
**LAKE WHATCOM
1999 - 2000 AREA AND
CAPACITY SURVEY**



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<p>The Bureau of Reclamation (Reclamation) surveyed the underwater portion of Lake Whatcom in 1999 to develop a topographic map and compute a present storage-elevation relationship (area-capacity tables). The underwater survey was conducted in July of 1999 near lake elevation 314.3 feet (City of Bellingham datum). The underwater survey used sonic depth recording equipment interfaced with a global positioning system (GPS) that gave continuous sounding positions throughout the underwater portions of the reservoir covered by the survey vessel. The above-water topography was determined by aerial data collected on 11/02/2000 near lake elevation 311.0 (City of Bellingham datum). The new topographic map of Lake Whatcom was developed from the combined aerial and underwater measured topography.</p> <p>This study measured Lake Whatcom surface areas from elevation (-)19.5 (below sea level) to elevation 318.5 feet. At elevation 318.5 feet the measured surface area was 5,172.1 acres with a total computed capacity of 803,634 acres. All elevations in this report are tied to the City of Bellingham datums which was determined to be 2.5 feet higher than the North American Vertical Datum of 1988.</p>				
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LAKE WHATCOM
1999 - 2000 AREA AND
CAPACITY SURVEY

by

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The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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INTRODUCTION

Lake Whatcom and dam are located north of Seattle about one mile east of Bellingham, Washington in Whatcom County. Lake Whatcom has been used as a water supply source since the 1880's and became the principle water source of the City of Bellingham in 1892. In 1938 a dam was constructed to provide additional water storage, maintain a higher lake water level, and prevent flooding. The manually controlled adjustable dam is operated and maintained by the City of Bellingham. The lake water surface elevation varies between 3 and 4 feet a year. The drainage area above Lake Whatcom is 55.9 square miles.

SUMMARY AND CONCLUSIONS

This Reclamation report presents the 1999 - 2000 results of the survey of Lake Whatcom. The primary objectives of the survey were to gather data needed to:

- develop reservoir topography
- compute area-capacity relationships

The Lake Whatcom hydrographic survey collection was conducted in July of 1999 near water surface elevation 314.3 which was measured by the City of Bellingham. Prior to the underwater survey a global positioning system (GPS) control survey was conducted to establish horizontal and vertical control points near the reservoir using real-time kinematic (RTK) GPS. The major benefits of RTK are real time precise 3D coordinates in latitude, longitude, and height, with accuracies in the order of 2 centimeters horizontally and 3 centimeters vertically, are obtained. The horizontal control was established in Washington State plane coordinates (north zone) in the North American Datum of 1983 (NAD83). The vertical control for the established points was in the North American Vertical Datum of 1988 (NAVD88). The survey determined that for these established points the average elevations in NAVD88 were around 2.5 (feet)¹ lower than the City of Bellingham vertical datum.

The bathymetric survey was run using hydrographic collection software that interfaced the RTK GPS with the sonic depth recording equipment. The survey system software continuously recorded lake bottom depths and horizontal coordinates as the survey boat moved across closely-spaced grid lines covering the lake area. Most of the transects (grid lines) were run somewhat in a perpendicular direction to the center line of the lake at 200-foot spacing. Data was also collected along the shore as the boat traversed between transects. The survey vessel's guidance system gave directions to the boat operator to assist in maintaining the course along these predetermined lines. During each run, the depth and position data were recorded on the notebook computer hard drive for subsequent processing.

¹Elevation levels are shown in feet. All elevations in this report are based on the City of Bellingham datum which is 2.5 feet high than North American Vertical Datum of 1988.

The 1999 underwater data was collected by a depth sounder that was calibrated by lowering a deflector plate below the boat by cables with known depths marked by beads. The depth sounder was calibrated by adjusting the speed of sound, which can vary with density, salinity, temperature, turbidity, and other conditions. The collected data were digitally transmitted to the computer collection system via an RS-232 port. Water surface elevations recorded by the City of Bellingham gauge during the time of collection were used to convert the sonic depth measurements to true lake bottom elevations. All computations in this report are based on the City of Bellingham gauge datum which was around 2.5 feet higher than NAVD88 during this survey.

Whatcom County Public Works contracted to have the above water topography of Lake Whatcom developed by aerial mapping methods. Prior to the aerial collection a static GPS control survey was conducted to establish horizontal and vertical control points around the lake. The horizontal control was established in Washington's north state plane coordinates in NAD83 and the vertical control in NAVD88. The aerial mapping was conducted on 11/02/2000 near lake elevation 311.0 (City of Bellingham datum). The survey found that for the established control points the average elevations in NAVD88 were around 2.5 lower than the City of Bellingham datum.

The new Lake Whatcom topography was developed from the combined aerial and underwater survey data. The 1999 - 2000 reservoir surface areas at predetermined contour intervals were generated by a computer graphics program using the collected reservoir data. The area and capacity tables were produced by a computer program that uses measured contour surface areas and a curve-fitting technique to compute area and capacity at prescribed elevation increments. The survey determined that the reservoir has a total storage capacity of 803,634 acre-feet and a surface area of 5,172 acres at lake elevation 318.5.

RESERVOIR AREA AND CAPACITY

Topography Development

Using ARC/INFO the topography of Lake Whatcom was developed from the combined 1999 underwater and 2000 aerial data. ARC/INFO is a software package for development and analysis of geographic information system (GIS) layers and development of interactive GIS applications and provides a means of organizing and interpreting large data sets (ESRI, 1992).

The aerial contractor provided the water surface contour (elevation 311.0) and 2-foot lake contours for elevation 312.5 and above in a data exchange format (DXF) file. As noted previously all elevations in this report are reference to the City of Bellingham vertical datum that was determined to be 2.5 feet higher than NAVD88. The underwater contours of the reservoir were developed by using the elevation 311.0 contour as a boundary around the edge of the underwater data set. This polygon that enclosed the data set was assigned an elevation of 311.0 and was used to perform a clip such that interpolation was not allowed to occur outside of this boundary.

Contours for the lake below elevation 311.0 were computed from the underwater data set using the triangular irregular network (TIN) surface modeling package within ARC/INFO. A TIN is a set of

adjacent, non-overlapping triangles computed from irregularly spaced points with x,y coordinates and z values. TIN was designed to deal with continuous data such as elevations. The TIN software uses a method known as Delaunay's criteria for triangulation where triangles are formed among all data points within the polygon clip. The method requires that a circle drawn through the three nodes of a triangle will contain no other point, meaning that sample points are connected to their nearest neighbors to form triangles using all collected data. Elevation contours are then interpolated along the triangle elements. The surface areas of the lake are also computed from the TIN.

The surface areas of the enclosed contour polygons developed from the aerial survey data were completed for the water surface elevation 311.0 and elevations 312.5, 314.5, 316.5 and 318.5 using the ARC/INFO software. Due to the many man-made structures and heavy vegetation the provided contours were not enclosed polygons for computing the surface areas. Using engineering judgement and the provided aerial contours, the lines were connected to form enclosed polygons, resulting in computed surface areas.

The map features such as the water surface elevation 311.0 (represented by a dash line), roads, docks, and 2-foot contours from elevation 312.5 and above were imported from the aerial data. The 5-foot contours from elevations 310.0 and below were developed and imported from the underwater data. The lake contour topography is presented on figures 1 through 8.

Development of 1999 - 2000 Contour Areas

The contour surface areas for Lake Whatcom were computed from elevation (-) 19.5 (below sea level) to elevation 318.5. The underwater TIN areas, as discussed above, were used for elevation (-) 19.0 through 310.0. These calculations were performed using the ARC/INFO VOLUME command. This command computes areas at user-specified elevations directly from the TIN and takes into consideration all regions of equal elevation. The aerial survey data mapped the water surface area at elevation 311.0 and the 2-foot contour surface areas for elevation 312.5 through 318.5. These coverages were imported into ARC/INFO for the purpose of computing the closed contour areas and for final map development.

1999 - 2000 Storage Capacity

The storage-elevation relationships based on the measured surface areas were developed using the area-capacity computer program ACAP85 (Bureau of Reclamation, 1985). Surface areas at 5-foot contour intervals from reservoir elevation (-15) to 310 and computed surface areas for elevations 311.0, 312.5, 314.5, 316.5, and 318.5 were used as the control parameters for computing the Lake Whatcom capacity. The program begins by testing the initial capacity equation over successive intervals to ensure that the equation fits within an allowable error limit. The error limit was set at 0.000001 for Lake Whatcom. The capacity equation is then used over the full range of intervals fitting within this allowable error limit. For the first interval at which the initial allowable error limit is exceeded, a new capacity equation (integrated from basic area curve over that interval) is utilized until it exceeds the error limit. Thus, the capacity curve is defined by a series of curves, each fitting a certain region of data. Final area equations are derived by differentiating the capacity equations, which are of second order polynomial form:

$$y = a_1 + a_2x + a_3x^2$$

where: y = capacity
 x = elevation above a reference base
 a₁ = intercept
 a₂ and a₃ = coefficients

The developed area and capacity equations are listed on table 1. Results of the 1999 - 2000 Lake Whatcom area and capacity computations are listed on table 2 and illustrated on figure 9.

REFERENCES

Bureau of Reclamation, 1985. Surface Water Branch, *ACAP85 User's Manual*, Technical Service Center, Denver CO.

Environmental Systems Research Institute , Inc. (ESRI), 1992. *ARC Command References*.

Lake Whatcom Management Team, 1999. Technical Report, *Water Quality Assessment/Conditions*, Lake Whatcom Stormwater Program, Bellevue, WA.

Table 1 - LAKE WHATCOM

1999 - 2000 AREA AND CAPACITY EQUATIONS

$$\text{AREA} = A2 + (X)(A3 + A3)$$

$$\text{CAPACITY} = (A3)((X)(X)) + (A2)(X) + A1$$

X= The difference between the base elevation and a given elevation
 Area in acres Capacity in acre-feet

<u>EQUATION NUMBER</u>	<u>ELEVATION BASE</u>	<u>CAPACITY BASE</u>	<u>COEFFICIENT A1(INTERCEPT)</u>	<u>COEFFICIENT A2(1ST TERM)</u>	<u>COEFFICIENT A3(2ND TERM)</u>
1	-20.0	0	0.0000	0.0000	0.8800
2	-15.0	22	22.0000	8.8000	2.4100
3	-10.0	126	126.2500	32.9000	6.9100
4	-5.0	463	463.5000	102.0000	11.0200
5	0.0	1249	1249.0000	212.2000	7.6700
6	5.0	2501	2501.7500	288.9000	6.4640
7	10.0	4107	4107.8501	353.5400	6.0060
8	15.0	6025	6025.7002	413.6000	6.2800
9	20.0	8250	8250.7000	476.4001	5.9500
10	25.0	10781	10781.4501	535.9000	5.2900
11	30.0	13593	13593.2001	588.8002	3.9999
12	35.0	16637	16637.1988	628.8004	3.7699
13	40.0	19875	19875.4496	666.4995	10.4201
14	45.0	23468	23468.4491	770.6999	17.9900
15	50.0	27771	27771.6993	950.6000	13.2600
16	55.0	32856	32856.1989	1083.2004	11.4299
17	60.0	38557	38557.9486	1197.5007	9.1699
18	65.0	44774	44774.6997	1289.1993	7.9101
19	70.0	51418	51418.4491	1368.3001	7.3200
20	75.0	58442	58442.9486	1441.5000	6.6101
21	80.0	65815	65815.6420	1507.6624	6.3600
22	90.0	81528	81528.2032	1634.7993	6.5302
23	95.0	89865	89865.4522	1700.1010	13.2697
24	100.0	98697	98697.7032	1832.7999	10.0700
25	105.0	108113	108113.4531	1933.5001	8.8200
26	110.0	118001	118001.4517	2021.7016	7.5797
27	115.0	128299	128299.4530	2097.4988	7.0703
28	120.0	138963	138963.7000	2168.2028	6.3795
29	125.0	149964	149964.2053	2231.9997	5.9199
30	130.0	161272	161272.2026	2291.2010	5.4899
31	135.0	172865	172865.4545	2346.0988	5.6001
32	140.0	184735	184735.8636	2402.1928	6.0151
33	150.0	209359	209359.2026	2522.4010	5.3798
34	155.0	222105	222105.7035	2576.1988	5.0702
35	160.0	235113	235113.4523	2626.9013	4.9198

LAKE WHATCOM

1999 - 2000 AREA AND CAPACITY EQUATIONS

$$\text{AREA} = A2 + (X)(A3 + A3)$$

$$\text{CAPACITY} = (A3)((X)(X)) + (A2)(X) + A1$$

X= The difference between the base elevation and a given elevation
 Area in acres Capacity in acre-feet

<u>EQUATION NUMBER</u>	<u>ELEVATION BASE</u>	<u>CAPACITY BASE</u>	<u>COEFFICIENT A1(INTERCEPT)</u>	<u>COEFFICIENT A2(1ST TERM)</u>	<u>COEFFICIENT A3(2ND TERM)</u>
36	165.0	248370	248370.9535	2676.0993	4.7901
37	170.0	261871	261871.2073	2723.9951	5.0607
38	175.0	275617	275617.6837	2774.6004	4.9403
39	180.0	289614	289613.9690	2824.2201	4.6048
40	190.0	318316	318316.1457	2916.3216	4.4521
41	205.0	363062	363062.3460	3049.7935	4.3150
42	215.0	393991	393991.9906	3135.6897	4.6499
43	225.0	425814	425814.1878	3229.0577	4.6253
44	240.0	475291	475291.1832	3368.2034	6.5095
45	245.0	492294	492294.9383	3433.2991	6.7703
46	250.0	509630	509630.6896	3500.9995	7.9497
47	255.0	527334	527334.4329	3580.5031	9.2694
48	260.0	545468	545468.6788	3673.2159	11.3264
49	265.0	564117	564117.9403	3786.4943	14.2412
50	270.0	583406	583406.4378	3928.9020	18.3495
51	275.0	603509	603509.6924	4112.3935	11.9310
52	280.0	624369	624369.9430	4231.7003	11.4296
53	285.0	645814	645813.7741	4346.8246	11.9337
54	290.0	667845	667845.0095	4466.3195	8.7730
55	294.0	685850	685850.5299	4534.0759	7.9882
56	300.0	713343	713343.5324	4630.6588	10.0029
57	304.0	732026	732026.6860	4710.3238	12.6822
58	306.0	741498	741498.2613	4762.0894	14.3274
59	308.0	751079	751079.7636	4819.3880	16.6290
60	310.0	760785	760785.0677	4885.8722	26.8721
61	311.0	765697	765697.8241	4939.5580	19.7928
62	312.5	773151	773151.8733	4998.3837	13.2127
63	316.5	793357	793357.0000	5104.6109	16.8678
64	318.5	803633	803633.6820	5172.1413	25.9389

Table 2 - Lake Whatcom 1999 - 2000 Area and Capacity Tables

LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON

1999 - 2000 AREA TABLE IN ACRES

Elevation Feet (Below Sea Level)	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0
-20										0
-19	0	0	1	1	1	1	1	1	2	2
-18	2	2	2	2	3	3	3	3	3	4
-17	4	4	4	4	4	5	5	5	5	5
-16	5	6	6	6	6	6	7	7	7	7
-15	7	7	8	8	8	8	8	8	9	9
-14	9	10	10	11	11	12	12	13	13	14
-13	14	15	15	16	16	17	17	17	18	18
-12	19	19	20	20	21	21	22	22	23	23
-11	24	24	25	25	26	26	27	27	28	28
-10	29	29	30	30	30	31	31	32	32	33
-9	34	36	37	38	40	41	43	44	45	47
-8	48	49	51	52	54	55	56	58	59	61
-7	62	63	65	66	67	69	70	72	73	74
-6	76	77	79	80	81	83	84	85	87	88
-5	90	91	92	94	95	96	98	99	101	102
-4	104	106	109	111	113	115	117	120	122	124
-3	126	128	131	133	135	137	139	142	144	146
-2	148	150	153	155	157	159	162	164	166	168
-1	170	173	175	177	179	181	184	186	188	190
0	192	195	197	199	201	203	206	208	210	212

LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 AREA TABLE IN ACRES

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0	212	214	215	217	218	220	221	223	224	226
1	228	229	231	232	234	235	237	238	240	241
2	243	244	246	247	249	251	252	254	255	257
3	258	260	261	263	264	266	267	269	270	272
4	274	275	277	278	280	281	283	284	286	287
5	289	290	291	293	294	295	297	298	299	301
6	302	303	304	306	307	308	310	311	312	313
7	315	316	317	319	320	321	323	324	325	326
8	328	329	330	332	333	334	335	337	338	339
9	341	342	343	344	346	347	348	350	351	352
10	354	355	356	357	358	360	361	362	363	364
11	366	367	368	369	370	372	373	374	375	376
12	378	379	380	381	382	384	385	386	387	388
13	390	391	392	393	394	396	397	398	399	400
14	402	403	404	405	406	408	409	410	411	412
15	414	415	416	417	419	420	421	422	424	425
16	426	427	429	430	431	432	434	435	436	437
17	439	440	441	442	444	445	446	448	449	450
18	451	453	454	455	456	458	459	460	461	463
19	464	465	466	468	469	470	471	473	474	475
20	476	478	479	480	481	482	484	485	486	487
21	488	489	491	492	493	494	495	497	498	499
22	500	501	503	504	505	506	507	509	510	511
23	512	513	514	516	517	518	519	520	522	523
24	524	525	526	528	529	530	531	532	534	535
25	536	537	538	539	540	541	542	543	544	545
26	546	548	549	550	551	552	553	554	555	556
27	557	558	559	560	561	562	563	564	566	567
28	568	569	570	571	572	573	574	575	576	577
29	578	579	580	581	582	584	585	586	587	588
30	589	590	590	591	592	593	594	594	595	596
31	597	598	598	599	600	601	602	602	603	604
32	605	606	606	607	608	609	610	610	611	612
33	613	614	614	615	616	617	618	618	619	620
34	621	622	622	623	624	625	626	626	627	628
35	629	630	630	631	632	633	633	634	635	636
36	636	637	638	639	639	640	641	642	642	643
37	644	645	645	646	647	648	648	649	650	651
38	651	652	653	654	654	655	656	657	657	658
39	659	660	660	661	662	663	663	664	665	666

LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 AREA TABLE IN ACRES

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
40	666	669	671	673	675	677	679	681	683	685
41	687	689	692	694	696	698	700	702	704	706
42	708	710	712	714	717	719	721	723	725	727
43	729	731	733	735	737	739	742	744	746	748
44	750	752	754	756	758	760	762	764	767	769
45	771	774	778	781	785	789	792	796	799	803
46	807	810	814	817	821	825	828	832	835	839
47	843	846	850	853	857	861	864	868	871	875
48	879	882	886	889	893	897	900	904	907	911
49	915	918	922	925	929	933	936	940	943	947
50	951	953	956	959	961	964	967	969	972	974
51	977	980	982	985	988	990	993	996	998	1001
52	1004	1006	1009	1012	1014	1017	1020	1022	1025	1028
53	1030	1033	1035	1038	1041	1043	1046	1049	1051	1054
54	1057	1059	1062	1065	1067	1070	1073	1075	1078	1081
55	1083	1085	1088	1090	1092	1095	1097	1099	1101	1104
56	1106	1108	1111	1113	1115	1117	1120	1122	1124	1127
57	1129	1131	1133	1136	1138	1140	1143	1145	1147	1149
58	1152	1154	1156	1159	1161	1163	1165	1168	1170	1172
59	1175	1177	1179	1181	1184	1186	1188	1191	1193	1195
60	1197	1199	1201	1203	1205	1207	1209	1210	1212	1214
61	1216	1218	1220	1221	1223	1225	1227	1229	1231	1232
62	1234	1236	1238	1240	1242	1243	1245	1247	1249	1251
63	1253	1254	1256	1258	1260	1262	1264	1265	1267	1269
64	1271	1273	1275	1276	1278	1280	1282	1284	1286	1287
65	1289	1291	1292	1294	1296	1297	1299	1300	1302	1303
66	1305	1307	1308	1310	1311	1313	1315	1316	1318	1319
67	1321	1322	1324	1326	1327	1329	1330	1332	1333	1335
68	1337	1338	1340	1341	1343	1345	1346	1348	1349	1351
69	1352	1354	1356	1357	1359	1360	1362	1364	1365	1367
70	1368	1370	1371	1373	1374	1376	1377	1379	1380	1381
71	1383	1384	1386	1387	1389	1390	1392	1393	1395	1396
72	1398	1399	1401	1402	1403	1405	1406	1408	1409	1411
73	1412	1414	1415	1417	1418	1420	1421	1422	1424	1425
74	1427	1428	1430	1431	1433	1434	1436	1437	1439	1440
75	1441	1443	1444	1445	1447	1448	1449	1451	1452	1453
76	1455	1456	1457	1459	1460	1461	1463	1464	1465	1467
77	1468	1469	1471	1472	1473	1475	1476	1477	1479	1480
78	1481	1482	1484	1485	1486	1488	1489	1490	1492	1493
79	1494	1496	1497	1498	1500	1501	1502	1504	1505	1506

LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 AREA TABLE IN ACRES

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
80	1508	1509	1510	1511	1513	1514	1515	1517	1518	1519
81	1520	1522	1523	1524	1525	1527	1528	1529	1531	1532
82	1533	1534	1536	1537	1538	1539	1541	1542	1543	1545
83	1546	1547	1548	1550	1551	1552	1553	1555	1556	1557
84	1559	1560	1561	1562	1564	1565	1566	1567	1569	1570
85	1571	1573	1574	1575	1576	1578	1579	1580	1581	1583
86	1584	1585	1587	1588	1589	1590	1592	1593	1594	1595
87	1597	1598	1599	1601	1602	1603	1604	1606	1607	1608
88	1609	1611	1612	1613	1615	1616	1617	1618	1620	1621
89	1622	1623	1625	1626	1627	1629	1630	1631	1632	1634
90	1635	1636	1637	1639	1640	1641	1643	1644	1645	1647
91	1648	1649	1650	1652	1653	1654	1656	1657	1658	1660
92	1661	1662	1664	1665	1666	1667	1669	1670	1671	1673
93	1674	1675	1677	1678	1679	1681	1682	1683	1684	1686
94	1687	1688	1690	1691	1692	1694	1695	1696	1697	1699
95	1700	1703	1705	1708	1711	1713	1716	1719	1721	1724
96	1727	1729	1732	1735	1737	1740	1743	1745	1748	1751
97	1753	1756	1758	1761	1764	1766	1769	1772	1774	1777
98	1780	1782	1785	1788	1790	1793	1796	1798	1801	1804
99	1806	1809	1812	1814	1817	1820	1822	1825	1827	1830
100	1833	1835	1837	1839	1841	1843	1845	1847	1849	1851
101	1853	1855	1857	1859	1861	1863	1865	1867	1869	1871
102	1873	1875	1877	1879	1881	1883	1885	1887	1889	1891
103	1893	1895	1897	1899	1901	1903	1905	1907	1909	1911
104	1913	1915	1917	1919	1921	1923	1925	1927	1929	1931
105	1934	1935	1937	1939	1941	1942	1944	1946	1948	1949
106	1951	1953	1955	1956	1958	1960	1962	1963	1965	1967
107	1969	1971	1972	1974	1976	1978	1979	1981	1983	1985
108	1986	1988	1990	1992	1993	1995	1997	1999	2001	2002
109	2004	2006	2008	2009	2011	2013	2015	2016	2018	2020
110	2022	2023	2025	2026	2028	2029	2031	2032	2034	2035
111	2037	2038	2040	2041	2043	2044	2046	2047	2049	2051
112	2052	2054	2055	2057	2058	2060	2061	2063	2064	2066
113	2067	2069	2070	2072	2073	2075	2076	2078	2079	2081
114	2082	2084	2085	2087	2088	2090	2091	2093	2094	2096
115	2097	2099	2100	2102	2103	2105	2106	2107	2109	2110
116	2112	2113	2114	2116	2117	2119	2120	2122	2123	2124
117	2126	2127	2129	2130	2131	2133	2134	2136	2137	2139
118	2140	2141	2143	2144	2146	2147	2148	2150	2151	2153
119	2154	2155	2157	2158	2160	2161	2163	2164	2165	2167

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1999 - 2000 AREA TABLE IN ACRES

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
120	2168	2169	2171	2172	2173	2175	2176	2177	2178	2180
121	2181	2182	2184	2185	2186	2187	2189	2190	2191	2192
122	2194	2195	2196	2198	2199	2200	2201	2203	2204	2205
123	2206	2208	2209	2210	2212	2213	2214	2215	2217	2218
124	2219	2221	2222	2223	2224	2226	2227	2228	2229	2231
125	2232	2233	2234	2236	2237	2238	2239	2240	2241	2243
126	2244	2245	2246	2247	2249	2250	2251	2252	2253	2254
127	2256	2257	2258	2259	2260	2262	2263	2264	2265	2266
128	2268	2269	2270	2271	2272	2273	2275	2276	2277	2278
129	2279	2281	2282	2283	2284	2285	2286	2288	2289	2290
130	2291	2292	2293	2294	2296	2297	2298	2299	2300	2301
131	2302	2303	2304	2305	2307	2308	2309	2310	2311	2312
132	2313	2314	2315	2316	2318	2319	2320	2321	2322	2323
133	2324	2325	2326	2327	2329	2330	2331	2332	2333	2334
134	2335	2336	2337	2338	2340	2341	2342	2343	2344	2345
135	2346	2347	2348	2349	2351	2352	2353	2354	2355	2356
136	2357	2358	2360	2361	2362	2363	2364	2365	2366	2367
137	2368	2370	2371	2372	2373	2374	2375	2376	2377	2379
138	2380	2381	2382	2383	2384	2385	2386	2388	2389	2390
139	2391	2392	2393	2394	2395	2397	2398	2399	2400	2401
140	2402	2403	2405	2406	2407	2408	2409	2411	2412	2413
141	2414	2415	2417	2418	2419	2420	2421	2423	2424	2425
142	2426	2427	2429	2430	2431	2432	2433	2435	2436	2437
143	2438	2439	2441	2442	2443	2444	2446	2447	2448	2449
144	2450	2452	2453	2454	2455	2456	2458	2459	2460	2461
145	2462	2464	2465	2466	2467	2468	2470	2471	2472	2473
146	2474	2476	2477	2478	2479	2480	2482	2483	2484	2485
147	2486	2488	2489	2490	2491	2492	2494	2495	2496	2497
148	2498	2500	2501	2502	2503	2504	2506	2507	2508	2509
149	2510	2512	2513	2514	2515	2516	2518	2519	2520	2521
150	2522	2523	2525	2526	2527	2528	2529	2530	2531	2532
151	2533	2534	2535	2536	2537	2539	2540	2541	2542	2543
152	2544	2545	2546	2547	2548	2549	2550	2551	2553	2554
153	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564
154	2565	2567	2568	2569	2570	2571	2572	2573	2574	2575
155	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585
156	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595
157	2596	2597	2599	2600	2601	2602	2603	2604	2605	2606
158	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616
159	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626

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Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
160	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636
161	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646
162	2647	2648	2649	2650	2651	2652	2652	2653	2654	2655
163	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665
164	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675
165	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685
166	2686	2687	2688	2689	2690	2690	2691	2692	2693	2694
167	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704
168	2705	2706	2707	2708	2709	2710	2711	2712	2713	2713
169	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723
170	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733
171	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743
172	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753
173	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763
174	2764	2765	2767	2768	2769	2770	2771	2772	2773	2774
175	2775	2776	2777	2778	2779	2780	2781	2782	2783	2783
176	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793
177	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803
178	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813
179	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823
180	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833
181	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842
182	2843	2844	2844	2845	2846	2847	2848	2849	2850	2851
183	2852	2853	2854	2855	2856	2856	2857	2858	2859	2860
184	2861	2862	2863	2864	2865	2866	2867	2868	2868	2869
185	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879
186	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888
187	2889	2890	2891	2891	2892	2893	2894	2895	2896	2897
188	2898	2899	2900	2901	2902	2903	2903	2904	2905	2906
189	2907	2908	2909	2910	2911	2912	2913	2914	2914	2915
190	2916	2917	2918	2919	2920	2921	2922	2923	2923	2924
191	2925	2926	2927	2928	2929	2930	2931	2931	2932	2933
192	2934	2935	2936	2937	2938	2939	2939	2940	2941	2942
193	2943	2944	2945	2946	2947	2947	2948	2949	2950	2951
194	2952	2953	2954	2955	2956	2956	2957	2958	2959	2960
195	2961	2962	2963	2964	2964	2965	2966	2967	2968	2969
196	2970	2971	2972	2972	2973	2974	2975	2976	2977	2978
197	2979	2980	2980	2981	2982	2983	2984	2985	2986	2987
198	2988	2988	2989	2990	2991	2992	2993	2994	2995	2996
199	2996	2997	2998	2999	3000	3001	3002	3003	3004	3004

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Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
200	3005	3006	3007	3008	3009	3010	3011	3012	3012	3013
201	3014	3015	3016	3017	3018	3019	3020	3021	3021	3022
202	3023	3024	3025	3026	3027	3028	3029	3029	3030	3031
203	3032	3033	3034	3035	3036	3037	3037	3038	3039	3040
204	3041	3042	3043	3044	3045	3045	3046	3047	3048	3049
205	3050	3051	3052	3052	3053	3054	3055	3056	3057	3058
206	3058	3059	3060	3061	3062	3063	3064	3064	3065	3066
207	3067	3068	3069	3070	3071	3071	3072	3073	3074	3075
208	3076	3077	3077	3078	3079	3080	3081	3082	3083	3083
209	3084	3085	3086	3087	3088	3089	3089	3090	3091	3092
210	3093	3094	3095	3096	3096	3097	3098	3099	3100	3101
211	3102	3102	3103	3104	3105	3106	3107	3108	3108	3109
212	3110	3111	3112	3113	3114	3115	3115	3116	3117	3118
213	3119	3120	3121	3121	3122	3123	3124	3125	3126	3127
214	3127	3128	3129	3130	3131	3132	3133	3134	3134	3135
215	3136	3137	3138	3138	3139	3140	3141	3142	3143	3144
216	3145	3146	3147	3148	3149	3150	3151	3151	3152	3153
217	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163
218	3164	3165	3165	3166	3167	3168	3169	3170	3171	3172
219	3173	3174	3175	3176	3177	3178	3178	3179	3180	3181
220	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191
221	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200
222	3201	3202	3203	3204	3205	3205	3206	3207	3208	3209
223	3210	3211	3212	3213	3214	3215	3216	3217	3218	3218
224	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228
225	3229	3230	3231	3232	3233	3234	3235	3236	3236	3237
226	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247
227	3248	3248	3249	3250	3251	3252	3253	3254	3255	3256
228	3257	3258	3259	3260	3261	3261	3262	3263	3264	3265
229	3266	3267	3268	3269	3270	3271	3272	3273	3273	3274
230	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284
231	3285	3285	3286	3287	3288	3289	3290	3291	3292	3293
232	3294	3295	3296	3297	3298	3298	3299	3300	3301	3302
233	3303	3304	3305	3306	3307	3308	3309	3310	3310	3311
234	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321
235	3322	3322	3323	3324	3325	3326	3327	3328	3329	3330
236	3331	3332	3333	3334	3335	3335	3336	3337	3338	3339
237	3340	3341	3342	3343	3344	3345	3346	3347	3347	3348
238	3349	3350	3351	3352	3353	3354	3355	3356	3357	3358
239	3359	3359	3360	3361	3362	3363	3364	3365	3366	3367

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Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
240	3368	3370	3371	3372	3373	3375	3376	3377	3379	3380
241	3381	3383	3384	3385	3386	3388	3389	3390	3392	3393
242	3394	3396	3397	3398	3399	3401	3402	3403	3405	3406
243	3407	3409	3410	3411	3412	3414	3415	3416	3418	3419
244	3420	3422	3423	3424	3425	3427	3428	3429	3431	3432
245	3433	3435	3436	3437	3439	3440	3441	3443	3444	3445
246	3447	3448	3450	3451	3452	3454	3455	3456	3458	3459
247	3460	3462	3463	3464	3466	3467	3469	3470	3471	3473
248	3474	3475	3477	3478	3479	3481	3482	3483	3485	3486
249	3487	3489	3490	3492	3493	3494	3496	3497	3498	3500
250	3501	3503	3504	3506	3507	3509	3511	3512	3514	3515
251	3517	3518	3520	3522	3523	3525	3526	3528	3530	3531
252	3533	3534	3536	3538	3539	3541	3542	3544	3546	3547
253	3549	3550	3552	3553	3555	3557	3558	3560	3561	3563
254	3565	3566	3568	3569	3571	3573	3574	3576	3577	3579
255	3580	3582	3584	3586	3588	3590	3592	3593	3595	3597
256	3599	3601	3603	3605	3606	3608	3610	3612	3614	3616
257	3618	3619	3621	3623	3625	3627	3629	3631	3632	3634
258	3636	3638	3640	3642	3644	3645	3647	3649	3651	3653
259	3655	3657	3658	3660	3662	3664	3666	3668	3669	3671
260	3673	3675	3678	3680	3682	3685	3687	3689	3691	3694
261	3696	3698	3700	3703	3705	3707	3709	3712	3714	3716
262	3719	3721	3723	3725	3728	3730	3732	3734	3737	3739
263	3741	3743	3746	3748	3750	3753	3755	3757	3759	3762
264	3764	3766	3768	3771	3773	3775	3777	3780	3782	3784
265	3786	3789	3792	3795	3798	3801	3804	3806	3809	3812
266	3815	3818	3821	3824	3826	3829	3832	3835	3838	3841
267	3843	3846	3849	3852	3855	3858	3861	3863	3866	3869
268	3872	3875	3878	3880	3883	3886	3889	3892	3895	3898
269	3900	3903	3906	3909	3912	3915	3918	3920	3923	3926
270	3929	3933	3936	3940	3944	3947	3951	3955	3958	3962
271	3966	3969	3973	3977	3980	3984	3988	3991	3995	3999
272	4002	4006	4010	4013	4017	4021	4024	4028	4032	4035
273	4039	4043	4046	4050	4054	4057	4061	4065	4068	4072
274	4076	4079	4083	4087	4090	4094	4098	4101	4105	4109
275	4112	4115	4117	4120	4122	4124	4127	4129	4131	4134
276	4136	4139	4141	4143	4146	4148	4151	4153	4155	4158
277	4160	4163	4165	4167	4170	4172	4174	4177	4179	4182
278	4184	4186	4189	4191	4194	4196	4198	4201	4203	4205
279	4208	4210	4213	4215	4217	4220	4222	4225	4227	4229

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Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
280	4232	4234	4236	4239	4241	4243	4245	4248	4250	4252
281	4255	4257	4259	4261	4264	4266	4268	4271	4273	4275
282	4277	4280	4282	4284	4287	4289	4291	4293	4296	4298
283	4300	4303	4305	4307	4309	4312	4314	4316	4319	4321
284	4323	4325	4328	4330	4332	4335	4337	4339	4341	4344
285	4346	4349	4352	4354	4356	4359	4361	4364	4366	4368
286	4371	4373	4375	4378	4380	4383	4385	4387	4390	4392
287	4395	4397	4399	4402	4404	4406	4409	4411	4414	4416
288	4418	4421	4423	4426	4428	4430	4433	4435	4438	4440
289	4442	4445	4447	4449	4452	4454	4457	4459	4461	4464
290	4466	4468	4470	4472	4473	4475	4477	4479	4480	4482
291	4484	4486	4487	4489	4491	4493	4494	4496	4498	4500
292	4501	4503	4505	4507	4508	4510	4512	4514	4515	4517
293	4519	4521	4522	4524	4526	4528	4529	4531	4533	4535
294	4537	4537	4537	4539	4540	4542	4544	4545	4547	4548
295	4550	4552	4553	4555	4556	4558	4560	4561	4563	4564
296	4566	4568	4569	4571	4572	4574	4576	4577	4579	4580
297	4582	4584	4585	4587	4588	4590	4592	4593	4595	4596
298	4598	4600	4601	4603	4604	4606	4608	4609	4611	4612
299	4614	4616	4617	4619	4620	4622	4624	4625	4627	4628
300	4630	4633	4635	4637	4639	4641	4643	4645	4647	4649
301	4651	4653	4655	4657	4659	4661	4663	4665	4667	4669
302	4671	4673	4675	4677	4679	4681	4683	4685	4687	4689
303	4691	4693	4695	4697	4699	4701	4703	4705	4707	4709
304	4711	4713	4715	4718	4720	4723	4726	4728	4731	4733
305	4736	4738	4741	4743	4746	4748	4751	4753	4756	4759
306	4761	4765	4768	4771	4774	4776	4779	4782	4785	4788
307	4791	4794	4796	4799	4802	4805	4808	4811	4814	4817
308	4819	4823	4826	4829	4833	4836	4839	4843	4846	4849
309	4853	4856	4859	4863	4866	4869	4873	4876	4879	4883
310	4886	4891	4897	4902	4907	4913	4918	4923	4929	4934
311	4940	4944	4947	4951	4955	4959	4963	4967	4971	4975
312	4979	4983	4987	4991	4995	4999	5001	5004	5006	5009
313	5012	5014	5017	5020	5022	5025	5027	5030	5033	5035
314	5038	5041	5043	5046	5049	5051	5054	5057	5059	5062
315	5064	5067	5070	5072	5075	5078	5080	5083	5086	5088
316	5091	5094	5096	5099	5101	5104	5108	5111	5115	5118
317	5121	5125	5128	5132	5135	5138	5142	5145	5148	5152
318	5155	5159	5162	5165	5169	5172				

LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON

1999 - 2000 CAPACITY TABLE IN ACRE-FEET

Elevation Feet (Below Sea Level)	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0
-20										
-19			0	0	0	0	0	1	1	1
-18	1	1	1	2	2	2	3	3	3	4
-17	4	4	5	5	6	6	6	7	7	8
-16	8	9	10	10	11	11	12	13	13	14
-15	15	16	16	17	18	19	19	20	21	22
-14	23	24	25	26	27	28	29	31	32	33
-13	35	36	38	39	41	42	44	46	47	49
-12	51	53	55	57	59	61	63	66	68	70
-11	72	75	77	80	82	85	88	90	93	96
-10	99	101	104	107	110	113	117	120	123	126
-9	130	133	137	141	144	148	153	157	161	166
-8	171	176	181	186	191	197	202	208	214	220
-7	226	232	238	245	252	259	265	273	280	287
-6	295	302	310	318	326	334	343	351	360	368
-5	377	386	395	405	414	424	434	443	453	464
-4	474	484	495	506	517	529	540	552	564	577
-3	589	602	615	628	641	655	669	683	697	712
-2	726	741	756	772	787	803	819	835	852	869
-1	886	903	920	938	955	974	992	1010	1029	1048
0	1067	1086	1106	1126	1146	1166	1186	1207	1228	1249

**LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 CAPACITY TABLE IN ACRE-FEET**

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0	1249	1270	1292	1313	1335	1357	1379	1401	1424	1446
1	1469	1492	1515	1538	1561	1585	1608	1632	1656	1680
2	1704	1728	1753	1778	1802	1827	1853	1878	1903	1929
3	1955	1981	2007	2033	2059	2086	2112	2139	2166	2193
4	2221	2248	2276	2303	2331	2359	2387	2416	2444	2473
5	2502	2531	2560	2589	2618	2648	2677	2707	2737	2767
6	2797	2827	2858	2888	2919	2950	2981	3012	3043	3074
7	3105	3137	3169	3200	3232	3264	3297	3329	3361	3394
8	3427	3459	3492	3526	3559	3592	3626	3659	3693	3727
9	3761	3795	3829	3864	3898	3933	3967	4002	4037	4073
10	4108	4143	4179	4214	4250	4286	4322	4358	4395	4431
11	4467	4504	4541	4578	4615	4652	4689	4726	4764	4801
12	4839	4877	4915	4953	4991	5029	5068	5106	5145	5184
13	5223	5262	5301	5340	5379	5419	5458	5498	5538	5578
14	5618	5658	5699	5739	5780	5820	5861	5902	5943	5984
15	6026	6067	6109	6150	6192	6234	6276	6318	6361	6403
16	6446	6488	6531	6574	6617	6660	6704	6747	6791	6834
17	6878	6922	6966	7010	7055	7099	7144	7188	7233	7278
18	7323	7368	7414	7459	7505	7550	7596	7642	7688	7734
19	7781	7827	7874	7920	7967	8014	8061	8108	8156	8203
20	8251	8298	8346	8394	8442	8490	8539	8587	8636	8684
21	8733	8782	8831	8880	8929	8979	9028	9078	9127	9177
22	9227	9277	9328	9378	9428	9479	9530	9580	9631	9682
23	9733	9785	9836	9888	9939	9991	10043	10095	10147	10199
24	10252	10304	10357	10409	10462	10515	10568	10621	10675	10728
25	10781	10835	10889	10943	10997	11051	11105	11159	11214	11268
26	11323	11377	11432	11487	11542	11597	11652	11708	11763	11819
27	11874	11930	11986	12042	12098	12154	12211	12267	12323	12380
28	12437	12494	12551	12608	12665	12722	12779	12837	12894	12952
29	13010	13068	13126	13184	13242	13300	13359	13417	13476	13534
30	13593	13652	13711	13770	13829	13889	13948	14007	14067	14126
31	14186	14246	14306	14365	14425	14485	14546	14606	14666	14726
32	14787	14847	14908	14969	15029	15090	15151	15212	15273	15334
33	15396	15457	15518	15580	15641	15703	15765	15827	15888	15950
34	16012	16075	16137	16199	16261	16324	16386	16449	16512	16574
35	16637	16700	16763	16826	16889	16953	17016	17079	17143	17206
36	17270	17333	17397	17461	17525	17589	17653	17717	17781	17846
37	17910	17974	18039	18103	18168	18233	18298	18362	18427	18492
38	18558	18623	18688	18753	18819	18884	18950	19015	19081	19147
39	19213	19279	19345	19411	19477	19543	19609	19676	19742	19809

**LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 CAPACITY TABLE IN ACRE-FEET**

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
40	19875	19942	20009	20076	20144	20211	20279	20347	20415	20484
41	20552	20621	20690	20760	20829	20899	20969	21039	21109	21179
42	21250	21321	21392	21464	21535	21607	21679	21751	21823	21896
43	21969	22042	22115	22188	22262	22336	22410	22484	22559	22633
44	22708	22783	22859	22934	23010	23086	23162	23238	23315	23391
45	23468	23546	23623	23701	23780	23858	23937	24017	24097	24177
46	24257	24338	24419	24501	24583	24665	24748	24831	24914	24998
47	25082	25166	25251	25336	25422	25508	25594	25680	25767	25855
48	25942	26031	26119	26208	26297	26386	26476	26566	26657	26748
49	26839	26931	27023	27115	27208	27301	27394	27488	27582	27677
50	27772	27867	27962	28058	28154	28250	28347	28444	28541	28638
51	28736	28833	28932	29030	29129	29227	29327	29426	29526	29626
52	29726	29826	29927	30028	30130	30231	30333	30435	30537	30640
53	30743	30846	30949	31053	31157	31261	31366	31470	31575	31681
54	31786	31892	31998	32104	32211	32318	32425	32532	32640	32748
55	32856	32965	33073	33182	33291	33401	33510	33620	33730	33840
56	33951	34062	34173	34284	34395	34507	34619	34731	34843	34956
57	35068	35181	35295	35408	35522	35636	35750	35864	35979	36094
58	36209	36324	36439	36555	36671	36787	36904	37021	37137	37255
59	37372	37489	37607	37725	37844	37962	38081	38200	38319	38438
60	38558	38678	38798	38918	39038	39159	39280	39401	39522	39643
61	39765	39886	40008	40130	40252	40375	40497	40620	40743	40866
62	40990	41113	41237	41361	41485	41609	41733	41858	41983	42108
63	42233	42358	42484	42610	42735	42862	42988	43114	43241	43368
64	43495	43622	43749	43877	44004	44132	44260	44389	44517	44646
65	44775	44904	45033	45162	45292	45421	45551	45681	45811	45941
66	46072	46202	46333	46464	46595	46726	46858	46989	47121	47253
67	47385	47517	47649	47782	47914	48047	48180	48313	48446	48580
68	48713	48847	48981	49115	49249	49384	49518	49653	49788	49923
69	50058	50193	50329	50465	50600	50736	50872	51009	51145	51282
70	51418	51555	51692	51830	51967	52104	52242	52380	52518	52656
71	52794	52932	53071	53210	53348	53487	53626	53766	53905	54045
72	54184	54324	54464	54604	54745	54885	55026	55166	55307	55448
73	55589	55731	55872	56014	56155	56297	56439	56581	56724	56866
74	57009	57152	57294	57437	57581	57724	57868	58011	58155	58299
75	58443	58587	58732	58876	59021	59165	59310	59455	59600	59746
76	59891	60037	60182	60328	60474	60620	60766	60913	61059	61206
77	61352	61499	61646	61793	61941	62088	62236	62383	62531	62679
78	62827	62975	63123	63272	63420	63569	63718	63867	64016	64165
79	64315	64464	64614	64764	64914	65064	65214	65364	65514	65665

LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 CAPACITY TABLE IN ACRE-FEET

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
80	65816	65966	66117	66269	66420	66571	66723	66874	67026	67178
81	67330	67482	67634	67786	67939	68091	68244	68397	68550	68703
82	68856	69010	69163	69317	69471	69625	69779	69933	70087	70241
83	70396	70551	70705	70860	71015	71170	71326	71481	71637	71792
84	71948	72104	72260	72416	72572	72729	72885	73042	73199	73356
85	73513	73670	73827	73985	74142	74300	74458	74616	74774	74932
86	75091	75249	75408	75566	75725	75884	76043	76202	76362	76521
87	76681	76841	77001	77161	77321	77481	77641	77802	77962	78123
88	78284	78445	78606	78767	78929	79090	79252	79414	79576	79738
89	79900	80062	80224	80387	80550	80712	80875	81038	81202	81365
90	81528	81692	81855	82019	82183	82347	82511	82676	82840	83005
91	83170	83334	83499	83664	83830	83995	84161	84326	84492	84658
92	84824	84990	85156	85323	85489	85656	85823	85990	86157	86324
93	86491	86659	86826	86994	87162	87330	87498	87666	87835	88003
94	88172	88341	88510	88679	88848	89017	89186	89356	89526	89696
95	89865	90036	90206	90377	90548	90719	90890	91062	91234	91406
96	91579	91752	91925	92098	92272	92445	92620	92794	92969	93144
97	93319	93494	93670	93846	94022	94199	94375	94552	94730	94907
98	95085	95263	95442	95620	95799	95978	96158	96337	96517	96698
99	96878	97059	97240	97421	97603	97785	97967	98149	98332	98515
100	98698	98881	99065	99248	99432	99617	99801	99986	100170	100355
101	100541	100726	100912	101097	101283	101470	101656	101843	102029	102216
102	102404	102591	102779	102966	103154	103343	103531	103720	103908	104098
103	104287	104476	104666	104856	105046	105236	105426	105617	105808	105999
104	106190	106381	106573	106765	106957	107149	107342	107534	107727	107920
105	108113	108307	108501	108694	108888	109082	109277	109471	109666	109861
106	110056	110251	110446	110642	110838	111034	111230	111426	111622	111819
107	112016	112213	112410	112607	112805	113002	113200	113398	113596	113795
108	113993	114192	114391	114590	114789	114989	115188	115388	115588	115788
109	115989	116189	116390	116591	116792	116993	117194	117396	117597	117799
110	118001	118204	118406	118609	118811	119014	119217	119420	119624	119827
111	120031	120234	120438	120642	120847	121051	121256	121460	121665	121870
112	122075	122280	122486	122691	122897	123103	123309	123515	123722	123928
113	124135	124342	124549	124756	124963	125170	125378	125586	125793	126001
114	126210	126418	126626	126835	127044	127253	127462	127671	127880	128090
115	128299	128509	128719	128929	129140	129350	129561	129771	129982	130193
116	130404	130615	130827	131038	131250	131462	131674	131886	132098	132310
117	132523	132735	132948	133161	133374	133587	133801	134014	134228	134442
118	134656	134870	135084	135298	135513	135727	135942	136157	136372	136587
119	136803	137018	137234	137449	137665	137881	138098	138314	138530	138747

**LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 CAPACITY TABLE IN ACRE-FEET**

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
120	138964	139181	139398	139615	139832	140049	140267	140485	140702	140920
121	141138	141356	141575	141793	142012	142230	142449	142668	142887	143106
122	143326	143545	143765	143984	144204	144424	144644	144864	145085	145305
123	145526	145746	145967	146188	146409	146631	146852	147073	147295	147517
124	147739	147961	148183	148405	148627	148850	149072	149295	149518	149741
125	149964	150187	150411	150634	150858	151082	151306	151530	151754	151978
126	152202	152427	152651	152876	153101	153326	153551	153776	154001	154226
127	154452	154678	154903	155129	155355	155581	155807	156034	156260	156487
128	156713	156940	157167	157394	157621	157849	158076	158304	158531	158759
129	158987	159215	159443	159671	159900	160128	160357	160585	160814	161043
130	161272	161501	161731	161960	162190	162419	162649	162879	163109	163339
131	163569	163799	164030	164260	164491	164721	164952	165183	165414	165645
132	165877	166108	166339	166571	166803	167035	167266	167498	167731	167963
133	168195	168428	168660	168893	169126	169359	169592	169825	170058	170291
134	170525	170758	170992	171226	171460	171694	171928	172162	172396	172631
135	172865	173100	173335	173570	173805	174040	174275	174510	174746	174981
136	175217	175453	175689	175925	176161	176397	176634	176870	177107	177343
137	177580	177817	178054	178291	178528	178766	179003	179241	179478	179716
138	179954	180192	180430	180669	180907	181145	181384	181623	181862	182100
139	182339	182579	182818	183057	183297	183536	183776	184016	184256	184496
140	184736	184976	185217	185457	185698	185938	186179	186420	186661	186903
141	187144	187386	187627	187869	188111	188353	188595	188837	189079	189322
142	189564	189807	190050	190293	190536	190779	191022	191266	191509	191753
143	191997	192240	192484	192729	192973	193217	193462	193706	193951	194196
144	194441	194686	194931	195177	195422	195668	195913	196159	196405	196651
145	196897	197144	197390	197636	197883	198130	198377	198624	198871	199118
146	199366	199613	199861	200108	200356	200604	200852	201101	201349	201597
147	201846	202095	202343	202592	202841	203091	203340	203589	203839	204089
148	204338	204588	204838	205088	205339	205589	205840	206090	206341	206592
149	206843	207094	207345	207597	207848	208100	208351	208603	208855	209107
150	209359	209612	209864	210116	210369	210622	210875	211128	211381	211634
151	211887	212140	212394	212647	212901	213155	213409	213663	213917	214171
152	214426	214680	214935	215189	215444	215699	215954	216209	216464	216719
153	216975	217230	217486	217742	217998	218254	218510	218766	219022	219278
154	219535	219791	220048	220305	220562	220819	221076	221333	221591	221848
155	222106	222363	222621	222879	223137	223395	223653	223912	224170	224428
156	224687	224946	225204	225463	225722	225981	226241	226500	226759	227019
157	227278	227538	227798	228058	228318	228578	228838	229098	229359	229619
158	229880	230141	230401	230662	230923	231185	231446	231707	231968	232230
159	232492	232753	233015	233277	233539	233801	234064	234326	234588	234851

**LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 CAPACITY TABLE IN ACRE-FEET**

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
160	235113	235376	235639	235902	236165	236428	236691	236955	237218	237482
161	237745	238009	238273	238537	238801	239065	239329	239593	239858	240122
162	240387	240652	240916	241181	241446	241711	241977	242242	242507	242773
163	243038	243304	243570	243836	244102	244368	244634	244900	245167	245433
164	245700	245966	246233	246500	246767	247034	247301	247569	247836	248103
165	248371	248639	248906	249174	249442	249710	249978	250247	250515	250783
166	251052	251320	251589	251858	252127	252396	252665	252934	253203	253473
167	253742	254012	254282	254551	254821	255091	255361	255631	255902	256172
168	256442	256713	256984	257254	257525	257796	258067	258338	258609	258881
169	259152	259423	259695	259967	260239	260510	260782	261054	261327	261599
170	261871	262144	262416	262689	262962	263234	263507	263780	264054	264327
171	264600	264874	265147	265421	265695	265969	266243	266517	266791	267065
172	267339	267614	267889	268163	268438	268713	268988	269263	269538	269813
173	270089	270364	270640	270916	271191	271467	271743	272019	272295	272572
174	272848	273125	273401	273678	273955	274232	274509	274786	275063	275340
175	275618	275895	276173	276451	276728	277006	277284	277562	277841	278119
176	278397	278676	278954	279233	279512	279791	280070	280349	280628	280907
177	281187	281466	281746	282025	282305	282585	282865	283145	283425	283706
178	283986	284266	284547	284828	285108	285389	285670	285951	286233	286514
179	286795	287077	287358	287640	287922	288203	288485	288767	289050	289332
180	289614	289896	290179	290462	290744	291027	291310	291593	291876	292160
181	292443	292726	293010	293293	293577	293861	294145	294428	294713	294997
182	295281	295565	295850	296134	296419	296703	296988	297273	297558	297843
183	298128	298413	298699	298984	299270	299555	299841	300127	300413	300698
184	300985	301271	301557	301843	302130	302416	302703	302990	303276	303563
185	303850	304137	304424	304712	304999	305286	305574	305862	306149	306437
186	306725	307013	307301	307589	307878	308166	308454	308743	309032	309320
187	309609	309898	310187	310476	310765	311055	311344	311633	311923	312213
188	312502	312792	313082	313372	313662	313953	314243	314533	314824	315114
189	315405	315696	315987	316277	316569	316860	317151	317442	317734	318025
190	318317	318608	318900	319191	319483	319775	320068	320360	320652	320944
191	321237	321530	321822	322115	322408	322701	322994	323287	323580	323873
192	324167	324460	324754	325047	325341	325635	325929	326223	326517	326811
193	327105	327400	327694	327989	328283	328578	328873	329168	329462	329758
194	330053	330348	330643	330939	331234	331530	331825	332121	332417	332713
195	333009	333305	333601	333898	334194	334491	334787	335084	335381	335677
196	335974	336271	336568	336866	337163	337460	337758	338055	338353	338651
197	338949	339246	339544	339843	340141	340439	340737	341036	341334	341633
198	341932	342230	342529	342828	343127	343427	343726	344025	344325	344624
199	344924	345223	345523	345823	346123	346423	346723	347023	347324	347624

**LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 CAPACITY TABLE IN ACRE-FEET**

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
200	347925	348225	348526	348827	349127	349428	349729	350030	350332	350633
201	350934	351236	351537	351839	352141	352443	352745	353047	353349	353651
202	353953	354255	354558	354860	355163	355466	355769	356072	356374	356678
203	356981	357284	357587	357891	358194	358498	358802	359105	359409	359713
204	360017	360321	360626	360930	361234	361539	361843	362148	362453	362758
205	363063	363367	363672	363978	364283	364588	364894	365199	365505	365811
206	366116	366422	366728	367034	367340	367647	367953	368259	368566	368873
207	369179	369486	369793	370100	370407	370714	371021	371328	371636	371943
208	372251	372558	372866	373174	373482	373789	374098	374406	374714	375022
209	375331	375639	375948	376256	376565	376874	377183	377492	377801	378110
210	378419	378729	379038	379347	379657	379967	380276	380586	380896	381206
211	381516	381827	382137	382447	382758	383068	383379	383690	384000	384311
212	384622	384933	385245	385556	385867	386178	386490	386802	387113	387425
213	387737	388049	388361	388673	388985	389297	389610	389922	390235	390547
214	390860	391173	391486	391799	392112	392425	392738	393051	393365	393678
215	393992	394306	394619	394933	395247	395561	395875	396189	396504	396818
216	397132	397447	397762	398076	398391	398706	399021	399336	399651	399967
217	400282	400597	400913	401229	401544	401860	402176	402492	402808	403125
218	403441	403757	404074	404390	404707	405024	405341	405658	405975	406292
219	406609	406926	407244	407561	407879	408197	408515	408832	409150	409468
220	409787	410105	410423	410742	411060	411379	411698	412016	412335	412654
221	412974	413293	413612	413931	414251	414570	414890	415210	415530	415850
222	416170	416490	416810	417130	417451	417771	418092	418412	418733	419054
223	419375	419696	420017	420339	420660	420981	421303	421624	421946	422268
224	422590	422912	423234	423556	423878	424201	424523	424846	425168	425491
225	425814	426137	426460	426783	427107	427430	427753	428077	428400	428724
226	429048	429372	429696	430020	430344	430668	430993	431317	431641	431966
227	432291	432616	432940	433266	433591	433916	434241	434566	434892	435217
228	435543	435869	436195	436520	436846	437173	437499	437825	438151	438478
229	438804	439131	439458	439785	440112	440439	440766	441093	441420	441748
230	442075	442403	442730	443058	443386	443714	444042	444370	444698	445027
231	445355	445684	446012	446341	446670	446998	447327	447656	447986	448315
232	448644	448974	449303	449633	449962	450292	450622	450952	451282	451612
233	451943	452273	452603	452934	453265	453595	453926	454257	454588	454919
234	455250	455582	455913	456244	456576	456908	457239	457571	457903	458235
235	458567	458900	459232	459564	459897	460229	460562	460895	461228	461560
236	461894	462227	462560	462893	463227	463560	463894	464227	464561	464895
237	465229	465563	465897	466231	466566	466900	467235	467569	467904	468239
238	468574	468909	469244	469579	469914	470249	470585	470920	471256	471592
239	471928	472263	472599	472936	473272	473608	473944	474281	474617	474954

**LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 CAPACITY TABLE IN ACRE-FEET**

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
240	475291	475628	475965	476302	476640	476977	477314	477652	477990	478328
241	478666	479004	479342	479681	480019	480358	480697	481036	481375	481714
242	482054	482393	482733	483072	483412	483752	484093	484433	484773	485114
243	485454	485795	486136	486477	486818	487160	487501	487843	488184	488526
244	488868	489210	489552	489895	490237	490580	490923	491266	491609	491952
245	492295	492638	492982	493326	493669	494013	494357	494702	495046	495390
246	495735	496080	496425	496770	497115	497460	497806	498151	498497	498843
247	499189	499535	499881	500227	500574	500920	501267	501614	501961	502308
248	502656	503003	503351	503699	504046	504394	504743	505091	505439	505788
249	506136	506485	506834	507183	507533	507882	508231	508581	508931	509281
250	509631	509981	510331	510682	511032	511383	511734	512085	512437	512788
251	513140	513491	513843	514195	514548	514900	515253	515605	515958	516311
252	516664	517018	517371	517725	518079	518433	518787	519141	519496	519850
253	520205	520560	520915	521271	521626	521982	522337	522693	523049	523406
254	523762	524118	524475	524832	525189	525546	525904	526261	526619	526976
255	527334	527693	528051	528409	528768	529127	529486	529845	530205	530564
256	530924	531284	531644	532005	532365	532726	533087	533448	533809	534171
257	534533	534894	535256	535619	535981	536344	536706	537069	537433	537796
258	538159	538523	538887	539251	539615	539980	540344	540709	541074	541439
259	541805	542170	542536	542902	543268	543634	544001	544368	544734	545101
260	545469	545836	546204	546572	546940	547308	547677	548046	548415	548784
261	549153	549523	549893	550263	550633	551004	551375	551746	552117	552489
262	552860	553232	553605	553977	554350	554723	555096	555469	555843	556216
263	556590	556965	557339	557714	558089	558464	558839	559215	559590	559967
264	560343	560719	561096	561473	561850	562228	562605	562983	563361	563739
265	564118	564497	564876	565255	565635	566015	566395	566775	567156	567537
266	567919	568300	568682	569064	569447	569830	570213	570596	570980	571364
267	571748	572132	572517	572902	573288	573673	574059	574445	574832	575219
268	575606	575993	576381	576768	577157	577545	577934	578323	578712	579102
269	579492	579882	580272	580663	581054	581446	581837	582229	582621	583014
270	583406	583800	584193	584587	584981	585376	585770	586166	586561	586957
271	587354	587750	588148	588545	588943	589341	589740	590139	590538	590938
272	591338	591738	592139	592540	592942	593343	593746	594148	594551	594955
273	595358	595762	596167	596572	596977	597382	597788	598195	598601	599008
274	599416	599823	600232	600640	601049	601458	601868	602278	602688	603099
275	603510	603921	604333	604745	605157	605569	605981	606394	606807	607221
276	607634	608048	608462	608876	609290	609705	610120	610535	610951	611366
277	611782	612198	612615	613031	613448	613865	614283	614700	615118	615536
278	615954	616373	616792	617211	617630	618049	618469	618889	619309	619730
279	620150	620571	620992	621414	621835	622257	622679	623102	623524	623947

**LAKE WHATCOM - WHATCOM COUNTY, WASHINGTON
1999 - 2000 CAPACITY TABLE IN ACRE-FEET**

Elevation Feet	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
280	624370	624793	625217	625641	626064	626489	626913	627338	627763	628188
281	628613	629039	629464	629891	630317	630743	631170	631597	632024	632451
282	632879	633307	633735	634163	634592	635021	635450	635879	636308	636738
283	637168	637598	638028	638459	638890	639321	639752	640184	640615	641047
284	641480	641912	642345	642778	643211	643644	644078	644511	644945	645380
285	645814	646249	646684	647119	647554	647990	648426	648862	649299	649736
286	650173	650610	651047	651485	651923	652361	652799	653238	653677	654116
287	654555	654995	655435	655875	656315	656755	657196	657637	658078	658520
288	658962	659404	659846	660288	660731	661174	661617	662060	662504	662948
289	663392	663836	664281	664726	665171	665616	666062	666507	666954	667400
290	667846	668292	668739	669186	669633	670080	670528	670976	671424	671872
291	672320	672769	673217	673666	674115	674564	675014	675463	675913	676363
292	676813	677263	677713	678164	678615	679066	679517	679968	680420	680871
293	681323	681775	682227	682679	683132	683585	684037	684491	684944	685397
294	685851	686304	686758	687212	687665	688120	688574	689028	689483	689938
295	690393	690848	691303	691758	692214	692670	693126	693582	694038	694494
296	694951	695407	695864	696321	696778	697236	697693	698151	698609	699067
297	699525	699983	700441	700900	701359	701818	702277	702736	703195	703655
298	704115	704575	705035	705495	705955	706416	706876	707337	707798	708259
299	708721	709182	709644	710106	710568	711030	711492	711954	712417	712880
300	713343	713807	714270	714734	715197	715661	716126	716590	717054	717519
301	717984	718449	718915	719380	719846	720312	720778	721245	721711	722178
302	722645	723112	723579	724047	724515	724983	725451	725919	726388	726857
303	727326	727795	728264	728734	729203	729673	730144	730614	731085	731555
304	732026	732498	732969	733441	733913	734385	734857	735330	735803	736276
305	736750	737223	737697	738172	738646	739121	739596	740071	740546	741022
306	741498	741975	742451	742928	743405	743883	744361	744839	745317	745796
307	746275	746754	747233	747713	748193	748674	749154	749635	750116	750598
308	751080	751562	752044	752527	753010	753494	753977	754462	754946	755431
309	755916	756401	756887	757373	757860	758346	758833	759321	759809	760297
310	760785	761274	761763	762253	762744	763235	763726	764218	764711	765204
311	765698	766192	766687	767182	767677	768173	768669	769165	769662	770159
312	770657	771155	771654	772153	772652	773152	773652	774152	774653	775153
313	775654	776156	776657	777159	777661	778164	778666	779169	779672	780176
314	780679	781183	781687	782192	782697	783202	783707	784212	784718	785224
315	785730	786237	786744	787251	787758	788266	788774	789282	789790	790299
316	790808	791317	791827	792337	792847	793357	793868	794379	794890	795402
317	795914	796426	796939	797452	797965	798479	798993	799507	800022	800537
318	801052	801568	802084	802600	803117	803634				

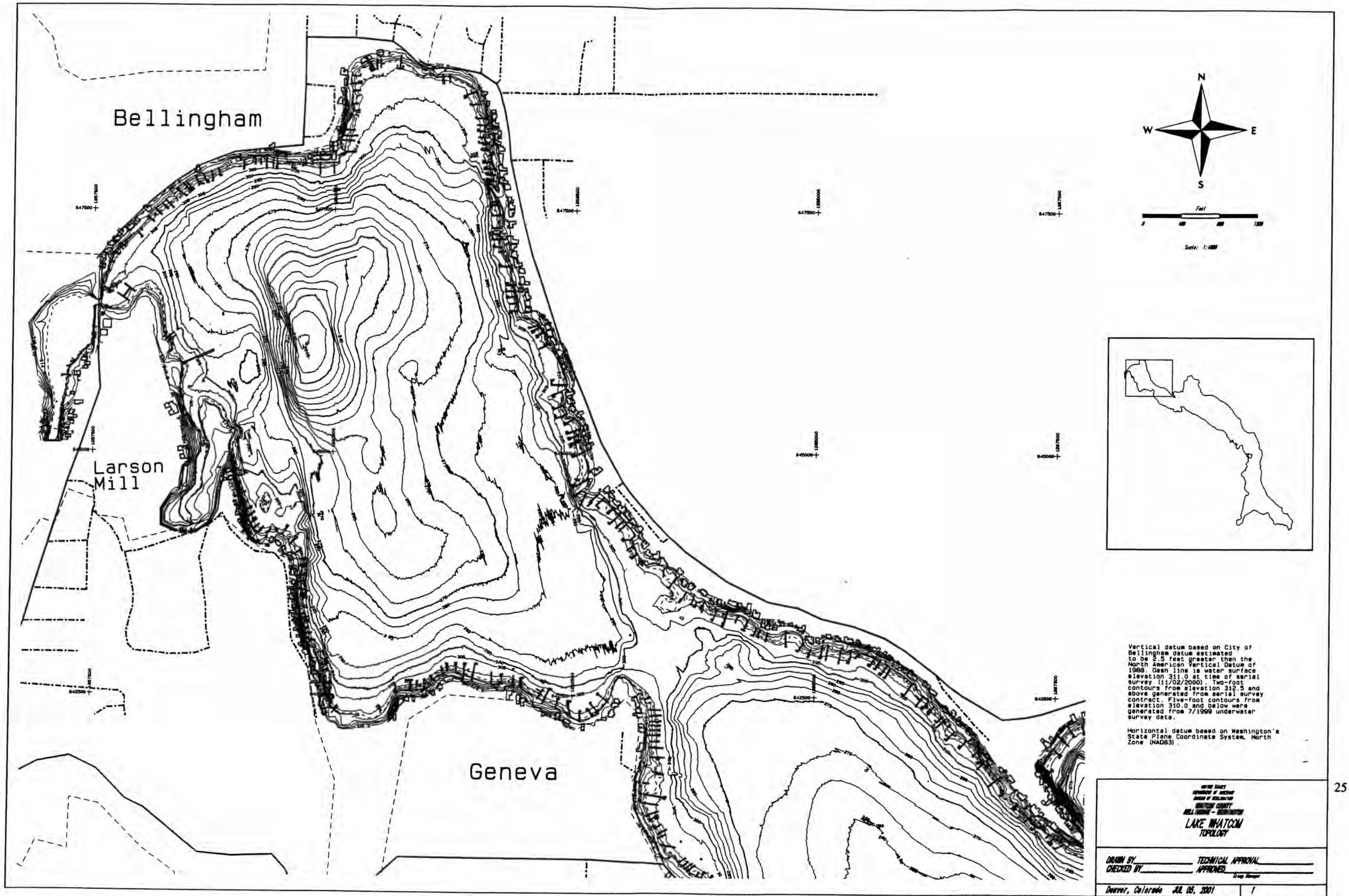
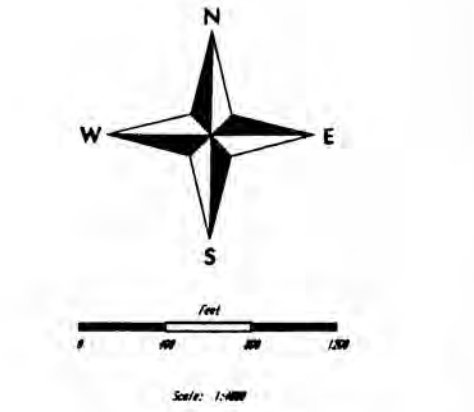
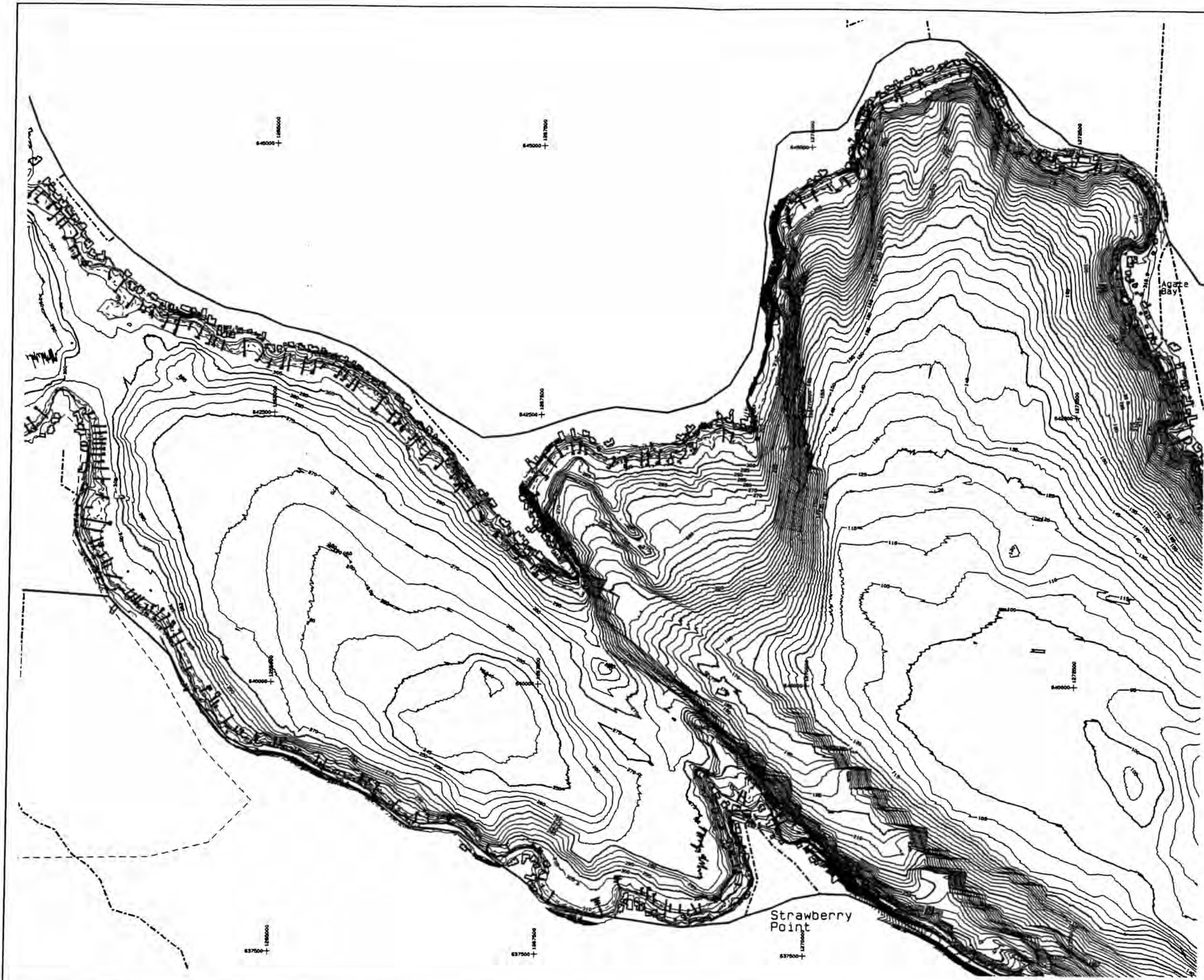


Figure 1. - Lake Whatcom topographic map, No. 1.



Vertical datum based on City of Bellingham datum estimated to be 2.5 feet greater than the North American Vertical Datum of 1988. Dash line is water surface elevation 311.0 at time of aerial survey (11/02/2000). Two-foot contours from elevation 312.5 and above generated from aerial survey contract. Five-foot contours from elevation 310.0 and below were generated from 7/1999 underwater survey data.

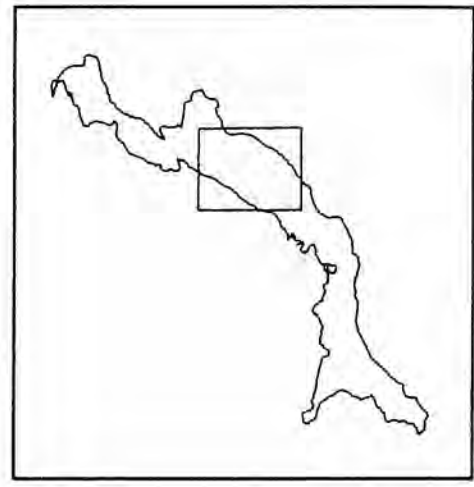
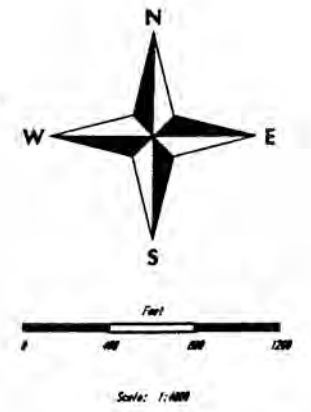
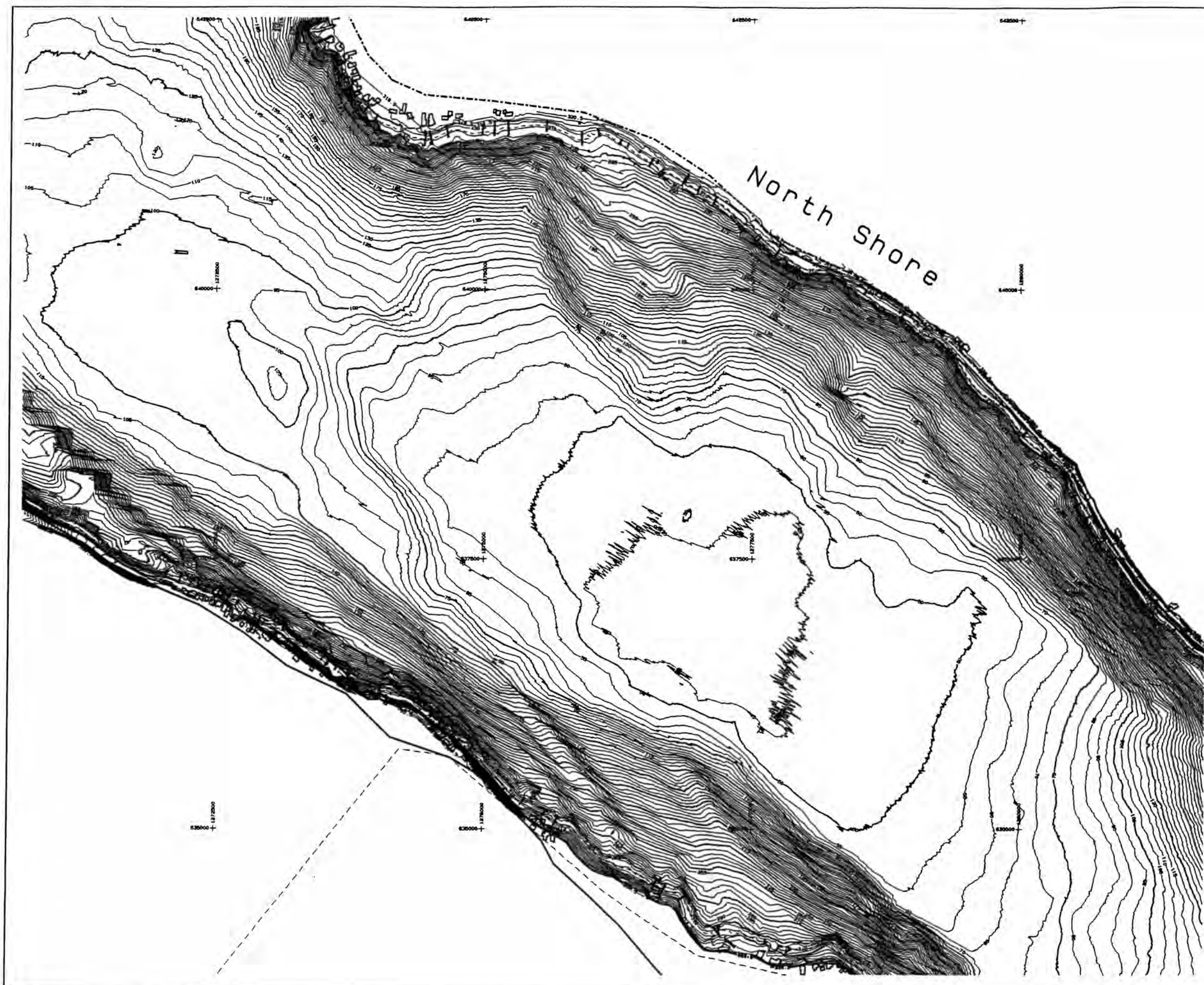
Horizontal datum based on Washington's State Plane Coordinate System, North Zone (NAD83).

WASHINGTON STATE
 DEPARTMENT OF LANDS
 DIVISION OF LANDS
 BELLINGHAM COUNTY
 BELLINGHAM - WASHINGTON
**LAKE WHATCOM
 TOPOLOGY**

DRAWN BY _____ TECHNICAL APPROVAL _____
 CHECKED BY _____ APPROVED _____
City Engineer

Denver, Colorado JUL 05, 2001 2

Figure 2. - Lake Whatcom topographic map, No. 2.



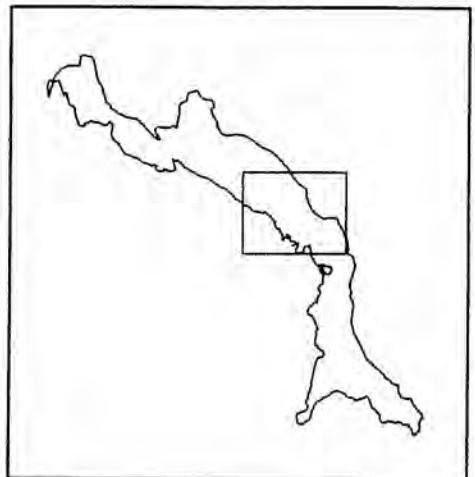
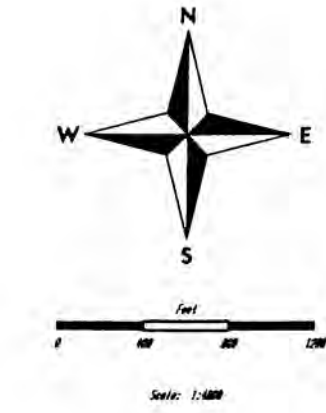
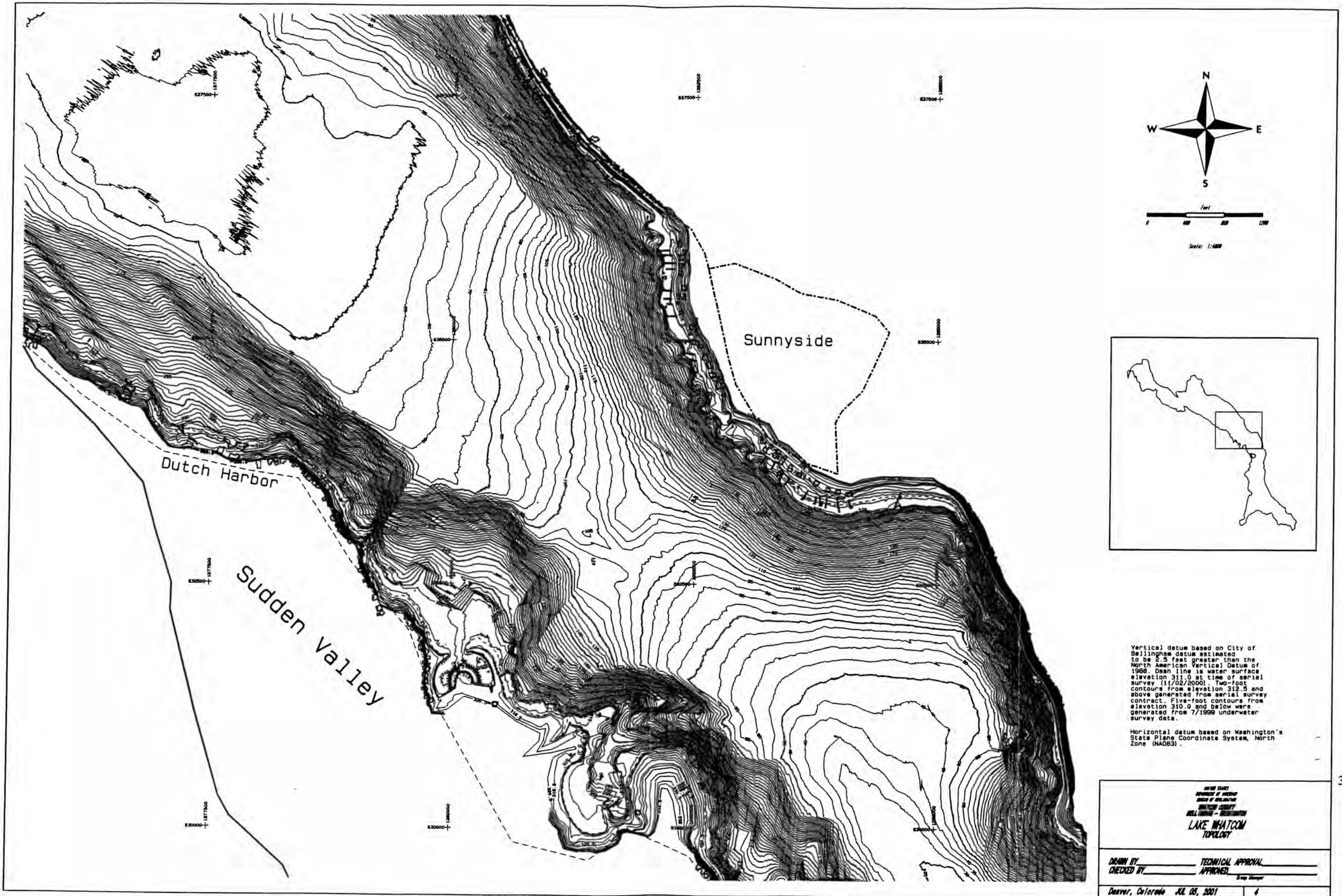
Vertical datum based on City of Bellingham datum estimated to be 2.5 feet greater than the North American Vertical Datum of 1988. Dash line is water surface elevation 311.0 at time of aerial survey (11/02/2000). Two-foot contours from elevation 312.5 and above generated from aerial survey contract. Five-foot contours from elevation 310.0 and below were generated from 7/1999 underwater survey data.

Horizontal datum based on Washington's State Plane Coordinate System, North Zone (NAD83).

WASHINGTON STATE
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF GEOLOGY AND LAND SURVEYING
 WASHINGTON COUNTY
 HILLMAN - BELLINGHAM
**LAKE WHATCOM
 TOPOLOGY**

DRAWN BY _____	TECHNICAL APPROVAL _____
CHECKED BY _____	APPROVED _____
<i>Group Manager</i>	
Denver, Colorado JUL 05, 2001	J

Figure 3. - Lake Whatcom topographic map, No. 3.



Vertical datum based on City of Bellingham datum estimated to be 2.5 feet greater than the North American Vertical Datum of 1988. Dash line is water surface elevation 311.0 at time of aerial survey (11/02/2000). Two-foot contours from elevation 312.5 and above generated from aerial survey contract. Five-foot contours from elevation 310.0 and below were generated from 7/1999 underwater survey data.

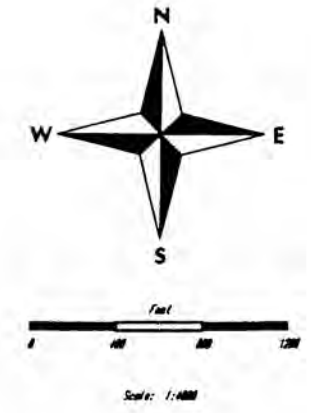
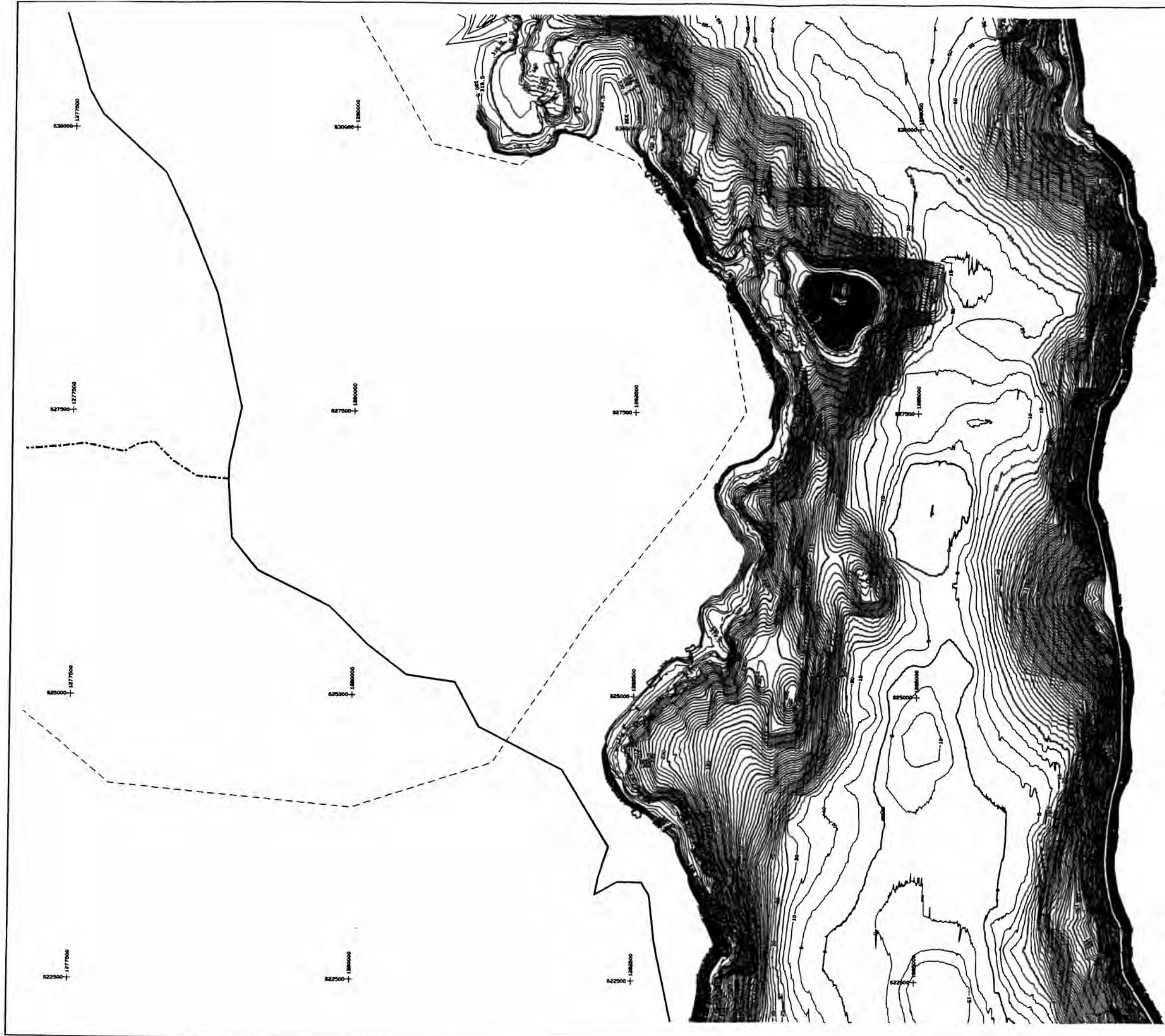
Horizontal datum based on Washington's State Plane Coordinate System, North Zone (NAD83).

WASH STATE
 DEPARTMENT OF WATERS
 DIVISION OF WILDLIFE
 WASHINGTON COUNTY
 BELL COUNTY - BELL COUNTY
**LAKE WHATCOM
 TOPOLOGY**

DRAWN BY _____ TECHNICAL APPROVAL _____
 CHECKED BY _____ APPROVED _____

Denver, Colorado JUL 05, 2001 4

Figure 4. - Lake Whatcom topographic map, No. 4.



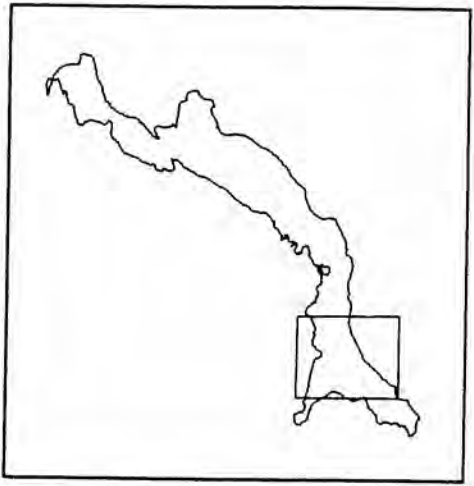
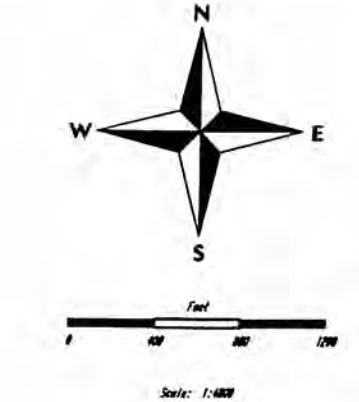
Vertical datum based on City of Bellingham datum estimated to be 2.5 feet greater than the North American Vertical Datum of 1988. Dash line is water surface elevation 311.0 at time of aerial survey (11/02/2000). Two-foot contours from elevation 312.5 and above generated from aerial survey contract. Five-foot contours from elevation 310.0 and below were generated from 7/1999 underwater survey data.

Horizontal datum based on Washington's State Plane Coordinate System, North Zone (NAD83).

THIS SHEET
 PART OF A SERIES
 UNDER THE TITLE
 BELLINGHAM COUNTY
 BELLINGHAM - BIRCHMOUNT
**LAKE WHATCOM
 TOPOLOGY**

<small>DRAWN BY</small> _____	<small>TECHNICAL APPROVAL</small> _____
<small>CHECKED BY</small> _____	<small>APPROVED</small> _____
<small>Drawn Map</small>	
<small>Denver, Colorado JUL 05, 2001</small>	<small>5</small>

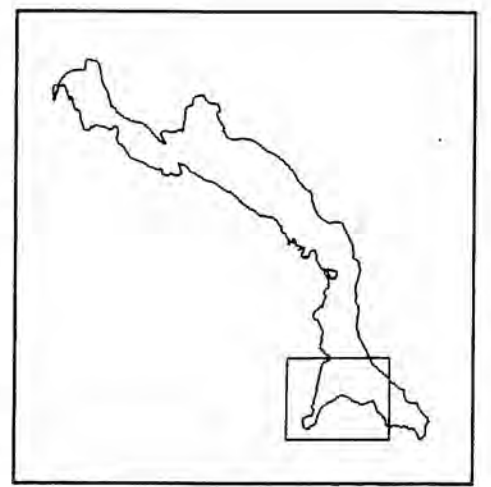
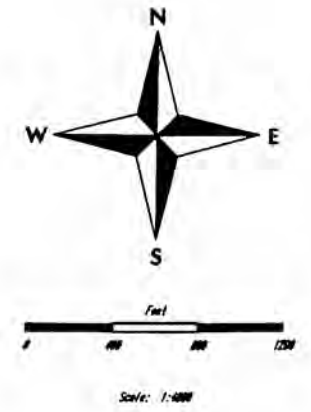
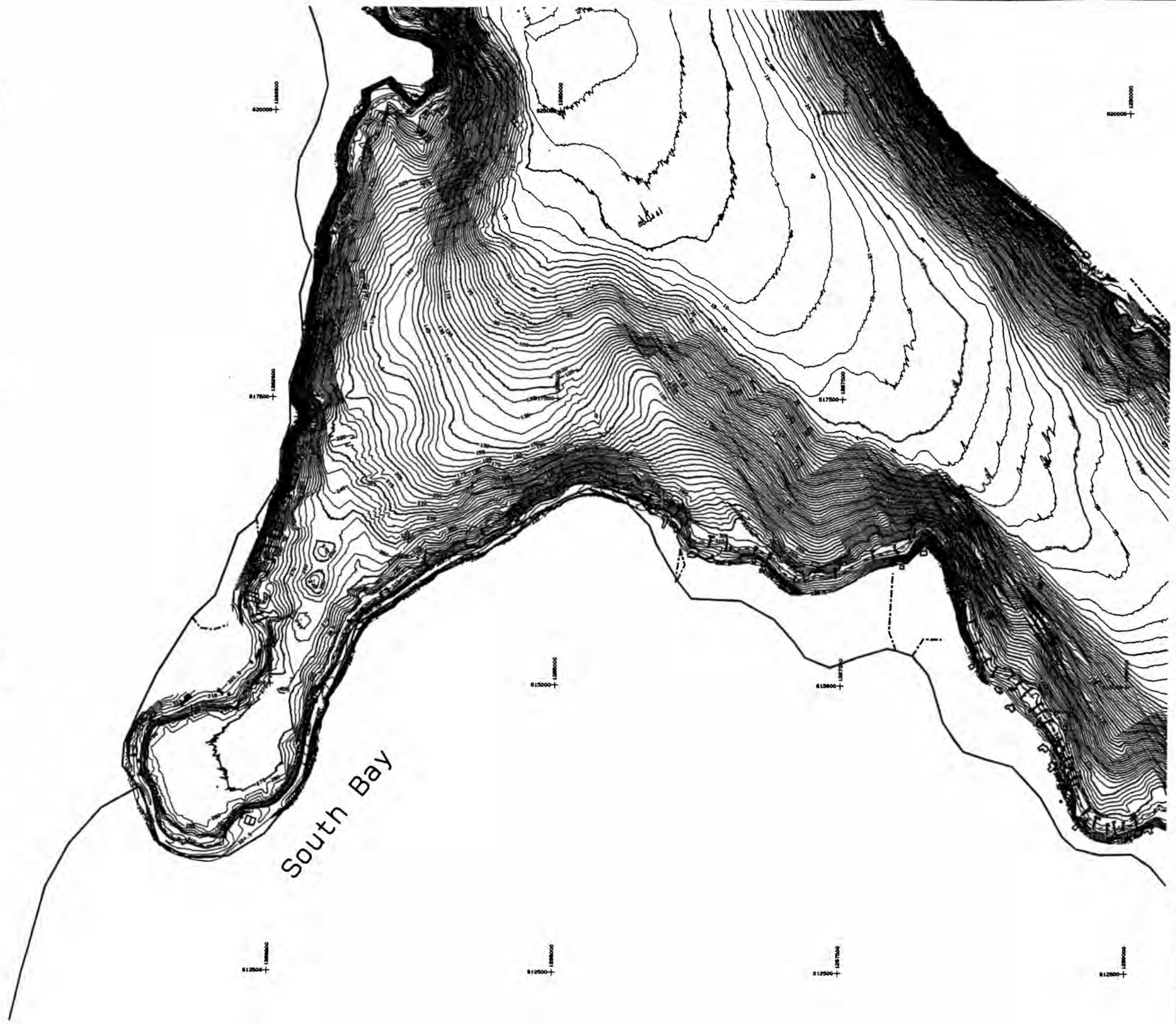
Figure 5. - Lake Whatcom topographic map, No. 5.



Vertical datum based on City of Bellingham datum estimated to be 2.5 feet greater than the North American Vertical Datum of 1988. Dashed line is water surface elevation 311.0 at time of aerial survey (11/02/2000). Two-foot contours from elevation 312.5 and above generated from aerial survey contract. Five-foot contours from elevation 310.0 and below were generated from 7/1999 underwater survey data.

Horizontal datum based on Washington's State Plane Coordinate System, North Zone (NAD83).

Figure 6. - Lake Whatcom topographic map, No. 6.



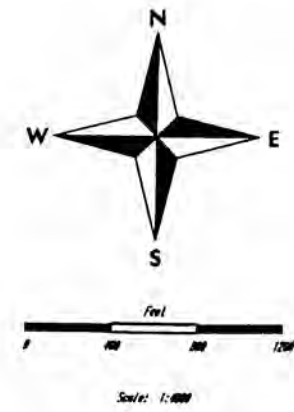
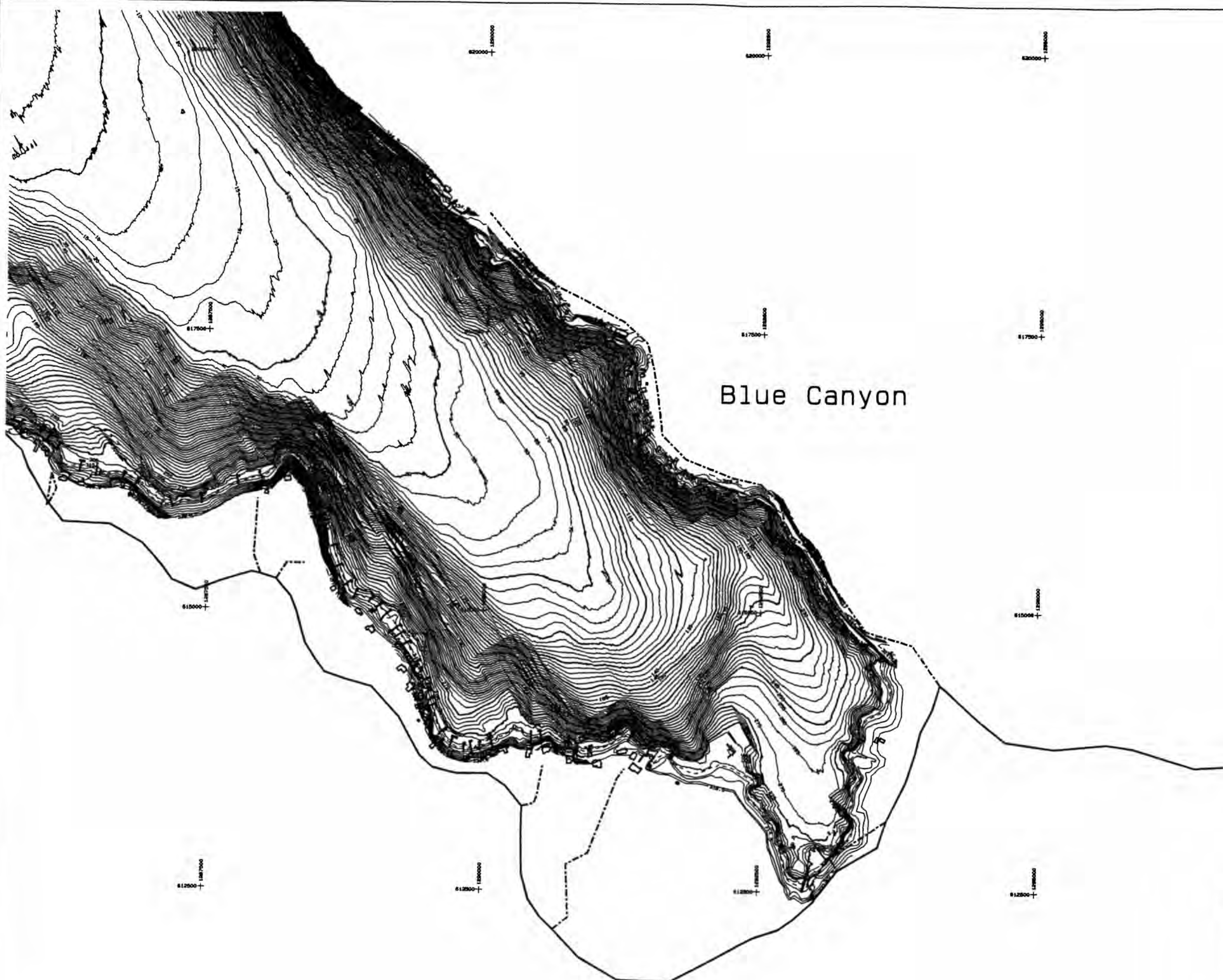
Vertical datum based on City of Bellingham datum estimated to be 2.5 feet greater than the North American Vertical Datum of 1988. Dash line is water surface elevation 311.0 at time of aerial survey (11/02/2000). Two-foot contours from elevation 312.5 and above generated from aerial survey contract. Five-foot contours from elevation 310.0 and below were generated from 7/1999 underwater survey data.

Horizontal datum based on Washington's State Plane Coordinate System, North Zone (NAD83).

WASH STATE
 DEPARTMENT OF WATER
 DIVISION OF WATERWAYS
 WASHINGTON COUNTY
 HULL, WASHINGTON - BELLINGHAM
LAKE WHATCOM
 TOPOLOGY

DRAWN BY _____	TECHNICAL APPROVAL _____
CHECKED BY _____	APPROVED _____
	<i>Map Manager</i>
Denver, Colorado JUL 05, 2001	7

Figure 7. Lake Whatcom topographic map, No. 7.



Vertical datum based on City of Bellingham datum estimated to be 2.5 feet greater than the North American Vertical Datum of 1985. Dash line is water surface elevation 311.0 at time of aerial survey (11/02/2000). Two-foot contours from elevation 312.5 and above generated from aerial survey contract. Five-foot contours from elevation 310.0 and below were generated from 7/1999 underwater survey data.

Horizontal datum based on Washington's State Plane Coordinate System, North Zone (NAD83).

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 ENGINEER & ARCHITECT
 1000 1ST AVENUE
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**LAKE WHATCOM
 TOPOLOGY**

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 CHECKED BY _____ APPROVED _____
Group Manager

Denver, Colorado JUL 06, 2001 | 8

Figure 8. - Lake Whatcom topographic map, No. 8.

Area-Capacity Curves for Lake Whatcom

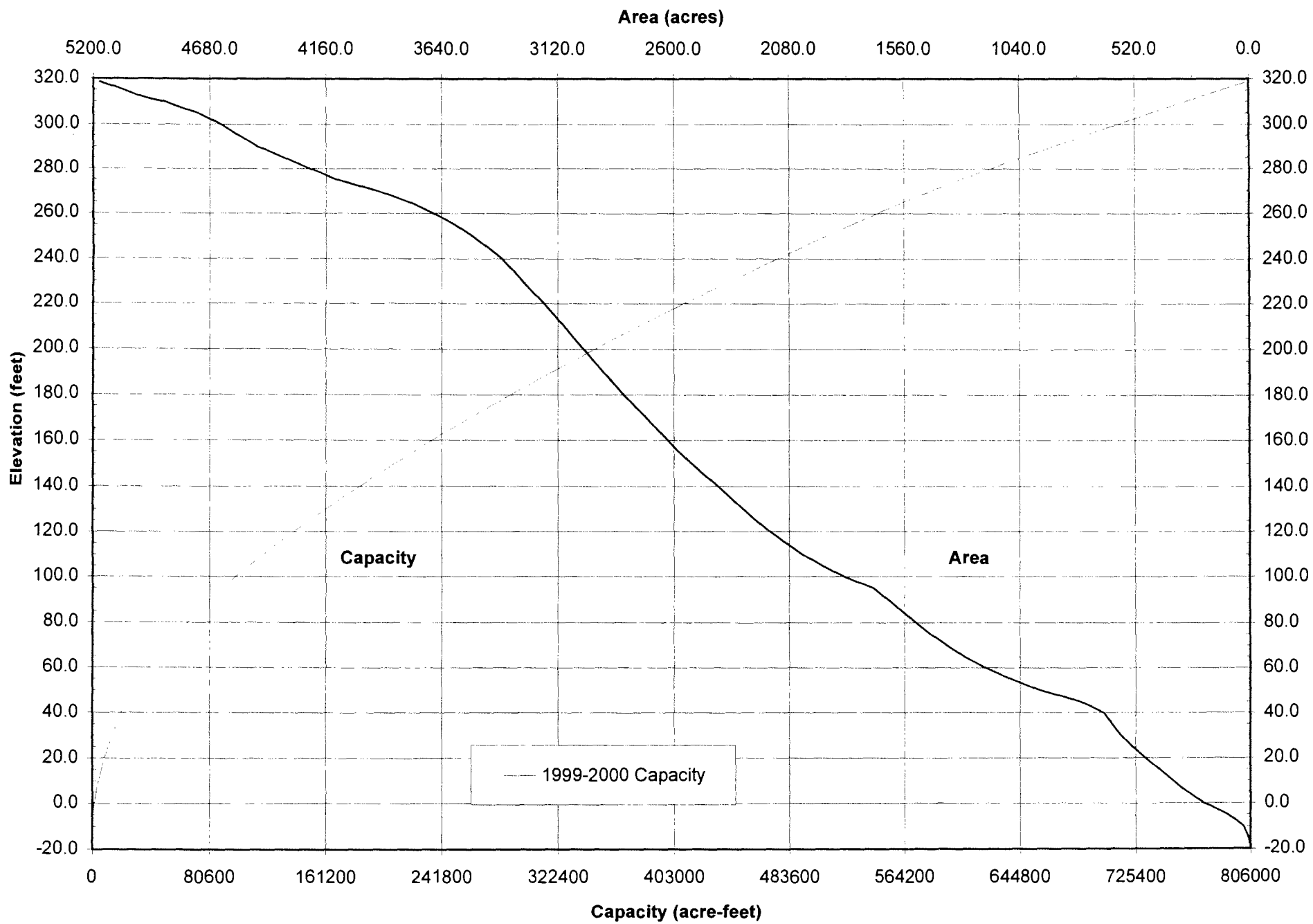


Figure 9. - 1999 - 2000 area and capacity curves.