

Division of Geological & Geophysical Surveys

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SUMMARY OF WATER-USE DATA IN ALASKA, 1991

By

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INTRODUCTION

by William A. Petrik¹ and Richard S. Noll²

Alaska contains more than 40 percent of the nation's surface water resources, with the three main rivers among the ten largest in the United States. Large amounts of water are stored in over three million lakes ranging in area from pond size, to about 1,000 square miles (USGS Water Supply Paper 2350, 1987). The use of these resources require good data collection and management. Data on water use is currently being collected by the Department of Natural Resources, Division of Water (DOW) and the United States Geological Survey (USGS).

Water-use data in Alaska are useful for conducting water resources investigations, planning, adjudicating water rights, and facilitating sound economic development. The Alaska Water-Use Data System (AKWUDS), operated by the DOW, collects, stores, evaluates, and distributes these data. DOW cooperates closely with the USGS in operating AKWUDS.

The goals of AKWUDS are to: 1) establish and operate a statewide site-specific water-use database for most types of water use in Alaska; 2) to coordinate with other water-use databases; and 3) and to publish yearly water-use data. This report presents site-specific data reported from 172 active water-use take points in Alaska for calendar year 1991 (Appendix A). This is a decrease of 35 take points over 1989 data. The total water use for the 172 points was 145,051 million gallons (MG). The water-use data were collected from 18 different categories (Appendix B) as defined by the Standard Industrial Classification (SIC) Code list (Appendix C). Public-water supplied by 47 private or municipal agencies accounted for 54 percent of the water-use data points contained in this report, and accounted for 13 percent of the total water used. Hydrocarbon development (crude petroleum and natural gas related use) supplied 31 water-use data points (18 percent), but accounted for less than one percent of the total water use. Hydroelectric facilities only supplied eight water-use data points, but accounted for 74 percent of the water use. Other data in water-use categories such as agricultural, commercial, or industrial water supply are limited because such use is covered by municipalities or is not reported. This report also describes the location and accessibility of other publicly-available water-use data in Alaska.

LOCATION OF ALASKAN WATER-USE DATA

Statewide summaries of water use in Alaska are published at 5-year intervals by the USGS (U.S. Geological Survey, 1983, 1985). These summaries include both reported data and estimates for all types of water use in the state. The Alaska Oil and Gas Conservation Commission (AOGCC) Bulletin is a monthly publication which has summaries of all oil, gas, and water production (including injection wells) serving the oil and gas industry in Alaska. This information is available from the early 1960's to the present, encompassing virtually the entire history of oil and gas production in Alaska. Annual summaries appear in the February issues. The oil and gas related water-use data that appear in this report are collected from sources other than the AOGCC Bulletin. They are compiled from water rights related reports.

Hydroelectric power generation water-use data are also available from facilities in Alaska. The Alaska Energy Administration and the Alaska Power Authority have water-use data available in manual files for hydroelectric projects. The USGS publishes an annual report series entitled "Water Resources Data - Alaska" that contains hydroelectric power water use. The remainder of the hydroelectric water-use data was obtained directly from power plant managers.

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The DNR Division of Mining has water-use estimates available from approximately 500 active State placer mining claim applications per year. These claim applications are entered in the LAS mining subsystem and reviewed by DOW for water rights issuance. There are no reported mining water-use data in this summary. Most of the reliable water-use data for mining in Alaska is calculated as part of DOW's water rights adjudication process, based on the type of mining equipment used. Information on pending water rights applications can be obtained from the local Division of Water-Water Management section in Juneau, Anchorage, and Fairbanks.

Most water-use data in Alaska are obtained through the water rights system which is administered by DOW. Numerous water users are required to submit water-use data to DOW as a condition of their water-use permits. DOW maintains computer files of all water rights holders on a Land Administration System (LAS) database. LAS contains numerous databases of which the water rights and water-use subsystems are parts of. Water-use data have been entered in a separate, but related, working area of the LAS prior to 1990, and maintained by AKWUDS personnel.

A new personal computer (PC) based system is in the early development stage to replace the LAS for water-use data storage and retrieval. The LAS system has proven to be too slow and relatively inaccessible for database retrievals and manipulations. A PC database will be easily accessible and available for query by project managers and other personnel adept at database software manipulation.

DATA ACQUISITION

AKWUDS water-use data are acquired in three ways:

- 1) by obtaining photocopies of raw water-use records submitted to DOW;
- 2) by requesting monthly water-use data from selected water users through questionnaire packets mailed at the beginning of each calendar year; and
- 3) by telephone conversations requesting water-use information from individuals, businesses, or other government agencies.

The first method of obtaining water-use data makes effective use of existing data collection activities of DOW. DOW requires metered water-use records from water rights permittees using 30,000 gal/day of water or more. Water-rights permittees using between 500 gal/day and 30,000 gal/day of water may be required to submit water-use records at the discretion of the adjudicator (Petrik, 1990). The DNR produces a monthly printout which lists all permitted or certified water rights holders that are required to submit water-use data. This printout is used to determine which of these applicants have water-use records available in DOW's manual files and the potential to be used by AKWUDS.

The second method of collecting water-use data is by sending a questionnaire packet directly to the water user asking for voluntary submittal of water-use data. The questionnaire packet requests submittal of information on the type and location of water sources and historic water-use data not yet submitted. By mid-January of each calendar year all water-use questionnaire packets for that calendar year are mailed to selected communities of water users by AKWUDS staff. The questionnaire packets include 12 monthly water-use forms and 12 stamped self-addressed envelopes for use in returning water-use information to DOW during the calendar year. Criteria used to select water users to receive packets include: 1) they have received questionnaires in previous years; 2) they are a community with its own public water-supply system; or 3) they are in an area of hydrologic interest to the State.

A third method of obtaining water-use data is used if water-use data cannot be collected through DOW Water Management Section or the questionnaire packet. This method involves making personal contact by telephone or mail. Sometimes water-use information is more effectively obtained over the telephone because the feedback is immediate. When monthly water-use reports

are missing, or monthly water-use questionnaire mailers lost or delinquent, mail or telephone inquiries are made to fill these gaps in data.

DATA COLLECTION METHODS

Water-use data are collected through use of water meters, weir techniques, pumping rate and time measurements, and reservoir level change calculations. Data are usually collected at well heads or at inlets or outlets of storage tanks, or water or wastewater treatment facilities. Water use is most commonly recorded and reported monthly. For some systems, daily, quarterly, semi-annual, or annual reports are made.

DATA VERIFICATION AND STORAGE

During 1992, commercially-available spreadsheet computer software (LOTUS 1-2-3, by Lotus Development Corp.) was used to calculate calendar year 1991 monthly and yearly water-use averages. Reports that are extremely irregular are custom calculated. Results of data compiled on these spreadsheets are checked for obvious clerical or reporting errors and stored in the PC database as monthly totals. Additionally, information such as the number of days per month the data is available, location, water source, water rights number, and Alaska Department of Environmental Conservation (DEC) Public Water Supply Inventory (PWSI) number are entered. Data prior to 1990 are stored in LAS and are available to any LAS user familiar with water rights computer files. 1990 and 1991 data are PC based, and requests can be directed to the project manager or other personnel familiar with Lotus 1-2-3 or Microsoft Fox Pro database software.

An important feature of water-use data storage is the appropriate classification of types of water use. AKWUDS utilizes the Standard Industrial Classification (SIC) system, which is described by the U.S. Office of Management and Budget (1987) as follows:

The Standard Industrial Classification was developed for use in the classification of establishments by type of activity in which they are engaged; for purposes of facilitating the collection, tabulation, presentation, and analysis of data relating to establishments; and for promoting uniformity and comparability in the presentation of statistical data collected by various agencies of the United States government, State agencies, trade associations, and private research organizations. To be recognized as an industry, the group of establishments constituting the proposed classification must be statistically significant in the number of persons employed, the volume of business conducted, and other measures of economic activity.

The SIC system provides for the correlation of unique 4-digit codes to different types of business activities (Appendix C). These codes are assigned to each water user and entered into the AKWUDS database.

RESULTS

Table 1 summarizes types of reported water-use data in Alaska for 1991. In frequency, the dominant category is public water suppliers, representing data from all major communities in Alaska and many smaller ones from all geographic areas. Water-use data are available from a diverse array of water-using establishments.

A summary of data contained in this report is presented by facility in Appendix A. Appendix A provides a cross reference between commonly used facility names, water rights file numbers, and DEC PWSI identification numbers. Appendix B contains a complete data listing ordered by SIC code and facility name. Appendix B contains totals in million gallons and acre feet for each SIC code.

TABLE 1. Types of reported water-use in Alaska, 1991.

<u>SIC Category</u>	<u>Number of Sources</u>	<u>Percentage of Total Users</u>
Public Water Supply	93	54
Crude Petroleum and Natural Gas	31	18
Aquaculture	8	5
National Security	8	5
Hydroelectric Power	8	5
University and Secondary Schools	5	3
Fresh and Frozen Seafood	4	2
Chemical Refining	3	2
Petroleum Refining	2	1
Other	<u>9</u>	<u>5</u>
TOTAL	171	100

Total reported water use in Alaska, 1991, listed here was 145,051 MG. Hydroelectric power generation is the largest reported water use (Appendix B) in Alaska in 1991 (106,924 MG). Hydroelectric water usage varies seasonally as a result of low summer and high winter electrical demand patterns.

The second largest and most frequently reported use of water is public water supplies (18,774 MG), which is at least partly a result of the emphasis of the AKWUDS program to collect these types of data. To avoid confusion, it must be pointed out that DNR has not formally defined the meaning of a public water supplier. As part of water rights adjudication, DOW uses the criteria of five or more homes on a single water system to assign the SIC code 4941 for a public water supplier (Petrik, 1990). The SIC manual defines water supply as: "*Establishments primarily engaged in distributing water for sale for domestic, commercial, and industrial use.*" The DOW definition used in this report differs from the definition of a "public water system" used by SIC and DEC. DEC defines a public water system as:

...any source of water, intake works, collection system, treatment works, storage facility, or distribution system from which water is available for human consumption; the term includes, but is also not limited to, systems providing water to more than one residential dwelling unit, or to a factory, office building, restaurant, school or other similar facility, but does not include a system serving only a single-family residence. (Alaska Department of Environmental Conservation, 1982).

DEC lists 2,777 active public water systems in Alaska (K.L. Lindley, DEC, written commun., 1990). The large number (approximately 2,650) of public water systems not contained in this report are mostly relatively small systems. This illustrates, however, that even in a water-use category that has received emphasis from the AKWUDS program, a significant amount of water use may be unreported.

DISCUSSION

Water-use data reported here do not always accurately represent actual or complete water use in Alaska. Field verification by AKWUDS personnel of water-users' data collection procedures does not occur. Water meters are commonly uncalibrated, especially in smaller communities, and leaky water-supply lines occur. Many of the water users with large leakage problems are smaller communities with inadequate funding for maintenance and communities with shallow-buried water supply lines that are subject to freezing and bursting. Additionally, even though public water supplies are usually used year-round, data are partially missing for many sources listed in Appendix A and B.

As previously mentioned, this report does not describe all water use in Alaska in 1991. In addition to omitting data available elsewhere, water is estimated to have been used in Alaska in significantly greater quantities than are reported here for public water-supply, agriculture, seafood processing, manufacturing, and retail trade (U.S. Geological Survey, 1985). Considering all uses of water, the USGS (1985) estimated that 707,005 MG of water was used during 1985. Assuming that water use has not significantly changed between 1985 and 1991, this indicates that only approximately 21 percent of all water use is reported here.

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APPENDIX A

WATER-USE DATA IN ALASKA, 1991, ARRANGED BY FACILITY NAME

1991 Alaska Water Use Summary

A - 2

Facility Name	Water Source	File Number	DEC Inventory Number	Total (mil. gal.)	Days of Use	Million Gallons Per Day	SIC Code
ADFG Pillar Creek Fish Hatchery	Pillar Creek	LAS 7247		124.10	365	0.34	921
Alaska Electric Light & Power	Salmon Creek	ADL 45780		9,336.61	284	32.88	4911
Alaska Energy Authority	Solomon Gulch	ADL 67278	292666C	25,486.34	365	69.83	4911
	Tyee Lake	ADL 100887		14,687.83	365	40.24	4911
	Terror Lake	ADL 201559		29,787.10	365	81.61	4911
	Bradley Lake Camp Wells	LAS 2838		3.30	181	0.02	1629
Alaska Power & Telephone	Dewey Lake	LAS 12268		3,250.25	365	8.90	4911
Aleut Corp. - Midtown Estates	Well #2	LAS 2183	227204A	8.46	365	0.02	4941
Alyeska Pipeline Allison Creek	Allison Creek	LAS 11813	291944B	67.26	365	0.18	4612
Anchorage School District	Ravenwood Well	LAS 636		0.19	152	0.00	8211
Anchorage W. & Waste W.	Third Avenue, Well #3	ADL 44626	210930C	34.58	334	0.10	4941
	Commercial Dr., Well #4	ADL 44626	210948C	35.94	365	0.10	4941
	Creskide Park, Well #20	ADL 50906		0.47	242	0.00	4941
	Eagle River Hts. North, E.R. #4	ADL 51573		2.66	365	0.01	4941
	Chugach Foothills, Well #10A	ADL 54850	210980C	92.20	304	0.30	4941
	Chugach Foothills, Well # 11B	ADL 54850		91.52	273	0.34	4941
	Military #1, Well #25	ADL 62222		52.10	365	0.14	4941
	40th Ave & Denali, Well #7	ADL 65787	210956C	81.07	365	0.22	4941
	Centennial Park, Well #9	ADL 67201	210972C	50.09	303	0.17	4941
	ALAGCO Well, #35	ADL 201555		12.99	365	0.04	4941
	Service Hanshwn H. S., Well #29	ADL 201920	210087A	16.49	365	0.05	4941

1991 Alaska Water Use Summary

Facility Name	Water Source	File Number	DEC Inventory Number	Total (mil. gal.)	Days of Use	Million Gallons Per Day	SIC Code
	Spenard Builders, Well #38	ADL 201921		3.53	365	0.01	4941
	40th Ave. & B St, Well #12	ADL 202997		117.55	365	0.32	4941
	Huffman Hills, Well #31	ADL 203956		13.68	306	0.04	4941
	Eagle Crest, E.R. #8	ADL 209828		0.57	365	0.00	4941
	Spruce and E. 64th St., Well #13	LAS 246		150.60	337	0.45	4941
	Ship Creek	LAS 1051	210906A	4,201.52	365	11.51	4941
	Ekutna Lake	LAS 2569		3,691.30	365	10.11	4941
Atlantic Richfield Co. Alaska	Webster Reservoir	ADL 67781		93.16	365	0.26	1311
		LAS 12166		23.19	334	0.07	1311
		LAS 12167		7.49	122	0.06	1311
	Unnamed Lake	LAS 12168		2.17	154	0.01	1311
		LAS 12169		0.48	153	0.00	1311
		LAS 12170		0.17	30	0.01	1311
	Unnamed Lake	LAS 12172		0.76	123	0.01	1311
		LAS 12173		1.48	151	0.01	1311
		LAS 12174		6.55	214	0.03	1311
		LAS 12175		1.89	123	0.02	1311
		LAS 12176		0.37	123	0.00	1311
		LAS 12177		4.73	153	0.03	1311
		LAS 12178		0.51	123	0.00	1311
		LAS 12179		0.24	61	0.00	1311
		LAS 12180		0.04	30	0.00	1311
		LAS 12181		0.14	92	0.00	1311
	Pingo Lake	LAS 12182		6.47	214	0.03	1311
		LAS 12183		0.22	61	0.00	1311
		LAS 12184		2.40	123	0.02	1311
		LAS 12186		0.16	61	0.00	1311
		LAS 12187		0.24	61	0.00	1311
		LAS 12188		3.28	92	0.04	1311
B & J Ventures, Inc.	Well	LAS 780	213352A	3.99	365	0.01	4941

1991 Alaska Water Use Summary

Facility Name	Water Source	File Number	DEC Inventory Number	Total (mil. gal.)	Days of Use	Million Gallons Per Day	SIC Code
British Petroleum	Big Lake	ADL 66177	333013B	25.44	365	0.07	1311
	Kuparuk Reservoirs 1-3	ADL 75979		16.02	365	0.04	1311
	Kuparuk Reservoirs 4-5	ADL 75979		15.23	365	0.04	1311
	Endicott Access Rd.	LAS 2915	333487B	0.42	92	0.00	1311
	PUT 27 Mine site	LAS 6575		1.14	92	0.01	1311
	Patti Lake, Sag. Site C	LAS 7611		5.55	273	0.02	1311
	BOC J-Pad, CC-2	LAS 12329		6.65	92	0.07	1311
	H-Pad CSP	LAS 12390		2.75	92	0.03	1311
	DIU Pit #1	LAS 13290		1.43	183	0.01	1311
Chugach Electric	Cooper Lake	ADL 39886		17,559.01	334	52.57	4911
Chugiak Utilities	225' Well	ADL 74176	213001A	18.05	365	0.05	4941
Chugiak-Eagle River Industries	180' Well	LAS 1947		0.72	365	0.00	4941
Cordova Electric Cooperative	Humpback Creek	LAS 3445		6,815.33	214	31.85	4911
Craig, City of	Sunnahae Mt. Spring	ADL 62346	120193A	99.37	365	0.27	4941
Crestbrook Water Assc. Inc.	Well	ADL 206632	210867A	4.40	365	0.01	4941
Dillingham, City of	WTP	ADL 46054	260197A	41.45	365	0.11	4941
Eek, City of	Eek River	LAS 11320	270281A	0.47	365	0.00	4941

1991 Alaska Water Use Summary

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Facility Name	Water Source	File Number	DEC Inventory Number	Total (mil. gal.)	Days of Use	Million Gallons Per Day	SIC Code
Elim, Village of	Wellhouse	ADL 75895	340345A	7.64	365	0.02	4941
Eru, Inc.	2 Wells, 308' and 346'	LAS 1059	213289A	2.57	271	0.01	4941
Fairbanks, City of	Fire Well #3	ADL 53813	310730A	1,251.70	365	3.43	4941
	Well #1	ADL 53813	310730A	293.93	212	1.39	4941
	Well #3	ADL 53813	310730A	256.40	211	1.22	4941
Fort Yukon, Village of	Main Well	LAS 11321	360256A	6.01	365	0.02	4941
Grayling, Village of	29' Well	ADL 75980	280066A	5.00	365	0.01	4941
Hillside Park Subdivision	283' Well	LAS 9731	21246A	4.68	365	0.01	4941
Homer Electric Assoc.	Well	LAS 2530		1.33	188	0.01	4911
Homestead Apartments & Trailer Ct.	Homestead Creek	LAS 4070	120046A	17.23	365	0.05	4941
Inlet Salmon	Kenai Well	LAS 3024	241444B	8.62	365	0.02	2092
	Kasilof Well	LAS 12139	244177B	1.37	365	0.00	2092
	Naknek Well	LAS 12424	262292B	2.65	365	0.01	2092
Johnson Development	2-101' Wells	LAS 2082		0.52	365	0.00	6512

1991 Alaska Water Use Summary

Facility Name	Water Source	File Number	DEC Inventory Number	Total (mil. gal.)	Days of Use	Million Gallons Per Day	SIC Code
Juneau, City and Borough	8th St and wells	ADL 44439	110342A	1,005.53	365	2.75	4941
	Well #3	ADL 100066	110342A	78.40	365	0.21	4941
	New Salmon Creek Tailrace	LAS 1942	110342A	436.00	334	1.31	4941
Kasaan, City of	Linkum Creek	LAS 11329	120606A	9.04	356	0.03	4941
Kenai, City of	Well #1	ADL 53282	240448A	109.46	335	0.33	4941
	Well #2	ADL 53282	240448A	206.32	365	0.57	4941
King Cove, City of	Ram Creek	ADL 42595	260244A	126.37	365	0.35	4941
Kodiak, City of	Pillar Creek	ADL 39747	250011A	17.50	59	0.30	4941
	Monashka Creek	LAS 1145	250011A	2,155.30	365	5.90	4941
Kotzebue, City of	Devil's Lake, Vortac Reservoir	ADL 401827	340060A	107.21	365	0.29	4941
McGrath, City of	Kuskokwim River	LAS 696	280155A	12.09	365	0.03	4941
Nelbro Packing Co.	Naknek, 90' Well	LAS 11431	261240B	1.56	365	0.00	7021
Nome, City of	Moonlight Springs - Anvil Mt.	ADL 42993	340599A	3.46	365	0.01	9223
	Moonlight Springs - Beltz H.S.	ADL 42993	340638B	3.90	365	0.01	8211
	Moonlight Springs - FAA	ADL 42993		3.17	365	0.01	4583
	M.S. - National Guard Armory	ADL 42993		0.09	365	0.00	9711
	Moonlight Springs - WTP	ADL 42993	340010A	172.70	365	0.47	4941

1991 Alaska Water Use Summary

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Facility Name	Water Source	File Number	DEC Inventory Number	Total (mil. gal.)	Days of Use	Million Gallons Per Day	SIC Code
Noorvik, Village of	Kobuk River	ADL 75902	340109A	1.59	365	0.00	4941
Norfolk Utilities	Well A, Eagle River Valley Ranch.	ADL 20957	210375A	75.84	334	0.23	4941
North Pole, City of	Wells 1 and 2	ADL 403254	310675A	29.66	365	0.08	4941
Northern SE Regional Aquaculture	Medvejie Creek	LAS 11523		2,174.19	365	5.96	921
Offshore Systems	Unnamed stream, Dutch Harbor Well, Kenai	LAS 342		27.23	365	0.07	4463
		LAS 12953	244997B	34.08	365	0.09	4941
Palmer, City of	Well #1, 624'	ADL 201324	226020A	142.57	277	0.51	4941
	Well #3	LAS 3017	226020A	6.35	62	0.10	4941
	Well #4, 186'	LAS 9889	226020A	113.68	184	0.62	4941
Petersburg Water Treatment Facility	Stream	LAS 6550	130148A	328.95	365	0.90	4941
Phillips Petroleum Co.	PW 3, 264' well	ADL 42983	240969B	121.91	365	0.33	2911
Port Graham, Village of	Unnamed Stream, WTP	LAS 11965	240498A	22.73	365	0.06	4941
Port Lions, City of	Branchwater Creek	ADL 39835	250045A	38.39	365	0.11	4941

1991 Alaska Water Use Summary

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Facility Name	Water Source	File Number	DEC Inventory Number	Total (mil. gal.)	Days of Use	Million Gallons Per Day	SIC Code
Prince William Sound Aquaculture	Esther Lake Hydro	LAS 1312		11,585.72	365	31.74	921
Royal Pacific Fisheries	Well	LAS 1117	242953B	1.74	365	0.00	2092
Sand Point, City of	Humboldt Creek	LAS 11795	260294A	79.29	365	0.22	4941
Saxman, City of	Saxman Creek	ADL 44121	120127A	30.15	364	0.08	4941
Scammon Bay, Village of	Lines 1 and 2	ADL 46364		1.10	183	0.00	4941
Settler's Bay	Condos	ADL 74699	223179A	2.30	365	0.01	4941
	Main supply and Golf Course	ADL 74700	221834A	17.26	365	0.05	4941
Seward, City of	Ft. Raymond #1	ADL 39936	240757A	154.73	365	0.42	4941
	Ft. Raymond #2	ADL 39936	240757A	0.06	365	0.00	4941
	Ft. Raymond #3	ADL 39936	240757A	105.13	365	0.29	4941
	Ft. Raymond #4	ADL 39936	240757A	33.57	365	0.09	4941
	Ft. Raymond #5	ADL 39936		3.10	154	0.02	4941
	Marathon Creek	ADL 210826	240757A	170.96	365	0.47	4941
	SMIC Well A, Marine Indust. Center	LAS 11311	240757A	19.52	365	0.05	4941
	SMIC Well B, Marine Indust. Center	LAS 11311	240757A	19.82	365	0.05	4941
Soldotna, City of	Well B	ADL 40315	241054A	21.96	365	0.06	4941
	Well A	ADL 52342	241054A	0.36	365	0.00	4941
	Well C	ADL 206983	241054A	28.90	337	0.09	4941
	Well D	ADL 214896	241054A	6.98	245	0.03	4941
	Well E	LAS 11215	240939B	0.06	365	0.00	4941

1991 Alaska Water Use Summary

A - 9

Facility Name	Water Source	File Number	DEC Inventory Number	Total (mil. gal.)	Days of Use	Million Gallons Per Day	SIC Code
Southcentral Utilities	2 Wells, 280' and 543'	LAS 6516	214706A	5.62	365	0.02	4941
Southpark Terrace	Little Rabbit Creek	ADL 209628	213475A	18.04	365	0.05	4941
Tatitlek, Village of	Pumphouse	ADL 76071	291130A	10.34	365	0.03	4941
Tesoro Alaska Petroleum	Well 1	ADL 42906	241745B	0.69	15	0.05	2911
	Well 2	ADL 42906	241745B	168.22	365	0.46	2911
Thorne Bay, City of	Water Lake	LAS 11465	120216A	57.29	365	0.16	4941
U.S.D.O.T. F.A.A. Elmendorf	160' Well	LAS 11600		93.42	365	0.26	4583
UNOCAL Chemicals Division	Wells # 7,15, and 16	ADL 42514	240919B	537.67	365	1.47	2873
	Wells #1 and 5B	ADL 78075	240919B	254.58	365	0.70	2873
	Well #6	ADL 203480	240919B	148.41	365	0.41	2873
US Army Ft. Richardson	Elmendorf Pit #18	ADL 45839	212039	145.65	243	0.60	9711
	Elmendorf Pit #20	ADL 45839	211423	422.88	243	1.74	9711
	Hosp. Housing, #21	ADL 45839	211423	22.84	243	0.09	9711
	Hospital, #22	ADL 45839	211423	17.90	243	0.07	9711
	Post	ADL 45839		530.24	243	2.18	9711
	Post Laundry	ADL 45839		4.60	243	0.02	9711
	Total Well Water	ADL 45839		49.13	243	0.20	9711
	Fish Hatchery Well 1	ADL 80511		68.84	91	0.76	921

1991 Alaska Water Use Summary

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Facility Name	Water Source	File Number	DEC Inventory Number	Total (mil. gal.)	Days of Use	Million Gallons Per Day	SIC Code
Unalaska, City of	Icy (Pyramid) Creek	LAS 2394	260309A	1,214.03	365	3.33	4941
	Unalaska Creek	LAS 2394	260309A	451.24	365	1.24	4941
	Wells 1 and 1A	LAS 2394	260309A	29.25	272	0.11	4941
	Wells 2 and 2A	LAS 2394	260309A	40.40	273	0.15	4941
University of Alaska	2 Wells at "K" Bldg	ADL 57174	310683A	1.35	365	0.00	8221
	Arts Building Well	ADL 212698	310683A	12.15	365	0.03	8221
	Admin. Building Well	ADL 212698	310683A	9.74	365	0.03	8221
	Palmer Exp. Station Well	LAS 12588		15.93	365	0.04	139
Valdez Fish. Dev. Assoc	Solomon Gulch Warm Water	LAS 1142	292005C	62.67	281	0.22	921
	Solomon Gulch High Pressure	LAS 1142	292005C	381.75	122	3.13	921
	Solomon Gulch Falls Creek	LAS 1142	292005C	52.87	112	0.47	921
	Solomon Gulch 24" Main	LAS 1142	292005C	1,989.32	230	8.65	921
Viewpoint Ventures, Inc.	295' Well	LAS 2393	214730A	5.63	365	0.02	4941
Wasilla, City of	Iditarod Wells, 136' and 154'	ADL 209104	223137A	49.24	365	0.13	4941
	Well/Mission Hills Sub Phase 2&3	LAS 1141	223763A	5.26	365	0.01	4941
	Lacy Laine Well	LAS 1541	224109A	0.26	365	0.00	4941
	Spruce Ave Wells, 236' and 240'	LAS 5204	224646A	104.02	365	0.28	4941
Whittier, City of	80' Well 1	LAS 2531	211952A	26.92	365	0.07	4941
	80' Well 2	LAS 2532	211952A	35.34	365	0.10	4941
	80' Well 3	LAS 2533	211952A	43.51	365	0.12	4941
Yakutat, City of	Back-up (ARCO) Well	ADL 43340	130172A	38.46	153	0.25	4941

1991 Alaska Water Use Summary

Facility Name	Water Source	File Number	DEC Inventory Number	Total (mil. gal.)	Days of Use	Million Gallons Per Day	SIC Code
	Main Well, A, 325'	ADL 43340	130172A	43.33	365	0.12	4941

APPENDIX B

1991 WATER-USE DATA SORTED BY SIC CODES

1991 Water Use by SIC Code

SIC Code & Type of Use	Facility Name	Water Source	Use in Million Gallons	Use in Acre Feet
139 Agricultural Crops	University of Alaska	Palmer Exp. Station Well	15.93	48.91
Total for SIC Group			15.93	48.91
921 Aquaculture	ADFG Pillar Creek Fish Hatchery	Pillar Creek	124.10	380.99
	Northern SE Regional Aquaculture	Medvejie Creek	2,174.19	6,675.63
	Prince William Sound Aquaculture	Esther Lake Hydro	11,585.72	35,568.16
	US Army Ft. Richardson	Fish Hatchery Well 1	68.84	211.34
	Valdez Fish. Dev. Assoc	Solomon Gulch Warm Water	62.67	192.41
	Valdez Fish. Dev. Assoc	Solomon Gulch High Pressure	381.75	1,172.02
	Valdez Fish. Dev. Assoc	Solomon Gulch Falls Creek	52.87	162.32
	Valdez Fish. Dev. Assoc	Solomon Gulch 24" Main	1,989.32	6,107.48
Total for SIC Group			16,439.46	50,470.35
1311 Crude Petroleum & Natural Gas	Atlantic Richfield Co. Alaska		7.49	22.99
	Atlantic Richfield Co. Alaska	Unnamed Lake	2.17	6.66
	Atlantic Richfield Co. Alaska		0.48	1.47
	Atlantic Richfield Co. Alaska		0.17	0.49
	Atlantic Richfield Co. Alaska		0.76	2.33
	Atlantic Richfield Co. Alaska		23.19	71.19
	Atlantic Richfield Co. Alaska		1.48	4.54
	Atlantic Richfield Co. Alaska	Unnamed Lake	6.55	20.11
	Atlantic Richfield Co. Alaska		1.89	5.80
	Atlantic Richfield Co. Alaska		0.37	1.14
	Atlantic Richfield Co. Alaska		4.73	14.52
	Atlantic Richfield Co. Alaska		0.51	1.57
	Atlantic Richfield Co. Alaska		0.24	0.74
	Atlantic Richfield Co. Alaska		0.04	0.12
	Atlantic Richfield Co. Alaska		0.14	0.43
	Atlantic Richfield Co. Alaska		6.47	19.86
	Atlantic Richfield Co. Alaska		0.22	0.68

1991 Water Use by SIC Code

SIC Code & Type of Use	Facility Name	Water Source	Use in Million Gallons	Use in Acre Feet
Crude Petroleum & Natural Gas	Atlantic Richfield Co. Alaska		2.40	7.37
	Atlantic Richfield Co. Alaska		0.16	0.49
	Atlantic Richfield Co. Alaska		0.24	0.74
	Atlantic Richfield Co. Alaska	Pingo Lake	3.28	10.07
	Atlantic Richfield Co. Alaska	Webster Reservoir	93.16	286.00
	British Petroleum	BOC J-Pad, CC-2	6.65	20.42
	British Petroleum	DIU Pit #1	1.43	4.39
	British Petroleum	Endicott Access Rd.	0.42	1.29
	British Petroleum	Big Lake	25.44	78.10
	British Petroleum	H-Pad CSP	2.75	8.44
	British Petroleum	Kuparuk Reservoirs 1-3	16.02	49.18
	British Petroleum	Kuparuk Reservoirs 4-5	15.23	46.76
	British Petroleum	Patti Lake, Sag. Site C	5.55	17.04
	British Petroleum	PUT 27 Mine site	1.14	3.50
Total for SIC Group			230.77	708.43
1629 Heavy Construction	Alaska Energy Authority	Bradley Lake Camp Wells	3.30	10.13
			Total for SIC Group	3.30 10.13
2092 Fresh and Frozen Seafood	Inlet Salmon	Kenai Well	8.62	26.46
	Inlet Salmon	Kasilof Well	1.37	4.18
	Inlet Salmon	Naknek Well	2.65	8.14
	Royal Pacific Fisheries	Well	1.74	5.34
	Total for SIC Group		14.38	44.12
2873 Nitrogenous Fertilizers	UNOCAL Chemicals Division	Wells #1 and 5B	254.58	781.89

1991 Water Use by SIC Code

SIC Code & Type of Use	Facility Name	Water Source	Use in Million Gallons	Use in Acre Feet
Nitrogenous Fertilizers	UNOCAL Chemicals Division	Well #6	148.41	455.64
	UNOCAL Chemicals Division	Wells # 7,15, and 16	537.67	1,650.72
	Total for SIC Group		940.66	2,888.25
2911 Petroleum Refining	Phillips Petroleum Co.	PW 3, 264' well	121.91	374.26
	Tesoro Alaska Petroleum	Well 1	0.69	2.12
	Tesoro Alaska Petroleum	Well 2	168.22	516.44
Total for SIC Group		290.82	892.82	
4463 Marine Cargo Handling	Offshore Systems	Unnamed stream, Dutch Harbor	27.23	83.60
	Total for SIC Group		27.23	83.60
	4583 Airport Terminal Services	Nome, City of U.S.D.O.T. F.A.A. Elmendorf	Moonlight Springs - FAA	3.17
160' Well			93.42	286.81
Total for SIC Group		96.59	296.54	
4612 Petroleum Pipeline Services	Alyeska Pipeline Allison Creek	Allison Creek	67.26	203.42

1991 Water Use by SIC Code

SIC Code & Type of Use	Facility Name	Water Source	Use in Million Gallons	Use in Acre Feet
Total for SIC Group			67.26	203.42
4911 Hydroelectric Power Generation	Alaska Electric Light & Power	Salmon Creek	9,336.61	28,653.00
	Alaska Energy Authority	Terror Lake	29,787.10	91,292.59
	Alaska Energy Authority	Tyce Lake	14,687.83	45,075.30
	Alaska Energy Authority	Solomon Gulch	25,486.34	78,227.65
	Alaska Power & Telephone	Dewey Lake	3,250.25	9,978.27
	Chugach Electric	Cooper Lake	17,559.01	53,880.19
	Cordova Electric Cooperative	Humpback Creek	6,815.33	20,903.06
	Homer Electric Assoc.	Well	1.33	4.08
Total for SIC Group			106,923.80	328,014.14
4941 Public Water Supply	Aleut Corp. - Midtown Estates	Well #2	8.46	25.97
	Anchorage W. & Waste W.	Eagle River Hts. North, E.R. #4	2.66	8.17
	Anchorage W. & Waste W.	Eagle Crest, E.R. #8	0.57	1.72
	Anchorage W. & Waste W.	Eklutna Lake	3,691.30	11,332.29
	Anchorage W. & Waste W.	Ship Creek	4,201.52	12,898.67
	Anchorage W. & Waste W.	Third Avenue, Well #3	34.58	106.16
	Anchorage W. & Waste W.	Commercial Dr., Well #4	35.94	110.34
	Anchorage W. & Waste W.	40th Ave & Denali, Well #7	81.07	95.38
	Anchorage W. & Waste W.	Centennial Park, Well #9	50.09	153.78
	Anchorage W. & Waste W.	Chugach Foothills, Well #10A	92.20	283.05
	Anchorage W. & Waste W.	Chugach Foothills, Well #11B	91.52	280.97
	Anchorage W. & Waste W.	40th Ave. & B St, Well #12	117.55	360.88
	Anchorage W. & Waste W.	Spruce and E. 64th St., Well #13	150.60	462.34
	Anchorage W. & Waste W.	Creskide Park, Well #20	0.47	1.44
	Anchorage W. & Waste W.	Military #1, Well #25	52.10	159.95
	Anchorage W. & Waste W.	Service Hanshwn H. S., Well #29	16.49	50.62
	Anchorage W. & Waste W.	Huffman Hills, Well #31	13.68	42.00
	Anchorage W. & Waste W.	ALAGCO Well, #35	12.99	39.85

1991 Water Use by SIC Code

SIC Code & Type of Use	Facility Name	Water Source	Use in Million Gallons	Use in Acre Feet
Public Water Supply	Anchorage W. & Waste W.	Spenard Builders, Well #38	3.53	10.84
	B & J Ventures, Inc.	Well	3.99	12.25
	Chugiak Utilities	225' Well	18.05	55.42
	Chugiak-Eagle River Industries	180' Well	0.72	2.21
	Craig, City of	Sunnahae Mt. Spring	99.37	305.11
	Crestbrook Water Assc. Inc.	Well	4.40	13.51
	Dillingham, City of	WTP	41.45	127.25
	Eek, City of	Eek River	0.47	1.44
	Elim, Village of	Wellhouse	7.64	23.45
	Eru, Inc.	2 Wells, 308' and 346'	2.57	7.89
	Fairbanks, City of	Fire Well #3	1,251.70	3,842.72
	Fairbanks, City of	Well #1	293.93	902.33
	Fairbanks, City of	Well #3	256.40	787.15
	Fort Yukon, Village of	Main Well	6.01	18.45
	Grayling, Village of	29' Well	5.00	15.35
	Hillside Park Subdivision	283' Well	4.68	14.37
	Homestead Apartments & Trailer Ct.	Homestead Creek	17.23	52.87
	Juneau, City and Borough	New Salmon Creek Tailrace	436.00	1,338.52
	Juneau, City and Borough	8th St and wells	1,005.53	3,087.38
	Juneau, City and Borough	Well #3	78.40	240.69
	Kasaan, City of	Linkum Creek	9.04	27.75
	Kenai, City of	Well #1	109.46	336.09
	Kenai, City of	Well #2	206.32	633.48
	King Cove, City of	Ram Creek	126.37	388.01
	Kodiak, City of	Monashka Creek	2,155.30	6,617.63
	Kodiak, City of	Pillar Creek	17.50	53.73
	Kotzebue, City of	Devil's Lake, Vortac Reservoir	107.21	329.13
	McGrath, City of	Kuskokwim River	12.09	37.12
	Nome, City of	Moonlight Springs - WTP	172.70	530.19
	Noorvik, Village of	Kobuk River	1.59	4.88
	Norfolk Utilities	Well A, Eagle River Valley Ranch.	75.84	232.78
	North Pole, City of	Wells 1 and 2	29.66	951.21
	Offshore Systems	Well, Kenai	34.08	104.63
	Palmer, City of	Well #1, 624'	142.57	437.69
	Palmer, City of	Well #3	6.35	19.49
	Palmer, City of	Well #4, 186'	113.68	349.00
	Petersburg Water Treatment Facility	Stream	328.95	1,009.88
	Port Graham, Village of	Unnamed Stream, WTP	22.73	728.96

1991 Water Use by SIC Code

SIC Code & Type of Use	Facility Name	Water Source	Use in Million Gallons	Use in Acre Feet
Public Water Supply	Port Lions, City of	Branchwater Creek	38.39	117.86
	Sand Point, City of	Humboldt Creek	79.29	243.43
	Saxman, City of	Saxman Creek	30.15	92.54
	Scammon Bay, Village of	Lines 1 and 2	1.10	3.38
	Settler's Bay	Condos	2.30	7.06
	Settler's Bay	Main supply and Golf Course	17.26	52.99
	Seward, City of	Ft. Raymond #1	154.73	475.04
	Seward, City of	Ft. Raymond #2	0.06	0.18
	Seward, City of	Ft. Raymond #3	105.13	322.76
	Seward, City of	Ft. Raymond #4	33.57	103.06
	Seward, City of	Ft. Raymond #5	3.10	9.52
	Seward, City of	Marathon Creek	170.96	524.87
	Seward, City of	SMIC Well A, Marine Indust. Center	19.52	59.93
	Seward, City of	SMIC Well B, Marine Indust. Center	19.82	60.85
	Soldotna, City of	Well A	0.36	1.11
	Soldotna, City of	Well B	21.96	67.42
	Soldotna, City of	Well C	28.90	88.72
	Soldotna, City of	Well D	6.98	21.43
	Soldotna, City of	Well E	0.06	0.18
	Southcentral Utilities	2 Wells, 280' and 543'	5.62	17.25
	Southpark Terrace	Little Rabbit Creek	18.04	55.39
	Tatitlek, Village of	Pumphouse	10.34	31.74
	Thorne Bay, City of	Water Lake	57.29	175.88
	Unalaska, City of	Icy (Pyramid) Creek	1,214.03	3,727.24
	Unalaska, City of	Unalaska Creek	451.24	1,385.31
	Unalaska, City of	Wells 1 and 1A	29.25	89.80
	Unalaska, City of	Wells 2 and 2A	40.40	124.03
	Viewpoint Ventures, Inc.	295' Well	5.63	17.28
	Wasilla, City of	Iditarod Wells, 136' and 154'	49.24	151.17
	Wasilla, City of	Lacy Laine Well	0.26	0.80
	Wasilla, City of	Well/Mission Hills Sub Phase 2&3	5.26	16.15
	Wasilla, City of	Spruce Ave Wells, 236' and 240'	104.02	319.34
	Whittier, City of	80' Well 1	26.92	82.65
	Whittier, City of	80' Well 2	35.34	108.50
	Whittier, City of	80' Well 3	43.51	133.58
	Yakutat, City of	Back-up (ARCO) Well	38.46	118.07
	Yakutat, City of	Main Well, A, 325'	43.33	133.03

1991 Water Use by SIC Code

SIC Code & Type of Use	Facility Name	Water Source	Use in Million Gallons	Use in Acres Feet
6512 Non-Resident Bldg. Operations	Johnson Development	2-101' Wells		
			0.52	1.60
			Total for SIC Group	18,774.12 59,003.97
7021 Boarding House	Nelbro Packing Co.	Naknek, 90' Well		
			1.56	4.79
			Total for SIC Group	0.52 1.60
8211 Secondary School	Anchorage School District Nome, City of	Ravenwood Well Moonlight Springs - Beltz H.S.		
			0.19 3.90	0.58 11.97
			Total for SIC Group	1.56 4.79
8221 University	University of Alaska University of Alaska University of Alaska	Arts Building Well Admin. Building Well 2 Wells at "K" Bldg		
			12.15 9.74 1.35	37.30 29.90 4.14
			Total for SIC Group	23.24 71.34
9223 Public Safety	Nome, City of	Moonlight Springs - Anvil Mt.	3.46	10.62

1991 Water Use by SIC Code

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APPENDIX C

STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE LISTING

Standard Industrial Classification (S.I.C.) Code List

1. Select the "Division" from the list below.

DIVISION A - AGRICULTURE, FORESTRY & FISHING
 DIVISION B - MINING
 DIVISION C - CONSTRUCTION
 DIVISION D - MANUFACTURING
 DIVISION E - TRANSPORTATION, COMMUNICATIONS,
 ELECTRIC, GAS & SANITARY SVCS.

DIVISION F - WHOLESALE TRADE
 DIVISION G - RETAIL TRADE
 DIVISION H - FINANCE, INSURANCE & REAL ESTATE
 DIVISION I - SERVICES
 DIVISION J - PUBLIC ADMINISTRATION
 DIVISION K - NONCLASSIFIABLE ESTABLISHMENTS

- Check the sub-heading as set out under each "division" on the list.
- Select the title under the sub-heading which best describes your business activity.
- Write the four-digit number that appears in front of your selection in the space provided on your application.
- Numbers ending with 99 will indicate "nec," which means "not elsewhere classified."
- If the S.I.C. Code that describes your business is printed in bold italics, you must meet additional regulatory requirements. Please see the instructions on the Alaska Business License Application.

DIVISION A. AGRICULTURE, FORESTRY, & FISHING

0100 Agricultural Production-Crops
 0134 Potatoes
 0160 Vegetables & Melons
 0170 Fruits & Tree Nuts
 0180 Horticultural Specialties
 0190 General Farms
 0200 Agricultural Production-Livestock
 0211 Beef Cattle
 0213 Hogs
 0214 Sheep & Goats
 0219 General Livestock
 0240 Dairy Farms
 0250 Poultry & Eggs
 0270 Animal Specialties
 0271 Fur Animals & Rabbits
 0272 Horses & Other Equines
 0700 Agricultural Services
 0710 Soil Preparation Services
 0729 Crop Services
 0732 Crop Harvesting
 0729 General Crop Services
 0740 Veterinary Services
 0741 Veterinary Svcs. Farm Livestock
 0752 Animal Specialty Services
 0780 Landscaping & Horticultural Svcs
 0781 Landscape Consulting & Planning
 0782 Lawn & Garden Services
 0800 Forestry
 0820 Forest Nurseries
 0850 Forest Services
 0900 Fishing, Hunting, & Trapping
 0910 Fish Buyer
 0911 Commercial Fishing
 0912 Finnish
 0913 Shellfish
 0915 Misc. Marine Products
 0920 Fish Hatcheries & Rearing
 0970 Hunt, Trap, Game Propagation

DIVISION B. MINING

1000 Metal Mining
 1010 Iron Ores
 1020 Copper Ores
 1030 Lead & Zinc Ores
 1040 Gold & Silver Ores
 1080 Metal Mining Services
 1099 Metal Ores, nec.
 1100 Anthracite Mining
 1200 Bituminous Coal & Lignite Mining
 1300 Oil & Gas Extraction
 1310 Crude Petroleum & Natural Gas
 1320 Natural Gas Liquids
 1360 Oil & Gas Field Services
 1361 Drilling Oil & Gas Wells
 1362 Oil & Gas Exploration Services
 1369 Oil & Gas Field Services, nec.
 1400 Nonmetallic Minerals, Except Fuels
 1410 Dimension Stone
 1420 Crushed & Broken Stone
 1440 Sand & Gravel
 1450 Clay & Related Minerals
 1470 Chemical & Fertilizer Minerals
 1490 Misc. Nonmetallic Minerals
 1499 Nonmetallic Minerals, nec.

DIVISION C. CONSTRUCTION

1500 General Building Contractors
 1520 Residential Bldg. Construction
 1521 Residential Construction, nec
 1530 Operative Builders
 1540 Nonresidential Bldg. Construction
 1542 Nonresidential Construction, nec.
 1600 Heavy Construction Contractors
 1610 Highway & Street Construction
 1620 Heavy Construction, Except Highway
 1622 Bridge, Tunnel, & Elevated Highway
 1623 Water, Sewer, & Utility Lines
 1629 Heavy Construction, nec.

1700 Special Trade Contractors

1710 Plumbing, Heating, Air Conditioning
 1720 Painting, Paper Hanging, Decorating
 1730 Electrical Work
 1740 Masonry, Stonework, & Plastering
 1750 Carpentry & Flooring
 1751 Carpentry
 1752 Floor Laying & Floor Work, nec.
 1760 Roofing & Sheet Metal Work
 1770 Camera Work
 1780 Water Well Drilling
 1790 Misc. Special Trade Contractors
 1799 Special Trade Contractors, nec.

DIVISION D. MANUFACTURING

2000 Food & Kindred Products
 2010 Meat Products
 2020 Dairy Products
 2030 Preserved Fruits & Vegetables
 2040 Grain Mill Products
 2050 Bakery Products
 2060 Sugar & Confectionary Products
 2070 Fats & Oils
 2080 Beverages
 2082 Soft Beverages
 2084 Wines, Brandy & Spirits
 2085 Distilled Liquor, Except Brandy
 2086 Bottled and Canned Soft Drinks
 2087 Flavoring Extracts & Syrups, nec.
 2088 Misc. Foods & Kindred Products
 2089 Canned & Cured Seafoods
 2092 Fresh or Frozen Packaged Fish
 2097 Manufactured Ice
 2098 Food Preparations, nec.
 2100 Tobacco Manufacturers
 2200 Textile Mill Products
 2270 Floor Covering Mills
 2280 Yarn & Thread Mills
 2290 Misc. Textile Goods
 2298 Textile Goods, nec.
 2300 Apparel & Other Textile Products
 2380 Misc. Apparel & Accessories
 2390 Misc. Fabricated Textile Products
 2400 Lumber & Wood Products
 2410 Logging Camps & Contractors
 2420 Sawmills & Planing Mills
 2430 Millwork, Plywood, Structural
 2440 Wood Containers
 2450 Wood Buildings & Mobile Homes
 2451 Mobile Homes
 2452 Prefabricated Wood Buildings
 2480 Misc. Wood Products
 2499 Wood Products, nec.
 2500 Furniture & Fixtures
 2510 Household Furniture
 2520 Office Furniture
 2540 Partitions & Fixtures
 2590 Misc. Furniture & Fixtures
 2599 Furniture & Fixtures, nec.

2600 Paper & Allied Products
 2610 Pulp Mills
 2620 Paper Mills, Except Bldg. Paper
 2630 Paperboard Mills
 2640 Misc. Converted Paper Products
 2650 Paperboard Containers & Boxes
 2660 Building Paper & Board Mills
 2700 Printing & Publishing
 2710 Newspapers
 2720 Periodicals
 2731 Book Publishing
 2732 Book Printing
 2740 Miscellaneous Publishing
 2750 Commercial Printing
 2760 Manuscript Business Forms
 2790 Printing Trade Services

2800 Chemicals and Like Products
 2810 Industrial Inorganic Chemicals
 2820 Plastics and Synthetics
 2830 Drugs
 2840 Soap, Cleaners, & Toilet Goods
 2860 Industrial Organic Chemicals
 2870 Agricultural Chemicals
 2890 Misc. Chemicals Products

2900 Petroleum and Coal Products
 2910 Petroleum Refining
 2950 Paving & Roofing Material
 2960 Misc. Petroleum & Coal Products

3000 Rubber & Misc. Plastics Products
 3070 Misc. Plastics Products

3100 Leather and Leather Products
 3110 Leather Tanning and Finishing
 3130 Boot & Shoe Cut Stock & Findings
 3140 Footwear, Except Rubber
 3150 Leather Gloves & Mittens
 3170 Handbags & Personal Leather Goods
 3199 Leather Goods, nec.

3200 Stone, Clay, and Glass Products
 3260 Pottery and Related Products
 3270 Concrete Gypsum & Plaster Products
 3280 Cut Stone & Stone Products
 3299 Nonmetallic Mineral Products, nec.

3300 Primary Metal Industries

3400 Fabricated Metal Products

3500 Machinery, Except Electrical

3600 Electric and Electronic Equipment

3700 Transportation Equipment
 3710 Motor Vehicles & Equipment
 3720 Aircraft & Parts
 3730 Ship & Boat Building & Repairing
 3750 Motorcycles, Bicycles, & Parts
 3760 Misc. Transportation Equipment
 3782 Travel Trailers & Campers

3800 Instruments and Related Products

3900 Miscellaneous Manufacturing Industries
 3910 Jewelry, Silverware, & Plated Ware
 3911 Jewelry, Precious Metal
 3915 Jewelers' Materials & Lapidary Work
 3920 Musical Instruments
 3940 Toys & Sporting Goods
 3960 Costume Jewelry & Novelties
 3990 Misc. Manufacturers

DIVISION E. TRANSPORTATION & PUBLIC UTILITIES

4000 Railroad Transportation

4100 Local & Interurban Passenger Transit
 4110 Local & Suburban Transportation
 4120 Taxicabs
 4130 Inter-city Highway Transportation
 4140 Transportation Charter Services
 4151 School Buses
 4170 Bus Terminal & Service Facilities

4200 Trucking & Warehousing
 4210 Trucking, Local & Long Distance
 4220 Public Warehousing
 4230 Trucking Terminal Facilities

4300 U.S. Postal Service

4400 Water Transportation
 4410 Deep Sea Foreign Transportation
 4420 Deep Sea Domestic Transportation
 4450 Local Water Transportation
 4454 Towing & Tugboat Service
 4459 Local Water Transportation, nec.
 4460 Water Transportation Services
 4463 Marine Cargo Handling
 4468 Water Transportation Svcs., nec.

4500 Air Transportation
 4510 Certificated Air Transportation
 4520 Noncertificated Air Transportation
 4580 Air Transportation Services
 4582 Airports & Flying Fields
 4583 Airport Terminal Services

4600 Pipelines, Except Natural Gas
 4610 Pipelines, Except Natural Gas
 4612 Crude Petroleum Pipelines
 4613 Refined Petroleum Pipelines
 4619 Pipelines, nec.

4790 Transportation Services	5961 Mail Order Houses	7800 Motion Pictures
4712 Freight Forwarding	5963 Direct Selling Organizations	7810 Motion Picture Production & Services
4720 Transportation Arrangement	5983 Fuel Oil Dealers	7813 Motion Picture Production, except TV
4780 Misc. Transportation Services	5984 Liquefied Petroleum Gas Dealers	7814 Motion Picture Production for TV
	5992 Florists	7819 Services Allied to Motion Pictures
4800 Communication	5993 Cigar Stores & Stands	7820 Motion Picture Dist. & Services
4810 Telephone Communication	5994 News Dealers & Newsstands	7830 Motion Picture Theaters
4820 Telegraph Communication	5999 Misc. Retail Stores, Nec.	7833 Drive-In Motion Picture Theaters
4832 Radio Broadcasting		
4833 TV Broadcasting	DIVISION H. FINANCE, INSURANCE, & REAL ESTATE	7900 Amusement & Recreation Services
4899 Communication Service, nec.	6000 Banking	7910 Dance Halls, Studios, & Schools
4900 Electric Gas & Sanitary Services	6010 Federal Reserve Banks	7920 Producers, Orchestras, Entertainers
4911 Electric Services	6020 Commercial & Stock Savings Banks	7929 Entertainers & Entertainment Groups
4920 Gas Production & Distribution	6022 State Banks, Federal Reserve	7932 Billiard, Pool Establishments
4930 Communication Utility Services	6025 National Banks, Federal Reserve	7933 Bowling Alleys
4940 Water Supply	6030 Mutual Savings Banks	7940 Commercial Sports
4950 Sanitary Services	6040 Trust Companies, Nondeposit	7990 Misc. Amusement, Recreational Svcs.
4952 Sewerage Systems	6050 Functions Closely Related to Banking	7993 Coin-op Amusement Devices
4953 Refuse Systems		
DIVISION F. WHOLESALE TRADE	6100 Credit Agencies Other Than Banks	8000 Health Services
5000 Wholesale Trade Durable Goods	6110 Rediscount & Financing Institutions	8010 Offices of Physicians
5010 Motor Vehicles & Auto Equipment	6120 Savings & Loan Associations	8020 Offices of Dentists
5013 Automotive Parts & Supplies	6130 Agricultural Credit Institutions	8030 Offices of Osteopathic Physicians
5014 Tires & Tubes	6140 Personal Credit Institutions	8040 Offices of Other Health Practitioners
5020 Furniture & Home furnishings	6150 Business Credit Institutions	8041 Offices of Chiropractors
5030 Lumber & Construction Materials	6160 Mortgage Bankers & Brokers	8042 Offices of Optometrists
5040 Sporting Goods, Toys & Hobby Goods	6200 Security, Commodity Brokers & Services	8049 Offices of Health Practitioners, nec.
5060 Electrical Goods	6300 Insurance Carriers	8050 Nursing & Personal Care Facilities
5070 Hardware, Plumbing & Heating Equip	6310 Life Insurance	8060 Hospitals
5080 Machinery, Equipment, & Supplies	6320 Medical Service & Health Insurance	8062 General Medical & Surgical Hospitals
5090 Misc. Durable Goods	6330 Fire, Marine, & Casualty Insurance	8063 Psychiatric Hospitals
5094 Jewelry, Watches, & Precious Stones	6350 Surety Insurance	8069 Specialty Hospitals, exc. Psych
5099 Durable Goods, nec.	6360 Title Insurance	8070 Medical & Dental Laboratories
5100 Wholesale Trade Nondurable Goods	6370 Pension, Health, & Welfare Funds	8071 Medical Laboratories
5110 Paper & Paper Products	6390 Insurance Carriers, nec.	8072 Dental Laboratories
5122 Drugs, Proprietarys, & Sundries	6400 Insurance Agents, Brokers & Service	8080 Outpatient Care Facilities
5130 Apparel, Piece Goods, & Nutrition	6500 Real Estate	8090 Health & Allied Services, nec.
5140 Groceries & Related Products	6510 Real Estate Operators & Lessors	8100 Legal Services
5150 Farm-Products Raw Materials	6512 Nonresidential Building Operators	8200 Educational Services
5160 Chemicals & Allied Products	6513 Apartment Building Operators	8210 Elementary & Secondary Schools
5170 Petroleum & Petroleum Products	6514 Dwelling Operators, exc. Apt.	8220 Colleges & Universities
5180 Beer, Wine, & Distilled Beverages	6515 Mobile Home Site Operators	8230 Libraries & Information Centers
5190 Misc. Nondurable Goods	6530 Real Estate Agents Managers	8241 Correspondence Schools
	6540 Title Abstract Offices	8243 Data Processing Schools
DIVISION G. RETAIL TRADE	6550 Subdividers & Developers	8244 Business & Secretarial Schools
5200 Building Materials & Garden Supplies	6600 Combined Real Estate, Insurance, etc.	8249 Vocational Schools, nec.
5210 Lumber & Other Building Materials	6700 Holding & Other Investment Offices	8300 Social Services
5230 Paint, Glass, & Wallpaper Stores	6710 Holding Offices	8320 Individual & Family Services
5250 Hardware Stores	6720 Investment Offices	8330 Job Training & Related Services
5260 Retail Nurseries & Garden Stores	6730 Trusts	8350 Child Day Care Services
5270 Mobile Home Dealers	6790 Misc. Investing	8399 Social Services, nec.
5300 General Merchandise Stores	DIVISION I. SERVICES	8400 Museums, Botanical, Zoological Gardens
5310 Department Stores	7000 Hotels, & Other Lodging Places	8600 Membership Organizations
5330 Variety Stores	7010 Hotels, Motels, & Tourist Courts	8610 Business Associations
5399 Misc. General Merchandise Stores	7020 Rooming & Boarding Houses	8620 Professional Associations
5400 Food Stores	7030 Camps & Trailer Parks	8630 Labor Organizations
5410 Grocery Stores	7200 Personal Services	8640 Civic & Social Associations
5420 Meat Markets & Freezer Provisioners	7210 Laundry, Cleaning, & Garment Svcs.	8650 Political Organizations
5430 Fruit Stores & Vegetable Markets	7215 Coin-op Laundry & Cleaning	8660 Religious Organizations
5440 Candy, Nut & Confectionary Stores	7216 Dry Cleaning Plants, except Rug	
5450 Dairy Products Stores	7217 Carpet & Upholstery Cleaning	8800 Private Households
5460 Retail Bakeries	7220 Photo Studios, Portrait	8900 Miscellaneous Services
5499 Misc. Food Stores	7230 Beauty Shops	8910 Engineering & Architectural Svcs.
5500 Automotive Dealers & Service Stations	7240 Barber Shops	8920 Noncommercial Research Organizations
5510 New & Used Car Dealers	7250 Shoe Repair	8930 Accounting, Auditing & Bookkeeping
5520 Used Car Dealers	7260 Funeral Service & Crematories	8999 Services, nec.
5530 Auto & Home Supply Stores	7299 Misc. Personal Services	DIVISION J. PUBLIC ADMINISTRATION
5540 Gas Service Stations	7300 Business Services	9100 Executive Legislative, & General
5550 Boat Dealers	7310 Advertising	9200 Justice, Public Order, & Safety
5560 Recreation and Utility Trailer Dealers	7320 Credit Reporting & Collection	9300 Finance, Taxation & Monetary Policy
5570 Motorcycle Dealers	7330 Mailing, Reproduction, Steno	9400 Administration of Human Resources
5600 Apparel & Accessory Stores	7333 Commercial Photography & Art	9500 Environmental Quality & Housing
5610 Men's & Boy's Clothing & Furnishings	7340 Services to Buildings	9600 Administration of Economic Programs
5620 Women's Ready to Wear Stores	7341 Window Cleaning	9700 National Security & Intl. Affairs
5630 Women's Accessory & Specialty Stores	7342 Disinfecting & Exterminating	DIVISION K. NONCLASSIFIABLE ESTABLISHMENTS
5640 Children's & Infants' Wear Stores	7349 Building Maintenance Svcs, nec.	9900 Nonclass Establishments
5650 Family Clothing Stores	7350 News Syndicates	
5660 Shoe Stores	7360 Personnel Supply Services	
5680 Furriers & Fur Shops	7370 Computer & Data Processing Svcs.	
5699 Misc. Apparel & Accessories	7390 Misc. Business Services	
5700 Furniture & Home Furnishings Stores	7392 Management & Public Relations	
5712 Furniture Stores	7393 Detective & Protective Services	
5713 Floor Covering Stores	7394 Equipment Rental & Leasing	
5714 Drapery & Upholstery Stores	7395 Photofinishing Labs	
5719 Misc. Home Furnishing Stores	7399 Business Services, Nec.	
5722 Household Appliance Stores	7500 Auto Repair, Services & Garages	
5730 Radio, Television, & Music Stores	7512 Passenger Car Rental & Leasing	
5800 Eating & Drinking Places	7513 Truck Rental & Leasing	
5812 Eating Places	7520 Automobile Parking	
5813 Drinking Places	7530 Auto Repair Shops	
5900 Miscellaneous Retail	7540 Auto Services, except Repair	
5912 Drug & Proprietary Stores	7542 Car Washes	
5920 Liquor Stores	7600 Misc. Repair Services	
5930 Used Merchandise Stores	7620 Electrical Repair Shops	
5940 Misc. Shopping Goods Stores	7622 Radio & TV Repair	
5941 Sporting Goods & Bicycle Shops	7630 Watch, Clock, & Jewelry Repair	
5942 Book Stores	7640 Reupholstery & Furniture Repair	
5943 Stationery Stores	7690 Misc. Repair Shops	
5944 Jewelry Stores	7692 Welding Repair	
5945 Hobby, Toy, & Game Shops		
5946 Camera, & Photographic Supply Stores		
5947 Gift, Novelty, & Souvenir Shops		
5948 Luggage & Leather Goods Stores		
5949 Sewing, Needlework, & Piece Goods		
5960 Nonstore Retailers		

APPENDIX D

NIKISKI INDUSTRIAL AREA WATER-USE DATA

Appendix D. Nikiski industrial area water-use data.

NAME	WELL	1991			JANUARY				
		YEARLY AVG. GPD	MAX. MONTH	MIN. MONTH	JANUARY AVG. GPD	MAX DAY	MAX. AVG. GPD	MIN DAY	MIN. AVG. GPD
CHEVRON	1	<500			<500				
	2	<500			<500				
	3	<500			<500				
	4	~ 60,000			~ 60,000				
CHUGACH ELECTRIC	1								
	2	150			150				
	3	150			150				
COOK INLET PROCESSING, INC.	1								
	2								
KENAI PIPELINE	1	<500			<500				
	2								
	3								
OFFSHORE SYSTEMS	1	93,372	APR	DEC	94,194				
	2	< 500			< 500				
PHILLIPS PETROLEUM CO.	1								
	2								
	3	333,988	SEP	MAY	280,320	14	321,120	7	220,320
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	? 1,000			? 1,000				
	2	? 500			? 500				
	3	? 500			? 500				
	4	? 500			? 500				
	5	NA			NA		NA		NA
	6								
	7	< 500			< 500				
SHELL WESTERN	1	< 500							
	2	< 100							
TESORO	1	1,893	FEB	JUL	374	30	11,600	1	0
	2	460,877	SEP	JAN	429,913	2	522,600	21	335,000
UNOCAL	1	697,479	FEB	SEP	785,194	1	851,000	15	683,000
	5B	(Metered with well #1)							
	6	406,597	JUL	SEP	504,806	18	723,000	29	324,000
	7P	1,473,077	MAY	OCT	1,460,871	25	1,564,000	19	1,319,000
	10	0			0		0		0
	12	(Metered with well #10)							
	14	(Metered with well #10)							
	15	(Metered with well #7P)							
	16	(Metered with well #7P)							

Appendix D. (continued)

FEBRUARY 1991						
NAME	WELL	FEBRUARY AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	<500				
	2	<500				
	3	<500				
	4	~ 60,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	<500				
	2					
	3					
OFFSHORE SYSTEMS	1	164,464				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	298,694	11	342,720	25	277,920
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	? 1,000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	7	< 500				
SHELL WESTERN	1	< 500				
	2	< 100				
TESORO	1	4,557	20	127,600	1	0
	2	475,914	14	535,500	1	346,100
UNOCAL	1	801,036	27	858,000	22	740,000
	5B	(Metered with well #1)				
	6	435,357	22	651,000	14	323,000
	7P	1,431,964	25	1,566,000	2	1,222,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				

Appendix D. (continued)

MARCH 1991						
NAME	WELL	MARCH AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	<500				
	2	<500				
	3	<500				
	4	~ 80,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	<500				
	2					
	3					
OFFSHORE SYSTEMS	1	155,290				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	299,372	4	332,640	18	256,320
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	? 1,000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	7	< 500				
SHELL WESTERN	1	< 500				
	2	< 100				
TESORO	1	1,906	16	37,100	1	0
	2	431,261	3	494,700	17	245,200
UNOCAL	1	783,581	1	851,000	26	624,000
	5B	(Metered with well #1)				
	6	488,677	27	720,000	7	364,000
	7P	1,355,645	28	1,572,000	5	1,186,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				

Appendix D. (continued)

APRIL 1991						
NAME	WELL	APRIL AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	< 500				
	2	< 500				
	3	< 500				
	4	~ 60,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	< 500				
	2					
	3					
OFFSHORE SYSTEMS	1	165,433				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	337,474	29	429,120	2	288,000
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	? 1,000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	?	< 500				
SHELL WESTERN	1					
	2					
TESORO	1	310	11	9,300	1	0
	2	442,950	22	511,500	30	325,500
UNOCAL	1	763,367	15	853,000	20	642,000
	5B	(Metered with well #1)				
	6	472,400	20	794,000	24	283,000
	7P	1,449,500	25	1,786,000	10	1,241,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				

Appendix D. (continued)

MAY 1991						
NAME	WELL	MAY AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	<500				
	2	<500				
	3	<500				
	4	~ 60,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	<500				
	2					
	3					
OFFSHORE SYSTEMS	1	125,806				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	212,110	6	309,600	13	119,520
PUGET SOUND TUG AND BARGE CO. (Rtg Tenders)	1	? 1000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	?	< 500				
SHELL WESTERN	1	< 500				
	2	< 100				
TESORO	1	0		0		0
	2	474,477	22	576,200	26	416,300
UNOCAL	1	729,194	20	860,000	17	495,000
	5B	(Metered with well #1)				
	6	380,387	23	649,000	25	167,000
	7P	1,680,290	16	1,949,000	1	1,399,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				

Appendix D. (continued)

JUNE 1991						
NAME	WELL	JUNE AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	<500				
	2	<500				
	3	<500				
	4	~ 60,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	<500				
	2					
	3					
OFFSHORE SYSTEMS	1	100,267				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	381,895	24	473,760	10	309,600
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	? 1,000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	?	< 500				
SHELL WESTERN	1	< 500				
	2	< 100				
TESORO	1	203	25	8,100	1	0
	2	470,127	1	554,000	4	415,700
UNOCAL	1	714,667	5	823,000	12	594,000
	5B	(Metered with well #1)				
	6	383,300	3	537,000	21	275,000
	7P	1,559,033	9	1,772,000	20	1,234,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				

Appendix D. (continued)

JULY 1991						
NAME	WELL	JULY AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	<500				
	2	<500				
	3	<500				
	4	~ 60,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	<500				
	2					
	3					
OFFSHORE SYSTEMS	1	82,581				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	375,029	22	448,280	1	321,120
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	? 1,000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	?	< 500				
SHELL WESTERN	1	< 500				
	2	< 100				
TESORO	1	3	31	100	1	0
	2	465,310	15	554,800	19	396,200
UNOCAL	1	691,419	24	805,000	17	444,000
	5B	(Metered with well #1)				
	6	524,613	10	822,000	6	343,000
	7P	1,545,290	17	1,752,000	22	1,312,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				

Appendix D. (continued)

AUGUST 1991						
NAME	WELL	AUGUST AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	< 500				
	2	< 500				
	3	< 500				
	4	~ 60,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	< 500				
	2					
	3					
OFFSHORE SYSTEMS	1	62,613				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	391,214	12	468,000	5	329,760
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	? 1000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	?	< 500				
SHELL WESTERN	1	< 500				
	2	< 100				
TESORO	1	9,284	13	201,300	1	0
	2	499,142	31	582,200	13	425,300
UNOCAL	1	594,871	3	799,000	31	310,000
	5B	(Metered with well #1)				
	6	479,710	30	668,000	29	309,000
	7P	1,604,968	14	1,768,000	3	1,393,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				

Appendix D. (continued)

SEPTEMBER 1991						
NAME	WELL	SEPTEMBER AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	<500				
	2	<500				
	3	<500				
	4	~ 60,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	<500				
	2					
	3					
OFFSHORE SYSTEMS	1	46,733				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	413,575	23	479,520	16	336,960
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	? 1,000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	?	< 500				
SHELL WESTERN	1	< 500				
	2	< 100				
TESORO	1	2,693	13	77,800	1	0
	2	514,357	28	572,500	19	349,400
UNOCAL	1	429,600	14	864,000	19	0
	5B	(Metered with well #1)				
	6	224,367	7	734,000	14	0
	7P	1,523,867	8	1,866,000	30	1,151,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				
	.					
	.					

Appendix D. (continued)

OCTOBER 1991						
NAME	WELL	OCTOBER AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	<500				
	2	<500				
	3	<500				
	4	~ 60,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	<500				
	2					
	3					
OFFSHORE SYSTEMS	1	65,806				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	369,571	28	424,800	21	275,040
PUGET SOUND TUG AND BARGE CO. (Rtg Tenders)	1	? 1,000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	?	< 500				
SHELL WESTERN	1	< 500				
	2	< 100				
TESORO	1	0		0		0
	2	449,723	2	536,000	17	371,800
UNOCAL	1	673,323	25	879,000	3	355,000
	5B	(Metered with well #1)				
	6	291,484	18	566,000	1	0
	7P	1,239,516	18	1,792,000	9	930,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				

Appendix D. (continued)

NOVEMBER 1991						
NAME	WELL	NOVEMBER AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	< 500				
	2	< 500				
	3	< 500				
	4	~ 60,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	< 500				
	2					
	3					
OFFSHORE SYSTEMS	1	32,333				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	345,694	25	406,080	11	277,920
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	? 1,000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	?	< 500				
SHELL WESTERN	1	< 500				
	2	< 100				
TESORO	1	3,070	7	16,400	1	0
	2	446,880	3	627,500	30	366,700
UNOCAL	1	720,867	29	795,000	12	653,000
	5B	(Metered with well #1)				
	6	305,800	1	794,000	12	132,000
	7P	1,315,133	4	1,518,000	1	542,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				

Appendix D. (continued)

DECEMBER 1991						
NAME	WELL	DECEMBER AVG. GPD	MAX. DAY	MAX. AVG. GPD	MIN. DAY	MIN. AVG. GPD
CHEVRON	1	<500				
	2	<500				
	3	<500				
	4	~ 60,000				
CHUGACH ELECTRIC	1					
	2	150				
	3	150				
COOK INLET PROCESSING, INC.	1					
	2					
KENAI PIPELINE	1	<500				
	2					
	3					
OFFSHORE SYSTEMS	1	30,895				
	2	< 500				
PHILLIPS PETROLEUM CO.	1					
	2					
	3	304,257	9	339,840	2	272,160
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	? 1,000				
	2	? 500				
	3	? 500				
	4	? 500				
	5	NA		NA		NA
	6					
	?	< 500				
SHELL WESTERN	1	< 500				
	2	< 100				
TESORO	1	2,970	4	84,300	1	0
	2	432,916	6	494,100	4	301,400
UNOCAL	1	687,452	31	790,000	22	531,000
	5B	(Metered with well #1)				
	6	383,290	26	541,000	4	263,000
	7P	1,505,419	14	1,845,000	19	1,164,000
	10	0		0		0
	12	(Metered with well #10)				
	14	(Metered with well #10)				
	15	(Metered with well #7P)				
	16	(Metered with well #7P)				

APPENDIX E

WELL DATA FOR NIKISKI INDUSTRIAL AREA WATER-USE

Appendix E. Well data for Nikiski area industrial water-use.

NAME	WELL	USGS NUMBER	DEC ID.	WATER RIGHTS No.	DATE	WELL DEPTH	WELL DIA.	SWL	GPM	SIZE SCREEN	SCREENED INTERVAL	USE TYPE
CHEVRON	1	SB 7-12-16 DCAB 1-03	241729 C	ADL 40432	5-28-62	176	6	124	90	.014	156-166	INDUSTRIAL
	2	SB 7-12-16 DCAB 2-03	241729 C	ADL 40435	7-11-62	169	6	124	90	.014	166-176	
	3	SB 7-12-16 DCAA 1-05	241729 C		8-08-62	170	6	124	50	.010	149-159	INDUSTRIAL
	4	SB 7-12-16 DBCD	241729 C		10-27-82	260	6	123	180	.014	159-169	INDUSTRIAL
CHUGACH ELECTRIC	1	SB 7-12-16 DCAA 2-05	212576 C	ADL 40432	11-08-62	174	12	122	60	.010	160-170	INDUSTRIAL
	2	SB 7-12-16 DDBB 1-07	212576 C	ADL 40432	11-08-62	174	6	123	63	.010	230-240	INDUSTRIAL
	3	SB 7-12-16 DBDD 1-08	212576 C	ADL 40432	1-22-65	182	10	124	175	.010	240-260	INDUSTRIAL
COOK INLET PROCESSING, INC.	1	SB 7-12-01 ACCB 1-07		LAS 6640	5-14-78	140			70	10' STAINLESS	162-172	COMMERCIAL
	2	SB 7-12-01 ACCB	241826 B	LAS 11223	5-04-84	168			100	YES	172-182	COMMERCIAL
	1	SB 7-12-16 ADBB 1-07		ADL 40250	5-31-61	260	6	40.4	60	.020	158-168	COMMERCIAL
KENAI PIPELINE										PERF.	79-87	
										OPEN H.	201-208	
	2	SB 7-12-21 ABDC 1-06		ADL 40250	2-00-61	87	6	36.9		PERF.	240-260	INDUSTRIAL
	3	SB 7-12-21 ABDB 2-07			67	79	6	39	70	.020	82-87	ABANDONED
	1	SB 8-12-36 CAAA PAD 3	244997 B	NONE	5-16-68	162	8	101	535	.035	69-79	INDUSTRIAL
	2	SB 8-12-36 CAAD	244997 B	NONE	6-11-91	186	8	101	550	.030	139-154	COMMERCIAL
OFFSHORE SYSTEM										.025	161-166	COMMERCIAL
										.020	166-171	
										.018	171-181	
	4	SB 8-12-36 ACCD PAD 2	245008 C	OFFICE WELL	12-12-66	41	6	NA	20	PERF.	181-186	COMMERCIAL
	1	SB 7-12-22 CBAA 2-02	240969 B	ADL 42983	<68	215	12	40	700	.036	15-18	COMMERCIAL
								58		.018	125-133	INDUSTRIAL
										.036	133-143	
										.065	143-145	
										.035	145-148	
										.018	148-150	
PHILLIPS PETROLEUM CO.										.018	160-180	
										.018	205-215	
	2	SB 7-12-22 CBBD 2-05	240969 B	ADL 42983	<68	254	12	45	450	PERF.	196-210	INDUSTRIAL
										PERF.	216-220	
										PERF.	226-230	
										PERF.	249-254	
	3	SB 7-12-22 CBBD 3-05	240969 B	ADL 42983	5-00-69	308	12	28	700	.080	289-294	
										.010	294-305	
										.080	305-308	
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	1	SB 7-12-21 ACBB 1-03	244696 B	ADL 40387	67	70	6	11	135			COMMERCIAL
	2	SB 7-12-21 ACBB 2-03	244395 C	ADL 40387	67	60	12	26	200			COMMERCIAL
	3	SB 7-12-21 ABCC 1-14	244400 C	ADL 40387	67	46	10	15	100			ABANDONED
	4	SB 7-12-21 ABCC 2-14		ADL 40387	67	56	10	18				ABANDONED
NAME	WELL	USGS NUMBER	DEC ID.	WATER RIGHTS No.	DATE	WELL DEPTH	WELL DIA.	SWL	GPM	SIZE SCREEN	SCREENED INTERVAL	USE TYPE

Appendix E. (continued)

NAME	WELL	USGS NUMBER	DEC ID.	WATER RIGHTS No.	DATE	WELL DEPTH	WELL DIA.	SWL	GPM	SIZE SCREEN	SCREENED INTERVAL	USE TYPE
PUGET SOUND TUG AND BARGE CO. (Rig Tenders) (con't)	5	SB 7-12-21 ABCD 1-05	241371 A	ADL 42979	10-25-67	158	10	42	625	PACKER .050 .020 .020 .020 .012 .012	103-104 104-106 106-117 117-127 127-137 137-147 147-158	COMMERCIAL
	6	SB 7-12-21 ACBA 1-04		ADL 42979	10-25-67	152	10	54	285	PACKER .050 .016	123-123+ 123+-133 133-152	
	?	SB 7-12-21 ABBC 1-02		ADL 40295	<78	272						
	1	SB 8-12-34 DCDB		LAS 12420	89					INCINERATOR		COMMERCIAL DOMESTIC
	2	SB 8-12-34 DDDDB 1-01	244832 C		11-10-65	156	6	137	25	.030	146-156	COMMERCIAL DOMESTIC
	1	SB 7-12-22 BCAA 2-09	NA	ADL 42906	3-18-69	140	12	50	525	.040 .010 .018 .035 .040 .012	92-102 120-124 124-126 126-129 130-134 134-140	INDUSTRIAL
	2	SB 7-12-22 BDAB 2-08	NA	ADL 42906	69	119	10	62.5	305		110-119	INDUSTRIAL
	1	SB 7-12-21 DDBC 2-08	240919 B	ADL 78075	5-06-77	371	16	110	4000	.180	340-370	INDUSTRIAL
	5B	SB 7-12-22 CCCA	240919 B	ADL 78075								
	6	SB 7-12-21 ADDD 2-09	240919 B	ADL 78075 ADL 203480	8-00-76	160	16	61.8	1200	.125 .035	101-136 136-151	INDUSTRIAL INDUSTRIAL
UNOCAL	7P	SB 7-12-26 BAAA 8-03	240919 B	ADL 42514 ADL 78075 ADL 211142	74	157	16	27	1400		132-157	INDUSTRIAL
	10	SB 7-12-26 BADD	240919 B	ADL 42514	6-16-67	75	16	15	1250	.070 .050 .015 .030	39-47 57-62 62-72 72-75	INDUSTRIAL
	12	SB 7-12-26 BADB 1-01	240919 B	ADL 42514	6-24-67	68	16	27	725	.050 .070 .100	48-62 62-64 64-68	INDUSTRIAL
	14	SB 7-12-26 BAAA	240919 B	ADL 42514	6-14-67	92?	16	8	NA	UNCONFINED AQ.		INDUSTRIAL
	15	SB 7-12-26 BAAB	240919 B	ADL 42514 ADL 78075 ADL 211142	1-15-82	160	8	66.5	300	.025	117-145	INDUSTRIAL
	16	SB 7-12-23 CDDC	240919 B	ADL 42514 ADL 78075 ADL 211142	10-21-82	136	10	65	520	.100	110-136	INDUSTRIAL
NAME	WELL	USGS NUMBER	DEC ID.	WATER RIGHTS No.	DATE	WELL DEPTH	WELL DIA.	SWL	GPM	SIZE SCREEN	SCREENED INTERVAL	USE TYPE

Appendix E. (continued)

NAME	WELL	USGS NUMBER	AQ.	USE TYPE	REMARKS	CONTACT PERSON	PHONE NUMBER	AVERAGE YEARLY GPD
CHEVRON	1	SB 7-12-16 DCAB 1-03	LC?	DOMESTIC	DRINKING WATER ONLY	GENE JACKSON	776-8711	<500
	2	SB 7-12-16 DCAB 2-03	LC?	DOMESTIC	LAB, EMERGENCY B.U.			<500
	3	SB 7-12-16 DCAA 1-05	LC?	DOMESTIC	SHOP, EMERGENCY B.U.			<500
	4	SB 7-12-16 DBCD	LC	INDUSTRIAL	STEAM BOILER			~ 60,000
CHUGACH ELECTRIC	1	SB 7-12-16 DCAA 2-05	LC?	DOMESTIC	ABANDONED -'64 QUAKE	GLENN DAVIDSON	776-8467	~ 150
	2	SB 7-12-16 DDBB 1-07	LC	DOMESTIC	USE CHEV. CONDENSATE	CARL HARMON	762-4739	~ 150
	3	SB 7-12-16 DBDD 1-08	LC	DOMESTIC	FOR NOX SCRUBBING AND ATOMIZING			~ 150
COOK INLET PROCESSING, INC. KENAI PIPELINE	1	SB 7-12-01 ACCB 1-07	LC?	COMMERCIAL	FISH PROCESSING		776-8174	
	2	SB 7-12-01 ACCB	LC?	COMMERCIAL	FISH PROCESSING			
	1	SB 7-12-16 ADBB 1-07	UC?	DOMESTIC	POTABLE USES	GENE JACKSON	776-8711	<500
OFFSHORE SYSTEM			LC?					
			DC?					
	2	SB 7-12-21 ABDC 1-06	UC?	DOMESTIC	ABANDONED?			
	3	SB 7-12-21 ABDB 2-07	UC?	DOMESTIC	RESIDENCE			
	1	SB 8-12-36 CAAA PAD 3	UC?	COMMERCIAL	BARGED TO PLATFORMS	FRED NEWTON	776-5551	93,372
PHILLIPS PETROLEUM CO.	2	SB 8-12-36 CAAD	UC?		UNKNOWN USE			
	4	SB 8-12-36 ACCD PAD 2	UNC	DOMESTIC	WATER TO OFFICE			~ 500
	1	SB 7-12-22 CBAA 2-02	UC	INDUSTRIAL	LNG PLANT	FRITZ (LESLIE)	776-8166	
			UC		ON STANDBY BECAUSE	KRUSEN		
			UC		OF POTENTIAL			
			UC		CONTAMINATION			
			UC		T=40,000 GPD/FT			
			UC		S=.0008			
			LC					
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)	2	SB 7-12-22 CBBD 2-05	UC	INDUSTRIAL	ON STANDBY BECAUSE			
			UC		OF POTENTIAL			
			UC		CONTAMINATION			
			LC					
	3	SB 7-12-22 CBBD 3-05	LC	INDUSTRIAL	CURRENTLY USED			333,988
PUGET SOUND TUG AND BARGE CO. (Rig Tenders)			LC					
			LC					
	1	SB 7-12-21 ACBB 1-03	UNC	COMMERCIAL	RIG TENDERS WELL #1	DAN; LEE McCOY	776-8880	1,000?
	2	SB 7-12-21 ACBB 2-03	UNC	COMMERCIAL	RIG TENDERS WELL #2			500?
	3	SB 7-12-21 ABCC 1-14	UNC	COMMERCIAL	RIG TENDERS WELL #3			500?
	4	SB 7-12-21 ABCC 2-14	UNC	COMMERCIAL	RIG TENDERS WELL #4			500?
NAME	WELL	USGS NUMBER	AQ.	USE TYPE	REMARKS	CONTACT PERSON	PHONE NUMBER	AVERAGE YEARLY GPD

Appendix E. (continued)

NAME	WELL	USGS NUMBER	AQ.	USE TYPE	REMARKS	CONTACT PERSON	PHONE NUMBER	AVERAGE YEARLY GPD
PUGET SOUND TUG AND BARGE CO. (con't.)	5	SB 7-12-21 ABCD 1-05	UC	COMMERCIAL	R. T.'S MAIN WELL,			NA
			UC	SUPPLY	USGS R. T.'S WELL			
			UC	COOK	#5. LOCATED ON			
			UC	INLET	KENAI PIPELINE PRO-			
			UC	PLATFORMS	PERTY, BUT MAIN-			
			UC		TAINED BY PUGET			
			UC		SOUND TUG & BARGE.			
	6	SB 7-12-21 ACBA 1-04	UC	COMMERCIAL	ABANDONED? LOCATED			
			UC		ON KENAI PL. LAND,			
			UC		P.S.T.& B. MAINTND.			
	?	SB 7-12-21 ABBC 1-02	LC	DOMESTIC	COMPANY RESIDENCE			100
SHELL WESTERN	1	SB 8-12-34 DCDB	?	COMMERCIAL	INCINERATOR COOLING	LUKE FRANKLIN	263-9617	<500
	2	SB 8-12-34 DDDDB 1-01	UC?	DOMESTIC	COMPANY RESIDENCES		776-8473	<100
TESORO	1	SB 7-12-22 BCAA 2-09	UC	INDUSTRIAL	WELL #1, BACKUP	DAMON KING	776-8191	1,893
			UC					
			UC					
			UC					
			UC					
UNOCAL	2	SB 7-12-22 BDAB 2-08	UC	INDUSTRIAL	MAIN WELL, #2			460,877
	1	SB 7-12-21 DDBC 2-08	LC	INDUSTRIAL	WELL #1, TANIC ACID	MIKE GAHR	776-8121	697,479
	5B	SB 7-12-22 CCCA	LC	INDUSTRIAL	WELL #5B, TANIC ACID			SEE WELL 1
	6	SB 7-12-21 ADDD 2-09	UC	INDUSTRIAL	WELL #6, PLUME NEAR			406,597
			UC		METERED UNIQUELY			
	7P	SB 7-12-26 BAAA 8-03	UC	INDUSTRIAL	WELL #7P, CABIN LAKE			1,473,077
			UC	DRINKING	WELLS 7P, 15, & 16			
			UC		METERED TOGETHER			
	10	SB 7-12-26 BADD	UNC	INDUSTRIAL	WELL #10, HIGH IRON			0
			UNC		WELLS 10, 12, & 14			
			UNC		METERED TOGETHER,			
			UNC		SYSTEM CONNECTED			
	12	SB 7-12-26 BADB 1-01	UNC	INDUSTRIAL	WELL #12, HIGH IRON			SEE WELL 10
			UNC		WELLS 10, 12, & 14			
			UNC		EMERGENCY BACKUP			
	14	SB 7-12-26 BAAA	UNC	INDUSTRIAL	WELL #14, HIGH IRON			SEE WELL 10
	15	SB 7-12-26 BAA8	UC	INDUSTRIAL	WELL #15, BACKUP TO			SEE WELL 7P
			UC	DRINKING	WELL 7P			
			UC					
	16	SB 7-12-23 CDDC	UC	INDUSTRIAL	WELL #16, BACKUP TO			SEE WELL 7P
			UC	DRINKING	WELL 7P			
			UC					
NAME	WELL	USGS NUMBER	AQ.	USE TYPE	REMARKS	CONTACT PERSON	PHONE NUMBER	AVERAGE YEARLY GPD