

APPENDIX D

WATER SYSTEM DATA

SUMMARY OF CLASS ONE WATER PURVEYORS

TABLE D-1, PAGE 1 OF 6
DATA COMPILED 12/87

Water System Name Township/Range	Description	Approved Comp. System Plan	Service Information			System Facilities							Comments	
			Services	Population (see note)	Potential Services	Source	Available Supply (gpm)	Storage (thousand gallons)	Distribution	Fire Flow	Certified Operator	Water Treatment		Future Expansion
1. Admiral's Cove T31N, R1E S24	Owned by Admiral's Cove Inc. Platted development on Whidbey Island.	no	171	325	Unk. Pot. Services 821 lots	G-195 ft. G-201 ft.	312 234	49 (S)	4",6",8"	yes	no	Cl	no	Expansion will be limited to connections to the existing system. Many lots probably will not be developed because of failing perc. tests. Further development in area will probably be limited by Naval jet training strip nearby. Only one other small water system nearby.
2. Ault Field T33W, R1E	System Serves the Naval Air Station Polnell Pt., OLF and the Sea Plane Base near Oak Harbor	no	1400	8,000	Unk.	Purchase (Oak Harbor) 5 wells	335	6,800 (C)	Up to 18"	yes	temp	Cl, Fl	yes	The system will expand within the boundaries of the Naval Station only. It will not supply water outside of the boundaries. If necessary, right of way may be available to extend utilities through the base.
3. Bayview Beach Water District, Systems #1 and #2 T29N, R2E S18 & 24	Located on Useless Bay in south Whidbey Is. Two separate water systems under the same management.	1985	#1 99 #2 98	300 300	98 150	G-146 ft. G-167 ft.	150 200	78 (C) 120 (C)	6",8" 4",6",8"	yes yes	not required	none none	no no	Growth for the system on the beach is limited by geographical constraints. To the west is Double Bluff, a very steep hill. To the north is marsh, unsuitable for development. The second system, on the north side of Deer Lagoon, will support additional connections. No plans for future service area, but possibly to the north side of Hwy 525. Several small systems to the east with potential for coordination.
4. Camaloch Assn. T32N, R3E S30	Community owned system in platted development. On Camano Island.	no	210	560	Unk. Pot. Services 460 lots	G-223 ft. G-230 ft. G-230 ft.	190 420 420	115	4"	no	yes	Cl	no	The system is completely installed as is. The contact people feel that the community has no interest in external management nor are they interested in being a water purveyor. Fire flow limited by line size.
5. Camano Co-op Water & Power Co. T31N, R2E S14	Cooperative water system on west side of Camano Island. Present system dates back to 1957.	1974	187 (P) 150 (T)	500 (P) 400 (T)	450	46 Shallow wells, 6 to 22 ft. G-318 ft.	265	100 (C) 30 (C) 40 (C)	4",6"	no	no	Cl	yes	Fire flow limited by primary 4" mains. Some 2" fire risers exist. Expansion of mains would be limited to areas serviceable by gravity only. Recently, acquired Lost Meadows water system. Deep well not in service yet. Plans for new storage in 100,000 gal range or greater. Future improvements will upgrade exist sytem to standards. Potential for coordination with Camano City and Onanac water systems. New well and storage will add to potential connections. Revised hydraulic studies have been performed and approved by the DSHS for new additions. Maintaining sufficient pressure in some areas is a problem.
6. Camano Island State Park T31N, R2E S36	State Park on south west side of Camano Island, system dates to early 60's	no	4 (P)	6 (P) Up to 3,500/month (T)	Unk.	G-198 ft. G-220 ft.	Unk. Unk.	12	Unk.	Unk.	yes	none	no	This State park, like others in Island Co., does not anticipate immediate growth. Water service is provided primarily at hose bibs to campers. Any improvements or upgrades would be financed by Washington State. The system is not capable of providing water outside the park.

TABLE D-1, PAGE 2 OF 6
DATA COMPILED 12/87

Water System Name Township/Range	Description	Approved Comp. System Plan	Service Information			System Facilities							Comments	
			Services	Population (see note)	Potential Services	Source	Available Supply (gpm)	Storage (thousand gallons)	Distribution	Fire Flow	Certified Operator	Water Treatment		Future Expansion
7. Camano Water Assn. T31N, R3E S19,29,30	Large development water system on east side of Camano Island. Community owned	no	400	1,100	Unk.	G-207 ft. G-118 ft. G-238 ft. G-372 ft. G-327 ft.	125 36 20 70 95	100 (C) 80 (C) 80 (C) 40 (C) 20 (C)	4",6"	yes	temp	none	yes	Well capacities reported lower than DSHS records. One supposedly suffered damage to well screen. Expansion of system will be into areas within the boundary of the development. Some areas have mains too small for required fireflow. Smallest reservoir is not used. System in good condition. Possible to serve other areas. The community prepared a comprehensive water system plan in 1985 but it was not submitted to DSHS for approval.
8. Clinton Water District T29N, R3E S25	Water district serving area adjacent to S. Whidbey Is. ferry terminal.	1975	491	1,050	Unk.	G-135 ft. G-100 ft. G-250 ft. G-90 ft. G-100 ft.	85 85 85 50 85	100 (R) 100 (R)	2"-8"	yes	yes	none	yes	Some areas are still served by 2" lines which are insufficient for fire flow. These are to be upgraded in the future.
9. Town of Coupeville T32N, R1E S33 & 34	Municipal water system located in central Whidbey Island, dates to 1920's	1981	670	2,500	Unk.	G-30 ft. G-215 ft. G-210 ft.	95 200 30	500 (S) 500 (B)	4"-12"	yes	yes	Cl soft	yes	The system anticipates growth and expanding service to areas adjacent to the city limits. The system has been upgraded over time. Fire flow does not meet county standards in some areas. The electrolysis treatment plant is currently operating only during times of high water demand. The operational costs are relatively expensive.
10. Crockett Lake Water District T31N, R1E S14	Water district in small development south of Coupeville.	1987	115	300	115	G-204 ft. G-204 ft.	53 65	40	2-1/2", 4"	no	temp	Cl	no	Plan for upgrading system approved in May of 1987. Plans include new 45,000 gal tank, upgrade pressure system and install meters at connections. The area is under a building moratorium until the upgrades are completed. Construction expected in the spring of 1988.
11. Crosswoods Water Co T32N, R1E S3	Small development west of Oak Harbor	no	127	425	150	G-177 ft. G-177 ft.	55 45	43	6"	yes	no	none	no	It is intended that the system will annex to Oak Harbor and then receive supply from the City. There is no plan to expand the service. The system appears well designed.
12. Deception Pass State Park T34N, R1E S35	State Park at north end of Whidbey Island	no	1	2 (P) Up to 25,000/month (T)	Unk.	Purchase (Oak Harbor) G-175 ft.	25	20	6"	Unk.	yes	none	no	No immediate plans for expansion. If purchased water from Oak Harbor is extended to Cornet Bay the existing well would be abandoned. The park area on the west side of Hwy 20 is served by water from Oak Harbor transmission lines.
13. Driftwood Hts. Assn., Driftwood Hts. Assn. #2, Camano Sunrise Water System, Green Island Water System T31N, R2E S12	Small water systems intertied on Camano Island	no no no no	86 4 33 25	215 10 66 75	100 25 90 110	G-190 ft. G-188 ft. G-212 ft. G-152 ft. G-554 ft.	160 25 70 25 100	80 85 80	4" 6" Unk. 4",6"	no yes Unk. yes	not required not required not required not required	none none none none	no no no no	These systems are particularly significant in that they are all intertied together. Each one operates independently. The most recent, DH #2, meets all design standards and provides adequate fireflow. DH #1 has experienced some problems with pressure. The water quality for all the systems has been described as good.

D-2

TABLE D-1, PAGE 3 OF 6
DATA COMPILED 12/87

Water System Name Township/Range	Description	Approved Comp. System Plan	Service Information			System Facilities							Comments	
			Services	Population (see note)	Potential Services	Source	Available Supply (gpm)	Storage (thousand gallons)	Distribution	Fire Flow	Certified Operator	Water Treatment		Future Expansion
14. Dugualla Community Association T33N, R2E S17	Located north east of Ault Field on Dugualla Bay	no	160	400	260	G-56 ft. G-56 ft.	260 160	22 (C) 40 (C) 105 (C)	6"	yes	yes	none	no	Expansion limited to additional connections on existing system. Growth at 1-5 homes a year. The community is isolated from other systems making interties difficult. Appears to be a well designed system with adequate supply and storage. The Island County Health Dept. has noted some problems with pressure and water quality. Further investigation will determine specific problems.
15. Fort Ebey State Park T32N, R1W S36	State Park located west of Coupeville.	no	1	4 (P) Up to 2,000/month (T)	Unk.	G-210 ft.	14	20	Unk.	Unk.	yes	none	no	The well is suspected of salt water intrusion. An increase in service may require another source.
16. Fort Casey State Park T31N, R1E S22	State Park located east of Coupeville.	no	2	6 (P) Up to 5,000/month (T)	Unk.	Purchase (Coupeville)			4", 6"	yes	yes	none	no	The system will probably not expand. There will be system upgrades as required.
17. Freeland Water District T29N, R2E S10	Growing water district in south Whidbey Is., dates back to 1964	1981	275	700	Unk.	G-240 ft. G-200 ft.	140 130	100 (R)	6"-10"	yes	temp	none	yes	The system is prepared to expand. Mains extend into currently undeveloped areas. Additional future improvements include additional storage, further extension of mains to loop system and add additional service area.
18. Hillcrest Village Water Co. Inc. T33N, R1E S33	Development west of Oak Harbor	no	280	750	Unk.	G-226 ft. G-226 ft. G-220 ft. G-220 ft.	70 70 90 90	72	4"	no	yes	Cl	no	The system is switching to a new operator. The hope is that the area will eventually be annexed to Oak Harbor which would then supply the water. The system does have fire hydrants but flow is limited by the small mains.
19. Lagoon Point Water District T30N, R3E S11	Large development on Admiralty Inlet. Existing dates to 1970	1970	130 (P) 155 (T)	187 (P) 325 (T)	525	4 wells	360	128 (S)	4", 6", 8"	yes	yes	none	no	The system appears to be well planned and designed. The wells appear to produce a good quantity and quality of water. Plans for a 300,000 gallon reservoir on the ridge east of the system. The reservoir would provide backup and additional storage for the existing system. There are no plans to expand the existing service area. It is proposed to finance the tank with a general obligation bond. There are concerns about the extent of the aquifer. Good potential for expansion and coordination with adjacent area especially if new reservoir is built. Currently, the system is isolated from other water systems. All connections metered. Comprehensive water plan prepared in 1970.
20. City of Langley T30N, R3E S34	Municipal water system in S. Whidbey	1980	600	1,600	Unk.	G-50 ft. G-50 ft. G-270 ft. G	90 40 200 500	275	Unk.	yes	yes	none	yes	The city would like to extend the water service area with annexation. This may not be feasible in all cases. The new well will provide adequate supply to the city and future service area.

TABLE D-1, PAGE 4 OF 6
DATA COMPILED 12/87

Water System Name Township/Range	Description	Approved Comp. System Plan	Service Information			System Facilities							Comments	
			Services	Population (see note)	Potential Services	Source	Available Supply (gpm)	Storage (thousand gallons)	Distribution	Fire Flow	Certified Operator	Water Treatment		Future Expansion
21. Ledgeswood Water District T31N, R2E S10	Water district in central Whidbey, system dates to 60's, district formed 1980	1985	93	340	200	G-232 ft. G-315 ft.	33 18	17 (C) 28 (C)	1.5"-6"	no	not required	none	no	There are plans for additional storage capacity. Upgrades for the system are financed by Local Improvement District (LID). Currently, small diameter existing pipe is being replaced with 6". The system upgrades will provide fire flow. Potential for cooperation and interties with neighboring systems.
22. Madrone Beach Community Water System T31N, R2E S34	Community owned system on the east side of Camano Island	no	156	375	Unk.	G-471 ft. G-500 ft.	105 95	150 (C)	3"-8"	yes	yes	Cl	no	The system has been upgraded over the last 10 years. It appears in good condition. 500 ft. maximum distance to a fire hydrant. The system was reported to meet fire flow requirements. Plans for an emergency intertie with neighboring water system. Well capacities and number reported differ from DSHS records.
23. New Utsalady Water System Inc. T32N, R3E S19	Development in north Camano Is., dates back to late 1950's	no	56 (P) 54 (T)	120 (P) 160 (T)	124	G-134 ft. G-56 ft.	61 4	22 (C) 13 (C)	4", 6"	no	not required	none	no	The area is fairly well developed. A third well was to have been drilled recently for additional supply. Other future improvements planned include a new 76,000 gallon reservoir and new mains parallel to existing lines to loop and provide fire flow. Several other water systems in the area with good potential for coordination. Possible interest in operations, management and acquisition.
24. North Whidbey Water District T34N, R1E S35	Small water district located just south of Deception Pass, dates to the 1970's	Unk.	5	20 (P) Up to 200/mon. (T)	10	Purchase (Oak Harbor)		none	6"	yes	not required	none	yes	Presently, a Class 3 system. Expanding the system would require storage facilities. Several areas in North Whidbey could be served by the District. No immediate plans for expansion but interested in expanding service. Meter at the main connection and meters at all individual connections. Two 2" connections at the supply line at 130 psi. Storage would be required for additional services.
25. Northgate Terrace Water System T33N, R1E S11	Located north of Ault Field. System installed in 1970.	no	206	650	274	G-171 ft. G-230 ft.	140 140	80 (C)	4"	no	yes	Cl	no	There are no plans for extending the current service area. Connections have been made however beyond the existing plan filed with DSHS. Fire flow is limited by line sizes. Located adjacent to Oak Harbor supply lines but are not currently connected.
26. Oak Harbor T32N, R1E	Large municipal water system.	1988	3000	14,000	Unk.	Purchase (Anacortes) G-250 ft. G-245 ft. G-160 ft.	1,900 180 180 180	2,000 (S) 500 (S) 500 (S)	2"-24"	yes	yes	Cl, Fl	yes	The proposed service area will extend into area west and south of the city. Fire flow does not meet standards in some areas.
27. Parkwood Manor Mobil Home Park T33N, R1E S34	Serves mobil home park on north side of Oak Harbor service area.	no	198	530	198	G-192 ft. G-192 ft.	60 60	80	2", 4"	no	yes	none	no	This system is completely developed with no plans for expansion. Has no fire flow. There are no plans for connecting with the Oak Harbor water system. There is some discrepancy between the reported well capabilities and DSHS records.

TABLE D-1, PAGE 5 OF 6
DATA COMPILED 12/87

Water System Name Township/Range	Description	Approved Comp. System Plan	Service Information			System Facilities								Comments
			Services	Population (see note)	Potential Services	Source	Available Supply (gpm)	Storage (thousand gallons)	Distribution	Fire Flow	Certified Operator	Water Treatment	Future Expansion	
28. Penn Cove Water District T32N, R1E S22	Water district that serves a development on the north side of Penn Cove.	Unk.	161	500	Unk.	G-180 ft. G-180 ft.	150 150	80	4", 6"	yes	yes	soft	no	This is a gravity system with exception of one small area. It appears to be in need of upgrade to the existing system. The area is almost completely developed. The wells can not be operated at the same time for extended periods because they lie in the same aquifer and are very close to each other. Large amounts of salts are used to soften the water.
29. Rolling Hills Glencairn T32N, R1E S20	Water district that serves a development on the north side of Penn Cove. Dates to 1960 with system upgrades.	no	230	450	Unk.	G-185 ft. G-265 ft.	115 115	125 (C) 65	4"	no	yes	Cl soft	no	There are 2 in. fire risers but flow is limited by main sizes. The mains need replacement. There is possible interest in outside acquisition, management and operation. There is also interest in receiving off island water if extended from Oak Harbor
30. Sandy Hook Yacht Club Estates T28N, R3E S14	Community owned system in platted development. Future expansion limited to additional services on existing system.	no	88 (P) 69 (T)	200 (P) 300 (T)	165 269 lots	G-450 ft.	182	130 (C)	4"-8"	yes	no	none	no	The system depends on a single deep well with a long history of good production. The contact person felt the community has no interest in supplying other areas with water through expansion or intertie. Fireflow is limited by fire standpipes.
31. Saratoga Water Inc. T30N, R3E S19	Water system serving development in South Whidbey	no	155	414	155	G-164 ft. G-164 ft.	30 30	40	Unk.	Unk.	no	none	Unk.	The system is under a building moratorium until the system is upgraded to the approval of the DSHS. One well was not approved by the DSHS. The system is described by the DSHS as "seriously inadequate" to serve the existing connections. Information based on DSHS and Island Co. Health Dept. records. System upgrades are supposedly under design; the owner and engineer were unavailable for comment.
32. Scatchet Head Water Dist. T28N, R3E S15	Water district in S. Whidbey Island on Cultus Bay	1978	163	435	Unk. Pot. Services 232 meters 492 lots	G-272 ft. G-100 ft.	300 125	300	2", 4", 6"	yes	yes	Cl	no	The district is still developing and adding new connections. 492 lots total but many will not perc. There is inconsistency with the large well capability reported and the DSHS records. Small well used only for back up. Salt water intrusion suspected in small well. Little interest in extending the district boundary.
33. Sea View Water Co. T32N, R1E S7	Privately owned system in small platted development.	no	135	330	210	G 274 ft. G 274 ft. G 288 ft.	80 80 100	30 (C) 30 (C)	4"	no	yes	filter	yes	Fireflow is limited by line size. There are 20 acres on the north east side of the service area that the owner would like to develop in the next five years. The expansion would be privately financed. There is an emergency intertie with Whidbey West water system.
34. Sierra Country Club Inc. T32N, R1W S25	Community owned system in development on west side of Whidbey Is.	no	130	300	160	G-315 ft. G	90	81 (C)	4", 6"	yes	temp	Cl Soft	no	This system has particularly poor water quality. The Mn and Fe concentrations are high and there are indications of salt water intrusion. The County Health Dept. and the DSHS are monitoring the quality and regulating new construction. Fire hydrants exist but the actual fire flow capabilities are not known. Storage is somewhat limited. Change in ownership, management or operation possible. Interest in of island water if extended from Oak Harbor. Not interested in supplying water to others.

D-5

TABLE D-1, PAGE 6 OF 6
DATA COMPILED 12/87

Water System Name Township/Range	Description	Approved Comp. System Plan	Service Information			System Facilities					Certified Operator	Water Treatment	Future Expansion	Comments
			Services	Population (see note)	Potential Services	Source	Available Supply (gpm)	Storage (thousand gallons)	Distribution	Fire Flow				
35. Silver Lake Water Co. T33N, R2E S34	Corporation owned system in NE Whidbey Is., dates to 70's	no	98	400	234	G-350 ft. G-333 ft.	50 50	50 (C) 50 (C)	4", 6"	yes	not required	sequestering	no	There are no plans to extend the service area. The majority of the service area is undeveloped with the mains readily accessible for connection. Other storage facilities will be added as required. Intertie supplies water to Polnell Hts. Water Assn. during some parts of the year. The wells and all connections are metered. Potential for coordination with other systems.
36. South Whidbey State Park T30N, R2E S29	State Park in SW Whidbey Island	no	1	4 (P) Up to 3,000/mon. (T)	Unk.	G-358 ft.	19	Unk.	Unk.	Unk.	yes	none	no	This park serves somewhat as an overflow for the other two parks on Whidbey Island. There are no plans to expand the service. The system is isolated neighboring systems.
37. W & B Waterworks # 1 T29N, R2E S22	Privately owned water system. Serves developments in S. Whidbey.	no	200	535	350	G-280 ft. G-300 ft. G-280 ft. G-264 ft.	75 50 75 25	50 (C) 50 (C)	4", 6", 8"	yes	yes	none	yes	The owner has extended mains into areas previously served by other water systems. Would like to extend service to other areas that can be supplied by gravity flow. Potential for upgrading supply sources and supplying a larger area. Any expansions of the system would be privately financed or assessed to the individuals receiving the future service.
38. Whidbey West Water System T33N, R1E S32	Private owner. Combination of four water systems on west side of Whidbey Island.	no	128	340	Unk.	G-100 ft. G-75 ft. G-206 ft. G-337 ft.	50 50 132 52	50 (C) 6 (C) 40 (C)	2", 4", 6"	yes	no	none	yes	These four systems have been intertied but it appears that they operate somewhat independently. Fire flow is limited to only the newer developments. Upgrades needed for the area on West Beach.

Legend

C	Concrete Reservoir	G-115 ft.	Groundwater-Depth of well	soft	Water softening
S	Steel Reservoir	Unk.	Unknown	B	Below Ground Reservoir
R	Redwood Reservoir	Cl	Chlorine	temp	Temporary Certified
P	Permanent Customers	T	Temporary or Seasonal Customers		System Operator

Notes

If the population served was not available, a service was assumed to be one household with 2.67 people per household. Based on 1980 Census data for Island County.

D-9

TABLE D - 2
PAGE 3 OF 4

Water System Name	Water Rights (Instantaneous gpm/ Annual Acre-ft/yr)	Water Rights (Average gpd from Annual total)	1986		1985		1984		1983		1982	
			Average Day (gpd)	Maximum Day (gpd)	Average Day (gpd)	Maximum Day (gpd)	Average Day (gpd)	Maximum Day (gpd)	Average Day (gpd)	Maximum Day (gpd)	Average Day (gpd)	Maximum Day (gpd)
26. Oak Harbor (M)	C-1030/1650 P-1060/1696	1,473,000 1,514,000	1,100,439	2,647,700	1,164,553	2,535,200	1,078,028	2,511,200	982,514	1,988,800	905,639	2,142,900
27. Parkwood Manor Mobil Home Park (E)	C-50/80	71,500	30,000	64,000	30,000	64,000	30,000	64,000	30,000	64,000	30,000	64,000
28. Penn Cove Water District (M, E)	C-100/160	143,000	44,000	110,000	44,000	110,000	44,000	110,000	44,000	110,000	43,000	108,000
29. Rolling Hills Glencairn (E)	C-115/184	164,000	45,000	115,000	43,000	108,000	41,000	103,000	39,000	98,000	37,000	93,000
30. Sandy Hook Yacht Club Estates (E)	Unk.		57,000	95,000	57,000	95,000	57,000	95,000	55,000	85,000	55,000	85,000
31. Saratoga Water Inc. (E)	Unk.		15,000	38,000	15,000	38,000	14,000	35,000	14,000	35,000	14,000	35,000
32. Scatchet Head Water Dist. (E)	C-215/241	215,000	29,000	71,000	27,000	67,000	26,000	65,000	24,500	61,000	24,000	60,000
33. Sea View Water Co. (M)	C-100/65 A-120	58,000	33,000	67,000								
34. Sierra Country Club Inc. (E)	C-95/150	134,000	30,000	50,000								
35. Silverlake Water Co. (E)	C-75/108 C-75/60	96,400 53,500	29,500	74,000	29,500	74,000	28,000	70,000	28,000	70,000	27,000	68,000
36. South Whidbey State Park	C-18/10	8,900										
37. W & B Waterworks # 1 (E)	C-225/105	93,700	29,000	72,000	29,000	72,000	26,000	65,000	23,000	58,000	23,000	58,000

TABLE D - 2
PAGE 4 OF 4

Water System Name	Water Rights (Instantaneous gpm/ Annual Acre-ft/yr)	Water Rights (Average gpd from Annual total)	1986		1985		1984		1983		1982	
			Average Day (gpd)	Maximum Day (gpd)	Average Day (gpd)	Maximum Day (gpd)	Average Day (gpd)	Maximum Day (gpd)	Average Day (gpd)	Maximum Day (gpd)	Average Day (gpd)	Maximum Day (gpd)
38. Whidbey West Water System (R)	C-130/34 A-150	30,000	34,000	85,000								

Legend

- E Estimated by water system personnel, Island Co. Health Dept. data or from DSHS information
- M Metered
- R - Estimated by R.W. Beck, 100 gpcd average, 250 gpcd maximum
- C Certificated Water Right
- P Permitted Water Right
- A Application for Water Right

D-10