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Vashon-Maury Island
GWMMA

Tables

Appendices

Vashon-Maury Island

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Vashon-Maury Island GWMA:

Tables

Appendices

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TABLES

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(May 14, 1993 rev.)

Table 5-1. Population and Housing Estimates, 1970-1990
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Demographic	1970	1980	1990	Percent Change 1970-1980	Percent Change 1980-1990
Total Population	6,516	7,377	9,309	13%	26%
Average Household Size	3.05	2.53	2.5	-17%	-1%
Total Households	2,123	2,894	3,703	36%	28%
Single-Family Households	2,027	2,594	3,488	28%	34%
Multi-Family Households	53	300	215	466%	-28%

Source: Puget Sound Council of Governments 1988 and 1993.

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Table 5-2. Population and Housing Estimates, 1980-1991
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Demographic	1980	1990	1991	Percent Change 1980-91
Population				
Unincorporated Area	7,400	9,300	9,800	32.4%
Population per square mile	200	250	263	31.5%
Households				
Total	2,890	3,800	4,000	38.4%
Household Size	2.53	2.43	2.42	-4.3%
Housing Units				
Total	3,110	4,500	4,700	51.1%
Single-Family Households	2,650	4,000	4,200	58.5%
Mobile Homes	150	200	200	33.3%
Multi-Family Households	300	300	300	0.0%

Source: King County Annual Growth Databook 1992.

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Table 5-3. Population Estimates and Forecasts for Vashon GWMA, 1970 - 2020
 Vashon Ground-Water Management Plan
 Project No. WA028.02

	1970	1980	1990	2000	2020
TOTAL POPULATION	6,516	7,377	7,868	8,572	9,729
Avg Household Size	3.05	2.53	2.35	2.25	2.08
TOTAL HOUSEHOLDS	2,123	2,894	3,330	3,787	4,630
Single-Family Hshld	2,070	2,594	2,887	3,106	3,366
Multi-Family Hshld	53	300	443	681	1,264
Lower-Income Hshld	543	679	735	815	1,188
Lower-Mid Inc Hshld	509	694	802	874	923
Upper-Mid Inc Hshld	497	784	967	1,142	1,376
Upper-Income Hshld	574	737	826	956	1,144
TOTAL EMPLOYMENT	758	1,248	1,533	1,913	2,897
Manufacturing	295	554	596	698	848
Whol/Tran/Comm/Util	26	32	47	58	89
Retail Trade	71	325	433	531	884
Services	82	150	264	365	715
Govt/Education	286	188	193	261	361
TOTAL LAND (Acres)	23,418	23,418	23,418	23,418	23,418
Residential	593	933	1,074	1,221	1,493
Employment	261	303	368	461	687
Vacant Developable	15,906	15,428	15,196	14,918	14,317
Balance	6,658	6,754	6,780	6,818	6,921

Source: Puget Sound Council of Governments 1993.

FAZ: Forecast and Analysis Zone -- the basic geographic unit for the data forecasts, composed of Vashon and Maury Islands.

Total Population: the total number of persons residing within the FAZ.

Total Households: the total number of occupied housing units within the FAZ, and the sum of the four household income groups.

Single-Family Households: the number of households occupying 1-unit detached or 1-unit attached units, or a mobile home/trailer, as defined by the 1980 U.S. Census.

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Multi-Family Households: the number of households in structures containing 2 or more units, as defined by the 1980 U.S. Census.

Lower-Income Households: the number of households in the FAZ with incomes in the lowest income quartile of all households in the region (the income levels that contain the lowest 25 percent of the region's households).

Lower-Middle Income Households: the number of households in the FAZ with incomes in the second income quartile of all households in the region.

Upper-Middle Income Households: the number of households in the FAZ with incomes in the third income quartile of all households in the region.

Upper-Income Households: the number of households in the FAZ with incomes in the highest income quartile of all households in the region.

Total Employment: the total number of jobs located in the FAZ, including part-time, self-employed, proprietors, and military, as well as wage and salary workers, in all industry sectors except resources (agriculture, forestry, fishing, and mining) and construction. (The latter sectors are estimated for the county totals).

Manufacturing: the number of jobs in SIC 19-39 plus the Puget Sound Naval Shipyard (PSNS) in Kitsap County.

Whol/Tran/Comm/Util: the number of jobs in wholesale trade, transportation services, communication, and utilities; SIC 40-42, 44-51.

Government/Education: the number of jobs in SIC 43, 82, 92-97 and government enterprises classified elsewhere (except PSNS).

Total Land: the total land area in acres in the FAZ.

Residential Land: the total acreage in residential land uses in the FAZ -- net residential land, not including streets, parks, etc.

Employment Land: the total acreage in land uses associated with the jobs estimated or forecasted for the FAZ -- net employment land, not including streets, etc.

Vacant Developable Land: the total acreage of land in the FAZ which is physically developable according to standards and policies currently applicable by local governments.

Balance: the remainder of the land area in the FAZ which is not contained in the residential, employment, or vacant-developable land categories, in particular, physically unbuildable land, streets, parks, and similar land uses.

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Table 5-4. Population Estimates and Forecasts, 1970-2020
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Demographic	Incorporated	Unincorporated	Total
1970	0	6,500	6,500
1980	0	7,400	7,400
1990	0	9,300	9,300
2000	0	11,100	11,100
2020*	0	9,700	9,700

Sources: King County Annual Growth Databook 1992.
 *King County Annual Growth Databook 1991.

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Table 5-5. Residential Permits and Units, 1980-1991
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Year	Single-Family Permits	Single-Family Units	Multi-Family Permits	Multi-Family Units	Total Permits	Total Units
1980	76	76	0	0	76	76
1981	79	79	0	0	79	79
1982	48	48	0	0	48	48
1983	56	56	1	11	57	67
1984	41	41	0	0	41	41
1985	41	41	0	0	41	41
1986	47	47	1	18	48	65
1987	78	78	0	0	78	78
1988	84	84	0	0	84	84
1989	90	90	0	0	90	90
1990	159	159	2	12	161	171
1991	125	127	0	0	125	127

Source: King County Annual Growth Databook 1992.

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Table 5-6. Selected New Industrial and Commercial Permits, 1980-1988
 Vashon-Maury Island Ground-Water Management Plan
 Project No. WA028.02

Year	Industrial Permits	Value (\$)	Office, Bank, Professional Permits	Value (\$)	Store and Restaurant Permits	Value (\$)	Total Permits	Total Value (\$)
1980	0	\$0	1	\$10,000	1	\$160,000	2	\$170,000
1981	2	\$49,100	1	\$95,500	1	\$90,000	4	\$234,600
1982	0	\$0	1	\$20,000	0	\$0	1	\$200,000
1983	1	\$50,000	0	\$0	0	\$0	1	\$50,000
1984	0	\$0	0	\$0	1	\$200,000	1	\$200,000
1985	0	\$0	1	\$155,800	0	\$0	1	\$155,800
1986	2	\$174,000	0	\$0	0	\$0	2	\$174,000
1987	1	\$413,200	1	\$963,600	1	\$67,200	3	\$1,444,000
1988	0	\$0	0	\$0	0	\$0	0	\$0

Source: King County Annual Growth Report 1989a

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Table 5-7. Solid Waste Generation, 1984-1986
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Year	Population	Solid Waste Generation Rate		Annual Landfill Volume Required (1) (cy/year)
		(tons/person)	(tons/year)	
1984	7,434	0.6510	4840	16,132
1985	7,876	0.6937	5463	18,211
1986	7,976	0.7363	5873	19,576

(1) In-place density equals 600 pounds per cubic yard.
 cy Cubic yards

Source: Harper-Owes 1988.

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Table 5.8
KING COUNTY BOARD OF HEALTH
RULES AND REGULATIONS #3
ON-SITE SEWAGE DISPOSAL SYSTEMS

Effective April 1, 1987

MINIMUM LOT SIZES FOR NEW SUBDIVISIONS⁽¹⁾

<u>Soil Texture Type⁽²⁾</u>	<u>Soil Textural Classification</u>	<u>Minimum Lot Size⁽³⁾</u>
Type 1	Coarse sand or coarser	½ acre ⁽⁴⁾
Type 2	Medium sand	12,500 sq. ft.
Type 3	Fine sand, loamy sand	15,000 sq. ft.
Type 4	Sandy loam, loam	18,000 sq. ft.
Type 5	Porous, well developed structure in silt and silt loams	20,000 sq. ft. ⁽⁵⁾

- (1) Minimum lot size requirements are based on soil texture type per unit volume of sewage (450 gallons per day) or single family residence.
- (2) Soils which are classified as excessively permeable, regardless of texture type, must meet all the requirements of soil texture Type 1.
- (3) Minimum size requirement may be increased depending on specific site conditions.
- (4) Lots with soil texture Type 1 (and other excessively permeable soils) and which are ½ acre to 1 acre in size, must be developed with an alternative on-site sewage system which provides a degree of treatment to the sewage equal or greater than the treatment provided by a mound or sandfilter.
- (5) On-site systems in soil texture Type 5 soils must consist of a mound system, sandfilter, or equivalent.

NOTE: In King County all lots created after 1972 need to be at least 5 acres in size in order to be developed with a private water supply.

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Table 5.9
KING COUNTY BOARD OF HEALTH
RULES AND REGULATIONS #3
ON-SITE SEWAGE DISPOSAL SYSTEMS

Effective April 1, 1987

ORIGINAL SOIL DEPTH REQUIREMENTS

Soil Texture Type	Soil Textural Classification	Size of Lot	Undisturbed Original Soil Depth Required		
			Gravity System	Pressure Distance	Mound/Sandfilter
Type 1	Coarse Sand or coarser	<1 acre	NA ⁽¹⁾	NA ⁽¹⁾	18"
		1 acre or larger	48"		
Type 2	Medium sand				
Type 3	Fine sand, loamy sand	<1 acre	48"	30" ⁽²⁾	18"
Type 4	Sandy loam, loam	1 acre or larger	36"	30" ⁽²⁾	18"
Type 5	Porous, well-developed structure in silt and silt loams	<1 acre	NA ⁽³⁾	NA ⁽³⁾	18"
		1 acre or larger	NA ⁽³⁾	NA ⁽³⁾	18"

- (1) Lots which have a soil texture Type 1 (and other excessively permeable soils) and which are less than 1 acre in size, must be developed with a mound, sandfilter, or equivalent system.
- (2) Lots using pressure distribution must have a minimum of 30" or original permeable soil and must maintain at least 21" of permeable soil below all trenches. Increased vertical separation is desirable whenever possible.
- (3) On-site systems in soil texture Type 5 must consist of a mound system sandfilter, or equivalent.

NA -- Not Applicable

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Table 5-10(a). Summary of Results of Analyses Performed on Sludge Collected from the Vashon Sewer District on November 18, 1987
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Tests Performed	Results	Units
Total Solids	1.6	%
Fecal Strep	> 160,000	MPN per 100 mls
Fecal Coliform Count	> 160,000	MPN per 100 mls
Total Coliform Count	> 160,000	MPN per 100 mls
Total Kjeldahl Nitrogen as N	940.	ppm (mg/L)
Soluble Nitrate as N	0.3	ppm (mg/L)
Total Ammonia as N	3.0	ppm (mg/L)
Total Phosphate as P	240.	ppm (mg/L)
Sulfate	3.	ppm (mg/L)
Potassium	70.	ppm (mg/L)
Magnesium	64.	ppm (mg/L)
Iron (total)	100.	ppm (mg/L)
Manganese	7.	ppm (mg/L)
Barium	< 0.8	ppm (mg/L)
Mercury	0.085	ppm (mg/L)
Selenium	< 0.02	ppm (mg/L)
Silver	7.	ppm (mg/L)
Hexavalent Chromium	< 0.05	ppm (mg/L)

MPN Most probable number
 mls Milliliters
 ppm Parts per million
 mg/L Milligrams per liter
 < Less than
 > Greater than

Laboratory analysis performed by Laucks Testing Laboratories, Inc.

Table 5-10(b). Summary of Results of Analyses Performed on Sludge Collected from the Vashon Sewer District on September 22, 1987
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Tests Performed	Results	Units
Total Solids	1.3	%
Total Arsenic	2.7	ppm (mg/L)
Total Lead	54.	ppm (mg/L)
Total Zinc	530.	ppm (mg/L)
Total Nickel	17.	ppm (mg/L)
Total Cadmium	3.3	ppm (mg/L)
Total Copper	88.	ppm (mg/L)
Total Kjeldahl Nitrogen as N	49,000.	ppm (mg/L)

ppm Parts per million
 mg/L Milligrams per liter

Laboratory analyses were performed by Laucks Testing Laboratories, Inc.

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Table 5-11. Underground Storage Tanks Reported to Ecology as of March 27, 1990
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Site Name	Site Address	Site Number	Tank Ccode	Age (Years)	Gallons (x 1000)	Substance Stored
Alascom, Inc.	Vashon Earth Station	007283	1	7	1-5	Diesel fuel
Burton Shell	103rd SW & SW 225th	011593	1	5	5-10	Leaded gas
			2	5	5-10	Unleaded gas
			3	5	5-10	Unleaded gas
			4	17	1-5	Diesel fuel
			5	17	1-5	Used oil
Island Automotive and Equipment	99th Ave SW & SW 178th	011720	1	5	0.5-1	Diesel fuel
			2	12	0.5-1	Kerosene
			3	12	1-5	Unleaded gas
			4	17	1-5	Leaded gas
			5	17	1-5	Unleaded gas
Kimm Co., Inc.	99 St SW & 178 St	011350	1	12	0-0.5	Leaded gas
			2	12	0-0.5	Diesel fuel
KING Radio Transmitter Facility	Lat 47 deg, 23' 40"	099001	1	26	NA	NA
	Long 122 deg, 25' 31" Maury Island		2	26	NA	NA
KIRO-AM Transmitter	Route 3, Box 155	012509	3	26	1-5	1,2,4 Oil
K2 Corporation	19215 99th Ave SW	097630	1	15	>20	Permanently out of service
			2	15	>20	
			3	20	0.5-1	
Laidlaw Transit, Inc.	9200 SW 204th	007191	1	29	1-5	Leaded gas
GE American (Sea Stn)	8700 SW 159th Street	000336	1	5	1-5	Diesel fuel
Vashon	10015 SW 196th Street	006885	7431	22	1-5	Unleaded gas
Vashon Island Facility	8700 SW 159th	007402	1	5	5-10	Diesel fuel
Williams Heating, Inc.	99th Ave SW & SW 196th	011602	1	17	5-10	Kerosene
			2	17	5-10	Diesel fuel
			3	17	10-20	Diesel fuel
			4	17	10-20	Diesel fuel

NA Not available

Source: Geraghty & Miller 1990.

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Table 6-1. Projected Water Demand for the Vashon GWMA (PSCOG)
 Vashon Ground-Water Management Plan
 Project No. Wa028.02

	1980	1990	2000	2020
Population	7,377	7,868	8,572	9,729
Projected Demand (Mgpd)	0.885	0.944	1.029	1.167
Annual Demand (Mg)	323	336	366	416

Mgpd Million gallons per day
 Mg Millions of gallons

Based on Puget Sound Council of Governments (PSCOG) 1992 Forecasts and Water Demand of 120 Gallons per Day per Person

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Table 6-2. Projected Water Demand for the Vashon GWMA (AGR)
 Vashon Ground-Water Management Plan
 Project No. WA028.02

	1980	1987	1990	2000*
Population	7,400	9,300	11,100	9,700
Projected Demand (Mgpd)	0.888	1.116	1.332	1.164
Annual Demand (Mg)	324	397	474	414

Mgpd Million gallons per day
 Mg Millions of gallons

* Taken from 1991 King County Annual Growth Report (AGR)

Based on 1988 AGR Population Forecasts and Water Demand of 120 Gallons per Day per Person.

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Table 6-3. Water Rights of and Water Use by Major Water Purveyors in the Vashon GWMA
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Purveyor	Instantaneous Withdrawal-rate (QI) (1) (2)	Annual Permitted Withdrawal Quantity (QA) (Acre-Foot) (2)	Annual Permitted Withdrawal Quantity (QA) (Gallons) (3)	Reported Withdrawal Quantity (Gallons)	Time Period for Reported Withdrawal Quantities
Heights Water Association	60.0 G, 85.0 G, 0.1 C, 0.15 C, 0.5 C	96, 95	31,300,512 30,974,465	42,203,490	31-July-88 to 1-Aug-89
Westside Water Association	2.0 C, 0.5 C	1120	365,172,640		
King County Water District #19	250.0 G, 0.9 C	300	97,814,100		
Burton Water Company	160 G	NA	NA	23,652,000 (4)	01-Jan-88 to 31-Dec-88
Maury Mutual Water Company	0.334 C	100	32,604,700		
Dockton Water Association	0.16 C	25	8,151,175	22,300,000 (5)	01-Sept-88 to 31-Aug-89
Gold Beach Water System	NA	NA	NA	NA	NA

G Gallons per minute
 C Cubic feet per second
 NA Not available
 QI Instantaneous withdrawal
 QA Annual withdrawal

- 1 Multiple sources are listed separately
 2 Source: Ecology Listing of Recorded Water Rights, September 5, 1989
 3 One acre-foot equals 326,047 gallons
 4 Estimated figure provided by G. Garlson, Burton Water Co. [Westside Water cannot use its water right to extract 1 million gallons per day out of Needle (Shinglemill) Creek].
 5 Total for September through November 1988 was estimated; total for December 1988 through August 1989 was reported as 17,515,754 gallons.

Source: Geraghty & Miller 1991.

Table 6-4. Available Information Pertaining to Major Water Purveyors in the Vashon GWMA
 Vashon Ground-Water Management Plan
 Project No. WA028.02

SYSTEM	NUMBER OF CONNECT/RE'S	SOURCE (GPD)		MINIMUM STORAGE REQUIREMENTS (GAL)				AVAILABLE STORAGE	STORAGE DEFICIENCY
		REQ'D (1)	AVAILABLE	STANDBY (2)	EQUALIZ (3)	FIRE (4)	TOTAL (5)		
Heights	445	356,000	396,000	196,245	18,075	360,000	378,075	330,000	- 48,075
Westside	205	164,000	158,400	164,000	17,475	360,000	377,475	253,000	- 124,475
Water District 19	1000/1100	880,000	828,000	376,000	41,700	360,000	417,700	1,725,000	+1,307,300
Burton	350	280,000	216,000	280,000	26,700	360,000	386,700	130,000	- 256,700
Maury Mutual	90	72,000	50,400	54,000	16,200	120,000	136,200	53,000	- 83,200
Dockton	245	196,000	345,000	49,000	2,175	360,000	362,175	381,000	+ 18,825
Gold Beach	109	87,200	360,000	51,300	-0-	120,000	120,000	85,000	- 35,000

Source: Horton Dennis and Associates, Inc. 1989

RE Residential equivalent based on actual water used and an assumed average use rate.

- (1) Required source calculated based on SKCHD requirement of 800 gallons per day per connection.
- (2) Required standby storage is based on SKCHD requirement of 800 gallons per residential equivalent for single source systems with more than 99 connections. Standby storage requirement for single source systems with less than 100 connections (Maury Mutual) is based on SKCHD requirement of 600 gallons per residential equivalent. Reduction of standby storage requirement for multiple source systems is calculated according to the requirements and formula presented in the SKCHD "Sizing Guidelines for Public Water Supplies."
- (3) Equalizing storage is based on the formula put forth in the SKCHD "Sizing Guidelines for Public Water Supplies."
- (4) Fire flow storage requirements are calculated based on the general requirement of 1,000 gallons per minute (gpm) for a duration of 2 hours in residential areas (1,000 gpm x 2 hours = 120,000 gallons). For commercial areas, a general requirement of 3,000 gpm for a duration of 2 hours was used (360,000 gallons). Although some specific areas may be exempt from fire flow requirements, all purveyors are subject to fire flow storage requirements.

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GERAGHTY & MILLER, INC.

**Table 6-5. Status of Septic Systems Based on Survey
Vashon Ground-Water Management Plan
Project No. WA028.02**

Community	Percent Failing	Percent Prefailing	Percent Functioning
Beulah Park	31	53	16
Cove	67	8	25
Bunker Trail	64	14	23
Spring Beach	100	0	0
Paradise Cove	19	31	50
Patten Palsades	12	12	76
Quartermaster Harbor	13	15	73
Total	21	19	60

Burton septic tank status is included with Quartermaster Harbor.

Source: PEI/Barrett 1992.

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Table 8-1. Rain-Gage Stations and Data Collection Periods
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Station Name	Location ¹	Available Data
RG-1	R3E/T22N/S22	March 1989 - January 1992
RG-2	R2E/T22N/S24	March 1989 - January 1992
RG-3	R2E/T23N/S25	March 1989 - January 1992
RG-4	R3E/T22N/S6	March 1989 - May 1991
RG-5	R2E/T22N/S31	December 1988 - January 1992
RG-6	R2E/T22N/S2	December 1988 - January 1992
RG-7	R2E/T21N/S2	December 1988 - January 1992
RG-8	R3E/T23N/S18	December 1988 - June 1990
RG-9	R3E/T23N/S29	December 1988 - December 1991
Sea-Tac Airport	R4E/T23N/S29	December 1988 - January 1992

1 Locations are given in U.S. Geological Survey (USGS) range (R), township (T), and section (S).

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Table 8-2. Summary of Monthly Rainfall Data*
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Date	Rain Gage No. 1		Rain Gage No. 2		Rain Gage No. 3		Rain Gage No. 4		Rain Gage No. 5		Rain Gage No. 6		Rain Gage No. 7		Rain Gage No. 8		Rain Gage No. 9		Sea-Tac Rain Gage	
	Monthly	Yearly	Monthly	Yearly	Monthly	Yearly	Monthly	Yearly	Monthly	Yearly	Monthly	Yearly	Monthly	Yearly	Monthly	Yearly	Monthly	Yearly	Monthly	Yearly
Dec-88									3.85	3.55	4.44	3.82	4.61							3.48
Jan-89									4.28	3.34	4.17	3.47	3.85							2.78
Feb-89									2.8	3.29	3.36	3.81	3.72							3.42
Mar-89	6.55		7.4		5.36		6.51		1.34	5.28	7.46	6.97	6.64							5.70
Apr-89	3.63		3.32		2.05		3.42		1.03	2.93	3.15	3.23	3.42							2.8
May-89	3.24		1.88		2.02		2.215		1.64	1.36	1.77	1.9	1.07							2.78
Jun-89	1.2		1.2		1.34		1.05		1.13	0.84	1.10	1.12	0.9							1.14
Jul-89	0.66		0.83		0.67		1		0.79	0.62	1.15	0.75	0.99							0.64
Aug-89	0.69		0.83		0.64		0.66		0.39	0.55	0.47	1.14	0.63							0.69
Sep-89	0.36		0.52		0.33		0.33		0.48	0.33	0.35	0.48	0.4							0.54
Oct-89	3.63		3.75		4.14		3.965		3.645	3.74	3.96	3.85	3.99							2.98
Nov-89	7.15		5.44		6.64		7.44		7.225	5.73	7.39	5.1	6.65							6.13
Dec-89	5.4		5.83		5.5		5		5.8	5.53	5.17	2.59	5.27							4.79
1989		32.91		30.8		29.61		31.81		30.51		33.82		39.59		34.21		38.83		34.89
Jan-90	10.38		12.02		13.99		12.2		11.27	11.48	11.75	10.43	10.9							9.41
Feb-90	4.05		6.39		10.05		5.64		3.37	4.48	7.37	5.44	6.59							3.72
Mar-90	3.00		3.59		3.85		3.49		2.65	3.12	3.54	4.38	3.15							2.58
Apr-90	2.38		3.01		1.83		2.13		2	1.92	2.34	1.92	2.1							2.54
May-90	1.72		1.8		1.85		1.9		1.64	1.42	1.64	1.78	1.79							1.98
Jun-90	3.29		3.29		3.21		3.31		3.48	2.92	3.77	2.27	3.26							3.05
Jul-90	2.12		0.81		0.83		0.67		0.67	0.32	2.33	0.84	0.58							0.58
Aug-90	0.94		1.27		1.09		1.11		0.87	0.93	0.89	0.99	0.71							0.71
Sep-90	0		0		0		0.04		0	0	0	0	0.05							0.05
Oct-90	6.67		7.12		5.97		4.97		7.26	4.82	7.14	6.12	5.61							5.79
Nov-90	12.72		14.32		15.15		14.78		11.8	12.6	12.62	11.48	14.62							10.71
Dec-90	3.89		4.04		4.87		3.95		3.9	2.95	4.49	4.7	3.83							3.83
1990		51.23		57.46		62.29		54.39		48.71		46.99		57.68		43.78		54.52		44.75
Jan-91	5.65		5.81		6.29		5.09		5.31	4.85	5.43		5.04							4.48
Feb-91	5.79		6.33		8		5.93		6.05	5.5	6.15		6.12							4.69
Mar-91	5.83		6.19		6.64		5.52		5.04	5.37	5.30		5.89							4.66
Apr-91	7.8		8.1		6.66		6.63		7.95	7.49	3.83		7.85							6.53
May-91	1.89		1.48		1.86		1.57		1.93	1.54	1.96		1.66							1.39
Jun-91	2.35		1.43		1.34				1.53	1.01	1.69		1.45							1.29
Jul-91	2.82		0.57		0.71				0.35	0.3	0.31		0.28							0.28
Aug-91	3.28		3.22		3.07				3.15	2.83	3.23		2.92							2.17
Sep-91	0		0		0.02				0.1	0	0.23		0							0
Oct-91	2.04		1.99		3.36				2.21	1.78	2.2		1.31							1.31
Nov-91	5.92		6.58		9.71				7.04	6.43	6.09		7.12							5.33
Dec-91	4.15		4.57		4.51				4.52	4.12	4.00		3.31							3.31
1991		47.32		45.07		52.41			45.18		41.32		40.22				44.98			35.42
Jan-92	6.34		6.68		14.42				7.43	9.67	9.2									

Data collected by Island volunteers.
 *Blanks in data field indicate no data was collected.
 Measurement in inches.

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Table 8-3. Stream-Gage Stations and Data Collection Periods
 Vashon Ground-Water Management Plan
 Project No. WA028.01

Station Name	Location ¹	Drainage Area ² (acres)	Available Data ³
*Needle Creek	R3E/T23N/S18	1,996	7/20/89 - 3/17/91
Beal Creek	R3E/T23N/S24	211	9/17/89 - 3/11/92
Upper Judd Creek	R3E/T22N/S7	NA	1/10/91 - 1/30/92
Judd Creek	R3E/T22N/S18	3,149 ⁴	7/20/89 - 4/6/92
Green Valley Creek	R2E/T22N/S14	762	1/10/91 - 4/8/92
Mileta Creek	R3E/T22N/S21	700 ⁵	7/20/89 - 3/11/92
Fisher Creek	R2E/T22N/S24	1,549	1/28/91 - 4/5/92
Paradise Cove Creek	R2E/T22N/S23	200 ⁵	1/11/91 - 7/9/91
Tahlequah Creek	R2E/T21/S2	780	7/20/89 - 4/5/92

1 Locations are given in U.S. Geological Survey (USGS) range (R), township (T), and section (S)

2 Data source: Carr/Associates, 1983

3 Data collected are not continuous.

4 Total drainage area for Judd Creek

5 Estimated

* Needle Creek is also known as Shinglemill Creek.

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Table B-4. Summary of High/Low Stream-Gage Readings*
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Month/Year	Beal Creek		Fisher Creek		Green Valley Creek		Judd Creek		Needle Creek		Mileta Creek		Paradise Cove Creek		Tahlequah Creek		Upper Judd Creek		
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	
Jul-89							0.91	0.88	0.43	0.42		0.13			0.44	0.42			
Aug-89									0.42	0.42	0.13	0.11							
Sep-89	0.64	0.41							0.42	0.42		0.15							
Oct-89	0.81	0.5					1.16	0.89	0.62	0.42		0.15							
Nov-89	0.68	0.5					1.5	0.97	0.88	0.57	1.6	1.5						0.73	
Dec-89	0.95	0.53					1.5	1	1.2	0.44					0.59	0.58			
Jan-90	0.77	0.67					2.1	1.28	2.4	0.48					0.72	0.53			
Feb-90	0.68	0.67					1.75	1.3	0.94	0.72	1.77	1.59			0.95	0.59			
Mar-90	0.78	0.52					1.78	1.21	0.72	0.8					0.62	0.48			
Apr-90	0.87	0.37							0.64	0.8		1			0.48	0.42			
May-90	0.68	0.47					2	1.13	0.64	0.8		0.9						0.4	
Jun-90	0.65	0.62					1.36	1.04	0.6	0.58	0.89	0.83						0.4	
Jul-90	0.67	0.3					1.26	1.02		0.58	0.81	0.79						0.43	
Aug-90	0.71	0.42					1.06	1.03	0.58	0.5	0.78	0.9						0.5	
Sep-90	0.59	0.51					1.08	1.04	0.8	0.58								0.5	
Oct-90	0.8	0.57					1.31	1.11	0.84	0.8									
Nov-90	0.98	0.62					1.67	1.18	0.82	0.8		0.56						0.54	
Dec-90																			
Jan-91	1.24	0.58	0.44	0.33	0.48	0.21				0.84			0.25	0.14			0.51	2.8	0.59
Feb-91	1	0.73	0.75	0.4	0.31	0.19		0.52	1.8	0.7			0.23	0.16			0.54	3.29	0.52
Mar-91	0.64	0.27	0.8	0.4	0.28	0.18		0.4		0.13			0.25	0.18			0.54	1	0.48
Apr-91			1.81	0.4									0.25	0.17			0.59	2.63	0.47
May-91	0.82	0.62	0.45	0.36								4.05						0.48	0.29
Jun-91	0.73	0.67	0.42	0.26														0.35	0.33
Jul-91	0.77	0.5	0.29	0.25		0.13		0.2						0.17			0.43	0.34	0.33
Aug-91	0.82	0.51		0.24				0.19				3.8					0.45	0.53	0.35
Sep-91	0.73	0.53	0.24	0.22				0.19				3.85					0.42		
Oct-91	0.78	0.48	0.51	0.2		0.2		0.21				4					0.47		
Nov-91	0.52	0.23	0.65	0.22		0.18		0.95									0.55	0.89	0.38
Dec-91		0.17	0.9	0.24		0.18		0.49				4.22					0.54	1.2	0.42
Jan-92		0.35		0.31				0.58				4.2					0.54	3.17	0.45
Feb-92		0.71		0.46				0.4				4.21					0.55		
Mar-92		0.76		0.29		0.14		0.34				4					0.48		
Apr-92				0.25		0.14		0.28									0.48		

*This table is meant only to be a summary of data. Data was intended to be collected daily. Data points for each day of each month were not always collected. If only one point was available, that one point was placed in the Low column.

Data collected by Island volunteers.

Measurement in feet.

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Table 8-5. Summary of Well Construction Data, Ground-Water Monitoring Sites, and Data Collection Periods
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Well ID	Location*	Surface Elevation (feet)**	Well Depth (feet)	Elevation Well Bottom (feet)	Range In Water Table Elevations (feet)***	Monitored for Water Quality	Monitored for Water Levels	Available Water-Level Data
W-1	R3E/T23N/S8	200	94	106	108 to 124	x	x	9/13/89 - 3/10/92
W-2A	R3E/T23/S18	230	177	53	84 to 86	x	x	8/9/89 - 3/10/92
W-2B	R3E/T23/S18	200	148	52	88 to 91		x	8/9/89 - 3/10/92
W-3	(1) R3E/T23N/S20	150	142	8	21 to 29	x	x	10/27/89 - 3/13/92
W-4	(1) R3E/T23N/S29	190	305	-115	-109 to -7	x	x	9/13/89 - 3/13/92
W-5	(1) R3E/T23N/S29	190	320	-130	-64 to 14		x	9/7/89 - 3/13/92
W-6	R3E/T23N/S31	400	169	231	249 to 260	x	x	7/19/89 - 3/10/92
W-7	(1) R3E/T22N/S6	280	297	-17	29 to 49	x	x	9/28/89 - 10/31/91
W-8	(1) R3E/T22N/S16	50	462	-412	5 to 7	x	x	8/9/89 - 3/13/92
W-9A	(1) R3E/T22N/S23	400	450	-50	3 to 11	x	x	8/9/89 - 3/13/92
W-9B	(1) R3E/T22N/S23	400	375	25	31 to 36	x	x	4/9/81 - 12/28/89
W-10A	R3E/T22N/S28	82	114	-32	-8 to 5		x	8/9/89 - 3/13/92
W-10B	R3E/T22N/S28	85	109	-24	-11 to 4	x	x	8/9/89 - 3/13/92
W-11	(1) R3E/T22N/S29	360	423	-63	65 to 117	x	x	9/13/89 - 3/13/92
W-12	(1) R3E/T22N/S21	105	473	-368	-38 to 17	x	x	7/19/89 - 3/13/92
W-13	R3E/T22N/S18	250	80	170	235 to 242	x	x	9/7/89 - 3/10/92
W-14	R2E/T22N/S35	390	183	207	213 to 226	x	x	7/21/89 - 3/10/92
W-15	R2E/T22N/S35	380	188	192	219 to 221	x	x	10/4/89 - 3/10/92
W-16A	R2E/T22N/S14	285	67	218	257 to 278	x	x	7/19/89 - 3/10/92
W-16B	R2E/T22N/S14	290	62	228	233 to 248		x	7/19/89 - 3/10/92
W-17	(1) R2E/T22N/S11	200	220	-20	29 to 33	x	x	9/7/89 - 3/10/92
W-18	(1) R2E/T23N/S35	190	116	74	114 to 115	x	x	9/7/89 - 3/10/92
W-19	R2E/T23N/S36	460	173	287	307 to 337	x	x	7/19/89 - 3/10/92
W-20	R2E/T23N/S25	380	122	258	281 to 286	x	x	7/19/89 - 5/23/91
W-21	(1) R2E/T23N/S24	190	133	57	76 to 77	x	x	7/21/89 - 3/10/92

* Location is given by U.S. Geological Survey (USGS) range (R), township (T), and section (S).

** Well surface elevations measured with hand-held altimeter relative to mean sea level.

*** Water-level data may include erroneous measurements.

(1) Well may be completed in deeper portions of the Vashon-age aquifer or in the pre-Vashon-age aquifer.

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Table 8-6. Summary of Surface-Water Samples Exceeding Established Limits
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Sample Medium	Beal Creek	Fisher Creek	Green Valley Creek	Judd Creek	Milota Creek	Paradise Cove Creek	Needle (Shinglemill) Creek	Tahlequah Creek
Fresh Water	None	Fecal coliform ^{a,1}	Fecal coliform ^a TDS ¹ (1) [8/91]	Mercury ^a (1) [9/91] Fecal coliform ^{a,1} Methylene chloride (2) [8/91 ^a , 9/91 ^a] Acetone ³ (1) [9/91]	Chromium (3) [8/91 ^a , 8/92 ^a , 8/92 ^a] Fecal coliform ^a	Fecal coliform ^a	Fecal coliform ^a	Fecal coliform ^a
Marine Water	Lead ^a (1) [8/91] Copper ^a (3) [7/92] Zinc ^a (1) [8/91]	Lead ^a (1) [8/91]	Lead ^a (1) [4/92]	Copper ^a (2) [8/91] Lead ^a (2) [8/91, 4/92] Total coliform ^a Fecal coliform ^a	Copper ^a (2) [8/91] Silver ^a (1) [8/91] Lead ^a (2) [8/91, 7/92]	Lead ^a (1) [11/91]	Copper ^a (3) [7/92] Lead ^a (3) [8/91, 4/92, 8/92]	Lead ^a (1) [4/92] Copper ^a (1) [8/91] Fecal coliform ^{a,1}
Freshwater Sediment	NS	NS	NS	Chromium ⁷	Total coliforms ⁷	NS	None	NS
Marine-Water Sediment	None	None	None	Chromium ⁷ Lead ⁷ Arsenic ⁸ Total coliforms ^a	Fecal coliforms ⁷ Total coliforms ^a	Zinc ⁷	Mercury ⁷	Total coliform ⁷
Marine Shellfish	Fecal coliform ^a (3) [7/92]	Fecal coliform ^a (4) [4/92, 7/92, 8/92]	NS	Fecal coliform ^a (1) [7/92]	None	Fecal coliform ^a (4) [8/91, 8/92]	None	Fecal coliform ^a (5) [8/91, 11/91, 7/92, 8/92]

(1) Indicates number of samples in which constituent was detected.
 [8/91] Indicates sample collection date(s) for which constituent was detected.
 None No sample exceeded standards established either by Washington State or for this study.
 TDS Total dissolved solids
 NS Not sampled
 TCA 1,1,1-tetrachloroethane

^a Geometric mean exceeds coliform criteria.
¹ More than 10% of values exceed maximum coliform level.
² Value exceeds federal maximum contaminant limit standards.
³ Detected in field blanks. Sample less than 10 times maximum contaminant limit.
⁴ Chronic
⁵ Acute
⁶ Exceeds Federal Drug Administration standards.
⁷ Highest level with respect to other sediment samples (fresh or marine).
⁸ Significantly higher level than other sediment samples (fresh or marine).

Note: Detection limits for mercury in freshwater and marine water above chronic limit. Detection limits for silver in marine water higher than acute limit. Fresh water pH values in December 1991 and January 1992 were very low and probably in error. No regulatory limits have been established for sediments.

Data collected by Seattle-King County Department of Public Health; summary analytical results in Appendix J.

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Table 8-7. Summary of Spring-Water Quality Data
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Spring ID	Sample Date		
	Oct-89	Apr-90	Oct-90
<u>Chloride (mg/L)</u>			
S-1 North Vashon	NS	9.5	4.8
S-2 Ober Beach	7.6	4.3	3.1
S-3 Atlas Water	NS	NS	NS
S-4 Magnolia Beach	19	5.8	NS
S-5 Morningside	18	4.0	3.1
S-6 Jensen	NS	NS	NS
<u>Nitrate (mg/L)</u>			
S-1 North Vashon	NS	2.5	2.5
S-2 Ober Beach	<0.2	1.2	1.4
S-3 Atlas Water	NS	NS	NS
S-4 Magnolia Beach	<0.5	4.4	NS
S-5 Morningside	<0.5	<0.2	<0.2
S-6 Jensen	NS	NS	NS
<u>TDS (mg/L)</u>			
S-1 North Vashon	NS	145	210
S-2 Ober Beach	148	140	280
S-3 Atlas Water	NS	NS	NS
S-4 Magnolia Beach	114	145	NS
S-5 Morningside	155	100	140
S-6 Jensen	NS	NS	NS

J Estimated value
 mg/L Milligrams per liter
 NS Not sampled

Data collected by Seattle-King County Department of Public Health.

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Table 8-8(a). Ground-Water Quality Data for Chloride
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Well ID	Sample Date		
	Oct-89 (mg/L)	Apr-90 (mg/L)	Oct-90 (mg/L)
W-1	5.6	2.8	<0.5
W-2A	5.4	2.8	2.3
W-3	14	6.4	2.9
W-4	6.9	3.5	2.9
W-6	4.5	2.3	2.3
W-7	5.2	2.6	3.4
W-8	13	8.1	4.0
W-9A	NS	4.0	4.7
W-9B	1.6	NS	NS
W-10B	1.6	8.4	19
W-11	7.7	4.1	3.5
W-12	6.7	3.2	3.1
W-13	5.1	2.9	2.9
W-14	5.2	2.9	1.5
W-15	5.7	3.3	2.7
W-16A	6.1	3.2	2.3
W-17	4.7	2.7	2.1
W-18	8.6	4.3	3.8
W-19	4.7	2.6	2.1
W-20	5.3	3.1	2.9
W-21	5.6	2.6	<0.5

mg/L Milligrams per liter

NS Not sampled

Data collected by Seattle-King County Department of Public Health.

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Table 8-8(b). Summary of Water Quality Data for Nitrate
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Well ID	Sample Date		
	Oct-89 (mg/L)	Apr-90 (mg/L)	Oct-90 (mg/L)
W-1	<0.2	<0.2	<0.2
W-2A	1.3	<0.2	<0.2
W-3	<0.2	<0.2	<0.2
W-4	<0.2	<0.2	<0.2
W-6	1.1	<0.2	2.0
W-7	<0.2	<0.2	<0.2
W-8	<0.2	<0.2	2.2
W-9A	NS	<0.2	<0.2
W-9B	<0.2	NS	NS
W-10B	1.5	1.1	3.4
W-11	0.51	<0.2	<0.2
W-12	<0.2	<0.2	<0.2
W-13	<0.2	<0.2	<0.2
W-14	<0.2	<0.2	<0.2
W-15	<0.2	<0.2	<0.2
W-16A	2.1	1.4	1.7
W-17	0.47	<0.2	<0.2
W-18	<0.2	<0.2	<0.2
W-19	0.73	<0.2	<0.2
W-20	2.5	2.7	2.5
W-21	0.53	<0.2	<0.2

mg/L Milligrams per liter

NS Not sampled

Data collected by Seattle-King County Department of Public Health.

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Table 8-8(c). Summary of Water Quality Data for Total Dissolved Solids
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Well ID	Sample Date		
	Oct-89 (mg/L)	Apr-90	Oct-90
W-1	178	180	230
W-2A	152	140	220
W-3	224	365	170 J
W-4	267	270	350 J
W-6	89	110	130
W-7	136	160	150 J
W-8	303	365	260 J
W-9A	NS	50	350 J
W-9B	108	NS	NS
W-10B	176	165	360 J
W-11	198	155	180 J
W-12	182	185	200 J
W-13	64	50 J	110 J
W-14	99	116 J	150
W-15	84	74 J	95
W-16A	103	80 J	120
W-17	111	80	100 J
W-18	223	245	210 J
W-19	94	110	110 J
W-20	94	55	120
W-21	137	115	210

J Estimated value
 mg/L Milligrams per liter
 NS Not sampled

Data collected by Seattle-King County Department of Public Health.

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Table 8-9. Safe Drinking Water Act (SDWA) Maximum Contaminant Levels (MCLs)
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Constituent	SDWA MCLs (mg/L)	Wells Exceeding Standards*
<u>WATER QUALITY PARAMETERS</u>		
Total Coliform	0 or 1	
Fecal Coliform	0	
Total Dissolved Solids	500	
Total Hardness	NA	
Total Alkalinity	NA	
Carbonate	NA	
Bicarbonate	NA	
Hydroxide	NA	
Total Organic Halides	NA	
<u>INORGANICS</u>		
Arsenic	0.05	
Barium	1.0	
Cadmium	0.01	
Calcium	NA	
Chloride	250	
Chromium	0.05	
Copper	1.0	
Fluoride	4	
Iron	0.3	
Lead	0.05	W-13, W-15
Magnesium	NA	
Manganese	NA	
Mercury	0.002	
Nitrate (as N)	10	
Nitrite (as N)	1	
Potassium	NA	
Selenium	0.01	
Silica	NA	
Silver	0.05	
Sodium	NA	
Sulfate	250	
Zinc	5.0	

mg/L Milligrams per liter

NA Not available

SDWA MCLs Safe Drinking Water Act maximum contaminant levels, 40 CFR 141, as per WAC 173-340-720 (2)(a)(ii)(A)

* Concentration in named well exceeded standards at least one time during the sampling period of October 1989 through October 1990.

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Table 8-10. Water Quality Data for Lead in Wells Exceeding MCLs
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Well ID	Sample Date		
	Oct-89	Apr-90	Oct-90
W-13 (mg/L)	0.063*	0.073*	0.004
W-15 (mg/L)	0.006	0.081*	0.009

mg/L Milligrams per liter

MCL Safe Drinking Water Act maximum contaminant level.

* Exceeds the MCL for lead of 0.015 mg/L

The detection limit for lead is 0.05 mg/L

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Table 9-1. Summary of Results of Sediment Grain-Size Analysis
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Grain Size		Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand		Silts and Clay
Standard Sieve Number		10	50	80	100	140	200
Size of Sieve Opening (Inches)		.066	.012	.007	.006	.004	.003
Percent Passing	Sample 420	100	99	96	92	75	66
	Sample 435	100	99	81	64	40	25

Samples analyzed by Cascade Testing Laboratory, Inc., Kirkland, Washington; report in Appendix N.

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**Table 9-2. Salinity Levels Measured in the Soil During the Installation of Exploratory Boring VT-1
Vashon Ground-Water Management Plan
Project No. WA028.02**

Depth (ft bls)	Temperature (degrees centigrade)	Conductivity (um/cm)	pH (s.u.)	% Salinity (ppt)
315	14	350	8.82	0
380	15	400	8.65	0
400	14	325	9.18	0
420	15	330		0
435	9	430	8.32	0
481	12	320	9.07	0

ft bls Feet below land surface
um/cm Micromhos/centimeter
ppt Parts per thousand
s.u. Standard units

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APPENDIX A

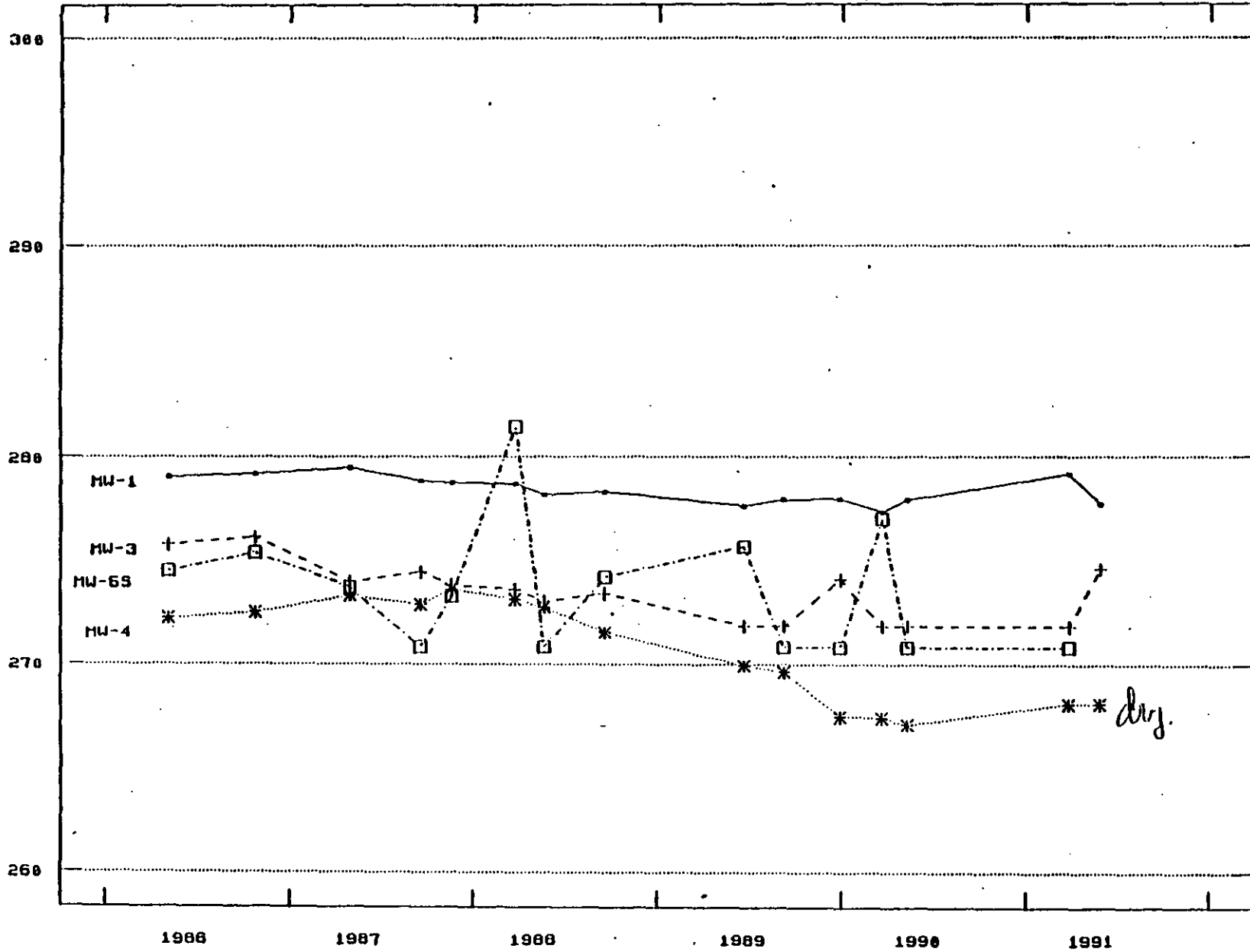
**LABORATORY ANALYTICAL DATA FOR
VASHON ISLAND LANDFILL**

(May 14, 1993 rev.)

VASHON ISLAND LANDFILL

SHALLOW WELLS

WATER LEVEL ELEVATION (ft, MSL)



VASHON ISLAND LANDFILL

DEEP WELLS

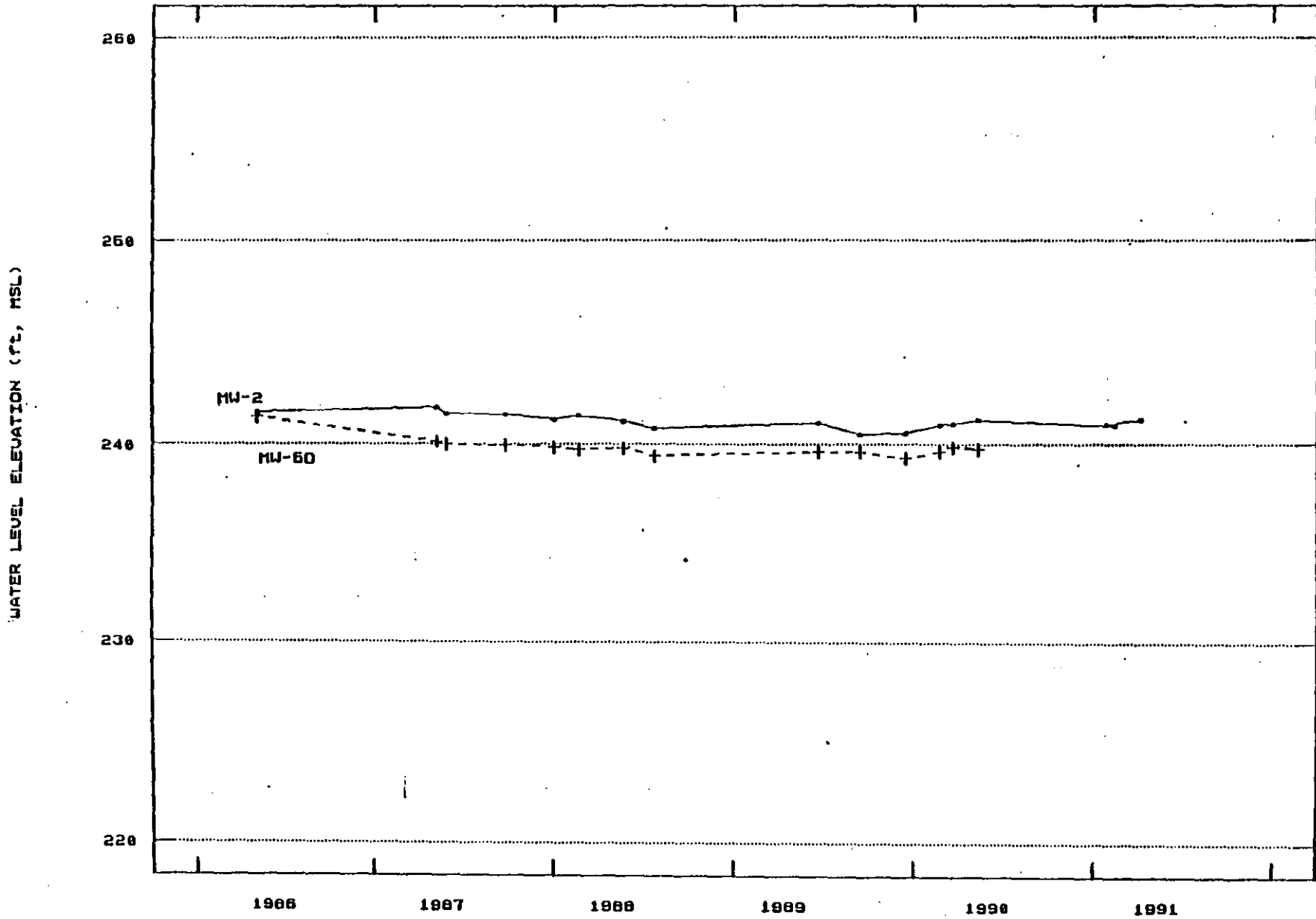


TABLE 1. Summary of conditions in Vashon Landfill monitoring wells.

WELL WATER LEVEL SINCE CAP BUJLE	AVERAGE CONCENTRATION WITH RESPECT TO BACKGROUND (MW-1)								CHANGES IN CONCENTRATION SINCE 1986								EXCEEDANCES OF WATER QUALITY STANDARDS (No. exceedances/No. samples)												
	spec								spec								PRIMARY CONTAMINANTS			SECONDARY CONTAMINANT			CARCINOGENS						
	pH	cond	Cl	SO ₄	TN	COD	Fe	Mn	pH	cond	Cl	SO ₄	TN	COD	Fe	Mn	Total Coliform	Cr	Endrin	pH	Fe	Mn	As	Vinyl Chlor	Meth Chlor	1,1,1-Trichlor ethene	Benzene	Lindane	
SHALLOW WELLS																													
MW-1	nc	-	-	-	-	-	-	nc	nc	nc	nc	nc	nc	nc	nc	2/12	0/12	0/12	1/12	1/12	1/12	7/12	0/12	1/12	1/12	0/12	0/12		
MW-3	nc	<	nc	nc	nc	>	nc	nc	>	nc	nc	nc	<	>	nc	nc	nc	0/5	0/5	0/5	5/5	4/5	5/5	0/5	0/5	0/5	0/5	0/5	0/5
MW-4	lower	<	>	nc	nc	nc	nc	nc	nc	>	nc	<	>	nc	nc	nc	nc	2/16	2/16	0/16	9/16	1/16	7/16	0/16	8/16	2/16	0/16	0/16	0/16
MW-5a	nc	<	>	nc	<	>	nc	>	>	nc	nc	nc	nc	>	nc	>	nc	0/8	1/8	0/8	6/8	8/8	8/8	8/8	5/8	0/8	0/8	0/8	0/8
DEEP WELLS																													
MW-2	nc	nc	>	nc	<	nc	nc	nc	nc	nc	>	nc	nc	nc	nc	nc	<	2/14	1/14	1/14	0/14	1/14	14/14	1/14	8/14	2/14	1/14	1/14	1/14
MW-5d	nc	<	>	>	<	nc	>	>	>	nc	<	<	>	nc	<	nc	nc	0/18	0/18	0/18	8/18	18/18	18/18	18/18	3/18	9/18	0/18	0/18	0/18
SPRINGS																													
SU-W1	nc	>	nc	nc	nc	>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc		
SU-W2	<	>	nc	nc	nc	>	nc	nc	nc	<	nc	nc	<	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc		
SU-W3	nc	>	nc	nc	nc	>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc		

NOTE: nc means no different than MW-1 or no change since 1986
 < means less than in MW-1 or dropping concentrations since 1986
 > means greater than in MW-1 or increasing concentrations since 1986

Indicator Parameters --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	pH (Lab) std units	Conduct- ance (Lab) umhos/cm	Total Solids (TS) (mg/L)	Total Dissolved Solids (TDS) (mg/L)	Total Suspended Solids (mg/L)	Chemical Oxygen Demand (COD) (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Organic Halogens (TOX) (mg/L)	Biological Oxygen Demand (BOD) (mg/L)	Oxygen, Dissolved (mg/L)
MW- 1	WV1-86023	10/23/86	7.5	250				22	7.8	< 0.02		
MW- 1	WV1-87430	04/30/87	6.7	150				< 10	1.2	< 0.02		
MW- 1	WV1-87916	09/16/87	7	180				< 10	1.1	< 0.02		
MW- 1	WV1-87N18	11/18/87	6.8	180				< 10	0.7	0.02		
MW- 1	WV1-88322	03/22/88	6.3	160				< 10	< 1.0	< 0.02		
MW- 1	WV1-88519	05/19/88	6.8	150				< 10	< 1	< 0.02		
MW- 1	WV1-88915Q	09/15/88	7.3	120	130		3	< 10	1.3	0.07		
MW- 1	WV1-89621Q	06/21/89	7.3	170	120		< 1	< 10	1.7	0.17		
MW- 1	WV1-89907Q	09/07/89	7.3	170	120		3	< 10	2	0.11		
MW- 1	WV1-89027Q	12/27/89	6.6	170	140		< 1	< 10	1.2	< 0.02		
MW- 1	WV1-90322Q	03/22/90	7.3	170	110		< 1	< 10	1.2	< 0.02		
MW- 1	WV1-90511Q	05/11/90	7.2	128	120		< 1.0	< 10	< 1.0	< 0.02		
MW- 1	WV1-90927-	09/27/90	7.3	170	160		< 1	< 10	1.3	< 0.02		
MW- 1	WV1-90027-	12/27/90	7.2	200	180		< 1	38	4	< 0.02		
MW- 1	WV1-91327-	03/27/91	7.3	120	82		< 1	< 10	9	< 0.02		
MW- 1	WV1-91529-	05/29/91	6.6	167	140		< 1	15	8.8	< 0.02		
MW- 1	WV1-91829-	08/29/91	8.1	180	140		6	< 10	< 1	< 0.02		
MW- 1	WV1-91015R	10/15/91	7.6	180	120		< 1	< 10	2.7	< 0.02		
MW- 1	WV1-91015D	10/15/91	7.4	170	150		< 1	< 10	3.4	< 0.02		
MW- 1	WV1-91D12-	12/12/91	7	170	90		< 1	< 10	5.5	< 0.02		
MW- 1	WV1-92305-	03/05/92	7	150	140		< 1	< 10	1	< 0.02		
MW- 2	WV2-87527	05/27/87	6.6	330				< 10	5.8	< 0.02		
MW- 2	WV2-87922	09/22/87	7.2	400				< 10	2.4	0.03		
MW- 2	WV2-87D29	12/29/87	6.4	370				< 10	12	0.05		
MW- 2	WV2-88217S	02/17/88	6.7	390				< 10	40	< 0.02		
MW- 2	WV2-88217	02/17/88	6.8	400				< 10	10	0.07		
MW- 2	WV2-88518	05/18/88	6.7	360				< 10	< 1	< 0.02		
MW- 2	WV2-88721Q	07/21/88	7	440	240		< 1	< 10	5.1	0.02		
MW- 2	WV2-89619Q	06/19/89	6.5	470	280		3	< 10	9.9	0.15		
MW- 2	WV2-89911Q	09/11/89	6.8	510	320		< 1	< 10	4.3	0.17		
MW- 2	WV2-89D12D	12/12/89	6.4	510	320		5	< 10	4.5	0.03		
MW- 2	WV2-89D12Q	12/12/89	6.5	510	330		2	< 10	2.4	0.03		
MW- 2	WV2-90220Q	02/20/90	6.8	540	320		2	< 10	2.4	0.03		
MW- 2	WV2-90220D	02/20/90	6.8	540	330		< 1	< 10	2.4	0.05		

Indicator Parameters --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	pH (Lab) std units	Conductance (Lab) umhos/cm	Total Solids (TS) (mg/L)	Total Dissolved Solids (TDS) (mg/L)	Total Suspended Solids (mg/L)	Chemical Oxygen Demand (COD) (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Organic Halogens (TOX) (mg/L)	Biological Oxygen Demand (BOD) (mg/L)	Oxygen, Dissolved (mg/L)
MW- 4	WV4-88N16Q	11/16/88	6.7	770	450		< 1	< 10	10	0.03		
MW- 4	WV4-89324Q	03/24/89	6.8	760	270		< 1	< 10	7.9	0.12		
MW- 4	WV4-89523Q	05/23/89	6.5	760	480		2	< 10	20	0.05		
MW- 4	WV4-89929Q	09/29/89	6.7	850	520		3	< 10	9.2	0.09		
MW- 4	WV4-89019Q	12/19/89	6.3	790	520		< 1	< 10	6.8	0.02		
MW- 4	WV4-90321Q	03/21/90	6.6	800	480		< 1	< 10	2	0.03		
MW- 4	WV4-90510Q	05/10/90	6.6	762	610	470	3	< 10	1.3	< 0.02		
MW- 4	WV4-90711	07/11/90	6.6	730	500	500	< 1	< 10	15	< 0.02		
MW- 4	WV4-90026-	12/26/90	6.8	730	410	380	< 1	< 10	21	< 0.02		
MW- 4	WV4-91326-	03/26/91	7	600	410	380	< 1	< 10	65	< 0.02		
MW- 4	WV4-91531-	05/31/91	7.4	570	400	360	< 1	< 10	48	< 0.02		
MW- 4	WV4-91827-	08/27/91	6.2	520	400	400	2	79	8.8	< 0.02		
MW- 4	WV4-91011-	12/11/91	6.4	460	360	360	< 1	130	59	< 0.02		
MW- 4	WV4-92306-	03/06/92	6.6	480	380	340	2	98	20	< 0.02		
MW- 50	WV5086917	09/17/86	6.5	1900				86	200			41
MW- 50	WV5087520	05/20/87	6.4	1600				59			0.13	
MW- 50	WV5087708	07/08/87	7.5	1400				47	73		0.19	
MW- 50	WV5087708S	07/08/87	6.5	1500				47	72		0.26	
MW- 50	WV5087D22S	12/22/87	6.3	1400				44	69		0.17	
MW- 50	WV5087D22	12/22/87	6.3	1600				41	72		0.16	
MW- 50	WV5088331S	03/31/88	6.2	1500				48	21		0.11	
MW- 50	WV5088331	03/31/88	6.2	1600				48	21		0.12	
MW- 50	WV5088519	05/19/88	6.3	1300				41	11		0.1	
MW- 50	WV5088913Q	09/13/88	6.6	1100	1200		220	31	71		0.12	
MW- 50	WV5088N16Q	11/16/88	6.6	1500	1000		180	28	28		0.11	
MW- 50	WV5089322Q	03/22/89	6.6	1400	1200		200	28	25	<	0.02	
MW- 50	WV5089620Q	06/20/89	6.4	1200	850		180	24	29		0.12	
MW- 50	WV5089908Q	09/08/89	6.5	1200	940		140	24	22		0.1	
MW- 50	WV5089908D	09/08/89	6.5	1200	950		150	24	24		0.2	
MW- 50	WV5089D13Q	12/13/89	6.2	1400	990		110	31	9.4		0.1	
MW- 50	WV5090319Q	03/19/90	6.6	1300	980		120	31	25		0.11	
MW- 50	WV5090511Q	05/11/90	6.6	948	1000	820	180	26	7.9	<	0.02	
MW- 50	WV5090710	07/10/90	6.5	1200	1100	900	54	29	29		0.07	

Indicator Parameters --- Part 2

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Coliform, Total MPN/ 100 mLs	Coliforms Total CFU/ 100 mLs	Coliform, Fecal MPN/ 100 mLs	Hardness (mg/L)	Turbidity NTU	Polar Fats, Oils, & Grease (mg/L)	Non-Polar Fats, Oils, & Grease (mg/L)	Total Fats, Oils, & Grease (mg/L)
MW- 1	WV1-86023	10/23/86	2		< 2					
MW- 1	WV1-87430	04/30/87	< 2							
MW- 1	WV1-87916	09/16/87	< 2							
MW- 1	WV1-87H18	11/18/87	< 2							
MW- 1	WV1-88322	03/22/88	< 2							
MW- 1	WV1-88519	05/19/88	< 2							
MW- 1	WV1-88915Q	09/15/88	< 2							
MW- 1	WV1-89621Q	06/21/89	< 2							
MW- 1	WV1-89907Q	09/07/89	2							
MW- 1	WV1-89D27Q	12/27/89	< 2							
MW- 1	WV1-90322Q	03/22/90	< 2							
MW- 1	WV1-90511Q	05/11/90	< 2							
MW- 1	WV1-90927-	09/27/90	< 2							
MW- 1	WV1-90D27-	12/27/90	< 2							
MW- 1	WV1-91327-	03/27/91	< 2							
MW- 1	WV1-91529-	05/29/91	< 2							
MW- 1	WV1-91829-	08/29/91			1					
MW- 1	WV1-91015R	10/15/91	4							
MW- 1	WV1-91015D	10/15/91	4							
MW- 1	WV1-91D12-	12/12/91			< 1					
MW- 1	WV1-92305-	03/05/92			< 1					
MW- 2	WV2-87527	05/27/87	< 2							
MW- 2	WV2-87922	09/22/87	< 2							
MW- 2	WV2-87D29	12/29/87	< 2							
MW- 2	WV2-88217S	02/17/88	< 2							
MW- 2	WV2-88217	02/17/88	< 2							
MW- 2	WV2-88518	05/18/88	< 2							
MW- 2	WV2-88721Q	07/21/88	< 2							
MW- 2	WV2-89619Q	06/19/89	4							
MW- 2	WV2-89911Q	09/11/89	< 2							
MW- 2	WV2-89D12D	12/12/89	< 2							
MW- 2	WV2-89D12Q	12/12/89	2							
MW- 2	WV2-90220Q	02/20/90	< 2							
MW- 2	WV2-90220D	02/20/90	< 2							

Indicator Parameters --- Part 2

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Coliform, Total MPN/ 100 mLs	Coliforms Total CFU/ 100 mLs	Coliform, Fecal MPN/ 100 mLs	Hardness (ng/L)	Turbidity NTU	Polar Fats, Oils, & Grease (mg/L)	Non-Polar Fats, Oils, & Grease (mg/L)	Total Fats, Oils, & Grease (mg/L)
MW- 4	WV4-88N16Q	11/16/88	< 2							
MW- 4	WV4-89324Q	03/24/89	< 2							
MW- 4	WV4-89523Q	05/23/89	< 2							
MW- 4	WV4-89929Q	09/29/89	< 2							
MW- 4	WV4-89D19Q	12/19/89	< 2							
MW- 4	WV4-90321Q	03/21/90	< 2							
MW- 4	WV4-90510Q	05/10/90	< 2							
MW- 4	WV4-90711	07/11/90	< 2							
MW- 4	WV4-90D26-	12/26/90	< 2							
MW- 4	WV4-91326-	03/26/91	< 5	XE						
MW- 4	WV4-91531-	05/31/91	< 2							
MW- 4	WV4-91827-	08/27/91			< 1					
MW- 4	WV4-91D11-	12/11/91			< 1					
MW- 4	WV4-92306-	03/06/92			< 1					
MW- 5D	WV5D86917	09/17/86				1400				
MW- 5D	WV5D87520	05/20/87	< 2							
MW- 5D	WV5D87708	07/08/87	< 2							
MW- 5D	WV5D87708S	07/08/87	< 2							
MW- 5D	WV5D87D22S	12/22/87	< 2							
MW- 5D	WV5D87D22	12/22/87	< 2							
MW- 5D	WV5D88331S	03/31/88	< 2							
MW- 5D	WV5D88331	03/31/88	< 2							
MW- 5D	WV5D88519	05/19/88	< 2							
MW- 5D	WV5D88913Q	09/13/88	< 2							
MW- 5D	WV5D88N16Q	11/16/88	< 2							
MW- 5D	WV5D89322Q	03/22/89	< 2							
MW- 5D	WV5D89620Q	06/20/89	< 2							
MW- 5D	WV5D89908Q	09/08/89	< 2							
MW- 5D	WV5D89908D	09/08/89	< 2							
MW- 5D	WV5D89D13Q	12/13/89	< 2							
MW- 5D	WV5D90319Q	03/19/90	< 2							
MW- 5D	WV5D90511Q	05/11/90	< 2							
MW- 5D	WV5D90710	07/10/90	< 2							

Non-Metals --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Alkalinity (HCO ₃)	Alkalinity Total (CaCO ₃)	Ammonia -N	Chloride	Cyanide	Fluoride	Nitrate -N	Nitrite -N
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW- 1	WV1-86023	10/23/86			< 0.05	4	< 0.005	< 0.3	< 0.2	< 0.005
MW- 1	WV1-87430	04/30/87			< 0.05	3	< 0.005	< 0.2	< 0.2	< 0.005
MW- 1	WV1-87916	09/16/87			< 0.05	4	< 0.005	< 0.2	< 0.2	< 0.005
MW- 1	WV1-87N18	11/18/87			< 0.05	4	< 0.005	< 0.2	0.2	< 0.005
MW- 1	WV1-88322	03/22/88			< 0.05	4	0.004	< 0.2	0.2	< 0.005
MW- 1	WV1-88519	05/19/88			0.13	5	< 0.005	< 0.2	0.3	< 0.005
MW- 1	WV1-88915Q	09/15/88			< 0.05	5	< 0.005	< 0.2	0.3	< 0.005
MW- 1	WV1-89621Q	06/21/89			< 0.05	4	< 0.005	< 0.2	< 0.2	< 0.005
MW- 1	WV1-89907Q	09/07/89			< 0.05	4	< 0.005	< 0.2	< 0.2	< 0.005
MW- 1	WV1-89027Q	12/27/89			< 0.05	4	< 0.005	< 0.2	0.3	< 0.005
MW- 1	WV1-90322Q	03/22/90			< 0.05	5	< 0.005	< 0.2	0.2	< 0.005
MW- 1	WV1-90511Q	05/11/90			< 0.05	3.1	< 0.01	0.1	0.16	< 0.01
MW- 1	WV1-90927-	09/27/90			< 0.05	1.3	< 0.01	< 0.01	< 0.01	< 0.01
MW- 1	WV1-90027-	12/27/90			< 0.05	4.6	< 0.01	0.1	0.19	< 0.01
MW- 1	WV1-91327-	03/27/91			< 0.05	4.2	< 0.01	0.09	0.04	< 0.01
MW- 1	WV1-91529-	05/29/91			< 0.05	4.2	< 0.01	0.11	0.09	< 0.01
MW- 1	WV1-91829-	08/29/91			< 0.05	4.7	< 0.01	0.09	0.11	< 0.01
MW- 1	WV1-91015R	10/15/91			< 0.05	5	< 0.01	< 0.1	0.33	< 0.01
MW- 1	WV1-91015D	10/15/91			< 0.05	5	< 0.01	< 0.1	0.1	< 0.01
MW- 1	WV1-91012-	12/12/91			< 0.05	3.5	< 0.01	0.49	0.15	< 0.01
MW- 1	WV1-92305-	03/05/92			< 0.05	4.8	< 0.01	0.08	0.17	< 0.01
MW- 2	WV2-87527	05/27/87			< 0.05	5	< 0.005	< 0.2	< 0.2	< 0.005
MW- 2	WV2-87922	09/22/87			< 0.05	5	< 0.005	< 0.2	< 0.2	< 0.005
MW- 2	WV2-87029	12/29/87			< 0.05	5	< 0.005	< 0.2	< 0.2	< 0.005
MW- 2	WV2-88217S	02/17/88			< 0.05	4	< 0.005	< 0.2	< 0.2	< 0.005
MW- 2	WV2-88217	02/17/88			< 0.05	4	< 0.005	< 0.2	< 0.2	< 0.005
MW- 2	WV2-88518	05/18/88			< 0.05	5	< 0.005	< 0.2	< 0.2	< 0.005
MW- 2	WV2-88721Q	07/21/88			< 0.05	4	< 0.005	< 0.2	< 0.2	< 0.005
MW- 2	WV2-89619Q	06/19/89			< 0.05	5	< 0.005	< 0.2	< 0.2	< 0.005
MW- 2	WV2-89911Q	09/11/89			< 0.05	5	< 0.005	< 0.2	< 0.2	< 0.005
MW- 2	WV2-89012D	12/12/89			< 0.05	2	< 0.005	0.6	< 0.2	< 0.005
MW- 2	WV2-89012Q	12/12/89			< 0.05	2	< 0.005	0.6	< 0.2	< 0.005
MW- 2	WV2-90220Q	02/20/90			< 0.05	5	< 0.005	< 0.2	< 0.2	< 0.005
MW- 2	WV2-90220D	02/20/90			< 0.05	5	< 0.005	< 0.2	< 0.2	< 0.005

Non-Metals --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Alkalinity (HCO3)	Alkalinity Total (CaCO3)	Ammonia -N	Chloride	Cyanide	Fluoride	Nitrate -N	Nitrite -N
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW- 4	WV4-88N16Q	11/16/88			< 0.05	7	< 0.005	0.3	< 0.2	< 0.005
MW- 4	WV4-89324Q	03/24/89			0.06	7	0.007	< 0.2	< 0.2	< 0.005
MW- 4	WV4-89523Q	05/23/89			0.06	9	0.005	< 0.2	0.3	< 0.005
MW- 4	WV4-89929Q	09/29/89			< 0.05	18	< 0.005	0.2	0.3	< 0.005
MW- 4	WV4-89D19Q	12/19/89			< 0.05	13	< 0.005	0.4	< 0.2	< 0.005
MW- 4	WV4-90321Q	03/21/90			< 0.05	13	< 0.005	0.5	< 0.2	< 0.005
MW- 4	WV4-90510Q	05/10/90			< 0.05	< 1	< 0.01	0.05	0.02	< 0.01
MW- 4	WV4-90711	07/11/90			< 0.05	18	< 0.01	< 0.01	< 0.01	< 0.01
MW- 4	WV4-90D26-	12/26/90			< 0.05	9.3	< 0.01	0.02	0.05	< 0.01
MW- 4	WV4-91326-	03/26/91			< 0.05	15	< 0.01	0.02	0.01	< 0.01
MW- 4	WV4-91531-	05/31/91			< 0.05	7.7	< 0.01	0.06	< 0.01	< 0.01
MW- 4	WV4-91827-	08/27/91			< 0.05	7.2	< 0.01	0.02	0.019	< 0.01
MW- 4	WV4-91D11-	12/11/91			0.13	6.6	< 0.01	0.36	< 0.01	0.074
MW- 4	WV4-92306-	03/06/92			0.14	11	< 0.01	0.27	0.036	0.049
MW- 5D	WV5D86917	09/17/86			0.08	89		3.5	< 0.2	< 0.005
MW- 5D	WV5D87520	05/20/87			0.15	82	< 0.005	1.8	< 0.2	< 0.005
MW- 5D	WV5D87708	07/08/87			0.15	86	< 0.005	1.2	< 0.2	< 0.005
MW- 5D	WV5D87708S	07/08/87			0.16	86	< 0.005	1.2	< 0.2	0.01
MW- 5D	WV5D87D22S	12/22/87			0.12	80	< 0.005	< 0.2	< 0.2	< 0.005
MW- 5D	WV5D87D22	12/22/87			0.12	82	< 0.005	< 0.2	< 0.2	< 0.005
MW- 5D	WV5D88331S	03/31/88			0.15	84	< 0.005	< 0.2	< 0.2	< 0.005
MW- 5D	WV5D88331	03/31/88			0.19	82	< 0.005	< 0.2	< 0.2	< 0.005
MW- 5D	WV5D88519	05/19/88			0.16	80	< 0.005	< 0.2	< 0.2	0.006
MW- 5D	WV5D88913Q	09/13/88			< 0.05	74	0.005	< 0.2	< 0.2	< 0.005
MW- 5D	WV5D88N16Q	11/16/88			0.11	74	< 0.005	0.9	< 0.2	< 0.005
MW- 5D	WV5D89322Q	03/22/89			0.2	61	0.007	0.6	< 0.2	< 0.005
MW- 5D	WV5D89620Q	06/20/89			0.13	57	< 0.005	0.4	< 0.2	0.005
MW- 5D	WV5D89908Q	09/08/89			0.31	63	< 0.005	< 0.2	< 0.2	< 0.005
MW- 5D	WV5D89908D	09/08/89			0.079	53	< 0.005	< 0.2	< 0.2	< 0.005
MW- 5D	WV5D89D13Q	12/13/89			0.33	60	< 0.005	1.3	0.3	< 0.005
MW- 5D	WV5D90319Q	03/19/90			0.2	72	< 0.005	0.9	< 0.2	< 0.005
MW- 5D	WV5D90511Q	05/11/90			0.09	< 1.0	< 0.01	0.03	0.02	< 0.01
MW- 5D	WV5D90710	07/10/90			0.08	< 1	< 0.01	0.03	< 0.01	< 0.01

Non-Metals --- Part 2

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Phosphate, Ortho	Phosphate, Total	Sulfate (SO ₄)	Sulfide, Total	Sulfur, Total	Sulfide, Soluble	Total Kjeldahl N	Total Nitrogen
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW- 1	WV1-86023	10/23/86				17				
MW- 1	WV1-87430	04/30/87				18				
MW- 1	WV1-87916	09/16/87				17				
MW- 1	WV1-87N18	11/18/87				16				
MW- 1	WV1-88322	03/22/88				18				
MW- 1	WV1-88519	05/19/88				18				
MW- 1	WV1-88915Q	09/15/88				18				
MW- 1	WV1-89621Q	06/21/89				17				
MW- 1	WV1-89907Q	09/07/89				17				
MW- 1	WV1-89D27Q	12/27/89				18				
MW- 1	WV1-90322Q	03/22/90				18				
MW- 1	WV1-90511Q	05/11/90				17				
MW- 1	WV1-90927-	09/27/90				18				
MW- 1	WV1-90D27-	12/27/90				17				
MW- 1	WV1-91327-	03/27/91				17				
MW- 1	WV1-91529-	05/29/91				18				
MW- 1	WV1-91829-	08/29/91				15				
MW- 1	WV1-91015R	10/15/91				15				
MW- 1	WV1-91015D	10/15/91				16				
MW- 1	WV1-91D12-	12/12/91				21				
MW- 1	WV1-92305-	03/05/92				15				
MW- 2	WV2-87527	05/27/87				11				
MW- 2	WV2-87922	09/22/87				11				
MW- 2	WV2-87D29	12/29/87				11				
MW- 2	WV2-88217S	02/17/88				11				
MW- 2	WV2-88217	02/17/88				12				
MW- 2	WV2-88518	05/18/88				11				
MW- 2	WV2-88721Q	07/21/88				11				
MW- 2	WV2-89619Q	06/19/89				12				
MW- 2	WV2-89911Q	09/11/89				11				
MW- 2	WV2-89D12D	12/12/89				11				
MW- 2	WV2-89D12Q	12/12/89				12				
MW- 2	WV2-90220Q	02/20/90				12				
MW- 2	WV2-90220D	02/20/90				12				

Non-Metals --- Part 2

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Phosphate, Ortho	Phosphate, Total	Sulfate (SO4)	Sulfide, Total	Sulfur, Total	Sulfide, Soluble	Total Kjeldahl N	Total Nitrogen
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW- 4	WV4-88N16Q	11/16/88				7				
MW- 4	WV4-89324Q	03/24/89				12				
MW- 4	WV4-89523Q	05/23/89				14				
MW- 4	WV4-89929Q	09/29/89				32				
MW- 4	WV4-89D19Q	12/19/89				25				
MW- 4	WV4-90321Q	03/21/90				23				
MW- 4	WV4-90510Q	05/10/90				34				
MW- 4	WV4-90711	07/11/90				46				
MW- 4	WV4-90D26-	12/26/90				11				
MW- 4	WV4-91326-	03/26/91				15				
MW- 4	WV4-91531-	05/31/91				12				
MW- 4	WV4-91827-	08/27/91				3.7				
MW- 4	WV4-91D11-	12/11/91				18				
MW- 4	WV4-92306-	03/06/92				8.8				
MW- 5D	WV5D86917	09/17/86		0.16	<	1			<	0.5
MW- 5D	WV5D87520	05/20/87			<	1				
MW- 5D	WV5D87708	07/08/87			<	1				
MW- 5D	WV5D87708S	07/08/87			<	1				
MW- 5D	WV5D87D22S	12/22/87				1				
MW- 5D	WV5D87D22	12/22/87			<	1				
MW- 5D	WV5D88331S	03/31/88				1				
MW- 5D	WV5D88331	03/31/88			<	1				
MW- 5D	WV5D88519	05/19/88			<	1				
MW- 5D	WV5D88913Q	09/13/88			<	1				
MW- 5D	WV5D88N16Q	11/16/88			<	1				
MW- 5D	WV5D89322Q	03/22/89			<	1				
MW- 5D	WV5D89620Q	06/20/89			<	1				
MW- 5D	WV5D89908Q	09/08/89				1				
MW- 5D	WV5D89908D	09/08/89				2				
MW- 5D	WV5D89D13Q	12/13/89				1				
MW- 5D	WV5D90319Q	03/19/90			<	1				
MW- 5D	WV5D90511Q	05/11/90				8				
MW- 5D	WV5D90710	07/10/90				5				

Total Metals --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (Total) (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)
MW- 2	WV2-87527	05/27/87	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.15	< 0.01	0.24

Dissolved Metals --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW- 1	WV1-86023	10/23/86	0.005	< 0.02	0.013	< 0.005	0.009	0.03	< 0.01	< 0.002
MW- 1	WV1-87430	04/30/87	0.005	< 0.02	< 0.002	0.008	< 0.002	0.13	< 0.01	< 0.002
MW- 1	WV1-87916	09/16/87	0.006	< 0.02	< 0.002	< 0.005	< 0.002	0.02	< 0.01	0.003
MW- 1	WV1-87H18	11/18/87	0.006	< 0.02	< 0.002	< 0.005	< 0.002	0.02	< 0.01	0.003
MW- 1	WV1-88322	03/22/88	0.005	< 0.02	< 0.002	< 0.005	< 0.002	< 0.05	0.02	< 0.002
MW- 1	WV1-88519	05/19/88	< 0.005	< 0.02	< 0.002	< 0.005	0.004	0.32	< 0.01	0.027
MW- 1	WV1-88915Q	09/15/88	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.05	< 0.01	0.058
MW- 1	WV1-89621Q	06/21/89	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	< 0.05	< 0.01	< 0.002
MW- 1	WV1-89907Q	09/07/89	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	< 0.05	< 0.01	< 0.002
MW- 1	WV1-89D27Q	12/27/89	< 0.005	< 0.02	< 0.002	< 0.005	0.003	< 0.05	< 0.01	0.003
MW- 1	WV1-90322Q	03/22/90	0.006	< 0.02	< 0.002	< 0.005	0.002	0.04	< 0.01	< 0.002
MW- 1	WV1-90511Q	05/11/90	0.005	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	< 0.01
MW- 1	WV1-90927-	09/27/90	0.005	< 0.05	< 0.005	< 0.01	< 0.025	0.03	0.007	< 0.01
MW- 1	WV1-90D27-	12/27/90	0.007	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	< 0.01
MW- 1	WV1-91327-	03/27/91	0.005	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	0.03
MW- 1	WV1-91529-	05/29/91	0.005	0.054	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	< 0.01
MW- 1	WV1-91829-	08/29/91	0.007	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	< 0.01
MW- 1	WV1-91015D	10/15/91	0.008	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	< 0.01
MW- 1	WV1-91015R	10/15/91	0.007	0.22	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	< 0.01
MW- 1	WV1-91D12-	12/12/91	0.005	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	< 0.01
MW- 1	WV1-92305-	03/05/92	0.006	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	0.007	< 0.01
MW- 2	WV2-87922	09/22/87	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.05	< 0.01	0.51
MW- 2	WV2-87D29	12/29/87	< 0.005	< 0.02	< 0.002	0.17	0.034	0.31	< 0.01	0.59
MW- 2	WV2-88217S	02/17/88	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.08	< 0.01	0.42
MW- 2	WV2-88217	02/17/88	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.24	< 0.01	0.52
MW- 2	WV2-88518	05/18/88	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	< 0.05	< 0.01	0.24
MW- 2	WV2-88721Q	07/21/88	< 0.005	< 0.02	< 0.002	< 0.005	0.004	0.13	< 0.01	0.27
MW- 2	WV2-89619Q	06/19/89	< 0.005	0.03	< 0.002	< 0.005	< 0.002	< 0.05	< 0.01	0.21
MW- 2	WV2-89911Q	09/11/89	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.05	< 0.01	0.2
MW- 2	WV2-89D12D	12/12/89	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.06	< 0.01	0.19
MW- 2	WV2-89D12Q	12/12/89	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.12	< 0.01	0.17
MW- 2	WV2-90220D	02/20/90	< 0.005	0.03	< 0.002	< 0.005	< 0.002	< 0.05	< 0.01	0.22
MW- 2	WV2-90220Q	02/20/90	< 0.005	0.03	< 0.002	< 0.005	< 0.002	< 0.05	< 0.01	0.22
MW- 2	WV2-90509Q	05/09/90	0.002	< 0.05	< 0.005	0.02	< 0.025	0.09	< 0.005	0.17

Dissolved Metals --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW- 2	WV2-90712	07/12/90	0.001	< 0.05	< 0.005	< 0.01	< 0.025	0.07	< 0.005	0.19
MW- 2	WV2-90D26-	12/26/90	0.003	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	0.14
MW- 2	WV2-91327-	03/27/91	0.001	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	0.15
MW- 2	WV2-91408M	04/08/91	0.001	0.06	< 0.005	0.02	< 0.025	0.23	0.005	0.14 XE
MW- 2	WV2-91508-	05/08/91	0.002	< 0.05	< 0.005	< 0.01	< 0.025	0.23	< 0.005	0.13 XE
MW- 2	WV2-91531D	05/31/91	< 0.001	0.061	< 0.005	< 0.01	< 0.025	0.08	< 0.005	0.14
MW- 2	WV2-91531-	05/31/91	< 0.001	0.069	< 0.005	< 0.01	< 0.025	0.89	< 0.005	0.19
MW- 2	WV2-91708-	07/08/91	0.004	0.05	< 0.005	< 0.01	< 0.025	0.72	< 0.005	0.19
MW- 2	WV2-91805-	08/05/91	0.001	< 0.05	< 0.005	< 0.01	< 0.025	0.11	0.005	0.17
MW- 2	WV2-91008D	10/08/91	< 0.001	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	0.13
MW- 2	WV2-91008R	10/08/91	< 0.001	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	0.13
MW- 2	WV2-91N08-	11/08/91	0.002	< 0.05	< 0.005	< 0.01	< 0.025	0.07	< 0.005	0.12
MW- 2	WV2-91D09R	12/09/91	< 0.001	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	0.13
MW- 2	WV2-91D09D	12/09/91	0.001	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	0.12
MW- 2	WV2-92110R	01/10/92	0.001	< 0.05	< 0.005	< 0.01	< 0.025	0.09	< 0.005	0.14
MW- 2	WV2-92110D	01/10/92	0.002	< 0.05	< 0.005	< 0.01	< 0.025	0.08	< 0.005	0.16
MW- 2	WV2-92224-	02/24/92	0.001	< 0.05	< 0.005	< 0.01	< 0.025	0.07	< 0.005	0.16
MW- 2	WV2-92305-	03/05/92	0.001	< 0.05	< 0.005	< 0.01	< 0.025	0.07	0.016	0.16
MW- 3	WV3-87507	05/07/87	0.007	0.03	< 0.002	< 0.005	< 0.002	0.63	< 0.01	1.3
MW- 3	WV3-87929	09/29/87	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	5.5	< 0.01	2.7
MW- 3	WV3-87D22	12/22/87	< 0.005	0.06	< 0.002	< 0.005	< 0.002	8.6	< 0.01	2.6
MW- 3	WV3-88322	03/22/88	< 0.005	0.05	< 0.002	< 0.005	< 0.002	8.1	< 0.01	2.7
MW- 3	WV3-88518	05/18/88	< 0.005	< 0.02	< 0.002	< 0.005	0.005	< 0.05	< 0.01	0.23
MW- 3	WV3-91528-	05/28/91	< 0.001	0.11	< 0.005	< 0.01	< 0.025	0.08	< 0.005	0.05
MW- 4	WV4-86826	08/26/86	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.01	< 0.01	0.017
MW- 4	WV4-87430	04/30/87	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.5	< 0.01	0.016
MW- 4	WV4-87914	09/14/87	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	< 0.01	< 0.01	0.017
MW- 4	WV4-87N19	11/19/87	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.03	< 0.01	0.022
MW- 4	WV4-88107	01/07/88	< 0.005	< 0.02	< 0.002	0.069	0.058	0.1	< 0.01	0.024
MW- 4	WV4-88107S	01/07/88	< 0.005	< 0.02	< 0.002	0.055	0.063	0.06	< 0.01	0.021
MW- 4	WV4-88524	05/24/88	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	0.2	< 0.01	0.029
MW- 4	WV4-88524S	05/24/88	< 0.005	< 0.02	< 0.002	< 0.005	< 0.002	< 0.05	< 0.01	0.028
MW- 4	WV4-88908D	09/08/88	< 0.005	< 0.02	< 0.002	< 0.005	0.003	0.1	< 0.01	0.066

Dissolved Metals --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW- 5D	WV5D90710	07/10/90	0.21	0.07	< 0.005	< 0.01	< 0.025	46	< 0.005	2.1
MW- 5D	WV5D90026-	12/26/90	0.23	0.07	< 0.005	< 0.01	< 0.025	48	< 0.005	2
MW- 5D	WV5D91326-	03/26/91	0.18 XE	0.06	< 0.005	< 0.01	< 0.025	42 XE	< 0.005	2.1 XE
MW- 5D	WV5D91531-	05/31/91	0.15	0.1	< 0.005	< 0.01	< 0.025	38	< 0.005	2.1
MW- 5D	WV5D91807-	08/07/91	0.21	< 0.05	< 0.005	< 0.01	< 0.025	28	< 0.005	1.4
MW- 5D	WV5D91008D	10/08/91	0.17	0.062	< 0.005	< 0.01	< 0.025	41	< 0.005	2.1
MW- 5D	WV5D91008R	10/08/91	0.19	0.059	< 0.005	< 0.01	< 0.025	40	< 0.005	2
MW- 5D	WV5D91N27R	11/27/91	0.16	0.059	< 0.005	< 0.01	< 0.025	36	< 0.005	2
MW- 5D	WV5D91D10-	12/10/91	0.19	0.057	< 0.005	< 0.01	< 0.025	38	< 0.005	2.1
MW- 5D	WV5D92110D	01/10/92	0.18	0.059	< 0.005	< 0.01	< 0.025	38	< 0.005	2.1
MW- 5D	WV5D92110R	01/10/92	0.18	0.06	< 0.005	< 0.01	< 0.025	38	< 0.005	2.1
MW- 5D	WV5D92224-	02/24/92	0.12	0.055	< 0.005	< 0.01	< 0.025	34	< 0.005	1.7
MW- 5D	WV5D92309-	03/09/92	0.22	0.055	< 0.005	< 0.01	< 0.025	37	0.007	1.9
MW- 5S	WV5S86917	09/17/86	0.028	< 0.02	< 0.002	< 0.005	< 0.002	13	0.01	13
MW- 5S	WV5S86918	09/18/86	0.028	< 0.02	< 0.002	< 0.005	< 0.002	13	0.01	13
MW- 5S	WV5S87527	05/27/87	0.037	< 0.02	< 0.002	< 0.005	< 0.002	11	< 0.01	3
MW- 5S	WV5S87723	07/23/87	0.036	< 0.02	< 0.002	< 0.005	0.006	10	< 0.01	7
MW- 5S	WV5S87723S	07/23/87	0.036	< 0.02	< 0.002	< 0.005	0.01	10	< 0.01	7.7
MW- 5S	WV5S87D29	12/29/87	0.045	0.05	< 0.002	0.57	0.11	24	< 0.01	14
MW- 5S	WV5S88217	02/17/88	0.036	< 0.02	< 0.002	< 0.005	< 0.002	21	< 0.01	12
MW- 5S	WV5S88217S	02/17/88	0.034	< 0.02	< 0.002	< 0.005	< 0.002	23	< 0.01	13
MW-STA-U-1	WVU187527	05/27/87	< 0.005	< 0.02	< 0.002	< 0.005	0.008	0.06	< 0.01	< 0.002
MW-STA-U-1	WVU188913	09/13/88	< 0.005	< 0.02	< 0.002	< 0.005	0.003	0.05	< 0.01	< 0.002
MW-STA-U-1	WVU190322L	03/22/90	< 0.005	< 0.02	< 0.002	< 0.005	0.004	0.05	< 0.01	< 0.002
MW-STA-U-1	WVU190031T	12/31/90	< 0.001	< 0.05	< 0.005	< 0.01	< 0.025	0.09	< 0.005	< 0.01
MW-STA-U-1	WVU191326T	03/26/91	< 0.001	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	< 0.01
MW-STA-U-1	WVU191326-	03/26/91	0.003	< 0.05	< 0.005	< 0.01	< 0.025	0.52 XE	< 0.005	0.03
MW-STA-U-1	WVU191008-	10/08/91	< 0.001	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	< 0.01
MW-STA-U-1	WVU191D09-	12/09/91	< 0.001	< 0.05	< 0.005	< 0.01	< 0.025	< 0.02	< 0.005	< 0.01
MW-STA-U-1	WVU192306-	03/06/92	< 0.001	< 0.05	< 0.005	< 0.01	< 0.025	0.02	< 0.005	< 0.01

Dissolved Metals --- Part 2

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Mercury	Nickel	Selenium	Silver	Zinc
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW- 2	WV2-90712	07/12/90	< 0.001	< 0.04	< 0.005	< 0.01	0.02
MW- 2	WV2-90D26-	12/26/90	< 0.001	< 0.04	< 0.005	< 0.01	0.02
MW- 2	WV2-91327-	03/27/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-91408M	04/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-91508-	05/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-91531D	05/31/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-91531-	05/31/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-91708-	07/08/91	< 0.001	< 0.04	< 0.005	< 0.01	0.06
MW- 2	WV2-91805-	08/05/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-91008D	10/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-91008R	10/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-91N08-	11/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-91D09R	12/09/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-91D09D	12/09/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-92110R	01/10/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-92110D	01/10/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-92224-	02/24/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 2	WV2-92305-	03/05/92	0.0012	< 0.04	< 0.005	< 0.01	< 0.02
MW- 3	WV3-87507	05/07/87	< 0.001		< 0.005	< 0.002	0.005
MW- 3	WV3-87929	09/29/87	< 0.001		< 0.005	< 0.002	0.003
MW- 3	WV3-87D22	12/22/87	< 0.001		< 0.005	< 0.002	0.002
MW- 3	WV3-88322	03/22/88	< 0.001		< 0.005	< 0.002	0.009
MW- 3	WV3-88518	05/18/88	< 0.001		< 0.005	< 0.002	0.006
MW- 3	WV3-91528-	05/28/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 4	WV4-86826	08/26/86	< 0.001		< 0.005	< 0.002	0.004
MW- 4	WV4-87430	04/30/87	< 0.001		< 0.005	< 0.002	< 0.002
MW- 4	WV4-87914	09/14/87	< 0.001		< 0.005	< 0.002	0.004
MW- 4	WV4-87N19	11/19/87	< 0.001		< 0.005	< 0.002	< 0.002
MW- 4	WV4-88107	01/07/88	< 0.001		< 0.005	< 0.002	0.003
MW- 4	WV4-88107S	01/07/88	< 0.001		< 0.005	< 0.002	0.005
MW- 4	WV4-88524	05/24/88	< 0.001		< 0.005	< 0.002	0.004
MW- 4	WV4-88524S	05/24/88	< 0.001		< 0.005	< 0.002	0.013
MW- 4	WV4-88908Q	09/08/88	< 0.001	0.01	< 0.005	< 0.002	0.01

Dissolved Metals --- Part 2

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Mercury	Nickel	Selenium	Silver	Zinc
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW- 5D	WV5D90710	07/10/90	< 0.001	< 0.04	< 0.005	< 0.01	0.04
MW- 5D	WV5D90026-	12/26/90	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91326-	03/26/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91531-	05/31/91	< 0.001	< 0.04	< 0.005	< 0.01	0.021
MW- 5D	WV5D91807-	08/07/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91008D	10/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91008R	10/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91N27R	11/27/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91D10-	12/10/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D92110D	01/10/92	< 0.001	< 0.04	< 0.005	< 0.01	0.052
MW- 5D	WV5D92110R	01/10/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D92224-	02/24/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D92309-	03/09/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5S	WV5S86917	09/17/86	< 0.001		< 0.005	< 0.002	0.006
MW- 5S	WV5S86918	09/18/86	< 0.001		< 0.005	< 0.002	0.006
MW- 5S	WV5S87527	05/27/87	< 0.001		< 0.005	< 0.002	< 0.002
MW- 5S	WV5S87723	07/23/87	< 0.001		< 0.005	< 0.002	0.006
MW- 5S	WV5S87723s	07/23/87	< 0.001		< 0.005	< 0.002	0.004
MW- 5S	WV5S87D29	12/29/87	< 0.001		< 0.005	< 0.002	< 0.002
MW- 5S	WV5S88217	02/17/88	< 0.001		< 0.005	< 0.002	0.01
MW- 5S	WV5S88217s	02/17/88	< 0.001		< 0.005	< 0.002	0.004
MW-STA-U-1	WVU187527	05/27/87	< 0.001		< 0.005	< 0.002	0.003
MW-STA-U-1	WVU188913	09/13/88	< 0.001	< 0.01	< 0.005	< 0.002	0.004
MW-STA-U-1	WVU190322L	03/22/90	< 0.001	< 0.01	< 0.005	< 0.002	0.005
MW-STA-U-1	WVU190031T	12/31/90	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW-STA-U-1	WVU191326T	03/26/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW-STA-U-1	WVU191326-	03/26/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW-STA-U-1	WVU191008-	10/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW-STA-U-1	WVU191D09-	12/09/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW-STA-U-1	WVU192306-	03/06/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02

Dissolved Metals --- Part 2

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Washon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Mercury	Nickel	Selenium	Silver	Zinc
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW- 5D	WV5D90710	07/10/90	< 0.001	< 0.04	< 0.005	< 0.01	0.04
MW- 5D	WV5D90D26-	12/26/90	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91326-	03/26/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91531-	05/31/91	< 0.001	< 0.04	< 0.005	< 0.01	0.021
MW- 5D	WV5D91807-	08/07/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91008D	10/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91008R	10/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91N27R	11/27/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D91D10-	12/10/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D92110D	01/10/92	< 0.001	< 0.04	< 0.005	< 0.01	0.052
MW- 5D	WV5D92110R	01/10/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D92224-	02/24/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5D	WV5D92309-	03/09/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW- 5S	WV5S86917	09/17/86	< 0.001		< 0.005	< 0.002	0.006
MW- 5S	WV5S86918	09/18/86	< 0.001		< 0.005	< 0.002	0.006
MW- 5S	WV5S87527	05/27/87	< 0.001		< 0.005	< 0.002	< 0.002
MW- 5S	WV5S87723	07/23/87	< 0.001		< 0.005	< 0.002	0.006
MW- 5S	WV5S87723S	07/23/87	< 0.001		< 0.005	< 0.002	0.004
MW- 5S	WV5S87D29	12/29/87	< 0.001		< 0.005	< 0.002	< 0.002
MW- 5S	WV5S88217	02/17/88	< 0.001		< 0.005	< 0.002	0.01
MW- 5S	WV5S88217S	02/17/88	< 0.001		< 0.005	< 0.002	0.004
MW-STA-U-1	WVU187527	05/27/87	< 0.001		< 0.005	< 0.002	0.003
MW-STA-U-1	WVU188913	09/13/88	< 0.001	< 0.01	< 0.005	< 0.002	0.004
MW-STA-U-1	WVU190322L	03/22/90	< 0.001	< 0.01	< 0.005	< 0.002	0.005
MW-STA-U-1	WVU190031T	12/31/90	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW-STA-U-1	WVU191326T	03/26/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW-STA-U-1	WVU191326-	03/26/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW-STA-U-1	WVU191008-	10/08/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW-STA-U-1	WVU191D09-	12/09/91	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02
MW-STA-U-1	WVU192306-	03/06/92	< 0.001	< 0.04	< 0.005	< 0.01	< 0.02

Herbicides, Pesticides, and Radioactivity

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	2,4-D	2,4,5-TP (Silvex)	Endrin	Lindane	Methoxy-chlor	Toxa-phene	Gross Alpha Activity	Gross Beta	Radium 226	Radium 228
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	pCi/L	pCi/L	pCi/L	pCi/L
MW- 1	WV1-86023	10/23/86	0.421	0.084	< 0.10	< 0.05	< 0.50	< 1.00	10		< 0.6	< 1
MW- 1	WV1-87430	04/30/87	< 0.50	< 0.50	< 0.11	< 0.05	< 0.53	< 1.1	< 2		< 0.6	< 1
MW- 1	WV1-87916	09/16/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 1	WV1-87N18	11/18/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 1	WV1-88322	03/22/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 1	WV1-88519	05/19/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 1	WV1-88915Q	09/15/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00			< 0.6	< 1
MW- 1	WV1-89621Q	06/21/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 1	WV1-89907Q	09/07/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00			< 0.6	< 1
MW- 1	WV1-89027Q	12/27/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	4		< 0.6	< 1
MW- 1	WV1-90322Q	03/22/90	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 1	WV1-90511Q	05/11/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	< 2		< 1	< 1
MW- 1	WV1-90927-	09/27/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	< 2		< 1	< 1
MW- 1	WV1-90027-	12/27/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	< 2		< 1	< 1
MW- 1	WV1-91327-	03/27/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	< 2		< 1	< 1
MW- 1	WV1-91529-	05/29/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	< 2		< 1	< 1
MW- 1	WV1-91829-	08/29/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	< 2		< 1	< 1
MW- 1	WV1-91015D	10/15/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	< 2		< 1	< 1
MW- 1	WV1-91015R	10/15/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	< 2		< 1	< 1
MW- 1	WV1-91012-	12/12/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	< 2		< 1	< 1
MW- 1	WV1-92305-	03/05/92	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	< 2		< 1	< 1
MW- 2	WV2-87527	05/27/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 2	WV2-87922	09/22/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 2	WV2-87D29	12/29/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 2	WV2-88217	02/17/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 2	WV2-88217S	02/17/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 2	WV2-88518	05/18/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		0.9	< 1
MW- 2	WV2-88721Q	07/21/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 2	WV2-89619Q	06/19/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 2	WV2-89911Q	09/11/89	1.1	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 2	WV2-89D12D	12/12/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1
MW- 2	WV2-89D12Q	12/12/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		1.1	< 1
MW- 2	WV2-90220D	02/20/90	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	6		< 0.6	< 1
MW- 2	WV2-90220Q	02/20/90	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	3		< 0.6	3

Herbicides, Pesticides, and Radioactivity

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	2,4-D (ug/L)	2,4,5-TP (Silvex) (ug/L)	Endrin (ug/L)	Lindane (ug/L)	Methoxy- chlor (ug/L)	Toxa- phene (ug/L)	Gross Alpha Activity pCi/L	Gross Beta pCi/L	Radium 226 pCi/L	Radium 228 pCi/L
MW- 4	WV4-893240	03/24/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00				
MW- 4	WV4-895230	05/23/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00				
MW- 4	WV4-899290	09/29/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00				
MW- 4	WV4-890190	12/19/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	4		< 0.6	< 1
MW- 4	WV4-903210	03/21/90	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 4	WV4-905100	05/10/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-90711	07/11/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-90026-	12/26/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-91326-	03/26/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-91531-	05/31/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-91827-	08/27/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-91011-	12/11/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-92306-	03/06/92	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1				
MW- 5D	WV5D87520	05/20/87	< 0.50	< 0.50	< 0.11	< 0.05	< 0.53	< 1.1	2		< 0.6	< 1
MW- 5D	WV5D87708S	07/08/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D87708	07/08/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D87D22	12/22/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D87D22S	12/22/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D88331	03/31/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D88331S	03/31/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D88519	05/19/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D889130	09/13/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D88M160	11/16/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D893220	03/22/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D896200	06/20/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D899080	09/08/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	3		< 0.6	< 1
MW- 5D	WV5D899080	09/08/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	7		< 0.6	< 1
MW- 5D	WV5D890130	12/13/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D903190	03/19/90	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D905110	05/11/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 5D	WV5D90710	07/10/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 5D	WV5D90026-	12/26/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 5D	WV5D91326-	03/26/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1

Volatiles --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Acetone	Benzene	Bromo-dichloro-methane	Bromoform	Bromo-methane	2-Butanone	Carbon Disulfide	Carbon Tetra-chloride	Chloro-benzene	Chloro-ethane
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW- 1	WV1-86023	10/23/86	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87430	04/30/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87916	09/16/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87W18	11/18/87	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-88322	03/22/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-88519	05/19/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-88915Q	09/15/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-89621Q	06/21/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-89907Q	09/07/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-89027Q	12/27/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-90322Q	03/22/90	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-90511Q	05/11/90	59	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-90927-	09/27/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-90027-	12/27/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91327-	03/27/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91529-	05/29/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91829-	08/29/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91015R	10/15/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91015D	10/15/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91D12-	12/12/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-92305-	03/05/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-87527	05/27/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-87922	09/22/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-87D29	12/29/87	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-88217	02/17/88	8	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-88217S	02/17/88	5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-88518	05/18/88	5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-88721Q	07/21/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-89619Q	06/19/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-89911Q	09/11/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-89D12Q	12/12/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-89D12D	12/12/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-90220Q	02/20/90	40	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-90220D	02/20/90	14	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3

Volatiles --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Acetone	Benzene	Bromo-dichloro-methane	Bromoform	Bromo-methane	2-Butanone	Carbon Disulfide	Carbon Tetra-chloride	Chloro-benzene	Chloro-ethane
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW- 2	WV2-91008D	10/08/91	11	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-91008R	10/08/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-91N08-	11/08/91	12 B	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-91D09R	12/09/91	11 B	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-91D09D	12/09/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-92110D	01/10/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-92110R	01/10/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-92224-	02/24/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-92305-	03/05/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 3	WV3-87507	05/07/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-87929	09/29/87	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-87D22	12/22/87	6	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 3	WV3-88322	03/22/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 3	WV3-88518	05/18/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 3	WV3-91528-	05/28/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 4	WV4-87430	04/30/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5 T
MW- 4	WV4-87914	09/14/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-87N19	11/19/87	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88107	01/07/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88107S	01/07/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88524	05/24/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88524S	05/24/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88908Q	09/08/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88N16Q	11/16/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-89324Q	03/24/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-89523Q	05/23/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-89929Q	09/29/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-89D19Q	12/19/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-90321Q	03/21/90	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-90510Q	05/10/90	130	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 4	WV4-90711	07/11/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 4	WV4-90711D	07/11/90	11	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 4	WV4-90D26-	12/26/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5

Herbicides, Pesticides, and Radioactivity

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	2,4-D	2,4,5-TP (Silvex)	Endrin	Lindane	Methoxy-chlor	Toxa-phene	Gross Alpha Activity	Gross Beta	Radium 226	Radium 228
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	pCi/L	pCi/L	pCi/L	pCi/L
MW- 4	WV4-89324Q	03/24/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00				
MW- 4	WV4-89523Q	05/23/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00				
MW- 4	WV4-89929Q	09/29/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00				
MW- 4	WV4-89D19Q	12/19/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	4		< 0.6	< 1
MW- 4	WV4-90321Q	03/21/90	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 4	WV4-90510Q	05/10/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-90711	07/11/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-90D26-	12/26/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-91326-	03/26/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-91531-	05/31/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-91827-	08/27/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-91D11-	12/11/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 4	WV4-92306-	03/06/92	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1				
MW- 5D	WV5D87520	05/20/87	< 0.50	< 0.50	< 0.11	< 0.05	< 0.53	< 1.1	2		< 0.6	< 1
MW- 5D	WV5D87708S	07/08/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D87708	07/08/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D87D22	12/22/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D87D22S	12/22/87	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D88331	03/31/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D88331S	03/31/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D88519	05/19/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D88913Q	09/13/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D88N16Q	11/16/88	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D89322Q	03/22/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D89620Q	06/20/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D89908Q	09/08/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	3		< 0.6	< 1
MW- 5D	WV5D89908Q	09/08/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	7		< 0.6	< 1
MW- 5D	WV5D89D13Q	12/13/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D90319Q	03/19/90	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	2		< 0.6	< 1
MW- 5D	WV5D90511Q	05/11/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 5D	WV5D90710	07/10/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 5D	WV5D90D26-	12/26/90	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1
MW- 5D	WV5D91326-	03/26/91	< 10	< 10	< 0.1	< 0.05	< 0.5	< 1	2		< 1	< 1

Volatiles --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Acetone	Benzene	Bromo-dichloro-methane	Bromoform	Bromo-methane	2-Butanone	Carbon Disulfide	Carbon Tetra-chloride	Chloro-benzene	Chloro-ethane
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW- 1	WV1-86023	10/23/86	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87430	04/30/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87916	09/16/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87N18	11/18/87	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-88322	03/22/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-88519	05/19/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-88915Q	09/15/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-89621Q	06/21/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-89907Q	09/07/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-89027Q	12/27/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-90322Q	03/22/90	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 1	WV1-90511Q	05/11/90	59	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-90927-	09/27/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-90027-	12/27/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91327-	03/27/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91529-	05/29/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91829-	08/29/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91015R	10/15/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91015D	10/15/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-91012-	12/12/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 1	WV1-92305-	03/05/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-87527	05/27/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-87922	09/22/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-87D29	12/29/87	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-88217	02/17/88	8	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-88217S	02/17/88	5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-88518	05/18/88	5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-88721Q	07/21/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-89619Q	06/19/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-89911Q	09/11/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-89012Q	12/12/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-89012D	12/12/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-90220Q	02/20/90	40	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 2	WV2-90220D	02/20/90	14	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3

Volatiles --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Acetone	Benzene	Bromo-dichloro-methane	Bromoform	Bromo-methane	2-Butanone	Carbon Disulfide	Carbon Tetra-chloride	Chloro-benzene	Chloro-ethane
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW- 2	WV2-91008D	10/08/91	11	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-91008R	10/08/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-91N08-	11/08/91	12 B	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-91D09R	12/09/91	11 B	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-91D09D	12/09/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-92110D	01/10/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-92110R	01/10/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-92224-	02/24/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 2	WV2-92305-	03/05/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 3	WV3-87507	05/07/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-87929	09/29/87	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-87D22	12/22/87	6	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 3	WV3-88322	03/22/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 3	WV3-88518	05/18/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 3	WV3-91528-	05/28/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 4	WV4-8743D	04/30/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5 T
MW- 4	WV4-87914	09/14/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-87N19	11/19/87	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88107	01/07/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88107S	01/07/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88524	05/24/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88524S	05/24/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88908Q	09/08/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-88N16Q	11/16/88	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-89324Q	03/24/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-89523Q	05/23/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-89929Q	09/29/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-89D19Q	12/19/89	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-90321Q	03/21/90	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 4	WV4-90510Q	05/10/90	130	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 4	WV4-90711	07/11/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 4	WV4-90711D	07/11/90	11	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 4	WV4-90D26-	12/26/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5

Volatiles --- Part 1

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Acetone (ug/L)	Benzene (ug/L)	Bromo- dichloro- methane (ug/L)	Bromoform (ug/L)	Bromo- methane (ug/L)	2-Butanone (ug/L)	Carbon Disulfide (ug/L)	Carbon Tetra- chloride (ug/L)	Chloro- benzene (ug/L)	Chloro- ethane (ug/L)
MW- 5D	WV5D91N27R	11/27/91	12 B	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 5D	WV5D91D10-	12/10/91	12 B	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 5D	WV5D92110R	01/10/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 5D	WV5D92110D	01/10/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 5D	WV5D92224-	02/24/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 5D	WV5D92309-	03/09/92	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW- 5S	WV5S87527	05/27/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 5S	WV5S87723S	07/23/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 5S	WV5S87723	07/23/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 5S	WV5S87D29	12/29/87	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 5S	WV5S88217	02/17/88	9	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW- 5S	WV5S88217S	02/17/88	10	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW-STA-U-1	WVU187527	05/27/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU188913	09/13/88	8	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW-STA-U-1	WVU190319L	03/19/90	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW-STA-U-1	WVU190319A	03/19/90	31	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU190322A	03/22/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU190322L	03/22/90	< 5	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3
MW-STA-U-1	WVU190710	07/10/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU190711	07/11/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU190712	07/12/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU190831-	08/31/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU190024-	10/24/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU190N29-	11/29/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU190D31T	12/31/90	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU191125-	01/25/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU191212-	02/12/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU191326-	03/26/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU191326T	03/26/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU191327-	03/27/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU191408M	04/08/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU191508-	05/08/91	< 10	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5
MW-STA-U-1	WVU191606-	06/06/91	44	< 1	< 1	< 1	< 5	< 10	< 1	< 1	< 1	< 5

Volatiles --- Part 2

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Chloroform	Dibromo-chloro-methane	p-Dichloro benzene	1,1-Dichlo ethane	1,2-Dichlo ethane	1,2-Dichlo ethene, total	1,1-Dichlo ethene	1,2-Dichlo propane	cis-1,3-Dichloro-propene	trans-1,3-Dichloro-propene
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW- 1	WV1-86023	10/23/86	< 1	< 1		< 1	< 1		< 1	< 1	< 1	< 1
MW- 1	WV1-87430	04/30/87	< 1	< 1		< 1	< 1		< 1	< 1	< 1	< 1
MW- 1	WV1-87916	09/16/87	< 1	< 1		< 1	< 1		< 1	< 1	< 1	< 1
MW- 1	WV1-87N18	11/18/87	< 1	< 3		< 1	< 1		< 1	< 1	< 3	< 3
MW- 1	WV1-88322	03/22/88	< 1	< 3		< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 1	WV1-88519	05/19/88	< 1	< 3		< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 1	WV1-88915Q	09/15/88	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 1	WV1-89621Q	06/21/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 1	WV1-89907Q	09/07/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 1	WV1-89027Q	12/27/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 1	WV1-90322Q	03/22/90	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 1	WV1-90511Q	05/11/90	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-90927-	09/27/90	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-90027-	12/27/90	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-91327-	03/27/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-91529-	05/29/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-91829-	08/29/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-91015R	10/15/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-91015D	10/15/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-91012-	12/12/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-92305-	03/05/92	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-87527	05/27/87	< 1	< 1		< 1	< 1		< 1	< 1	< 1	< 1
MW- 2	WV2-87922	09/22/87	< 1	< 1		< 1	< 1		< 1	< 1	< 1	< 1
MW- 2	WV2-87D29	12/29/87	< 1	< 3		< 1	< 1		< 1	< 1	< 3	< 3
MW- 2	WV2-88217	02/17/88	< 1	< 3		< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 2	WV2-88217S	02/17/88	< 1	< 3		< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 2	WV2-88518	05/18/88	< 1	< 3		< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 2	WV2-88721Q	07/21/88	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 2	WV2-89619Q	06/19/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 2	WV2-89911Q	09/11/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 2	WV2-89D12Q	12/12/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 2	WV2-89D12D	12/12/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 2	WV2-90220Q	02/20/90	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 2	WV2-90220D	02/20/90	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3

Volatiles --- Part 2

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Chloroform	Dibromo-chloro-methane	p-Dichloro benzene	1,1-Dichlo ethane	1,2-Dichlo ethane	1,2-Dichlo ethene, total	1,1-Dichlo ethene	1,2-Dichlo propane	cis-1,3-Dichloro-propene	trans-1,3-Dichloro-propene
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW- 2	WV2-91008D	10/08/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-91008R	10/08/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-91N08-	11/08/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-91D09R	12/09/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-91D09D	12/09/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-92110D	01/10/92	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-92110R	01/10/92	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-92224-	02/24/92	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-92305-	03/05/92	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-87507	05/07/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-87929	09/29/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-87022	12/22/87	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 3	WV3-88322	03/22/88	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 3	WV3-88518	05/18/88	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 3	WV3-91528-	05/28/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-87430	04/30/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-87914	09/14/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-87N19	11/19/87	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-88107	01/07/88	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-88107S	01/07/88	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-88524	05/24/88	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-88524S	05/24/88	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-88908Q	09/08/88	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-88N16Q	11/16/88	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-89324Q	03/24/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-89523Q	05/23/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-89929Q	09/29/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-89D19Q	12/19/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-90321Q	03/21/90	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW- 4	WV4-90510Q	05/10/90	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-90711	07/11/90	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-90711D	07/11/90	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-90D26-	12/26/90	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Volatiles --- Part 2

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Chloroform (ug/L)	Dibromo- chloro- methane (ug/L)	p-Dichloro benzene (ug/L)	1,1-Dichlo ethane (ug/L)	1,2-Dichlo ethane (ug/L)	1,2-Dichlo ethene, total (ug/L)	1,1-Dichlo ethene (ug/L)	1,2-Dichlo propane (ug/L)	cis-1,3- Dichloro- propene (ug/L)	trans-1,3- Dichloro- propene (ug/L)
MW- 5D	WV5D91W27R	11/27/91	< 1	< 1	< 1	< 1	< 1	16	< 1	< 1	< 1	< 1
MW- 5D	WV5D91D10-	12/10/91	< 1	< 1	< 1	< 1	< 1	16	< 1	< 1	< 1	< 1
MW- 5D	WV5D92110R	01/10/92	< 1	< 1	< 1	< 1	< 1	15	< 1	< 1	< 1	< 1
MW- 5D	WV5D92110D	01/10/92	< 1	< 1	< 1	< 1	< 1	16	< 1	< 1	< 1	< 1
MW- 5D	WV5D92224-	02/24/92	< 1	< 1	< 1	< 1	< 1	12	< 1	< 1	< 1	< 1
MW- 5D	WV5D92309-	03/09/92	< 1	< 1	< 1	< 1	< 1	13	< 1	< 1	< 1	< 1
MW- 5S	WV5S87527	05/27/87	< 1	< 1		< 1	< 1		< 1	< 1	< 1	< 1
MW- 5S	WV5S87723S	07/23/87	< 1	< 1		< 1	< 1		< 1	< 1	< 1	< 1
MW- 5S	WV5S87723	07/23/87	< 1	< 1		< 1	< 1		< 1	< 1	< 1	< 1
MW- 5S	WV5S87D29	12/29/87	< 1	< 3		< 1	< 1		< 1	< 1	< 3	< 3
MW- 5S	WV5S88217	02/17/88	< 1	< 3		1	< 1	3	< 1	< 1	< 3	< 3
MW- 5S	WV5S88217S	02/17/88	< 1	< 3		1	< 1	3	< 1	< 1	< 3	< 3
MW-STA-U-1	WVU187527	05/27/87	12	< 1		< 1	< 1		< 1	< 1	< 1	< 1
MW-STA-U-1	WVU188913	09/13/88	5	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW-STA-U-1	WVU190319L	03/19/90	9	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW-STA-U-1	WVU190319A	03/19/90	6.6	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190322A	03/22/90	6.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190322L	03/22/90	8	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3
MW-STA-U-1	WVU190710	07/10/90	7 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190711	07/11/90	9.3 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190712	07/12/90	9.1 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190831-	08/31/90	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190024-	10/24/90	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190W29-	11/29/90	1 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190D31T	12/31/90	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU191125-	01/25/91	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU191212-	02/12/91	1.2 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU191326-	03/26/91	1.1 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU191326T	03/26/91	3.7 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU191327-	03/27/91	1 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU191408M	04/08/91	1 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU191508-	05/08/91	1.6 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU191606-	06/06/91	1.3 B	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Volatiles --- Part 3

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Ethyl Benzene (ug/L)	2-Hexanone (ug/L)	Methylene Chloride (ug/L)	4-Methyl-2-Pentanone (ug/L)	Styrene (ug/L)	1,1,2,2-Tetrachloroethane (ug/L)	Tetrachloroethylene (ug/L)	Toluene (ug/L)	1,1,1-Tri-chloro-ethane (ug/L)	1,1,2-Tri-chloro-ethane (ug/L)
MW- 1	WV1-86023	10/23/86	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87430	04/30/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87916	09/16/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87N18	11/18/87	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 1	WV1-88322	03/22/88	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 1	WV1-88519	05/19/88	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 1	WV1-88915Q	09/15/88	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 1	WV1-89621Q	06/21/89	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 1	WV1-89907Q	09/07/89	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 1	WV1-89027Q	12/27/89	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 1	WV1-90322Q	03/22/90	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 1	WV1-90511Q	05/11/90	< 1	< 10	9.9 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 1	WV1-90927-	09/27/90	< 1	< 10	< 1	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 1	WV1-90027-	12/27/90	< 1	< 10	2.3 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 1	WV1-91327-	03/27/91	< 1	< 10	2.5 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 1	WV1-91529-	05/29/91	< 1	< 10	2.7 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 1	WV1-91829-	08/29/91	< 1	< 10	< 1	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 1	WV1-91015R	10/15/91	< 1	< 10	2 B	< 10	< 1	< 1	< 1	< 5	< 1	< 1
MW- 1	WV1-91015D	10/15/91	< 1	< 10	2 B	< 10	< 1	< 1	< 1	< 5	< 1	< 1
MW- 1	WV1-91012-	12/12/91	< 1	< 10	3 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 1	WV1-92305-	03/05/92	< 1	< 10	< 1	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 2	WV2-87527	05/27/87	< 1	< 1	4	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-87922	09/22/87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	4	< 1
MW- 2	WV2-87029	12/29/87	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 2	WV2-88217	02/17/88	< 1	< 3	2	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 2	WV2-88217S	02/17/88	< 1	< 3	2	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 2	WV2-88518	05/18/88	< 1	< 3	2	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 2	WV2-88721Q	07/21/88	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 2	WV2-89619Q	06/19/89	< 1	< 3	3	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 2	WV2-89911Q	09/11/89	< 1	< 3	3	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 2	WV2-89012Q	12/12/89	< 1	< 3	4	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 2	WV2-89012D	12/12/89	< 1	< 3	4	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 2	WV2-90220Q	02/20/90	< 1	< 3	3	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 2	WV2-90220D	02/20/90	< 1	< 3	3	< 3	< 1	< 3	< 1	< 1	< 1	< 1

Volatiles --- Part 3

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Ethyl Benzene (ug/L)	2-Hexanone (ug/L)	Methylene Chloride (ug/L)	4-Methyl-2-Pentanone (ug/L)	Styrene (ug/L)	1,1,2,2-Tetra-chloro-ethane (ug/L)	Tetra-chloro-ethylene (ug/L)	Toluene (ug/L)	1,1,1-Tri-chloro-ethane (ug/L)	1,1,2-Tri-chloro-ethane (ug/L)
MW- 2	WV2-91008D	10/08/91	< 1	< 10	4 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 2	WV2-91008R	10/08/91	< 1	< 10	3 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 2	WV2-91N08-	11/08/91	< 1	< 10	3 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 2	WV2-91D09R	12/09/91	< 1	< 10	6 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 2	WV2-91D09D	12/09/91	< 1	< 10	5 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 2	WV2-92110D	01/10/92	< 1	< 10	4 B	< 10	< 1	< 1	< 1	< 5	< 1	< 1
MW- 2	WV2-92110R	01/10/92	< 1	< 10	4 B	< 10	< 1	< 1	< 1	< 5	< 1	< 1
MW- 2	WV2-92224-	02/24/92	< 1	< 10	5 B	< 10	< 1	< 1	< 1	< 5	< 1	< 1
MW- 2	WV2-92305-	03/05/92	< 1	< 10	2.1 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 3	WV3-87507	05/07/87	< 1	< 1	< 1	< 1	< 1	< 1	< 5 T	< 1	< 1	< 1
MW- 3	WV3-87929	09/29/87	< 1	< 1	12	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-87D22	12/22/87	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 3	WV3-88322	03/22/88	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 3	WV3-88518	05/18/88	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 3	WV3-91528-	05/28/91	< 1	< 10	3.1 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 4	WV4-87430	04/30/87	< 1	< 1	< 5 T	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-87914	09/14/87	< 1	< 1	3	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-87N19	11/19/87	< 1	< 3	2	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-88107	01/07/88	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-88107S	01/07/88	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-88524	05/24/88	< 1	< 3	1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-88524S	05/24/88	< 1	< 3	2	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-88908Q	09/08/88	< 1	< 3	5	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-88N16Q	11/16/88	< 1	< 3	2	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-89324Q	03/24/89	< 1	< 3	3	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-89523Q	05/23/89	< 1	< 3	3	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-89929Q	09/29/89	< 1	< 3	8	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-89D19Q	12/19/89	< 1	< 3	5	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-90321Q	03/21/90	< 1	< 3	4	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW- 4	WV4-90510Q	05/10/90	< 1	< 10	16 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 4	WV4-90711	07/11/90	< 1	< 10	4.6 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 4	WV4-90711D	07/11/90	< 1	< 10	7.1 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 4	WV4-90026-	12/26/90	< 1	< 10	11 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1

Volatiles --- Part 3

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Ethyl Benzene (ug/L)	2-Hexanone (ug/L)	Methylene Chloride (ug/L)	4-Methyl-2-Pentanone (ug/L)	Styrene (ug/L)	1,1,2,2-Tetrachloroethane (ug/L)	Tetrachloroethylene (ug/L)	Toluene (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1,2-Trichloroethane (ug/L)
MW- 5D	WV5D91N27R	11/27/91	< 1	< 10	5 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 5D	WV5D91D10-	12/10/91	< 1	< 10	3 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW- 5D	WV5D92110R	01/10/92	< 1	< 10	4 B	< 10	< 1	< 1	< 1	< 5	< 1	< 1
MW- 5D	WV5D92110D	01/10/92	< 1	< 10	4 B	< 10	< 1	< 1	< 1	< 5	< 1	< 1
MW- 5D	WV5D92224-	02/24/92	< 1	< 10	5 B	< 10	< 1	< 1	< 1	< 5	< 1	< 1
MW- 5D	WV5D92309-	03/09/92	< 1	< 10	6 B	< 10	< 1	< 1	< 1	< 5	< 1	< 1
MW- 5S	WV5S87527	05/27/87	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 5S	WV5S87723S	07/23/87	1	< 1	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 5S	WV5S87723	07/23/87	1	< 1	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW- 5S	WV5S87D29	12/29/87	< 1	< 3	< 1	< 3	< 1	< 3	< 1	1	< 1	< 1
MW- 5S	WV5S88217	02/17/88	1	< 3	1	< 3	< 1	< 3	< 1	1	< 1	< 1
MW- 5S	WV5S88217S	02/17/88	< 1	< 3	1	< 3	< 1	< 3	< 1	1	< 1	< 1
MW-STA-U-1	WVU187527	05/27/87	< 1	< 1	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU188913	09/13/88	< 1	< 3	14	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190319L	03/19/90	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190319A	03/19/90	< 1	< 10	7.4 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU190322A	03/22/90	< 1	< 10	6.3 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU190322L	03/22/90	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190710	07/10/90	< 1	< 10	1.1 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU190711	07/11/90	< 1	< 10	2.2 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU190712	07/12/90	< 1	< 10	1.5 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU190831-	08/31/90	< 1	< 10	< 1	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU190024-	10/24/90	< 1	< 10	3.3 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU190N29-	11/29/90	< 1	< 10	2 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU190D31T	12/31/90	< 1	< 10	26 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU191125-	01/25/91	< 1	< 10	< 1	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU191212-	02/12/91	< 1	< 10	1.5 B	< 5	< 1	< 1	< 1	< 5	3.2	< 1
MW-STA-U-1	WVU191326-	03/26/91	< 1	< 10	2.8 B	< 5	< 1	2.5	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU191326T	03/26/91	< 1	< 10	5.9 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU191327-	03/27/91	< 1	< 10	2.6 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU191408H	04/08/91	< 1	< 10	9.1 B	< 5	< 1	< 1	< 1	< 5	< 1	< 1
MW-STA-U-1	WVU191508-	05/08/91	< 1	< 10	2.4 B	< 5	< 1	< 1	< 1	< 5	2.6	< 1
MW-STA-U-1	WVU191606-	06/06/91	< 1	< 10	3.3 B	< 5	< 1	< 1	< 1	< 5	2.3	< 1

Volatiles --- Part 4

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Trichloro-	Vinyl	Vinyl	Total	Chloro-
			ethene	Acetate	Chloride	Xylenes	methane
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW- 1	WV1-86023	10/23/86	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87430	04/30/87	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87916	09/16/87	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-87N18	11/18/87	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-88322	03/22/88	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-88519	05/19/88	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-88915Q	09/15/88	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-89621Q	06/21/89	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-89907Q	09/07/89	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-89D27Q	12/27/89	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-90322Q	03/22/90	< 1	< 1	< 1	< 1	< 1
MW- 1	WV1-90511Q	05/11/90	< 1	< 10	< 5	< 1	< 5
MW- 1	WV1-90927-	09/27/90	< 1	< 10	< 2	< 1	< 5
MW- 1	WV1-90D27-	12/27/90	< 1	< 10	< 2	< 1	< 5
MW- 1	WV1-91327-	03/27/91	< 1	< 10	< 2	< 1	< 5
MW- 1	WV1-91529-	05/29/91	< 1	< 10	< 2	< 1	< 5
MW- 1	WV1-91829-	08/29/91	< 1	< 10	< 2	< 1	< 5
MW- 1	WV1-91015R	10/15/91	< 1	< 10	< 2	< 1	< 5
MW- 1	WV1-91015D	10/15/91	< 1	< 10	< 2	< 1	< 5
MW- 1	WV1-91D12-	12/12/91	< 1	< 10	< 2	< 1	< 5
MW- 1	WV1-92305-	03/05/92	< 1	< 10	< 2	< 1	< 5
MW- 2	WV2-87527	05/27/87	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-87922	09/22/87	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-87D29	12/29/87	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-88217	02/17/88	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-88217S	02/17/88	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-88518	05/18/88	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-88721Q	07/21/88	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-89619Q	06/19/89	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-89911Q	09/11/89	< 1	< 1	9	< 1	< 1
MW- 2	WV2-89D12Q	12/12/89	< 1	< 1	10	< 1	< 1
MW- 2	WV2-89D12D	12/12/89	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-90220Q	02/20/90	< 1	< 1	< 1	< 1	< 1
MW- 2	WV2-90220D	02/20/90	< 1	< 1	7	< 1	< 1

Volatiles --- Part 4

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992

Vashon Landfill --- GROUND WATER

CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Trichloro-	Vinyl	Vinyl	Total	Chloro-
			ethene	Acetate	Chloride	Xylenes	methane
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW- 2	WV2-91008D	10/08/91	< 1	< 10	10	< 1	< 5
MW- 2	WV2-91008R	10/08/91	< 1	< 10	9	< 1	< 5
MW- 2	WV2-91N08-	11/08/91	< 1	< 10	13	< 1	< 5
MW- 2	WV2-91D09R	12/09/91	< 1	< 10	15	< 1	< 5
MW- 2	WV2-91D09D	12/09/91	< 1	< 10	13	< 1	< 5
MW- 2	WV2-92110D	01/10/92	< 1	< 10	9	< 1	< 5
MW- 2	WV2-92110R	01/10/92	< 1	< 10	12	< 1	< 5
MW- 2	WV2-92224-	02/24/92	< 1	< 10	13	< 1	< 5
MW- 2	WV2-92305-	03/05/92	< 1	< 10	11	< 1	< 5
MW- 3	WV3-87507	05/07/87	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-87929	09/29/87	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-87D22	12/22/87	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-88322	03/22/88	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-88518	05/18/88	< 1	< 1	< 1	< 1	< 1
MW- 3	WV3-91528-	05/28/91	< 1	< 10	< 2	< 1	< 5
MW- 4	WV4-87430	04/30/87	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-87914	09/14/87	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-87N19	11/19/87	< 1	< 1	12	< 1	< 1
MW- 4	WV4-88107	01/07/88	< 1	< 1	14	< 1	< 1
MW- 4	WV4-88107S	01/07/88	< 1	< 1	15	< 1	< 1
MW- 4	WV4-88524	05/24/88	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-88524S	05/24/88	< 1	< 1	12	< 1	< 1
MW- 4	WV4-88908Q	09/08/88	< 1	< 1	6	< 1	< 1
MW- 4	WV4-88N16Q	11/16/88	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-89324Q	03/24/89	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-89523Q	05/23/89	< 1	< 1	3	< 1	< 1
MW- 4	WV4-89929Q	09/29/89	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-89019Q	12/19/89	< 1	< 1	< 1	< 1	< 1
MW- 4	WV4-90321Q	03/21/90	< 1	< 1	10	< 1	< 1
MW- 4	WV4-90510Q	05/10/90	< 1	< 10	5.7	< 1	< 5
MW- 4	WV4-90711	07/11/90	< 1	< 10	< 2	< 1	< 5
MW- 4	WV4-90711D	07/11/90	< 1	< 10	< 2	< 1	< 5
MW- 4	WV4-90026-	12/26/90	< 1	< 10	< 2	< 1	< 5

Volatiles --- Part 4

DATA REPORTED FROM OCTOBER 1, 1986 TO MARCH 31, 1992
 Vashon Landfill --- GROUND WATER
 CONTACT PERSON: Anne Holmes, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Trichloro-ethene	Vinyl Acetate	Vinyl Chloride	Total Xylenes	Chloro-methane
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW- 5D	WV5D91N27R	11/27/91	< 1	< 10	30	< 1	< 5
MW- 5D	WV5D91010-	12/10/91	< 1	< 10	28	< 1	< 5
MW- 5D	WV5D92110R	01/10/92	< 1	< 10	17	< 1	< 5
MW- 5D	WV5D92110D	01/10/92	< 1	< 10	21	< 1	< 5
MW- 5D	WV5D92224-	02/24/92	< 1	< 10	19	< 1	< 5
MW- 5D	WV5D92309-	03/09/92	< 1	< 10	19	< 1	< 5
MW- 5S	WV5S87527	05/27/87	1	< 1	22	< 1	< 1
MW- 5S	WV5S87723S	07/23/87	1	< 1	15	< 1	< 1
MW- 5S	WV5S87723	07/23/87	1	< 1	21	< 1	< 1
MW- 5S	WV5S87D29	12/29/87	1	< 1	< 1	< 1	< 1
MW- 5S	WV5S88217	02/17/88	1	< 1	8	< 1	< 1
MW- 5S	WV5S88217S	02/17/88	1	< 1	9	< 1	< 1
MW-STA-U-1	WVU187527	05/27/87	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU188913	09/13/88	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190319L	03/19/90	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190319A	03/19/90	< 1	< 10	< 5	< 1	< 5
MW-STA-U-1	WVU190322A	03/22/90	< 1	< 10	< 5	< 1	< 5
MW-STA-U-1	WVU190322L	03/22/90	< 1	< 1	< 1	< 1	< 1
MW-STA-U-1	WVU190710	07/10/90	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU190711	07/11/90	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU190712	07/12/90	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU190831-	08/31/90	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU190024-	10/24/90	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU190N29-	11/29/90	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU190031T	12/31/90	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU191125-	01/25/91	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU191212-	02/12/91	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU191326-	03/26/91	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU191326T	03/26/91	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU191327-	03/27/91	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU191408H	04/08/91	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU191508-	05/08/91	< 1	< 10	< 2	< 1	< 5
MW-STA-U-1	WVU191606-	06/06/91	< 1	< 10	< 2	< 1	< 5

Site Number	Zone	Onsite	Site name	GSE	TOC	Depth	X	Y
MW- 1		Y	MONITORING WELL 1	402.48	403.56	131.08	2987.420	1368.710
MW- 2		Y	MONITORING WELL 2	312.58	313.28	85.70	2358.920	123.860
MW- 3		Y	MONITORING WELL 3	312.90	313.45	40.55	2360.150	132.230
MW- 4		Y	MONITORING WELL 4	373.08	374.23	111.15	2116.940	711.510
MW- 5D	D	Y	MONITORING WELL 5D	355.86	357.23	126.37	2208.920	322.180
MW- 5S	S	Y	MONITORING WELL 5S	355.86	356.66	85.80	2208.920	322.180
MW- 6D	D	Y	MONITORING WELL 6D	392.42	394.10	163.68	2344.050	1196.300
MW- 6S	S	Y	MONITORING WELL 6S	392.42	394.20	118.78	2344.050	1196.300
MW-STA-U-1		Y	FIELD BLANK	0.00	0.00	0.00	0.000	0.000

VASHON GW

VASHON LANDFILL FIELD MONITORING DATA
2ND QTR 1986 TO 1ST QTR 1992

Site Number	Site Name	Date (mm/dd/yy)	Time (hh:mm:ss)	Foot- Notes	Temp (C)	H2O Dpth-C	Water Elev	Purge Vol.	pH (water)	Spec Cond	
MW- 1	MONITORING WELL 1	12/11/91	12:35:00		10.7	125.52	278.04	5.0	6.83	194.0	
		03/05/92	10:30:00		10.6	125.83	277.73	4.59	6.75	187.0	
MW- 2	MONITORING WELL 2	05/05/86	01:50:00			71.72	241.56				
		05/05/86	03:00:00		10					450	
		05/07/87	08:45:00			71.42	241.86				
		05/27/87	01:14:00			71.75	241.53				
		05/27/87	03:13:00			9.5				6.91	400
		09/22/87	00:00:00			10.5				6.66	400
		09/22/87	09:40:00				71.80	241.48			
		12/29/87	00:00:00			8				6.93	410
		12/29/87	01:52:00				72.04	241.24			
		02/17/88	00:00:00			8.5				7.13	410
		02/17/88	01:30:00				71.88	241.40			
		05/18/88	00:00:00			10				7.13	450
		05/18/88	08:20:00				72.17	241.11			
		07/21/88	09:30:00				72.51	240.77			
		07/21/88	10:35:00			10				6.77	440
		06/19/89	09:20:00				72.25	241.03			
		06/19/89	10:20:00			10					460
		09/11/89	09:40:00				72.77	240.51			
		09/11/89	11:28:00			11				6.95	510
		12/12/89	09:45:00				72.73	240.55			
12/12/89	10:47:00			8.1				6.6	480		
02/20/90	09:34:00				72.32	240.96					
02/20/90	10:28:00			9.0				7.07	349		
03/19/90	09:35:00				72.26	241.02					
03/19/90	11:10:00			9.0				6.82	530		
05/09/90	09:09:00				72.05	241.23					
05/09/90	10:00:00			11.5				6.78	520		

VASHON GW

VASHON LANDFILL FIELD MONITORING DATA
2ND QTR 1986 TO 1ST QTR 1992

Site Number	Site Name	Date (mm/dd/yy)	Time (hh:mm:ss)	Foot- Notes	Temp (C)	H ₂ O Dpth-C	Water Elev	Purge Vol.	pH (water)	Spec Cond
MW- 3	MONITORING WELL 3	05/18/88	09:30:00		10.5				6.25	150
		07/21/88	12:07:00	11		40.00	273.45			
		06/21/89	08:50:00	12		40.0	273.5			
		09/20/89	09:50:00	13		0	313			
		12/12/89	10:40:00	14		0	313			
		03/19/90	11:02:00	15		39.34	274.11			
		05/09/90	00:00:00	16		0	313			
		05/10/90	08:15:00	17		0	313			
		03/26/91	00:00:00	18		39.2	274.3			
		05/28/91	09:00:00		10.9	38.82	274.63	1.3	6.28	140.0
		08/26/91	08:40:00	19		40.0	273.5			
		12/09/91	09:44:00	20		40.15	273.30			
		03/04/92	09:40:00	21		39.15	274.30		0	
		MW- 4	MONITORING WELL 4	12/03/85	09:30:00		8	102.00	272.23	
04/29/86	01:40:00				11					810
04/29/86	11:18:00					101.67	272.56			
08/26/86	02:40:00				13					850
08/26/86	08:40:00					100.9	273.3			
04/30/87	09:55:00					101.31	272.92			
04/30/87	12:15:00				12				6.78	720
09/14/87	00:00:00				12				6.29	650
09/14/87	11:07:00					100.6	273.6			
11/19/87	10:00:00					101.06	273.17			
11/19/87	11:50:00				10.5				6.37	590
01/07/88	00:00:00				10				6.45	485
01/07/88	10:30:00					101.44	272.79			
05/23/88	01:55:00				13				6.49	705
05/23/88	09:10:00					102.64	271.59			
05/24/88	08:15:00		12				6.68	710		

VASHON GW

VASHON LANDFILL FIELD MONITORING DATA
2ND QTR 1986 TO 1ST QTR 1992

Site Number	Site Name	Date (mm/dd/yy)	Time (hh:mm:ss)	Foot- Notes	Temp (C)	H ₂ O Dpth-C	Water Elev	Purge Vol.	pH (water)	Spec Cond
MW- 5D	MONITORING WELL 5D	09/17/86	00:00:00			115.88	241.35			
		09/17/86	03:20:00		12					2200
		05/20/87	00:00:00		10				6.52	1750
		05/20/87	09:35:00			117.08	240.15			
		07/08/87	00:00:00		10				6.65	1760
		12/22/87	00:00:00		9.5				6.76	1600
		12/22/87	08:50:00			117.21	240.02			
		03/31/88	08:20:00			117.25	239.98			
		03/31/88	09:05:00		10				6.73	1725
		05/19/88	08:30:00			117.33	239.90			
		05/19/88	09:20:00		11				6.78	1700
		09/13/88	08:30:00			117.50	239.73			
		09/13/88	09:15:00		10.5				6.59	1650
		11/16/88	01:15:00		9				6.76	1400
		11/16/88	12:15:00			117.42	239.81			
		03/22/89	00:00:00		10					
		03/22/89	10:35:00			117.79	239.44			
		03/22/89	11:15:00						6.58	1450
		06/20/89	09:38:00			117.58	239.65			
		06/20/89	10:05:00		11					1180
		09/08/89	00:00:00		12.5				6.31	1300
		09/08/89	09:30:00			117.6	239.6			
		12/13/89	09:30:00			117.9	239.3			
		12/13/89	10:40:00		8.7				6.4	1400
		03/19/90	09:30:00			117.58	239.65			
		03/19/90	10:12:00		11.0				6.49	1250
		05/11/90	00:00:00		11.0					
		05/11/90	10:55:00			117.34	239.89			
		05/11/90	11:20:00						6.45	1200
		07/10/90	10:10:00			117.34	239.89			

VASHON GW

VASHON LANDFILL FIELD MONITORING DATA
2ND QTR 1986 TO 1ST QTR 1992

Site Number	Site Name	Date (mm/dd/yy)	Time (hh:mm:ss)	Foot- Notes	Temp (C)	H2O Dpth-C	Water Elev	Purge Vol.	pH (water)	Spec Cond		
MW- 5S	MONITORING WELL 5S	12/13/89	00:00:00	38			0	357				
		03/19/90	09:30:00	39			0	357				
		05/11/90	11:30:00	40			79.6	277.1				
		07/11/90	00:00:00	41			0	357				
		05/31/91	08:45:00	42			0	357				
		08/07/91	11:10:00	43			83.2	273.5				
		10/08/91	11:13:00	44			0	357				
		12/10/91	07:50:00	45			83.0	273.7				
		01/10/92	10:00:00	46						0		
		02/24/92	10:49:00	47						0		
		05/11/92	08:15:00	48						0		
		MW- 60	MONITORING WELL 60	03/27/91	00:00:00	49		157.81	236.29			
				05/22/91	07:45:00	50		160.0	234.1			
08/26/91	10:05:00			51		161.30	232.80					
12/10/91	11:43:00			52		161.0	233.1					
02/24/92	12:00:00			53						0		
MW- 6S	MONITORING WELL 6S	03/27/91	00:00:00	54		0	394					
		08/26/91	10:00:00	55		115.50	278.70					
		12/10/91	11:40:00	56		115.83	278.37					
		02/24/92	12:00:00	57		116.27	277.93					

Footnotes (#-Column) :

- 1-2. SAMPLING OF THIS WELL REQUIRED MORE THAN ONE DAY.
- 3. SAMPLING OF THIS WELL REQUIRED MORE THAN ONE DAY.
- 2-2. SAMPLING OF THIS WELL REQUIRED MORE THAN ONE DAY.
- 3. SAMPLING OF THIS WELL REQUIRED MORE THAN ONE DAY.
- 3-2. SAMPLE COLLECTED WAS FOR VOA'S ONLY.
- 3. SAMPLE COLLECTED WAS FOR VOA'S ONLY.

VASHON GW

VASHON LANDFILL FIELD MONITORING DATA
2ND QTR 1986 TO 1ST QTR 1992

Footnotes (continued)

- 21-5. FIELD NOTE: WELL IS DRY. NO SAMPLES COLLECTED.
- 22-2. A BLANK WAS TAKEN WITH THIS SAMPLE.
-3. A BLANK WAS TAKEN WITH THIS SAMPLE.
- 23-2. DEPTH TO WATER MEASUREMENT WAS ASSUMED DUE TO INADEQUACY OF THE M-SCOPE USED. IT WILL BE MEASURED AT A LATER DAY.
-3. DEPTH TO WATER MEASUREMENT WAS ASSUMED DUE TO INADEQUACY OF THE M-SCOPE USED. IT WILL BE MEASURED AT A LATER DAY.
- 24-2. FIELD NOTE: WATER IS MILKY LOOKING.
-3. FIELD NOTE: WATER IS MILKY LOOKING.
- 25-2. FIELD NOTE: DUE TO SLOW WATER RECOVERY THIS WELL WAS SAMPLED AFTER SECOND PORE VOLUME. NO RADIONUCLIDE SAMPLE WAS TAKEN.
-3. FIELD NOTE: DUE TO SLOW WATER RECOVERY THIS WELL WAS SAMPLED AFTER SECOND PORE VOLUME. NO RADIONUCLIDE SAMPLE WAS TAKEN.
-4. FIELD NOTE: DUE TO SLOW WATER RECOVERY THIS WELL WAS SAMPLED AFTER SECOND PORE VOLUME. NO RADIONUCLIDE SAMPLE WAS TAKEN.
- 26-2. DEPTH TO WATER MEASUREMENT WAS ASSUMED DUE TO INADEQUACY OF THE M-SCOPE USED. IT WILL BE MEASURED AT A LATER DAY.
-3. DEPTH TO WATER MEASUREMENT WAS ASSUMED DUE TO INADEQUACY OF THE M-SCOPE USED. IT WILL BE MEASURED AT A LATER DAY.
- 27-2. A DUPLICATE WAS COLLECTED WITH THIS SAMPLE.
-3. A DUPLICATE WAS COLLECTED WITH THIS SAMPLE.
- 28-2. A COMPLETE SET OF DUPLICATE SAMPLE WAS COLLECTED WITH THIS SAMPLE.
-3. A COMPLETE SET OF DUPLICATE SAMPLE WAS COLLECTED WITH THIS SAMPLE.
- 29-1. FIELD NOTE: SAMPLE HAS A SULFURIC SMELL. IT TURNED GREEN WHEN POURED INTO 125 mL HDPE CYANIDE SAMPLE BOTTLE PRESERVED WITH NaOH.
-2. FIELD NOTE: SAMPLE HAS A SULFURIC SMELL. IT TURNED GREEN WHEN POURED INTO 125 mL HDPE CYANIDE SAMPLE BOTTLE PRESERVED WITH NaOH.
-3. FIELD NOTE: SAMPLE HAS A SULFURIC SMELL. IT TURNED GREEN WHEN POURED INTO 125 mL HDPE CYANIDE SAMPLE BOTTLE PRESERVED WITH NaOH.
-4. FIELD NOTE: SAMPLE HAS A SULFURIC SMELL. IT TURNED GREEN WHEN POURED INTO 125 mL HDPE CYANIDE SAMPLE BOTTLE PRESERVED WITH NaOH.
-5. FIELD NOTE: SAMPLE HAS A SULFURIC SMELL. IT TURNED GREEN WHEN POURED INTO 125 mL HDPE CYANIDE SAMPLE BOTTLE PRESERVED WITH NaOH.
-6. FIELD NOTE: SAMPLE HAS A SULFURIC SMELL. IT TURNED GREEN WHEN POURED INTO 125 mL HDPE CYANIDE SAMPLE BOTTLE PRESERVED WITH NaOH.
- 30-2. FIELD NOTE: H2O SAMPLE SMELLS LIKE ROTTEN EGG. DUPLICATE SAMPLE WAS COLLECTED.
-3. FIELD NOTE: H2O SAMPLE SMELLS LIKE ROTTEN EGG. DUPLICATE SAMPLE WAS COLLECTED.
-4. FIELD NOTE: H2O SAMPLE SMELLS LIKE ROTTEN EGG. DUPLICATE SAMPLE WAS COLLECTED.
-5. FIELD NOTE: H2O SAMPLE SMELLS LIKE ROTTEN EGG. DUPLICATE SAMPLE WAS COLLECTED.
-6. FIELD NOTE: H2O SAMPLE SMELLS LIKE ROTTEN EGG. DUPLICATE SAMPLE WAS COLLECTED.
- 31-5. FIELD NOTE: WATER SMELLS LIKE ROTTEN EGGS
- 32-2. FIELD NOTE: WELL IS DRY. NO SAMPLES COLLECTED.
-3. FIELD NOTE: WELL IS DRY. NO SAMPLES COLLECTED.
- 33-2. FIELD NOTE: WELL IS DRY. NO SAMPLES COLLECTED.
-3. FIELD NOTE: WELL IS DRY. NO SAMPLES COLLECTED.
- 34-2. FIELD NOTE: WELL IS DRY. NO SAMPLES COLLECTED.
-3. FIELD NOTE: WELL IS DRY. NO SAMPLES COLLECTED.

VASHON GW

VASHON LANDFILL FIELD MONITORING DATA
2ND QTR 1986 TO 1ST QTR 1992

Footnotes (continued)

- 54-2. WATER COLUMN TOO LOW TO SAMPLE (UNDER 1 FT.). NO SAMPLE WAS COLLECTED.
- 3. WATER COLUMN TOO LOW TO SAMPLE (UNDER 1 FT.). NO SAMPLE WAS COLLECTED.
- 55-2. NO ENOUGH WATER SUBMERGENCE FOR THE PUMP TO BE ABLE TO PUMP OUT SAMPLE.
- 3. NO ENOUGH WATER SUBMERGENCE FOR THE PUMP TO BE ABLE TO PUMP OUT SAMPLE.
- 56-2. FIELD NOTE: THERE IS NOT ENOUGH WATER WATER TO BAIL OUT. NO SAMPLE WAS TAKEN.
- 3. FIELD NOTE: THERE IS NOT ENOUGH WATER WATER TO BAIL OUT. NO SAMPLE WAS TAKEN.
- 57-2. FIELD NOTE: WELL IS DRY. NO SAMPLES COLLECTED.
- 3. FIELD NOTE: WELL IS DRY. NO SAMPLES COLLECTED.

Qualifier Information

Qual	Qualifier Description
	No Qualifier
<	At or Below Detection Limit
>	At or Above Detection Limit
A	TIC is a suspected aldol-condensation...
B	Detected in method blank and sample
C	Compound confirmed by GC/MS
CG	Confluent Growth in Total Coliform
D	Compounds at a secondary dilution factor
E	Exceed the Calibration Range of GC/MS
J	Estimated value
JB	Estimated value; also found in blank
M	High D.L. Due To Matrix Interference
N	Unknown qualifier - keep for service
P	Pesticide/Arochlor > 25% difference
R	value based on sample re-extract/digest
T	Unquantifiable amount between 1-5 ug/L
U	not detected, detection limit given
UB	detection limit, also in blank
X	X
XB	Report of Possible Exceedance

Following are qualifier symbols referred from EPA CLP under organics: (This symbols were updated into ENVIS 05/07/92)

- P added to ENVIS
- C added to ENVIS
- B existing in ENVIS
- E added to ENVIS (The existing symbol E's in ENVIS was changed to the symbol XE's. Also, all qualifier E's in database was changed to XE's.)
- D added to ENVIS
- A added to ENVIS
- U existing in ENVIS
- J existing in ENVIS

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APPENDIX B

**SUMMARY OF LABORATORY ANALYTICAL DATA FOR
FORMER NIKE MISSILE LAUNCH SITE**

(May 14, 1993 rev.)

**TABLE CONTAMINATION THAT EXCEEDS METHOD A CLEANUP LEVELS
FORMER NIKE BATTERY 61 SI-FOLLOWUP STUDY**

BOREHOLE NUMBER	DEPTH (feet)	Total Xylenes (mg/Kg)	Trichloro-ethene (mg/Kg)	Bunker C (Diesel 6) (mg/Kg)	Diesel 2 ethene (mg/Kg)	Gasoline (mg/Kg)
Method A cleanup level		20	0.5	200	200	100
S-9	2.0-2.6	ND	0.007J	ND	87	ND
	4.0-4.6	5.2J†	0.2J	NA	NA	NA
	6.0-6.6	9.3J†	0.95J	NA	NA	NA
	8.0-8.6	ND	ND	NA	NA	NA
	10.0-10.6	1.1	ND	NA	NA	NA
S-14	1.0-1.5	0.01J	ND	ND	ND	ND
	3.0-3.75	ND	ND	ND	ND	ND
	5.0-5.75	ND	0.014	ND	13	ND
	7.0-7.6	ND	0.13	ND	360	ND
	9.0-9.6	ND	ND	ND	19	ND
S-15	1.0-1.5	ND	ND	ND	ND	ND
	3.0-3.5	ND	ND	NA	NA	NA
	5.0-5.6	26.8J†	0.52J†	ND	ND	ND
	8.0-8.6	3.9J†	0.30J†	ND	ND	ND
	10.0-10.6	0.105	0.025J	ND	ND	ND
S-23	0-3	ND	ND	100*	ND	ND
	3-6	31	ND	1900*	685	3600**
	6-10	5.8	ND	400*	140	400**
S-24	0-3	ND	ND	ND	ND	ND
	3-6	ND	ND	ND	ND	ND
	6-10	22	ND	780*	280	880**

Concentration exceeds cleanup level

DATA QUALIFIERS

J - Indicates an estimated value

† - Analyte detected at medium level protocol; all other analytes detected at low level protocol

ND- Compound analyzed for but not detected

NA - Sample not analyzed for VOCs

*Fuel hydrocarbons quantified as Bunker oil appear to be motor oil

**Fuel hydrocarbons quantified as gasoline appear to be stoddard solvent

Source: Data for boreholes S-9, S-14, and S-15 from ARDL, Inc., 1990
Data for boreholes S-23 and S-224 from NET Pacific, Inc., 1991

Table 6 (continued):

**VOLATILE ORGANIC COMPOUNDS RESULTS
FORMER NIKE BATTERY 61 SI FOLLOWUP STUDY**

BOREHOLE NUMBER	DEPTH (feet)	Total Xylene (mg/kg)	Trichloro-ethene (mg/kg)	Ethylbenzene (mg/kg)	Tetrachloro-ethene (mg/kg)	1,1,1-Trichloroethane (mg/kg)	Vinyl Acetate (mg/kg)	1,1-Dichloro-ethene (mg/kg)	Acetone (mg/kg)	Toluene (mg/kg)	Chloroform (mg/kg)
Method A cleanup level		20	0.6	20	0.6	20	-	-	-	40	-
S-23	0-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3-6	31	ND	1.7	ND	ND	ND	ND	ND	ND	ND
	6-10	5.8	ND	0.3	ND	ND	ND	ND	ND	ND	ND
S-24	0-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6-10	22	ND	0.32	ND	ND	ND	ND	ND	0.091	ND
S-26	0-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-27	0-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-28	0-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-29 (background)	0-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATA QUALIFIERS

J - Indicates an estimated value

B - Analyte found in blank as well as sample

E - Concentrations that exceed the calibration range of the instrument

ND - Compound analyzed for but not detected

NA - Sample not analyzed for VOCs

† - Analyte detected at medium level protocol; all other analytes detected at low level protocol

* - Analyte detected in field samples attributed to probable laboratory contamination

Source: Analyses for boreholes S-9 to S-17 by ARDL, Inc., 1990.

Analyses for boreholes S-18 to S-29 by NET Pacific, Inc., 1991

**TABLE 7: TENTATIVELY IDENTIFIED VOLATILE ORGANIC COMPOUNDS
FORMER NIKE BATTERY 61 SI FOLLOWUP STUDY**

BOREHOLE NUMBER	DEPTH (feet)	COMPOUNDS	CONCENTRATION (mg/kg)
S-9	4.0-4.6	Benzene, ethyl-methyl-	0.36J
	6.0-6.6	Benzene, ethyl-methyl-	1.48
S-10	1.0-1.25	Cyclohexane, dimethyl-	0.011J
	1.0-1.25	Hexane, 3-methyl-	0.012J
	5.0-5.5	Methane, trichlorofluoro-	0.067
S-11	4.0-5.0	Benzene, 1-ethyl-2-methyl-	0.11
	5.5-7.0	Heptane, 2-methyl	0.023J
	5.5-7.0	Methane, trichlorofluoro-	0.031J
	5.5-7.0	Cyclohexane, dimethyl-	0.011J
	5.5-7.0	Cyclohexane, trimethyl-	0.018J
S-12	2.25-3.0	Methane, trichlorofluoro-	0.008
	4.25-5.0	Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	0.025
	5.5-7.0	Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	0.051
S-13	5.0-5.75	Benzene, trimethyl-	6.8J
S-14	5.0-5.75	Pentalene, octahydro-	0.006
	7.0-7.6	Pentalene, octahydro-	0.009
	7.0-7.6	Cyclohexane, ethyl-methyl-	0.18
S-15	5.0-5.6	Pentalene, octahydro-	0.067
	8.0-8.6	Benzene, ethyl-methyl-	83J
	8.0-8.6	Methane, trichlorofluoro-	3.3J
S-17	2.5-3.0	Methane, trichlorofluoro-	1.69
	2.5-3.0	Methane, dichlorodifluoro-	1.3
	4.5-5.0	Methane, dichlorodifluoro-	0.11
	4.5-5.0	Methane, trichlorodifluoro-	
	4.5-5.0	3-methylhexane	0.11
	8.5-9.0	Methane, trichlorofluoro-	0.03

J - Data qualifier indicating an estimated value

Source: ARDL, Inc., 1990

TABLE 8:

**FUEL HYDROCARBONS AND
TOTAL PETROLEUM HYDROCARBONS RESULTS
FORMER NIKE BATTERY 61 SI FOLLOWUP STUDY**

BOREHOLE NUMBER	DEPTH (feet)	FUEL HYDROCARBONS					Total Petroleum Hydrocarbons (mg/Kg)
		Number 1 (Diesel Oil) (mg/Kg)	Class 2 (mg/Kg)	Gasoline (mg/Kg)	Jet Kerosene (mg/Kg)	Jet Fuel (mg/Kg)	
Method A cleanup level		200	200	100	200	200	200
S-9	2.0-2.6	ND	87	ND	ND	ND	NA
	4.0-4.6	NA	NA	NA	NA	NA	NA
	6.0-6.6	NA	NA	NA	NA	NA	NA
	8.0-8.6	NA	NA	NA	NA	NA	NA
	10.0-10.6	NA	NA	NA	NA	NA	NA
S-10	1.0-1.25	ND	ND	ND	ND	ND	ND
	3.0-3.6	ND	ND	ND	ND	ND	NA
	5.0-5.5	ND	ND	ND	ND	ND	NA
	8.0-8.5	ND	ND	ND	ND	ND	NA
	9.5-10.0	ND	ND	ND	ND	ND	NA
S-11	4.0-5.0	ND	ND	ND	ND	ND	NA
	5.5-7.0	ND	ND	ND	ND	ND	ND
	9.0-10.0	ND	10.7	ND	ND	ND	10
S-12	2.25-3.0	ND	ND	ND	ND	ND	NA
	4.25-5.0	ND	ND	ND	ND	ND	NA
	5.5-7.0	ND	ND	ND	ND	ND	ND
	8.5-10.0	ND	ND	ND	ND	ND	ND
S-13	1.0-1.75	ND	ND	ND	ND	ND	NA
	3.0-3.75	ND	ND	ND	ND	ND	NA
	5.0-5.75	ND	ND	ND	ND	ND	NA
	8.0-8.6	ND	ND	ND	ND	ND	NA
	10.0-10.6	ND	ND	ND	ND	ND	NA
S-14	1.0-1.5	ND	ND	ND	ND	ND	NA
	3.0-3.75	ND	ND	ND	ND	ND	NA
	5.0-5.75	ND	13	ND	ND	ND	NA
	7.0-7.6	ND	360	ND	ND	ND	NA
	9.0-9.6	ND	19	ND	ND	ND	NA
S-15	1.0-1.5	ND	ND	ND	ND	ND	NA
	3.0-3.5	NA	NA	NA	NA	NA	NA
	5.0-5.6	ND	ND	ND	ND	ND	NA
	8.0-8.6	ND	ND	ND	ND	ND	NA
	10.0-10.6	ND	ND	ND	ND	ND	NA
S-17	2.5-3.0	ND	ND	ND	ND	ND	NA
	4.5-5.0	ND	ND	ND	ND	ND	NA
	5.5-6.0	ND	17.4	ND	ND	ND	10
	8.5-9.0	ND	ND	ND	ND	ND	NA
	10.0-10.6	ND	ND	ND	ND	ND	NA
S-16 (background)	4.0-4.5	ND	ND	ND	ND	ND	NA

TABLE 8 (continued): FUEL HYDROCARBONS AND TOTAL PETROLEUM HYDROCARBONS RESULTS FORMER NIKE BATTERY 61 SI FOLLOWUP STUDY

BOREHOLE NUMBER	DEPTH (feet)	FUEL HYDROCARBONS					Total Petroleum Hydrocarbons (mg/Kg)
		Bunker C (Diesel #) (mg/Kg)	Diesel #2 (mg/Kg)	Gasoline (mg/Kg)	Kerosene (mg/Kg)	Jet Fuel (mg/Kg)	
Method A cleanup level		200	200	100	200	200	200
S-18	0-3	ND	ND	ND	ND	ND	NA
	3-6	ND	ND	ND	ND	ND	NA
	6-10	ND	ND	ND	ND	ND	NA
S-19	0-3	22*	ND	ND	ND	ND	NA
	3-6	22	ND	ND	ND	ND	NA
	6-10	ND	ND	ND	ND	ND	NA
S-20	0-3	ND	ND	ND	ND	ND	NA
	3-6	ND	ND	ND	ND	ND	NA
	6-10	ND	ND	ND	ND	ND	NA
S-21	0-3	ND	ND	ND	ND	ND	NA
	3-6	ND	ND	ND	ND	ND	NA
	6-10	ND	ND	ND	ND	ND	NA
S-22	0-3	ND	ND	ND	ND	ND	NA
	3-6	ND	ND	ND	ND	ND	NA
	6-10	ND	ND	ND	ND	ND	NA
S-23	0-3	100*	ND	ND	ND	ND	NA
	3-6	1900*	685	3600**	ND	ND	NA
	6-10	400*	140	400**	ND	ND	NA
S-24	0-3	ND	ND	ND	ND	ND	NA
	3-6	ND	ND	ND	ND	ND	NA
	6-10	780*	280	880**	ND	ND	NA
S-26	0-3	ND	ND	ND	ND	ND	NA
	3-6	ND	ND	ND	ND	ND	NA
	6-10	ND	ND	ND	ND	ND	NA
S-27	0-3	ND	ND	ND	ND	ND	NA
	3-6	ND	ND	ND	ND	ND	NA
	6-10	ND	ND	ND	ND	ND	NA
S-28	0-3	35*	ND	ND	ND	ND	NA
	3-6	23*	ND	ND	ND	ND	NA
	6-10	ND	ND	ND	ND	ND	NA
S-29 (background)	0-3	ND	ND	ND	ND	ND	NA
	3-6	ND	ND	ND	ND	ND	NA
	6-10	ND	ND	ND	ND	ND	NA

NA—Sample not analyzed

ND—None detected

*Petroleum hydrocarbons quantified as Bunker oil appear to be motor oil

**Petroleum hydrocarbons quantified as gasoline appear to be stoddard solvent

† Reported value is the average of duplicate analyses

Source: Analyses for boreholes S-9 to S-17 by ARDL, Inc., 1990, and CENPD-PE-GT-L, 1990.

Analyses for boreholes S-18 to S-29 by NET Pacific, Inc., 1991

**TABLE 9: TOTAL LEAD RESULTS
FORMER NIKE BATTERY 61 SI FOLLOWUP STUDY**

BOREHOLE NUMBER	DEPTH (feet)	TOTAL LEAD (mg/Kg)
Method A cleanup level		250.0
S-9	2.0-2.6	9.1
	4.0-4.6	3.7
	6.0-6.6	2.5
	8.0-8.6	NA
	10.0-10.6	NA
S-10	1.0-1.25	3.9
	3.0-3.6	2.7
	5.0-5.5	2.3
	8.0-8.5	2.3
	9.5-10.0	NA
S-11	4.0-5.0	6.4
	5.5-7.0	5.5
	9.0-10	3.7
S-12	2.25-3.0	5.0
	4.25-5.0	1.3
	5.5-7.0	3.7
	8.5-10.0	3.0
S-13	1.0-1.75	NA
	3.0-3.75	2.2
	5.0-5.75	NA
	8.0-8.6	NA
	10.0-10.6	2.7
S-14	1.0-1.5	4.0
	3.0-3.75	2.0
	5.0-5.75	2.1
	7.0-7.6	2.6
	9.0-9.6	2.8
S-15	1.0-1.5	NA
	3.0-3.5	NA
	5.0-5.6	NA
	8.0-8.6	1.9
	10.0-10.6	2.3
S-17 (extra boring)	2.5-3.0	5.6
	4.5-5.0	12.0
	5.5-6.0	4.6
	8.5-9.0	NA
	10.0-10.6	1.5
S-16 (background)	4.0-4.5	NA

BOREHOLE NUMBER	DEPTH (feet)	TOTAL LEAD (mg/Kg)
Method A cleanup level		250.0
S-18	0-3	2.4
	3-6	2.9
	6-10	3.0
S-19	0-3	4.2
	3-6	5.6
	6-10	2.2
S-20	0-3	4.3
	3-6	4.5
	6-10	2.9
S-21	0-3	2.5
	3-6	3.0†
	6-10	2.7
S-22	0-3	1.9
	3-6	1.8
	6-10	2.6
S-23	0-3	24.0
	3-6	4.2†
	6-10	3.0
S-24	0-3	1.9
	3-6	2.0†
	6-10	2.6
S-26	0-3	1.9
	3-6	1.8
	6-10	1.7
S-27	0-3	1.6
	3-6	1.9
	6-10	2.4
S-28	0-3	2.2
	3-6	2.6
	6-10	2.2
S-29 (background)	0-3	2.3
	3-6	1.8†
	6-10	1.9

NA - Sample not analyzed for Total Lead

Source: Data for S-9 to S-17 by ARDL, Inc., 1990;

† Reported value is the average of duplicate analyses

Data for S-18 to S-29 by NET Pacific, Inc., 1991

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APPENDIX C

KING COUNTY AND ISLAND POLICIES

(May 14, 1993 rev.)

VASHON COMMUNITY PLAN POLICIES

- V-1 ALL OF VASHON IS RECOGNIZED IN THIS PLAN AS A RURAL AREA.
- V-2 MOST OF VASHON SHALL REMAIN AT LOW RESIDENTIAL DENSITIES IN ORDER TO MAINTAIN THE ISLAND'S CURRENT RURAL LEVEL OF DEVELOPMENT. TO ACCOMMODATE FUTURE GROWTH, SOME OF THE ISLAND'S EXISTING TOWN CENTERS AND NEIGHBORHOODS ARE PLANNED FOR ADDITIONAL RESIDENTIAL GROWTH. THE TOWN OF VASHON IS PLANNED FOR THE MOST INTENSIVE RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT.
- V-3 ALL LAND USE POLICIES AND REGULATIONS FOR VASHON SHALL REFLECT THE OVERRIDING IMPORTANCE OF THE FACT THAT THE WHOLE ISLAND IS THE RECHARGE AREA FOR A SOLE-SOURCE AQUIFER. ALL OF VASHON ISLAND SHALL THEREFORE BE CONSIDERED A GROUND WATER RECHARGE AREA. WITHIN THE ISLAND, BASED LARGELY ON SOIL TYPES, THERE ARE AREAS OF RELATIVELY HIGH, MEDIUM, AND LOW RECHARGE POTENTIAL. AREAS OF HIGHER RECHARGE POTENTIAL SHOULD RECEIVE EXTRA PROTECTION.
- V-4 A VARIETY OF RESIDENTIAL LOT SIZES AND HOUSING TYPES SHOULD BE ENCOURAGED ON THE ISLAND.
- V-5 MOST OF THE ISLAND'S UPPER PLATEAU AREAS ARE PLANNED FOR LOW RESIDENTIAL DENSITIES.
- V-6 (There is no policy V-6)
- V-7 (There is no policy V-7)
- V-8 SOME OF THE ISLAND'S EXISTING TOWNS AND NEIGHBORHOODS ARE PLANNED FOR ADDITIONAL RESIDENTIAL DEVELOPMENT TO ACCOMMODATE FUTURE GROWTH AND TO CONTINUE THE DEVELOPMENT OF THESE AREAS AS DISTINCT COMMUNITIES. NEW RESIDENTIAL DEVELOPMENT SHOULD BE COMPATIBLE WITH THE EXISTING DENSITY AND CHARACTER OF THESE COMMUNITIES, AND PRESERVE THE QUALITY AND QUANTITY OF ISLAND GROUND WATER.
- V-9 BURTON, DOCKTON, AND VASHON HEIGHTS ARE PLANNED FOR SINGLE FAMILY RESIDENTIAL DEVELOPMENT AT DENSITIES WHICH DO NOT REQUIRE SEWERS (LESS THAN THREE HOUSES PER ACRE).
- V-10 IN ORDER TO FULLY UTILIZE EXISTING SERVICES INCLUDING SEWERS, CLASS I WATER, PUBLIC TRANSPORTATION AND SHOPPING, THE TOWN OF VASHON IS PLANNED FOR INTENSIVE RESIDENTIAL DEVELOPMENT. THIS WOULD OCCUR IMMEDIATELY ADJACENT TO THE BUSINESS CENTER AND EXTEND TO THE LIMITS OF THE SEWER LOCAL SERVICE AREA.
- V-11 IN ADDITION TO AREAS ZONED FOR MULTIFAMILY DEVELOPMENT PRIOR TO THE ADOPTION OF THIS PLAN, NEW AREAS OF MULTIFAMILY DEVELOPMENT ARE PLANNED WITHIN THE SEWER LOCAL SERVICE AREA (LSA) AT THE

TOWN OF VASHON. WHERE PROPERTIES ARE AT LEAST 660 FEET FROM VASHON ISLAND HIGHWAY AND ARE ADJACENT TO AREAS PLANNED FOR MANUFACTURING PURPOSES, MULTIFAMILY DEVELOPMENT SHOULD OCCUR AT DENSITIES OF 18 UNITS PER ACRE. ALL OTHER AREAS ARE PLANNED FOR MULTIFAMILY DEVELOPMENT AT DENSITIES UP TO 12 DWELLING UNITS PER ACRE.

- V-12 MULTIFAMILY REZONES FOR ELDERLY HOUSING PROJECTS AT DENSITIES UP TO 24 DWELLING UNITS PER ACRE SHOULD BE ALLOWED AT THE TOWN OF VASHON PROVIDED THEY MEET OTHER APPLICABLE COMMUNITY PLAN AND COUNTY POLICIES. THESE REZONES SHOULD BE CONDITIONED UPON HUD (U.S. HOUSING AND URBAN DEVELOPMENT), FARMER'S HOME ADMINISTRATION OR OTHER GOVERNMENT AGENCY APPROVAL OR THEY SHOULD BE FOR GOVERNMENT SPONSORED PROJECTS.
- V-13 MULTIFAMILY REZONES FOR LOW/MODERATE INCOME FAMILY HOUSING PROJECTS AT DENSITIES UP TO 18 DWELLING UNITS PER ACRE SHOULD BE ALLOWED AT THE TOWN OF VASHON PROVIDED THEY MEET OTHER APPLICABLE COMMUNITY PLAN AND COUNTY POLICIES. THESE REZONES SHOULD BE CONDITIONED UPON HUD, FARMER'S HOME ADMINISTRATION OR OTHER GOVERNMENT AGENCY APPROVAL OR THEY SHOULD BE FOR GOVERNMENT SPONSORED PROJECTS.
- V-14 SINGLE FAMILY REZONES FOR MODERATE INCOME HOUSING PROJECTS AT DENSITIES UP TO 9 DWELLING UNITS PER ACRE SHOULD BE ALLOWED AT THE TOWN OF VASHON PROVIDED THEY MEET OTHER APPLICABLE COMMUNITY PLAN AND COUNTY POLICIES. THESE REZONES SHOULD BE CONDITIONED UPON HUD, FARMER'S HOME ADMINISTRATION, FHA, VETERAN'S HOME ADMINISTRATION OR OTHER GOVERNMENT AGENCY APPROVAL OR THEY SHOULD BE FOR GOVERNMENT SPONSORED PROJECTS.
- V-15 (There is no policy V-15)
- V-16 INTENSIVE COMMERCIAL AND INDUSTRIAL LAND USES SHOULD BE CONCENTRATED AT THE TOWN OF VASHON AND NEARBY AREAS WHERE WATER, WASTEWATER DISPOSAL AND TRANSIT SERVICES ARE AVAILABLE AND ADEQUATE.
- V-17 SMALL COMMERCIAL CENTERS ARE RECOGNIZED AS FOCAL POINTS FOR VASHON'S COMMUNITIES AND NEIGHBORHOODS. THESE CENTERS ARE TO BE MAINTAINED AT THEIR CURRENT SIZE EXCEPT THAT A LIMITED EXPANSION OF THE BURTON BUSINESS AREA MAY OCCUR DURING THE LIFE OF THE COMMUNITY PLAN.
- V-18 THE TOWN OF VASHON SHOULD CONTINUE TO BE THE MAJOR COMMERCIAL BUSINESS CENTER ON VASHON ISLAND.
- V-19 MIXED BUSINESS AND RESIDENTIAL USES ARE PLANNED IN THE TOWN OF VASHON SURROUNDING THE EXISTING BUSINESS CENTER.
- V-20 NEIGHBORHOOD BUSINESS AREAS ON VASHON ISLAND SHOULD ALLOW FOR A MIX OF RETAIL AND RESIDENTIAL USES.
- V-21 A LIMITED NEIGHBORHOOD BUSINESS AREA SHOULD BE ESTABLISHED AT VALLEY CENTER.

- V-22 A SMALL EXPANSION OF THE BUSINESS DISTRICT AT BURTON SHOULD BE ALLOWED DURING THE SIX TO TEN YEAR LIFE OF THE PLAN, SUBJECT TO CRITERIA ESTABLISHED IN THIS PLAN.
- V-23 EXISTING NEIGHBORHOOD GROCERY STORES AND SMALL NODES OF BUSINESS ARE RECOGNIZED AS A VIABLE PART OF THE IDENTITY OF NEIGHBORHOODS ON VASHON ISLAND. THESE AREAS INCLUDE: DOCKTON, TAHLEQUAH, PORTAGE, HEIGHTS DOCK, MAURY ISLAND SERVICE STATION, VASHON CENTER, AND JACK'S CORNER. THE EXISTING SMALL-SCALE AND NEIGHBORHOOD CHARACTER OF BUSINESS USES AT THESE LOCATIONS SHOULD BE MAINTAINED.
- V-24 FUTURE INDUSTRIAL DEVELOPMENT ON VASHON ISLAND SHOULD BE CLUSTERED SOUTH AND WEST OF THE TOWN OF VASHON AND NEAR EXISTING MANUFACTURING USES.
- V-25 INDUSTRIAL DEVELOPMENT SHOULD HAVE ADEQUATE ACCESS TO THE VASHON HIGHWAY, BUT IT SHOULD NOT OCCUR IN A STRIP ALONG THE HIGHWAY.
- V-26 FUTURE INDUSTRY SHOULD BE DEVELOPED IN A MANUFACTURING PARK SETTING AND SHOULD NOT EXCEED LIGHT INDUSTRIAL USES.
- V-27 HOME OCCUPATIONS SHOULD CONTINUE TO BE ALLOWED IN RESIDENTIAL AREAS ON VASHON ISLAND.
- V-28 COTTAGE INDUSTRIES SHOULD BE ALLOWED SUBJECT TO STRICT CONTROLS AND LIMITED TO RESIDENTIAL ZONES WITH A BASE DENSITY OF ONE ACRE OR LARGER.
- V-29 SAND AND GRAVEL EXTRACTION OPERATIONS SHOULD CONTINUE TO OPERATE UNDER APPROPRIATE ZONING. QUARRYING AND MINING ZONED PROPERTY IS PLANNED FOR RESIDENTIAL USE WHEN IT IS NO LONGER NEEDED FOR SAND AND GRAVEL EXTRACTION.
- V-30 AREAS WHERE NATURAL FEATURES AND RESOURCES ARE FRAGILE OR HAZARDOUS TO DEVELOPMENT ARE GIVEN SPECIAL RECOGNITION AS DEVELOPMENT LIMITATION AREAS. THE FOLLOWING FEATURES ARE CONSIDERED COLLECTIVELY AS DEVELOPMENT LIMITATION AREAS:
- A. EROSION HAZARD AREAS
 - B. CLASS III LANDSLIDE HAZARD AREAS
 - C. CLASS III EARTHQUAKE HAZARD AREAS
 - D. WETLANDS
 - E. FISH BEARING WATERS
 - F. FLOOD HAZARD AREAS
 - G. HIGH GROUND WATER RECHARGE AREAS
 - H. WILDLIFE HABITAT AREAS
- V-31 DEVELOPMENT SHOULD BE MINIMIZED AND CAREFULLY MANAGED IN DEVELOPMENT LIMITATION AREAS. THE MOST FRAGILE, HAZARDOUS OR VALUABLE AREAS, INCLUDING HIGH RECHARGE AREAS, CLASS III LANDSLIDE HAZARD AREAS AND WETLANDS, SHOULD REMAIN LARGELY UNDEVELOPED THROUGH APPLICATION OF A LOW DENSITY DESIGNATION.

- V-32 AS A METHOD OF EROSION CONTROL, LANDSLIDE PREVENTION AND OF PROTECTING SURFACE WATER QUALITY, THE REMOVAL OF NATIVE VEGETATION SHOULD BE LIMITED IN EROSION HAZARD AREAS, CLASS III LANDSLIDE HAZARD AREAS, WETLANDS AND ALONG FISH BEARING WATERS.
- V-33 PROTECT AND PRESERVE THE ISLAND'S WILDLIFE HABITATS.
- V-34 WHERE FISH OR WILDLIFE HABITAT AREAS OCCUR WITHIN A PROPOSED SHORT PLAT, SUBDIVISION OR PLANNED UNIT DEVELOPMENT, THE PROPOSAL SHOULD BE REVIEWED TO ENSURE THAT THE INGREDIENTS NECESSARY FOR THE HABITAT'S PRESERVATION ARE NOT DESTROYED. SPECIAL CONDITIONS SHOULD BE ATTACHED TO PROTECT THE HABITAT IF NECESSARY.
- V-35 FISH AND WILDLIFE HABITATS IDENTIFIED ON VASHON ISLAND AND CONSIDERED TO BE ESPECIALLY UNIQUE AND VALUABLE OR OF POTENTIAL COUNTY-WIDE SIGNIFICANCE SHOULD RECEIVE SPECIAL ATTENTION. WHERE THESE OCCUR WITHIN A PROPOSED PLAT, SUBDIVISION OR PLANNED UNIT DEVELOPMENT, BUILDING AND LAND DEVELOPMENT (BALD) MAY REQUIRE THE DEVELOPER TO SUBMIT A SPECIAL REPORT TO ASSESS MORE CLOSELY THE IMPACTS OF THE PROPOSAL ON THE HABITAT AND TO RECOMMEND SPECIFIC MEASURES TO PROTECT THEM.
- V-36 FISH AND WILDLIFE HABITATS IDENTIFIED IN THE PLAN SHOULD BE CONSIDERED WHEN FUNDS FOR PARKS OR OPEN SPACE ACQUISITION ARE AVAILABLE.
- V-37 COMMERCIAL AND SMALL SCALE AGRICULTURE SHOULD BE PROMOTED BY COMPATIBLE LAND USE DESIGNATIONS.
- V-38 FUTURE REZONES TO A (AGRICULTURAL) ZONING SHOULD BE INITIATED BY KING COUNTY AT THE TIME DEVELOPMENT RIGHTS TO FARMLANDS ON VASHON ARE PURCHASED THROUGH KING COUNTY'S AGRICULTURAL BOND PROGRAM.
- V-39 TO FURTHER THE ISLAND'S RURAL CHARACTER AND ENCOURAGE AGRICULTURE, FUTURE INDIVIDUAL REZONE REQUESTS FOR A (AGRICULTURAL) ZONING SHOULD BE GRANTED IF CONSISTENT WITH OTHER POLICIES OF THIS PLAN OR REQUIREMENTS OF THE A ZONE. SUCH REZONE REQUESTS SHOULD BE ALLOWED IN AREAS PLANNED FOR LOW RESIDENTIAL DENSITIES (AR-10, AR-5, AR-2.5 ZONES) AND IN DEVELOPMENT LIMITATION AREAS.
- V-40 FOOD PROCESSING OPERATIONS ARE IMPORTANT TO AGRICULTURAL USES ON VASHON AND ARE COMPATIBLE WITH THE ISLAND'S RURAL ENVIRONMENT. FOOD PROCESSING PLANTS SHALL CONTINUE TO BE PERMITTED ON VASHON BY ALLOWING APPROPRIATE ZONING.
- V-41 THE PRESERVATION, RESTORATION, AND ADAPTIVE USE OF HISTORIC SITES ON VASHON ISLAND SHOULD BE ENCOURAGED IN ORDER TO MAINTAIN THE CHARACTER OF EXISTING COMMUNITIES ON THE ISLAND AND TO PRESERVE TANGIBLE REMINDERS OF THE ISLAND'S HISTORY.
- V-42 HISTORIC SITES WHICH MEET NATIONAL, STATE OR COUNTY STANDARDS SHOULD BE GIVEN PARTIAL PROTECTION BY MAKING THE LAND USE DESIGNATION COMPATIBLE WITH THE SITE'S HISTORIC CHARACTER.

- V-43 AS A HIGH PRIORITY, THE PLAN SUPPORTS THE NOMINATION OF TWO HISTORIC DISTRICTS TO THE NATIONAL AND STATE REGISTERS OF HISTORIC PLACES: DOCKTON AND BURTON. REDEVELOPMENT IN THESE DISTRICTS SHOULD BE COMPATIBLE WITH THE HISTORIC CHARACTER OF THESE COMMUNITIES.
- V-44 ON-SITE WASTEWATER DISPOSAL SYSTEMS ARE CONSIDERED AS PERMANENT SOLUTIONS TO WASTEWATER DISPOSAL OUTSIDE SEWER LOCAL SERVICE AREAS.
- V-45 NO FUTURE ZONING CLASSIFICATION OUTSIDE A SEWER LOCAL SERVICE AREA SHALL ALLOW RESIDENTIAL LOT SIZES OF LESS THAN 15,000 SQUARE FEET OR RESIDENTIAL DENSITIES AT THREE HOUSING UNITS PER ACRE OR MORE.
- V-46 COMMUNITY (ALTERNATIVE) SEWAGE SYSTEMS SHOULD BE ALLOWED OUTSIDE THE SEWER LOCAL SERVICE AREA ESTABLISHED IN THIS PLAN. ALTERNATIVE SYSTEMS SHOULD BE CONSIDERED PRIOR TO TRADITIONAL PUBLIC SEWERS WHERE NECESSARY TO ALLEVIATE EXISTING OR POTENTIAL HEALTH HAZARDS. TECHNICAL AND ECONOMIC FEASIBILITY SHOULD BE EVALUATED BEFORE DECIDING TO IMPLEMENT AN ALTERNATIVE SEWAGE SYSTEM.
- V-47 OUTSIDE SEWER LOCAL SERVICE AREAS ON VASHON, THE ALLOCATION OF FEDERAL, STATE, AND LOCAL GOVERNMENT GRANTS THAT ARE PROVIDED TO ACHIEVE FEDERAL AND STATE WATER QUALITY STANDARDS SHOULD GO TOWARD DEVELOPING ON-SITE WASTEWATER DISPOSAL TECHNOLOGIES.
- V-48 IN REVIEWING BOUNDARY ADJUSTMENTS AND OTHER LSA AMENDMENTS, WHERE AN EXISTING OR POTENTIAL HEALTH HAZARD DEVELOPS OUTSIDE A SEWER LOCAL SERVICE AREA, AND BEFORE SEWER SERVICE IS PROVIDED, THE APPLICANT MUST DEMONSTRATE THAT OTHER ALTERNATIVES FOR WASTEWATER DISPOSAL ARE NOT FINANCIALLY OR TECHNICALLY FEASIBLE. SUCH DEMONSTRATION SHALL INCLUDE A COMPARISON OF ALTERNATIVES AS TO THEIR EFFECTIVENESS, COST, AND IMPACTS ON THE COMMUNITY PLAN.
- V-49 A DECISION TO GRANT A BOUNDARY ADJUSTMENT TO THE LSA SHOULD NOT BE MADE SOLELY BECAUSE THE MINIMUM LOT SIZE OF A ZONE CLASSIFICATION IS TOO SMALL TO MEET ON-SITE WASTEWATER DISPOSAL STANDARDS. SPECIFICALLY, LARGER LOT SIZES THAN THE MINIMUM REQUIRED BY ZONING SHOULD BE CONSIDERED AS AN ALTERNATIVE TO A BOUNDARY ADJUSTMENT.
- V-50 WHEN CONSIDERING FUTURE BOUNDARY ADJUSTMENTS TO THE LSA ON VASHON, DEMONSTRATION SHALL BE REQUIRED THAT SEWER SERVICE WOULD NOT BE MADE AVAILABLE TO, OR RESULT IN, ADVERSE IMPACTS TO AGRICULTURAL LANDS, FLOODPLAINS, WETLANDS OR OTHER SENSITIVE AREAS. IN THE VASHON PLAN, SENSITIVE AREAS ARE DEFINED TO INCLUDE HIGH GROUND WATER RECHARGE AREAS AND WILDLIFE HABITAT AREAS.
- V-51 THE FOLLOWING CONDITIONS MUST BE EVALUATED IN DETERMINING THE ADEQUACY OF WATER SERVICE FOR PROPOSED BOUNDARY ADJUSTMENTS TO THE LSA :

- A. A SEWER LOCAL SERVICE AREA BOUNDARY ADJUSTMENT SHOULD NOT BE ALLOWED IF THE RESULTING DEVELOPMENT WOULD ADVERSELY IMPACT DOMESTIC WATER SUPPLIES WHICH SERVE EXISTING OR PREVIOUSLY APPROVED USES.
- B. NO BOUNDARY ADJUSTMENT SHALL BE ALLOWED UNLESS CLASS ONE WATER SERVICE IS AVAILABLE AND IS TECHNICALLY ADEQUATE TO SERVE THE PROPOSED DEVELOPMENT.
- V-52 ISLAND WATER RESOURCES SHOULD CONTINUE TO BE THE SOLE WATER-SUPPLY SOURCE IN THE FUTURE. THE PLAN DISCOURAGES IMPORTING WATER FOR DOMESTIC USES FROM OFF THE ISLAND.
- V-53 LAND USES AND DEVELOPMENT DENSITIES SHOULD BE PLANNED SO THAT DEMANDS ON THE ISLAND'S GROUND WATER RESOURCES DO NOT EXCEED ITS CAPACITY TO PROVIDE ADEQUATE SUPPLIES, WITHOUT DETERIORATION OF QUALITY. IN ORDER TO ACHIEVE THIS, ONGOING RESEARCH AND MONITORING AS RECOMMENDED IN THE VASHON/MAURY ISLAND WATER RESOURCES STUDY SHOULD BE CONDUCTED.
- V-54 PROTECTION OF THE GROUND WATER AQUIFER IS OF PRIMARY IMPORTANCE TO THE ISLAND. FURTHER WATER QUALITY DEGRADATION WHICH WOULD INTERFERE WITH OR BECOME INJURIOUS TO EXISTING OR PLANNED USES SHOULD NOT BE ALLOWED.
- V-55 USE EXISTING DOMESTIC WATER SUPPLIES AND WATER SYSTEMS EFFICIENTLY.
- V-56 ALL OF VASHON ISLAND IS DESIGNATED A WATER SERVICE AREA.
- V-57 TO PROTECT DOMESTIC WATER RESOURCES, HIGH GROUND WATER RECHARGE AREAS AND WATERSHEDS SHOULD BE MAINTAINED IN RESIDENTIAL OR SIMILARLY NON-INTENSIVE USES AT LOW DENSITIES.
- V-58 INTENSIVE DEVELOPMENT, INCLUDING MULTIFAMILY HOUSING, HIGH DENSITY SINGLE FAMILY HOUSING, COMMERCIAL AND INDUSTRIAL DEVELOPMENT SHOULD BE SERVED BY A PUBLIC WATER DISTRICT OR BY EXISTING CLASS 1 WATER SYSTEMS.
- V-59 AS AN ADDITIONAL REQUIREMENT FOR THE COMPREHENSIVE PLAN OF PUBLIC WATER SYSTEMS ON VASHON ISLAND, THE COUNTY SHALL ASK THAT INFORMATION BE INCLUDED ASSESSING THE ABILITY OF EXISTING AND POTENTIAL WATER SOURCES TO MEET ANTICIPATED POPULATION GROWTH. PLANNED EXPANSION OF THE WATER SYSTEM SHOULD BE PROHIBITED IF THE ANALYSIS REVEALS A RISK TO THE ADEQUACY OF SERVICE, INCLUDING QUALITY OF WATER BEING PROVIDED TO CURRENT USERS.
- V-60 KING COUNTY SHOULD GIVE SPECIAL ATTENTION WHEN REVIEWING BUILDING PERMITS, SHORT PLATS, SUBDIVISIONS, PLANNED UNIT DEVELOPMENTS AND REZONES TO ENSURE THAT EXTENSION OF WATER SERVICE TO NEW CUSTOMERS WILL NOT REDUCE SERVICE TO EXISTING CUSTOMERS BELOW MINIMUM STATE AND COUNTY STANDARDS.
- V-61 SPECIAL CONSIDERATION SHOULD BE GIVEN TO THE IMPACTS OF NEW DEVELOPMENT ON THE ISLAND'S GROUND WATER RESOURCES. THIS SHOULD

- APPLY TO MAJOR DEVELOPMENTS, DEVELOPMENT IN HIGH GROUND WATER RECHARGE AREAS OR DEVELOPMENT NEAR PUBLIC WATER SUPPLIES.
- V-62 THE SEATTLE-KING COUNTY HEALTH DEPARTMENT SHOULD GIVE SPECIAL ATTENTION WHEN ESTABLISHING SETBACKS FOR SEPTIC SYSTEMS AND OTHER POTENTIAL POLLUTION SOURCES TO PROTECT DOMESTIC WATER SUPPLIES.
- V-63 PERMIT DEVELOPMENT OF NEW PUBLIC WATER SOURCES ONLY IF IT CAN BE DEMONSTRATED THAT DEVELOPMENT OF THESE SOURCES WILL NOT ADVERSELY AFFECT EXISTING WATER SOURCES.
- V-64 FUTURE ADDITIONS TO OR CHANGES OF EXISTING TRANSPORTATION FACILITIES SHOULD PROVIDE EFFICIENT, ENVIRONMENTALLY SOUND TRANSPORTATION WHICH MAKES NEW AUTOMOBILE FACILITIES (ROADS, FERRIES, PARKING LOTS, ETC.) LESS NECESSARY.
- V-65 PUBLIC TRANSIT SHOULD BE ENCOURAGED IN EVERY POSSIBLE WAY.
- V-66 TRANSIT SERVICE SHOULD BE PROVIDED AMONG THE VARIOUS COMMUNITIES ON VASHON ISLAND.
- V-67 PARK-AND-RIDE LOT DEVELOPMENT BOTH ON THE ISLAND AND AT OR NEAR THE FERRY TERMINALS WHICH SERVE VASHON ISLAND (FAUNTLEROY, SOUTHWORTH, PT. DEFIANCE) SHOULD BE ENCOURAGED.
- V-68 DIRECT BUS SERVICE SHOULD BE PROVIDED TO MAJOR EMPLOYMENT CENTERS ON THE MAINLAND.
- V-69 PROVIDE A SAFE AND EFFICIENT SYSTEM OF COMMUTER AND RECREATIONAL ROUTES FOR BICYCLISTS, PEDESTRIANS, AND EQUESTRIANS.
- V-70 IDENTIFY AND MAINTAIN AN ISLAND-WIDE SYSTEM OF HIKING AND EQUESTRIAN TRAILS.
- V-71 STREET AND HIGHWAY IMPROVEMENTS SHOULD BE LOW-COST SAFETY AND MAINTENANCE PROJECTS WHEREVER POSSIBLE.
- V-72 TO RETAIN THE RURAL ENVIRONMENT, FOUR-LANE ROADS SHOULD NOT BE BUILT ON VASHON ISLAND.
- V-73 NEW ROADWAYS SHOULD NOT BE BUILT UNTIL OTHER VIABLE ALTERNATIVES HAVE BEEN IMPLEMENTED.
- V-74 HIGH-SPEED, PASSENGER-ONLY FERRY SERVICE TO VASHON ISLAND SHOULD NOT BE IMPLEMENTED.
- V-75 GREATER INCENTIVES SHOULD BE PROVIDED FOR PASSENGER TRAVEL VERSUS AUTO TRAFFIC ON THE FERRIES.
- V-76 FERRY SERVICE MUST BE RELIABLE SO THAT THE USER CAN MAKE CONNECTIONS WITH OTHER MODES OF TRANSPORTATION.
- V-77 FERRY SERVICE MUST BE MAINTAINED AT A LEVEL OF SERVICE WHICH MEETS THE REASONABLE NEEDS OF ISLAND RESIDENTS.

- V-78 THE IMPACT OF EXPANSION OF FERRY SERVICE, PARTICULARLY THE IMPACTS ON ROADS, NEIGHBORHOODS, ETC., MUST BE CONSIDERED CAREFULLY.
- V-79 TRAVEL TIME AND ECONOMIC INCENTIVES SHOULD BE PROVIDED TO CARPOOLS AND VANPOOLS.
- V-80 FURTHER DEVELOPMENT OF AIRPORT FACILITIES SHOULD BE DISCOURAGED, EXCEPT FOR EMERGENCY SERVICES.
- V-81 A PRIMARY CONSIDERATION IN ACQUIRING PARK SITES AND DEVELOPING RECREATIONAL FACILITIES ON VASHON ISLAND SHOULD BE THE NEEDS OF ISLAND RESIDENTS.
- V-82 FUNDS FOR DEVELOPING EXISTING PARKS SHOULD EMPHASIZE PASSIVE RATHER THAN ACTIVE RECREATIONAL FACILITIES SUCH AS HIKING TRAILS, PICNIC TABLES AND FISHING DOCKS.
- V-83 ADDITIONAL WATER-RELATED PARKS AND BEACHES SHOULD BE ACQUIRED ALONG THE SALTWATER SHORELINES OF VASHON-MAURY ISLANDS. THESE PARKS SHOULD BE RETAINED AS PASSIVE, NATURAL AREAS.
- V-84 ADDITIONAL PARK SITES SHOULD BE ACQUIRED IN THE ISLAND'S MOST ENVIRONMENTALLY SENSITIVE NATURAL AREAS. THESE SITES SHOULD BE RETAINED AS PASSIVE, OPEN SPACE AREAS ALLOWING ONLY THOSE USES THAT WOULD BE COMPATIBLE WITH SENSITIVE AREAS.
- V-85 A PUBLIC TRAIL SYSTEM SHOULD BE IDENTIFIED AND ENCOURAGED FOR PRESERVATION ON VASHON ISLAND.
- V-85a TRAILS ON VASHON SHOULD SERVE BICYCLISTS, EQUESTRIAN AND PEDESTRIAN USES.
- V-85b TRAIL SYSTEMS AT PARKS AND ON OTHER PUBLIC LANDS SHOULD BE ENCOURAGED ON VASHON ISLAND. TRAILS ON PUBLIC LANDS SHOULD BE OFFICIALLY RECOGNIZED AND PRESERVED.
- V-85c IF AND WHEN COUNTY AND STATE OWNED LAND ON VASHON IS LOGGED, TRAILS SHOULD BE PRESERVED FOR EQUESTRIAN AND PEDESTRIAN USE. IF POSSIBLE, AN UNLOGGED BUFFER ZONE SHOULD BE LEFT WHEN LOGGING OCCURS.
- V-85d VOLUNTARY DEDICATION OF TRAILS SHOULD BE ENCOURAGED WHEN LAND IS DEVELOPED FOR MORE INTENSIVE USES.
- V-85e TRAILS SHOULD PROVIDE MULTIPLE USES WHERE POSSIBLE, SERVING BOTH RECREATIONAL AND COMMUTER NEEDS.
- V-85f TRAIL CORRIDORS ON VASHON SHOULD BE ESTABLISHED AND DESIGNED BASED UPON THE FOLLOWING CRITERIA:
- 1) CONNECT PARK AND OPEN SPACE AREAS;
 - 2) PROVIDE ACCESS TO SHORELINE AREAS, PARTICULARLY PUBLIC PARKS;
 - 3) INCORPORATE VIEWS AND OTHER SPECIAL FEATURES OF SCENIC, HISTORIC, OR ARCHAEOLOGICAL INTEREST;

- 4) TRAVERSE DEVELOPMENT LIMITATION AREAS WHERE NOT INCOMPATIBLE WITH HAZARDOUS OR FRAGILE NATURAL AREAS;
- 5) FOLLOW STREAMBANKS AND RAVINES,
- 6) FOLLOW UNDEVELOPED RIGHTS-OF-WAY, OR ALONGSIDE EXISTING ROADS; AND
- 7) PROVIDE ACCESS TO AND CONNECT SCHOOLS.

- V-86 A BOAT LAUNCH SITE SHOULD BE ACQUIRED AND DEVELOPED AT THE NORTH END OF VASHON ISLAND AND POSSIBLY ON THE WEST SIDE.
- V-87 KING COUNTY SHOULD RETAIN HISTORICAL NAMES FOR VASHON ISLAND PARKS AND CONSULT THE COMMUNITY BEFORE NAMING NEW PARKS.
- V-88 IF A MARINA IS CONTEMPLATED ON VASHON DURING THE SIX TO TEN YEAR LIFE OF THE PLAN, IT SHOULD BE ESTABLISHED ON THE OUTSIDE PERIMETER OF THE ISLAND, OR IF IN QUARTERMASTER HARBOR, SOUTH OF SOUTHWEST 256TH STREET IF EXTENDED.
- V-89 KING COUNTY SHOULD EXPLORE OPTIONS FOR TRADING THE NORTHEAST VASHON (WINGHAVEN) PARK SITE FOR ANOTHER WATERFRONT SITE ON THE ISLAND.

SELECTED KING COUNTY COMPREHENSIVE PLAN POLICIES

- E-304 Land uses on steep slopes should be designed to prevent property damage and environmental degradation, and enhance greenbelt and wildlife habitat values.
- E-305 As slope increases, development intensity, site coverage and vegetation removal should decrease to mitigate problems of drainage, erosion, siltation and landslides. Slopes of 40 percent or more should be retained in a natural state, free of structures and roads.
- E-306 Severe landslide hazard areas should be free of development and roads.
- E-307 In areas subject to erosion hazards, native ground cover should be retained or replaced after construction, special construction practices should be used, and allowable site coverage may need to be reduced to prevent erosion and sedimentation. Limitations on the time when site work can be done may also be appropriate.
- E-311 Water quality should be protected and enhanced. Land use plans and land development should preserve the amenity and ecological functions of water features.
- E-327 Development within designated Shoreline Environments should:
- a. Preserve the resources and ecology of the water and shorelines;
 - b. Avoid natural hazards;
 - c. Promote visual and physical access to the water; and
 - d. Preserve navigation rights.
- E-328 Wetlands important for flood control, drainage, water quality, aquifer recharge, visual or cultural values or habitat functions should be preserved or enhanced.
- E-329 New development adjacent to a Unique/Outstanding or Significant wetland should preserve or enhance the wetland and provide an undisturbed buffer around the wetland adequate to protect its natural functions. Encroachments into Significant wetlands may be allowed when no feasible alternative exists and enhancements are provided to replace the lost wetland's functions.
- E-330 Water level fluctuations in wetlands used as storm water detention sites should be similar to the fluctuations under natural conditions, unless plants and animals in the wetland can adapt to new levels.
- E-331 Public access to wetlands for scientific and recreational use is desirable when sensitive habitats are protected. Careful planning to access trails, for example, can allow public enjoyment of wetlands while preventing safety and environmental problems.
- E-332 Development on existing or former wetlands should occur only after careful soils analysis shows that construction measures can successfully mitigate potential hazards of unstable soil and drainage problems.

- E-337 Ground water recharge areas should be identified and protected to ensure that ground water resources are protected from potential pollution.
- R-215 In Rural Areas, the maximum overall density should be one unit per five acres. Community plans may propose areas where lower densities (one unit per ten acres) may be appropriate.
- R-216 Community plans may locate densities of one unit per 2.5 acres in Rural Areas where the following criteria are met:
- a. A density higher than one unit per five acres already exists;
 - b. Soil conditions are able to handle the cumulative longterm impacts of on-site sewage disposal without adverse impacts to ground and surface waters; and
 - c. Public water supply is available to serve the area.
- R-218 In Rural Areas, existing lots below five acres in size may still be developed, provided applicable standards for sewage disposal, water quality, roads and rural fire protection can be met.
- R-219 Residential development within Rural Activity Centers and their planned expansion areas should have a range similar to that permitted in Urban Areas when adequate facilities and services exist or can be made available as needed.
- R-220 Nonresidential uses in Rural Areas that are primarily residential should be limited to those that:
- a. Do not result in heavy traffic, noise, smoke or other significant adverse impacts; and
 - b. Do not require public services beyond those appropriate in Rural Areas; and
 - c. Provide convenient local services for nearby residents; or
 - d. Require location in a Rural Area residential community (for example, some utility installations).
- R-221 Farming and forestry are favored and permitted uses in Rural Areas. Agricultural and silvicultural management practices should not be construed as public nuisances when carried on in a reasonable manner and in compliance with any applicable public regulations, even though they may impact nearby rural residences.
- R-311 Where the allowed average density is three units per acre or greater (Urban Areas and Rural Activity Centers), residential developments should include the following improvements:
- a. Paved streets, curbs and sidewalks or paved walkways;
 - b. Adequate off-street parking;
 - c. Street lighting;

- d. Adequate storm drainage control;
 - e. Public water supply; and
 - f. Sanitary sewers.
- R-314 In Rural Areas outside Rural Activity Centers, residential development should include the following improvements:
- a. Local access streets improved to a standard that allows year-round access for service and emergency vehicles, and controls dust and drainage;
 - b. Public water supply or private water system approved by the King County Public Health Department; and
 - c. On-site sewage disposal designed for long-term performance. Community systems may be considered for clustered development.
- CI-501 Rural Activity Centers serve as the activity centers for Rural Areas and should include several or all of the following land uses:
- a. Retail stores and services intended to serve the surrounding Rural Area population and to provide supplies for resource industries;
 - b. Residential development, including single family housing on small lots as well as multifamily housing and mixed use developments; and
 - c. Other commercial and industrial uses, including commercial recreation facilities, resource based industries and light industry.
- CI-503 Location of new uses in Rural Activity Centers should be based on the following principles:
- a. Uses with similar needs and impacts should be grouped so access, utilities and other services can be shared;
 - b. Compatibility between land uses within and adjacent to Rural Activity Centers should be enhanced through landscaping, building placement, traffic control and other measures to reduce conflicts; and
 - c. Rural Activity Centers should be compact to encourage pedestrian travel; safe pedestrian routes should link retail stores and services.
- CI-505 Commercial and industrial developments in Rural Activity Centers should provide the following minimum improvements as development occurs:
- a. Paved streets and improved walkways;
 - b. Off-street parking for employees and visitors;
 - c. Landscaping for walkways, streets and parking areas, to provide an attractive appearance;
 - d. Provisions for drainage control;

- e. Public water supply, or private supply adequate to meet applicable health and commercial fire flow standards;
 - f. Adequate wastewater disposal; and
 - g. Combined and controlled access to arterials and intersections to reduce congestion and assure smooth traffic flow.
- CI-506 Industrial development should include adequate on site loading and docking facilities, and turning areas for large vehicles and equipment as needed, to prevent traffic disruptions in Rural Activity Centers.
- CI-507 Adequate roads, intersection improvements, right-of-way utilities needed in conjunction with new development should be assured before construction proceeds in Rural Activity Centers.
- CI-601 Rural Neighborhood Centers should maintain approximately their existing size.
- CI-602 In Rural Neighborhood Centers, density of mixed use development should be based on the capacity of sewage disposal systems, and capacity and adequacy of local rural roads.
- CI-603 In Rural Areas, developments within Rural Neighborhood Centers should provide the following improvements:
- a. Access to a collector arterial;
 - b. Local access streets, if needed, improved to a standard that allows year round access for service and emergency vehicles, and controls dust;
 - c. Provisions for storm drainage control;
 - d. Public water supply, or private water supply adequate to meet applicable health and commercial fire flow standards;
 - e. On-site sewage disposal designed for long-term performance; and
 - f. Adequate off-street parking.
- RL-308 King County should offer incentives to conserve farmlands outside of Agricultural Production Districts. When permanent conservation of a parcel of farmland is assured, adjacent land uses, utilities and transportation should be designed to minimize conflicts with farming.
- RL-309 Agriculture should be managed to maintain water quality, protect fisheries and prevent erosion of valuable agricultural soils.
- RL-408 Prior to completion of the Mineral Resources functional plan, proposals for extractive operations or activities will be permitted through the zone reclassification or unclassified use process when consistent with the purposes of Policies RL-401, RL-403, RL-405 or RL-406, RL-407; and RL-409 through RL-418.
- F-309 Service level standards for water supplies should assure water quality, adequate domestic supplies and urban fire flow levels in Urban Areas, urban portions of

Transitional Areas and in Rural Activity Centers. Rural Area service level standards must assure water quality and domestic supply, and fire flow consistent with low rural residential densities.

- HS-102 King County should encourage land uses that retain or enhance the historic or scenic setting of landmarks, landmark sties or districts.
- HS-103 New development in and adjacent to landmark districts should enhance the historic features of the district and should be compatible with the scale of the district whenever possible.
- HS-104 New development affecting historic landmarks, landmark sites, districts or archeological sites in King County should retain and enhance historic features to the greatest extent possible.

KING COUNTY ZONING CODE SYNOPSIS

WARNING: This zoning code synopsis should be used as a guide only for the unincorporated areas of King County. Before buying or selling property, the complete text for a particular zoning classification should be consulted to insure the proposed use is permitted and under what conditions if any. You may review copies of the King County Code at our offices or at various libraries throughout King County. If you want zoning information for property within the corporate limits of a city or town in King County, you must call the City's planning or building department. Remember codes are changed continually so be sure your copy is up to date.

Chapter 21.08 RS Residential Single Family

Provides an area for single family dwellings and townhouses at urban densities and other related uses which contribute to a complete urban residential environment. These other uses, churches, schools, libraries, etc. are considered compatible with single family residential uses.

RS 5000 - Dimensional Standards

min. lot area: 5000 sq. ft.*
 min. lot width: 40 feet
 lot coverage: 35 percent
 front yard: 20 feet, key & transitional lots may be reduced to 15'
 side yard: 5 feet
 rear yard: 5 feet for dwelling units
 height: 30 feet; non-residential buildings may be increased by 1' for each foot of add'l side yard to a maximum of 50 feet

RS 7200 - Dimensional Standards

min lot area: 7200 sq. ft.*
 min lot width: 60 feet
 front, side & rear yards; height & lot coverage same as RS 5000

RS 9600 - Dimensional Standards

min lot area: 9600 sq. ft.*
 min lot width: 70 feet
 front, side & rear yards; height & lot coverage same as RS 5000

RS 15,000 - Dimensional Standards

min lot area 15,000 sq. ft.*
 min lot width: 80 feet
 front, side & rear yards; height & lot coverage same as RS 5000

*NOTE: In new subdivisions within the RS zone, clustering of lots and townhouses is permitted, provided the average allowable density is not exceeded.

Chapter 21.10 RD 3600 - Two-Family Dwelling

Permits low density multiple dwellings and duplexes.

RD 3600 - Dimensional Standards

min. lot area: 7200 sq. ft.
 min. lot width: 60 feet
 lot coverage: 35 percent
 side yard: 5 feet
 front yard: 20 feet; key & transitional lots 15 feet
 rear yard: 5 feet for dwelling units
 height: 30 feet. Non-residential buildings and structures may be increased by 1' for each foot of additional side yard and open space to a maximum of 50 feet.

Chapter 21.12 RM 2400 Medium Density Multiple-Dwelling

Establishes areas permitting a greater population density while maintaining a residential environment consistent with such density.

RM 2400 - Dimensional Standards

min. lot area: 7200 sq. ft.
 min. lot width: 60 feet
 lot coverage: 50 percent
 side yard: 5 feet
 front yard: 20 feet; key & transitional lots 15 feet
 rear yard: 5 feet for dwelling units
 lot area/dwelling unit: 2400 sq. ft.
 height: 30 feet. Non-residential buildings and structures may be increased by 1' for each foot of additional side yard and open space to a maximum of 50 feet.

Chapter 21.14 RM 1800 High Density Multiple-Dwelling

Provides a higher density for the accommodation of those who desire to live in a residential atmosphere without the necessity of individually maintaining a dwelling unit.

RM 1800 - Dimensional Standards

min. lot area: 7200 sq. ft.
 min. lot width: 60 feet
 lot coverage: 50 percent
 front, side & rear yards: same as RM 2400
 lot area/dwelling unit: 1800 sq. ft.
 height: 35 feet. Height may be increased 1' for each additional 1' of side yard and open space.

Chapter 21.16 RM 900 Maximum Density Multiple-Dwelling / Restricted Service

Establishes areas permitting the maximum population density and also permits certain uses other than residential, e.g., medical, dental, social services, professional and business offices.

RM 900 - Dimensional Services

min. lot area: 7200 sq. ft.
 min. lot width: 60 feet
 lot coverage: 60 percent for residential uses
 front, side & rear yards: same as RM 2400
 permissible floor area: two times the area of lot; does not apply to dwelling units if the only use on the lot.
 lot area/dwelling unit: 900 square feet
 height: 35 feet. Height may be increased 1' for each additional 1' of side yard and open space.

Chapter 21. RT Residential, Townhouse

Allows townhouses (single-family dwelling attached by common side walls; either on individually platted lots or on a commonly held site to provide a mix of attached and detached single-family housing and promote efficient use of land and energy in a residential environment.

RT - Dimensional Standards

See text of Zoning Code for detailed performance standards.

Chapter 21.18 SE Suburban Estate

Provides an area permitting uses and activities more rural, e.g., horses, private stables, chickens and agricultural crops, than is practical in the more concentrated urban areas.

SE - Dimensional Standards

min. lot area: 35,000 sq. ft.
min. lot width: 135 feet
lot coverage: 35 percent
residential building setbacks:
front yard: 30 feet
side yard: 10 feet
rear yard: 10 feet
height: 35 feet except for agricultural buildings

Chapter 21.19 SC Suburban Cluster

Permits uses and activities more rural in character than practical in the more concentrated urban areas. Provides flexibility in individual lot size while maintaining a long-term low density character.

SC - Dimensional Standards

Minimum lot area per dwelling unit: 10 acres except may be reduced through subdividing or short subdividing, subject to on site sewage disposal requirements. With public sewers, the minimum lot size is 9,600 square feet.

Lot dimensions/coverage/height/limits/yards/open space:
parcels over five acres: same as "A"
parcels of five acres or less: same as SE
Lots in multiple lot subdivisions and short subdivisions: same as nearest comparable RS classification lot area

Densities in multiple lot subdivision:
Parcels less than five acres: one dwelling unit per acre with sensitive area protection through lot clustering

Parcels with five or more acres: one dwelling unit per acre with lot clustering and reserve tract provision

Chapter 21.20 SR Suburban Residential

Provides for the orderly transition of areas from a suburban to an urban character. Within this classification, small scale and intensive agricultural pursuits may be mixed with developing urban subdivisions.

SR - Dimensional Standards

lot area: 5 acres except that the area may be reduced through subdividing:
7200 or 9600 square feet with sewers, water, paved streets, curbs, sidewalks, drainage
15,000 square feet with approved water and sewage systems, paved streets, walkways
35,000 square feet with approved water and sewage disposal systems

min lot width: 330 feet unless platted
front yard depth: 30 feet unless platted
side yard depth: 10 feet unless platted
rear yard depth: 10 feet unless platted
lot coverage: 35 percent
height: 30 feet except for agricultural buildings

Chapter 21.20A RMHP Residential Mobile Home Park 16

Provides for a suitable living environment within a park-like atmosphere for families residing in mobile homes.

RMHP - Dimensional Standards

minimum site area: three acres
density: not to exceed 1 1/2 times surrounding density or nine units per acre, whichever is less.

Chapter 21.21 GR Growth Reserve

Provides for limited residential growth adjoining existing supporting public facilities but reserves large tracts of open land for possible future urban or suburban growth.

GR - Dimensional Standards

Minimum lot area: 20 acres except that the area may be reduced through subdivision with lot clustering; one exception allowed on previously created 2-10 acre parcels subject to conditions.

Maximum densities in sub divisions and short subdivisions:

GR-5: one dwelling unit per five acres with lot clustering and reserve tract provision;

GR-2.5: one dwelling unit per 2.5 acres with lot clustering and reserve tract provision;

Lot dimensions/lot coverage/height limitations and building setbacks: conform to the requirements of the nearest comparable RS, S, or A zone.

Chapter 21.21 AR Rural

Provides for an area-wide rural character and prevents premature urban development in areas without adequate urban services. Establishes forestry and agriculture as preferred uses, and protects environmentally sensitive areas. The zone allows for lot clustering and density bonuses.

AR - Dimensional Standards

min lot area: 5 acres (basic density)
10 acres (areas adjacent to forest and agriculture production districts)
2.5 acres (to be applied where existing lot pattern and level of services permits, as determined through the Community Plan process)
min lot dimensions: depth to width lot ratio no greater than 4 to 1.
height: 35 feet except for agricultural buildings
setbacks: 35 feet (except for residential structures abutting an A-35, F, OM, or approved mineral extraction operator which shall maintain a 100 foot setback)

Chapter 21.22 A Agricultural

Preserves agricultural lands and discourages the encroachment of urban type development in areas which are particularly suited for agricultural pursuits.

A - Dimensional Standards

min. lot area: 10 acres
min. lot width: 330 feet
lot coverage: 60 percent
height: 35 feet except for agricultural buildings

Residential building setbacks:
front yard: 30 feet
side yard: 10 feet
rear yard: 10 feet

Chapter 21.35 A-10, A-35 Agriculture

Preserves agricultural lands and discourages encroaching urban development in areas particularly suited to agricultural pursuits. Allows marketing of agriculture products and the processing of agriculture products grown on site.

A-10, A-35 - Dimensional Standards

min lot area: 10 acres (croplands)
35 acres (lands suited to raising livestock)
min lot dimensions: depth to width lot ratio of no greater than 4-1.
height: 35 feet except for agricultural structures
lot coverage: less than 1 acre - 35 percent max.
1-5 acres - 25 percent max.
5-10 acres - 15 percent max.
lot acres - 10 percent max.

Chapter 21.24 G General

Regulates the use of land in areas generally undeveloped and not yet subjected to urban development pressures to prevent the improper location and intrusion of business and industrial uses.

G - Dimensional Standards

min. lot area: SE uses 35,000 sq. ft. SR uses 5 acres, A uses 10 acres
min. lot area/dwelling unit: 35,000 sq. ft. for single family
min. lot width: 135 feet

Residential building setbacks:

front yard: 30 feet
side yard: 10 feet
rear yard: 20 feet for dwelling units
height: 30 feet except for agricultural buildings

Chapter 21.25 G-5 General Five Acres

Provides for an area-wide rural character and prevents premature urban development in areas without adequate urban services and to preserve environmentally sensitive areas.

G-5 - Dimensional Standards

Minimum lot area: five acres; one exception allowed on previously created 2-10 acre parcels subject to conditions.
Minimum lot dimensions: depth-to-width lot ratio no greater than 4-to-1.
Height: 35 feet except for agricultural buildings
Residential building setbacks:
front yard: 30 feet
side yard: 10 feet

Chapter 21.26 BN Neighborhood Business

Provides for shopping and limited personal service facilities to serve the everyday needs of the neighborhood.

BN - Dimensional Standards

lot coverage: 100 percent
height: 35 feet maximum
permitted floor area: not more than total lot area

Chapter 21.27 BR-N Mixed Business- Residential Neighborhood Scale

Provides for mixed commercial (retail and office) and residential use projects.

BR-N - Dimensional Standards

lot area/dwelling unit: 2400 sq. ft.
permitted floor area:
1½ times buildable area of lot
2 times buildable area with enclosed parking
lot width: 60 feet

Chapter 21.28 BC Community Business

Provides for the grouping of similar type enterprises including recreation, entertainment and general business activities, but excluding uses relying on outdoor sales. It is a further objective to concentrate a maximum variety of facilities as a contribution to the convenience of shoppers and patrons on a community-wide basis.

BC - Dimensional Standards

lot coverage: 100 percent
permitted floor area: not more than 3 times lot area
height: 35 feet. Height may be increased 1' for each additional 1' of side and rear yards.

Chapter 21.29 BR-C Mixed Business- Residential Community Scale

BR-C - Dimensional Standards

lot area/dwelling unit: 900 sq. ft.
permitted floor area: 2 times buildable portion of lot
6 times if required parking is totally enclosed
lot width: 60 feet

Chapter 21.30 CG General Commercial

Provides for the grouping of enterprises which may involve some on-premise retail service but comprised primarily of those with outside activities and display or fabrication; assembling including manufacturing and processing in limited degree. These uses, if permitted to locate in strictly on-premise retail and service areas, would introduce factors of heavy trucking and handling of materials that destroy the maximum service and attraction of strictly retail areas.

CG - Dimensional Standards

lot coverage: 100 percent
permitted floor area: not more than 3½ times lot area
height: 35 feet. Height may be increased 1' for each additional 1' of side and rear yards

Chapter 21.32 ML Light Manufacturing

Provides for the heavier general commercial uses and for industrial activities and uses involving the processing, handling and creating of products, research and technological processes as distinguished from major fabrication. These uses are largely devoid of nuisance factors, hazard or exceptional demands upon public facilities or services.

ML - Dimensional Standards (except adjacent to R or S zones)

*lot coverage: 100 percent
permitted floor area: not more than 2½ times lot area
height: 45 feet. Height may be increased 1' for each additional 1' of side and rear yards*

Chapter 21.34 MP Manufacturing Park

Provides for industrial areas of high standards of operational development and environment. Standards of intensity of use and standards of external effects which will minimize traffic congestion, noise, glare, air and water pollution, fire and safety hazards are established in this classification.

MP - Dimensional Standards

*street property line setback: 25 feet
side and rear yard setback: per landscape ordinance
permitted floor area: not more than 2½ times the buildable area of the lot.
height: 45 feet. Height may be increased 1' for each additional 1' of required open space.*

See text of zoning code for detailed performance standards.

Chapter 21.36 MH Heavy Manufacturing

Provides for industrial enterprises involving heavy manufacturing assembling, fabrication and processing, bulk handling of products, large amounts of storage, warehousing and heavy trucking.

MH - Dimensional Standards

*lot coverage: 100 percent
permitted floor area: not more than 2½ times lot area
height: 45 feet. Height may be increased 1' for each additional 1' of side and rear yards*

Chapter 21.37 F Forest

Allows for the continued management of commercial forest resource lands through the establishment of large minimum lot sizes and the mitigation of adjacent conflicting uses through buffering.

F - Dimensional Standards

*min. lot area: 80 acres
min setback: 100 feet (scaling stations excepted)*

Chapter 21.38 FR Forestry and Recreation

Allows the development of forest land for the sustained production of forest products and the development of compatible uses such as recreation.

FR - Dimensional Standards

*min. lot area for building site: 35,000 sq. ft.
min. lot width for building site: 135 feet
front, side & rear yards: 20 feet
height: 45 feet. Height may be increased 1' for each additional 1' of side and rear yards.*

Chapter 21.42 QM Quarrying and Mining

Insures continued development of natural resources through inclusion of known deposits of minerals and material within a zone reserved for their development and production and allows for the necessary processing of such minerals and materials.

QM - Dimensional Standards

*min. lot area: 10 acres
front, side & rear yards: 20 feet except if adjacent to R or S zone
permitted floor area: not more than total lot area
height: 45 feet. Height may be increased 1' for each additional 1' of setback from each property line.*

See text of zoning code for detailed performance standards.

Chapter 21.43 AOU Airport Open Use

Provides for economic uses and development of areas affected by major airports which are compatible with neighboring residential areas, designated open space areas and airport clear zone requirements.

Chapter 21.46.060 Potential Zone

Recognizes the suitability of a location for a future type of use and the impracticability of precisely zoning the property until property designed and planned.

Chapter 21.46.150 P Suffix - Site Plan Approval

The requirement for site approval is based upon a recognition that development on the designated property may require special conditions to protect the public interest such as dedication of rights-of-way, street improvements, screening between land uses, signing controls, height regulations or others to assure its compatibility with adjacent land uses as well as the community. All conditions stipulated as a result of an area zoning process or zone reclassification shall be reflected and/or included in the site plan submittal.

Chapter 21.48 Zero-Lot-Line Provision

In new subdivisions or short subdivisions within an R, S or G zone, yard and lot width requirements may be varied in order to make better use of the lots including common wall construction, subject to conditions. The final subdivision must show exact size and location of structures proposed to be placed in an otherwise required open space or setback.

See text of Zoning Code for detailed requirements.

Chapter 21.50 Loading Areas and Off-Street Parking

Provides for parking requirements in all zone classifications.

See text of Zoning Code for detailed requirements.

Chapter 21.51 Landscaping and Screening

Provides for landscaping in all zones.

See text of Zoning Code or Bulletin #22.

Chapter 21.54.040 Flood Hazard Area

A hazardous situation may exist within an urban, suburban or rural area and in a residential, agricultural or industrial zone. No permit or license for structures or the development or use of land shall be issued by King County within a flood hazard area unless approved by the Manager of the Building and Land Development Division. Such approval shall be based on a review of the provisions set forth in the Chapter and the technical findings and recommendations of the Director of Public Works.

Chapter 21.56 Planned Unit Development (Not a Zone)

Permits flexibility within a zone that will encourage a more creative approach in the development of land than a lot-by-lot development with the result that a more efficient and desirable use of land is produced. A minimum area of 1 acre is required

See text of Zoning Code for detailed performance standards.

DRAFT

APPENDIX D

**RAINFALL DATA BY SEATTLE-KING COUNTY
DEPARTMENT OF PUBLIC HEALTH**

(May 14, 1993 rev.)

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	Jun-90
Rain Gage No. 1																			
1				0	0.29	0	0	0.23	0	0	0	0	0	0.11	0.07	0	0	0	0.04
2				0	0.23	0	0	0.07	0	0	0	0	0.85	0		0	0	0.1	0
3				0		0	0	0	0	0	0	0.01	0.85	0.13	0.53		0	0	1.28
4				0	0.64	0	0	0	0	0	0	0.59	2.23	0.15	0.18		0	0	
5				0.63	1.19	0	0	0	0	0	0.04	0.08	0.08	0.15	0.25	0.11	0	0	0.78
6				0.2	0.11	0	0	0	0	0	0.01	0.08	0	1.32	0.19	0.18	0	0.1	
7				0.23	0	0	0	0	0	0	0	0	0.08	1.13	0.25		0	0	
8				0.02	0	0	0	0	0	0	0	0.21	0.84	0.66	0.12	0.73	0	0	
9				0.31	0	0.05	0	0	0	0	0	0.48	0	3.5	0.17	0.43	0	0	
10				0.41	0	0	0	0	0	0	0.14	1.04	0	0.01	0.64		0	0	
11				0.47	0	0	0	0	0	0	0	0.61	0	0.02		0.22	0.25	0	
12				0.65	0	0	0	0	0	0	0.4	1	0	0.13	0.25	0	0	0	1.19
13				0.25	0	0	0	0	0	0	0.25	0.57	0	0				0.1	
14				0.14	0	0	0.33	0	0	0	0.01	0	0	0.05		0.45	0.41	0	
15				0.07	0	0	0	0	0	0	0	0	0	0.04		0	0	0	
16				0	0	0	0.01	0.49	0	0.04	0	0.28	0	0.1	0.49	0	0	0	
17				0.34	0	0.74	0.01	0	0	0.03	0.16	0.29	0	0	0	0	0	0	
18				0.22	0	0.07	0	0	0	0	0	0	0	0	0.34	0.44		0	
19				0.3	0	0	0.35	0	0	0	0	0.14	0	0	0	0.05	0.22	0	
20				0	0	0	0	0	0	0	0.02	0.03	0.03	0	0.57	0	0.14	0.06	
21				0.33	0	0	0	0	0.81	0	0.44	0.2	0	0	0	0	0	0	
22				0.03	0.51	0	0	0	0.08	0	0.6	0.28	0.02	0.15	0			0.24	
23				0	0.62	0.7	0	0	0	0	0.65	0.29	0.07	0.15	0	0.45	0.4	0	
24				0.3	0	0	0	0	0	0	0	0.38	0	0.16	0	0		0	
25				0.56	0.04	0	0	0	0	0	0.04	0.09	0	0.13	0	0		0	
26				0.03	0	0.07	0	0	0	0.19	0.69	0.5	0	0.13	0	0	0.45		
27				0.36	0	0.55	0	0	0	0.02	0.02	0	0.22	0.14	0	0			
28				0.27	0	0.86	0.08	0	0	0	0.16	0	0.07	1.19	0	0			
29				0.04	0	0.2	0.2	0	0	0	0	0	0	0.16		0	0.51		
30				0.17	0	0	0.22	0.05	0	0.08	0	0	0	0.17		0	0	0.21	
31				0.22	0	0		0.02	0		0		0.28	0.51		0		0.91	
Monthly Total				6.55	3.63	3.24	1.2	0.86	0.89	0.36	3.63	7.15	5.4	10.39	4.05	3.06	2.38	1.72	3.29
Yearly Total													32.91						

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Jul-90	Aug-90	Sep-90	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Oct-91	Nov-91	Dec-91	Jan-92
Rain Gage No. 1																			
1		0	0	0.04	0	0.53	0	0.31	0.35	0	0			0	0		0.02		0.12
2		0	0	0	0		0	0.53	1.19	0.28	0			0	0		0		
3		0	0	0.33	0.47	0.35	0	0.72			0			0	0		0	0.03	0.63
4		0	0	0.73	0	0.93	0.01	0.67		3.97	0			0	0		0.43		0.34
5		0	0	0.05	0	0.02	0	0.26	1.93	1.53	0.13			0	0		0.04		
6		0	0		0		0	0						0	0				
7		0	0			0	0.89	0	0.34	0.18				0	0		0.06	1.99	0.02
8		0	0		0.03	0.42	0.39	0.04	0		0.63			0	0		0.22	0.02	0
9		0	0		2.4	0.49	0.44	0.03	0.38		0		1.26	0					0.02
10		0	0	0.38	1.52				0.19		0			0	0		0.21	0.4	0.3
11		0	0	0	0.03	0.36	1.46	0.08	0.07		0			0	0		0.85		0.05
12		0	0		0	0.04			0.57		0			0	0		0.06	0.17	
13		0	0		1.04	0	1.24		0					0	0		0.13	0	
14		0	0	0.6	0.18		0.33		0		0.09			0	0		0	0	
15		0	0	1	0.04		0.15	0.37	0.02	0.85	0			0	0			0	
16		0	0	0.01	0.01		0.08		0	0	0			0	0	0.4	0.55	0.02	0.45
17		0.08	0	0.43	0.37	0.43	0.04		0	0	0			0	0			0.01	0
18		0.12	0	0.24	0	0	0	0.38	0.04	0	0.24			0	0		0.5	0.49	0.02
19			0	0	0.03	0.02	0	2.25	0	0	0.02			0	0				0.01
20			0	0	0.02	0	0	0.09	0	0	0			0	0				0
21		0.25	0	0.59	0.39	0	0		0.23	0	0			0	0		1.27		0.13
22			0	0	0	0	0	0.06		0	0			0	0	0.55	0.01		
23			0	0	1.47	0	0	0		0.11	0			0	0	0.01		0.38	1.21
24			0		3.93	0	0	0	0.49	0.5	0			0	0				
25			0	0.22	0.1	0	0	0			0			0	0	0.81	0.92		
26			0		0.06	0	0	0		0.04	0			0	0				
27			0			0	0	0			0.63			1.09	0				
28			0	0.45		0	0	0	0	0.14				0.27	0	0.25			2.95
29		0.36	0	0.21	0.53	0	0		0	0	0.15				0	0.02			
30		0.06	0	0.2	0.1	0	0			0	0				0		0.63	0.64	1.69
31		0.07		1.19		0.3	0.62		0.03		0			0.66	0	0			0.4
	Estimated																		
Monthly Total	2.115	0.94	0	0.67	12.72	3.89	5.65	5.79	5.63	7.6	1.89	2.855	2.817	3.28	0	2.04	5.92	4.15	8.34
Yearly Total						51.225													47.32

Fixed
 (Estimated Estimated)
 but not reprinted

Table ____

Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	Jun-90	
Rain Gage No. 2																				
1				0.47	0.61	0	0	0.11	0	0	0	0.24	0.02	0	0.18	0	0	0	0	
2				0.04	0.16	0	0	0.08	0	0	0	0.24	1.32	0	0.27	0	0	0.03	0.88	
3				0	0.46	0	0	0	0	0	0	0.24	2.15	0.5	0.4	0.12	0	0	0.54	
4				0.25	1.19	0	0	0	0	0	0.04	0.24	0.64	0.28	0.32	0	0	0	0.27	
5				0.49	0.24	0	0	0	0	0	0	0.24	0	1.19	0.38	0.12	0	0	0.02	
6				0.44	0.13	0	0	0	0	0	0	0.24	0	1.29	0.02	0.38	0	0	0.49	
7				0.03	0	0	0	0	0	0	0	0.25	0.63	0.97	0.59	0.52	0	0	0.13	
8				0.02	0	0	0	0	0	0	0	0.25	0.1	2.09	0.11	0.4	0	0	0.03	
9				0.39	0	0	0	0	0	0	0	0.25	0	1.08	0.52	0.69	0	0	0.79	
10				0.4	0	0.02	0	0	0	0	0.13	0.25	0	0.01	0.63	0	0.13	0	0.1	
11				0.59	0	0	0	0	0	0	0.41	0.25	0	0	0.07	0	0.05	0	0.03	
12				0.49	0	0	0	0	0	0	0.15	0.25	0	0.18	0	0	0.02	0	0.25	
13				0.3	0	0	0.32	0.05	0	0	0.08	0	0	0.05	0	0.61	0.35	0		
14				0.07	0	0	0.03	0	0.08	0	0	0	0	0.08	0.49	0.02	0.01	0		
15				0.24	0.01	0	0	0.32	0	0	0	0	0	0.14		0	0	0		
16				0.14	0	0.04	0	0.22	0	0.12	0.09	0.51	0	0.01	1.7		0.14	0		
17				0.16	0	0.67	0.03	0	0	0	0.02	0	0	0	0	0.36	0.04	0		
18				0.19		0	0.06	0	0	0	0	0.12	0	0	0	0.02	0.5	0		
19				0	0.19	0	0.32	0	0	0	0	0.03	0	0	0.65	0.08	0.13	0.1		
20				0.32	0.18	0	0	0	0.02	0	0.68	0.25	0.05	0		0.01		0.16		
21				0.07	0	0	0	0	0.53	0	0.57	0.01	0	0.36	0.02	0	0.65	0.21		
22				0	0.13	0.14	0	0	0	0	0.35	0.38	0.06	0.34	0	0.26		0.01	0	
23				0	0	0.05	0	0	0	0	0.36	0.5	0.03	0.02	0	0	0.03	0		
24				0.92	0	0.06	0	0	0	0	0.01	0.25	0	0	0.04	0	0.31	0		
25				0.05	0.02	0	0	0	0	0.13	0.48	0.44	0	0.45	0	0	0	0		
26				0.39	0	0.43	0	0	0	0.09	0.31	0.01	0	0.16	0	0	0.24	0.03		
27				0.25	0	0.27	0.07	0	0	0	0.05	0	0.28	0.69	0	0	0.41	0.05	0.02	
28				0.21	0	0	0.09	0	0	0	0.02	0	0	0.77	0	0				
29				0	0	0	0.18	0.05	0	0.12	0	0	0	0.48		0	0	0.03		
30				0.28	0	0	0.33	0	0	0.06	0	0	0.05	0.2		0	0	0.92		
31				0.2	0	0		0	0		0		0.5	0.68		0		0.06		
Monthly Total				7.4	3.32	1.68	1.2	0.83	0.63	0.52	3.75	5.44	5.83	12.02	6.39	3.59	3.01	1.6	3.29	
Yearly Total													30.6							

Table _____

Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Jul-90	Aug-90	Sep-90	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Oct-91	Nov-91	Dec-91	Jan-92
Rain Gage No. 2																			
1	0	0.01	0	0.02	0.01	0.02	0.02	0.45	0.84	0.06	0	0	0	0	0		0.01	0.04	0.79
2	0.09		0	0.24	0.09	0.29		0.85	1.29	0.42	0	0	0	0	0				0.12
3	0.47		0	0.14	0.25	0.84		0.91	0.78	2.76	0	0.03	0	0	0		0.39	0.26	0.47
4	0		0	0.84		0.34	0.02	0.42	0.33	2.89	0.05	0	0	0	0		0.49	0.49	
5	0.24		0	0.82	0.01				0.09	0.07	0.02	0	0	0	0			1.18	
6	0		0	0.01	0.25	0.01	0.61			0.2	0	0.02	0	0	0		0.1	0.23	
7	0		0			0.19	0.64	0.07	0.03		0.55	0.05	0	0	0		0.16	0.02	
8	0		0		0.77	0.79	0.28		0.01	0.6	0	0	0	0.02	0		0.02	0.46	
9	0		0	0.1	2.57	0.35	0.58		0.2	0.39	0.01	0	0	0	0				0.34
10	0		0		0.24	0.2	0.4	0.02	0.14		0	0	0	0.88	0		0.47	0.07	0.21
11	0		0	0.36		0.01	1.5	0.28	0.63		0	0	0	0.12	0		0.23	0.22	
12	0		0		1.39	0.03	0.29	0.29	0.1		0	0.14	0	0	0		0.14		
13	0		0	0.07	0.22	0.03	0.42	0.18	0.01	0.02	0.17	0.03	0	0	0		0.02		0.02
14	0		0	1.21	0.16	0.01	0.14	0.01	0.01	0.07	0	0	0.09	0	0				
15	0		0	0.17	0.03	0.23	0.01	0.32		0.02	0	0.2	0.12	0	0		0.04		0.33
16	0		0		0.3	0.15		0.02			0.03	0.16	0	0	0	0.32	0.93		
17	0	0.05	0	0.51				0.04			0.06	0	0	0	0		0.16	0.28	
18	0		0			0.15		1.88	0.2		0	0	0	0	0		0.43	0.28	
19	0	0.04	0		0.04			0.45			0	0.17	0	0	0		1.21		
20	0	0.18	0	0.85	0.07						0	0.63	0	0	0		0.2	0.29	0.18
21	0	0.07	0	0.01	0.75						0	0	0	0	0		0.02		0.01
22	0		0		0.5						0	0	0	0	0	0.51		0.06	0.85
23	0		0		3.05		0.03		0.32	0.35	0.23	0	0	0	0	0.57	0.32	0.01	0.78
24	0		0		2.07	0.03			0.18	0.16	0.35	0	0.34	0	0	0.17	0.54	0.12	0.15
25	0		0	0.21	0.06				0.03	0.04	0.01	0	0.02	0	0	0.13	0.02	0.06	0.18
26	0		0		0.14	0.09						0	0	1.04	0	0.04	0.65	0.17	0.28
27	0	0	0	0.24	0.03	0.02					0	0	0	0.16	0				2.15
28	0	0.25	0	0.28	0.36			0.14		0.05	0	0	0	0.54	0	0.22	0.02	0.17	0.82
29	0	0.67	0	0.39	0.2						0	0	0	0.22	0	0.03	0.01	0.15	0.94
30	0		0	0.44	0.76	0.09	0.35				0	0	0	0.24	0		0	0.01	0.88
31	0.01			0.21		0.17	0.32		0				0	0	0				0.38
Monthly Total	0.81	1.27	0	7.12	14.32	4.04	5.61	6.33	5.19	8.1	1.48	1.43	0.57	3.22	0	1.99	6.58	4.57	9.88
Yearly Total						57.46												45.07	

Table ____

Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	Jun-90
Rain Gage No. 3																			
1					0.46	0	0	0.15	0	0	0.12	0	0	0	0.49	0		0	
2					0.21	0	0	0.15	0	0	0	0	1.25	0	0.37	0		0	
3					0.26	0	0	0	0	0	0	0.02	1.12	0	0.51	0		0	1.1
4					0.4	0	0	0	0	0	0	0.54	2.25	1.03	0.01	0		0	0.31
5					1.2	0	0	0	0	0	0	0	0.02	1.05	0.82	0		0	0.02
6					0.07	0	0	0	0	0	0.05	0	0.01	0.87	0.22	0.35		0.14	
7					0	0	0	0	0	0	0	0	0.16	1.6	0.11	0.51		0	
8					0	0	0	0	0	0	0	0.2	0.39	0.52	0.07	0.43		0	0.15
9				0.21	0	0	0	0	0	0	0	0.3	0	4	0.22	0.81		0	0.73
10				0.39	0	0	0	0	0	0	0.13	1.25	0	0	0.38	0.28		0	0.74
11				0.38	0	0	0	0	0	0	0.04	0.87	0	0.08	0.31	0		0	0.03
12				1	0	0	0	0	0	0	0.36	0.82	0	0		0.16		0	
13				0.25	0	0	0.02	0	0	0	0.18	0.32	0	0		0.48		0.08	0.13
14				0.2	0	0	0.27	0	0.2	0	0	0.02	0	0.12		0		0	
15				0.08	0	0	0	0	0.02	0	0	0	0	0.1	0.76	0.01		0	
16				0.23	0	0	0	0.34	0	0	0	0.38	0	0	0.7	0	0.14	0	
17				0.12	0	0.72	0.03	0	0	0	0	0	0	0	4	0.32		0.02	
18				0.31	0	0.05	0.01	0	0	0	0	0	0	0	0.04	0	0.22	0	
19				0	0	0	0.28	0	0	0	0.18	0	0	0.13		0	0.09	0	
20				0.06	0.18	0	0.02	0	0	0	0.18	0.17	0	0	0.79	0		0	
21				0.33	0	0	0	0	0.13	0	0.74	0	0	0	0.02	0		0.35	
22				0	0	0	0	0	0.29	0	0.83	0.21	0.08	0.51	0.2	0	0.73	0	
23				0	0.15	0.21	0	0	0	0	0.64	0.69	0	0.24		0		0	
24				0.4	0	0	0	0	0	0	0.03	0.31	0	0		0.3		0	
25				0.43	0	0.01	0	0	0	0	0	0.09	0	0.37	0.03	0		0	
26				0.11	0.02	0.08	0	0	0	0.33	0	0.43	0	0.03		0		0	
27				0.41	0	0.22	0	0	0	0	0.65	0.01	0.22	0.51		0		0	
28				0.13	0	0.53	0.1	0	0	0	0	0.01	0	1.3		0	0.57	0	
29				0.07	0	0.2	0.23	0	0	0	0	0	0	0.45		0		0.14	
30				0.14	0	0	0.38	0.02	0	0	0.01	0	0	0.42		0	0.08	0.24	
31				0.15		0		0.01	0		0		0	0.66		0		0.88	
Monthly Total				5.38	2.95	2.02	1.34	0.67	0.84	0.33	4.14	6.64	5.5	13.99	10.05	3.65	1.83	1.85	3.21
Yearly Total													29.61						

Table ____

Summary of Rainfall Data
Vaahon-Maury Island GWMA
Project No. WA028.01

DAY	Jul-90	Aug-90	Sep-90	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Oct-91	Nov-91	Dec-91	Jan-92
Rain Gage No. 3																			
1	0	0	0	0.05	0.08	0.57		0.22			0	0	0	0					0.2
2	0.53	0	0	0	0.1			1.98			0	0	0	0				0.13	0.68
3	0	0	0	0.25	0			1.1	4.35	1.77	0	0	0	0					0.26
4	0	0	0	0.68	0	1.86		0.75	0.18	2.62	0	0	0	0			0.64	0.27	
5	0.1	0	0	0.4	0.22			0.21		1.3	0	0	0	0					1.63
6	0	0	0	0.39	0						0.39	0	0	0					0.03
7	0	0	0	0	0	0.02					0.68	0.11	0	0					
8	0	0	0	0	0.16					0.3	0.1	0	0	0					0.57
9	0	0	0	0.07	2.34	1.2		0.61	0.22	0	0	0	0	1			1.16		0.5
10	0	0	0	0	0	0.3			0.35	0	0.09	0	0.03			0.76	0.04		0.5
11	0	0	0	0.28	0	0.32	4	0.41		0	0	0	0			0.5			0.51
12	0	0	0	0	2		1.3				0.06	0	0	0	0.01		1.12	0.03	
13	0	0	0	0	1.19		0.6				0	0	0	0			0.1		0.03
14	0	0	0	1.32	0.29		0.3	0.81			0	0	0	0	0.01				0.2
15	0	0	0	0	0						0	0	0.08	0		0.24			0.04
16	0	0.08	0	0.01	0						0	0.4	0	0			1.66		
17	0	0	0	0	0	0.2					0	0.06	0	0					
18	0	0	0	0.36	0		0.09	0.52			0	0	0	0			0.08	0.8	
19	0	0	0	0	0.33			2.93			0	0	0	0			1.74		
20	0	0	0	0	0						0	0	0	0			0.3	0.04	
21	0	0	0	0.75	0.51						0	0	0	0					
22	0	0	0	0	0.58			0.12			0	0	0.32	0		0.45	0.4		
23	0	0	0	0	1.37				0.32		0	0	0	0		1.15	0.25		
24	0	0	0	0.01	5.35						0.51	0.68	0.31	0		0.75	0.41		3.03
25	0	0	0	0.24	0						0	0	0	0		0.22	0.07		0.3
26	0	0	0	0	0	0.16		0.45			0	0	0	0		0.02	0.51		0.34
27	0	0	0	0.16	0.13						0	0	0					0.64	1.37
28	0	0	0	0.19	0						0.14	0	0			0.5			3.67
29	0	0.52	0	0.19	0						0	0	0	1.55		0.03	0.01		1.23
30	0	0.32	0	0.27	0.5						0	0	0	0.49				0.31	0.67
31	0	0.19	0	0.35	0	0.24					0		0	0				0.02	0.91
Monthly Total	0.63	1.09	0	5.97	15.15	4.87	6.29	6	6.64	6.88	1.88	1.34	0.71	3.07	0.02	3.36	9.71	4.51	14.42
Yearly Total						62.29												52.41	

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	Jun-90
Rain Gage No. 4																			
1				0		0	0	0.32	0	0	0.03	0	0	0.47		0	0	0	
2				0		0	0	0.06	0	0	0	0	0	0	0.26	0	0	0.06	0.88
3				0	0.83	0	0	0.07	0	0	0	0.01	1.41	0.04		0	0	0	
4				0	0.44	0	0	0	0	0	0.03	0.58	2.03	0.49	0.47	0.08	0	0	0.45
5				0.13	0.86	0	0	0	0	0	0	0	0.7	0.09	0.46		0	0	0.18
6				0.61	0.57	0	0	0	0	0	0	0.02	0.03	1.18	0.3		0		0.42
7				0.48	0.1	0	0	0	0	0	0.02	0.13	0	0	0.2	0.44	0	0.19	0
8				0.02	0	0	0	0	0	0	0	0	0.6	2.28	0.5	0.34	0	0	0.1
9				0	0	0	0	0	0	0	0	0.51	0.08	1.12		0.56	0	0	
10				0.42	0	0	0	0	0	0	0	0.34	0	1.79			0	0	0.81
11				0.32	0	0.01	0	0	0	0	0.11	0.91	0	0	0.8	0.81	0.13	0	0
12				0.6	0	0	0	0	0	0	0.41	1.81	0	0.03	0	0	0.04	0	0.1
13				0.56	0	0	0	0.03	0	0	0.04	0.02	0	0	0	0	0	0	0.3
14				0.36	0	0	0.3	0	0	0	0.16	0.29	0	0.14	0	0.56	0.38	0.1	0
15				0.06	0	0	0.02	0	0.25	0	0.01	0	0	0.1		0	0	0	0
16				0.08	0	0	0	0.13	0	0	0	0	0	0.15	0.59	0	0	0	0
17				0.34	0	0	0	0.33	0	0	0	0.44	0	0	1.37	0.14	0.03	0	0
18				0.18	0	0.695	0	0	0	0	0	0.02	0	0	0	0.21	0	0	0
19				0.16	0.03	0	0.08	0	0	0	0.11	0.07	0.01	0	0	0.01	0.2	0	0
20				0	0.17	0	0.28	0	0	0	0	0.05	0.02	0		0.05	0.09	0.05	0
21				0.26	0.15	0.06	0	0	0.02	0	0.73	0.2	0	0	0.67	0	0	0.2	0
22				0.1	0	0	0	0	0.59	0	0.67	0	0	0.34	0	0		0.21	0
23				0	0.25	0.18	0	0	0	0	0.35	0.4	0.03	0.38	0	0.285	0.54	0.02	0.04
24				0	0	0.04	0	0	0	0	0.43	0.4	0.03	0	0.02	0	0.02	0	0
25				0.81	0	0	0	0	0	0	0.02	0.77	0	0.33	0		0.27	0	0
26				0.03	0.02	0	0	0	0	0.16	0.46	0.46	0	0.48	0			0	0
27				0.25	0	0.61	0	0	0	0.08	0.26	0.01	0		0		0.32	0	0.03
28				0.3	0	0.3	0.07	0	0	0	0.12	0	0.01	0.59	0		0	0	0
29				0.21	0	0.31	0.1	0	0	0	0.025	0	0				0.11	0.05	0
30				0.01	0	0.01	0.22	0.06	0	0.09	0	0	0				0	0	0
31				0.2		0		0	0		0		0.05	2.2		0		1.02	
Monthly Total				6.51	3.42	2.215	1.05	1	0.86	0.33	3.985	7.44	5	12.2	5.64	3.465	2.13	1.9	3.31
Yearly Total													31.81						

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Jul-90	Aug-90	Sep-90	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Oct-91	Nov-91	Dec-91	Jan-92
Rain Gage No. 4																			
1	0	0	0	0	0.57	0.68	0												
2	0	0	0	0	0			0.49	0.91										
3	0.32	0	0	0.29	0.08	0.18	0	0.55											
4	0	0	0	0.19	0.17	1	0												
5	0	0	0	0.38		0.61	0	1.54		6.15									
6	0.55	0	0	0.2	0.02	0	0	0											
7	0	0	0	0	0.17	0	0	0		0.25									
8	0	0	0	0	0.02	0.24	0	0											
9	0	0	0	0	0.96		1.45	0.05		0.48									
10	0	0	0	0.08	3.14	0.28													
11	0	0	0	0	0.22		0.84												
12	0	0	0	0	0		1.59											0.6	
13	0	0	0	0.32	1.14		0.31		3.85	0.37									
14	0	0	0	0.1	0.35	0.05		0.78	0	0.3									
15	0	0	0	0	0.22	0	0.56		0									0.05	
16	0	0	0	1.19	0.02	0.25	0	0.24	0										
17	0	0	0	0	0.27	0.11	0		0										
18	0	0.18	0	0.39	0	0.25	0.03	0.05	0	0.6									
19	0	0	0	0	0	0	0		0										
20	0	0	0	0	0.03	0	0	2.23	0									0.24	
21	0	0	0	0.81	0.06	0	0	0	0										
22	0	0.28	0	0.02	0.89		0		0										
23	0	0	0	0	0.47	0	0		0.29										
24	0	0	0.04	0	3.71	0	0												
25	0	0	0		1.54	0.07	0												
26	0	0	0	0.2		0	0												
27	0	0	0	0		0.06	0												
28	0	0	0	0.19		0	0			0.68									
29	0	0	0		0.73	0	0												
30	0	0.26	0	0.61	0	0	0		0.47	0									
31	0	0.39				0.17	0.31												0.68
Monthly Total	0.87	1.11	0.04	4.97	14.78	3.95	5.09	5.93	5.52	8.83	1.57	No data	No data	No data	No data	No data	No data	No data	No data
Yearly Total	54.385																		

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	Jun-90	
Rain Gage No. 5																				
1		0				0	0	0.19		0	0	0	0	0.14				0	0.1	
2		0.05				0	0	0.19		0	0	0	1.25	0	0.46			0.08	0.2	
3		0.21				0	0	0.03		0	0	0.16	0.37	0.4	0.5	0.02		0	1.05	
4		0.04				0	0	0		0	0	0.17	0.37	0.08	0.01			0	0.27	
5		0.4				0	0	0		0	0	0.17	0.37	0.95	0.27			0	0	
6		0.3			0.66	0	0	0		0	0	0.15	0.37	0.82	0.25			0	0.5	
7		0.015			0.1	0	0	0		0	0	0.09	0.37	0.83	0.45	0.6		0.05	0.05	
8		0.8			0	0	0	0		0	0	0.36	0.37	0.58	0.15	0.25		0	0.23	
9		0.05			0	0	0	0		0	0	0.5	0.37	3.35		0.4		0	0.4	
10		0			0	0	0	0		0	0	0.84	0.38	0.19	0.9	0.2		0	0.42	
11	0.26	0			0	0	0	0		0	0.16	0.87	0.38	0.07	0.29		0.28	0		
12	0.15	0.01			0	0	0	0		0	0.16	0.88	0.11	0	0.09			0.08	0.15	
13	0.05	0.35			0	0	0	0		0	0.16	0.32	0	0.17		0.1	0.3	0.05	0.1	
14	0	0			0	0	0.32	0		0	0.17	0.1	0	0.03		0.37	0.08	0		
15	0	0.16			0	0	0	0		0	0	0	0	0.01				0		
16	0	0.5			0	0	0	0.38		0.1	0	0.5	0	0				0		
17	0	0.2			0	0.4	0			0.03	0	0.17	0	0.04		0.41	0.1	0		
18	0.1	0.25			0	0.01	0			0	0.17	0	0	0				0		
19	0.4	0			0.15	0	0.38			0	0.06	0.18	0	0				0		
20	0.24	0.12			0.12	0	0.1			0	0.21	0.12	0	0		0.07		0.17		
21	0.13	0.05			0	0	0		0.39	0	0.25	0.195	0	0.17				0.08		
22	0.51	0.33			0	0	0		0	0	0.7	0	0	0.17		0.19		0.13		
23	0.28	0.08			0	0.15	0		0	0	0.49	0	0.18	0.17		0.04		0.05		
24	0.02	0			0	0.09	0		0	0	0.125	0.91	0	0.17				0		
25	0	0			0		0		0	0	0.04	0.27	0	0.17			0.8	0		
26	0	0			0	0.15	0		0	0.2	0.65	0.27	0	0.07				0		
27	0	0			0		0		0	0.06	0.07	0	0.27	0.29			0.34	0.1		
28	0	0			0	0.75	0.14		0	0.05	0.07	0	0.1	0.98			0.1	0	0.01	
29	0.95	0			0	0.08	0.13		0	0	0.07	0	0.02	0.37				0		
30	0.65	0.29			0	0.01	0.06		0	0.02	0.09	0	0	0.25				0.1		
31	0.01	0.05		1.34		0			0	0	0		0.52	0.8				0.75		
			Estimated																	
Monthly Total	3.95	4.255	2.8	1.34	1.03	1.64	1.13	0.79	0.39	0.46	3.645	7.225	5.8	11.27	3.37	2.65	2	1.64	3.48	
Yearly Total													30.505							

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Jul-90	Aug-90	Sep-90	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Oct-91	Nov-91	Dec-91	Jan-92
Rain Gage No. 5																			
1	0		0	0.07	0.1	0.42					0		0	0	0.05			0.07	0.5
2	0.25		0		0.07	0.05		0.8	1.4	0.37			0	0					0.4
3	0		0	0.27	0.31			0.75	1.1	0.75		0.05	0	0					0.1
4	0		0	0.85	0.15	1.15		0.52	0.25	3.38			0	0			0.42		0.26
5	0.1		0	0.09	0.09	0.08	0.05	0.35	0.33	1.25	0.15	0.05	0	0			0.5	1.55	0.02
6	0.32		0	0.45	0.08			0.05		0.21			0	0			0.03	0.2	
7	0		0	0.06	0.21	0.03		0.05		0.05	0.45		0	0.05			0.08	0.13	
8	0		0				1.3				0.25		0	0			0.2	0	
9	0		0	0.1	2.1	0.95	0.5	0.25			0.05		0	0.92			0.16	0.34	0.01
10	0		0	0.04	0.46	0.25	0.28						0	0.1			0.1	0.05	0.31
11	0		0	0	0.1	0.13	0.75	0.28					0	0			0.7	0.1	0.04
12	0		0	0.31	0.15	0.1	1		0.9				0	0			0.15	0.13	
13	0		0		1.1		0.23	0.35				0.1	0	0	0.05		0.1	0.04	
14	0		0	0.4			0.4						0	0			0.05		0.03
15	0		0	1.1		0.25	0.05				0.05	0.15	0	0					0.02
16	0		0			0.15	0.05	0.3		1.05		0.23	0	0		0.3			0.24
17	0	0.15	0					0.2					0	0				0.78	
18	0		0	0.55	0.56		0.1	1.95	0.09		0.25		0	0			0.2	0.5	
19	0		0		0.08				0.25				0	0			0.85		
20	0	0.05	0								0.05		0	0			0.48	0.07	
21	0	0.28	0	0.89	0.43								0	0			0.05	0.38	0.12
22	0	0.04	0	0.09					0.04				0	0		0.45		0.1	
23	0	0	0	0.05			0.05		0.03	0.18			0			0.16	0.2	0.05	
24	0	0	0		4.53				0.6	0.5			0.3			0.7	0.6		
25	0	0	0	0.24	0.18	0.12			0.05	0.1	0.58	0.85	0.05			0.3	0.32		
26	0		0	0.1	0.1					0.05			0				0.54	0.15	
27	0		0	0.19						0			0				0.28	0.25	
28	0		0	0.24	0.13			0.2		0.08			0			0.24	0.25	0.13	
29	0		0	0.1	0.5							0.1	0	1.5		0.06		0.1	
30	0		0	0.26	0.17								0	0					4.9
31	0	0.35		0.81		0.22	0.55				0.1		0	0.58				0.18	0.48
Monthly Total	0.67	0.87	0	7.26	11.6	3.9	5.31	6.05	5.04	7.95	1.93	1.53	0.35	3.15	0.1	2.21	7.04	4.52	7.43
Yearly Total						48.71												45.18	

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	Jun-90
Rain Gage No. 6																			
1		0	0		0.5	0	0	0.31	0	0.13	0.03	0	0	0.04	0.1	0	0	0	0.01
2		0	0.1		0.3	0	0	0.04	0	0	0	0	1.36	0		0.03	0	0	0
3		0.2	0		0.3	0	0	0	0	0	0	0.33	0.92	0.18	0.54	0	0	0	1.1
4		0.01	0	0.2	0.42	0	0	0	0	0	0	0.14	2.09	0.29		0	0	0	0.31
5		0.2	0	0.8	0.9	0	0	0	0	0	0	0	0.02	1.16	0.89	0.29	0	0	0
6		0.01	0	0.3	0.08	0	0	0	0	0	0	0.11	0.01	0.1	0.2	0	0	0	0.3
7		0.2	0	0.2	0	0	0	0	0	0	0.02	0	0.06	1.21	0.5	0	0	0.11	0
8		0.4	0	0	0	0	0	0	0	0	0	0.23	0.53	0.97	0.03	0.83	0	0	0.11
9		0.1	0	0.12	0	0	0	0	0	0	0	0.26	0	2.61	0.17	0.79	0	0	0
10		0.01	0	0.32	0	0	0	0	0	0	0.1	1	0	0.01	0.34	0.2	0	0	0.8
11	0.05	0	0	0.4	0	0	0	0	0	0	0.01	0.86	0	0	0.31	0	0.12	0	0
12	0.08	0	0		0	0	0	0.02	0	0	0.35	0.82	0	0.04		0	0	0	0
13	0.05	0.5	0		0	0	0	0	0	0	0.2	0	0	0.1		0.16	0.21	0.01	0.28
14	0	0.2	0		0	0	0.25	0	0.11	0	0	0	0	0.05		0.4	0.02	0.1	0
15	0	0	0		0	0	0	0	0	0	0	0	0	0.1		0	0	0	0
16	0	0.5	0		0	0	0	0.4	0	0	0	0.69	0	0		0	0	0	0
17	0	0.02	1.25		0	0.65	0	0.05	0	0	0	0.06	0	0		0.2	0.18	0	0
18	0.15	0.3	0.5	1.02	0	0.04	0	0	0	0	0.15	0	0	0	0.69	0		0	0
19	0.15	0	0	0.08	0.1	0	0.29	0	0	0	0	0	0.01	0		0	0.1	0	0
20	0.45	0.1	0.2	0	0.24	0	0	0	0	0	0.11	0.11	0	0	0.68	0	0.05	0.11	0
21	0.05	0	0.1	0.25	0.01	0	0	0	0.41	0	0.73	0	0.01	0	0	0	0	0.1	0
22	0.5	0.35	0.6	0	0	0	0	0	0.03	0	0.81	0	0	0	0	0		0	0.01
23	0.2	0	0.28	0	0.08	0.12	0	0	0	0	0.57	0.54	0	0	0.03	0.22	0.54	0	0
24	0	0	0	0.5	0	0	0	0	0	0	0.03	0.51	0	0	0	0		0	0
25	0	0	0.25	0.3	0	0	0	0	0	0	0	0.07	0	0	0	0	0.22	0	0
26	0	0.01	0	0	0	0.05	0	0	0	0.2	0.61	0	0	0	0	0		0	0
27	0	0	0.01	0.45	0	0	0	0	0	0	0.02	0	0.21	1.84	0	0	0.28	0.18	0
28	0	0	0	0.12	0	0.5	0.04	0	0	0	0	0	0	0	0	0		0	0
29	0.48	0		0.05	0	0	0.2	0	0	0	0	0	0	1.53		0	0.2	0	0
30	1.37	0.23		0.12	0	0	0.16	0	0	0	0	0	0	0.34		0	0	0.06	0
31	0.02	0		0.03		0		0	0	0			0.31	0.91		0		0.75	
Monthly Total	3.55	3.34	3.29	5.26	2.93	1.36	0.94	0.82	0.55	0.33	3.74	5.73	5.53	11.48	4.48	3.12	1.92	1.42	2.92
Yearly Total													33.82						

Table ____

Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Jul-90	Aug-90	Sep-90	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Oct-91	Nov-91	Dec-91	Jan-92
Rain Gage No. 6																			
1	0	0	0	0	0	0.6	0	0.59			0	0	0	0	0	0	0.01		
2	0.32	0	0	0	0		0	0.62	2.03		0	0	0	0	0	0		0.22	0.75
3	0	0	0	0.6	0.2	0.31	0	0.81	1.52		0	0	0	0	0	0			0.61
4	0	0	0	0		0.6	0			4.42	0	0	0	0	0	0	0.29	0.2	0
5	0	0	0	0.29		0	0	0.9		1.3	0.13	0	0	0	0	0		1.45	
6	0	0	0	0		0	0			0.3	0	0	0	0	0	0	0.4	0.23	
7	0	0	0	0.15		0	0.92			0		0.05	0	0	0	0			0.02
8	0	0	0	0		0	0.36			0.37	0.62	0	0	0	0	0			0
9	0	0	0		2.3	0.75	0.34	0.05	0.4	0.17	0	0	0	0.82	0	0		0.4	
10	0	0	0		1.31	0.28	0.42		0.2	0.33	0	0	0	0	0	0			0.5
11	0	0	0			0.03	0.7	0.18	0.3	0	0	0	0	0	0	0			
12	0	0	0	0.3					0.38	0	0	0	0	0	0	0		0.25	
13	0	0	0	0.17			1.42			0	0	0	0	0	0	0			
14	0	0	0	0	1.46		0.29	0.28		0	0.01	0	0	0	0	0			
15	0	0	0	1.12	0	0.16	0	0.1		0.03	0	0	0	0	0	0	1.3		
16	0	0	0	0.01	0.05		0			0	0	0	0	0	0	0.15	0.9		
17	0	0	0		0	0.02	0	0.07		0	0	0	0	0	0	0	0.56		
18	0	0.03	0		0		0	0.08		0	0	0	0	0	0	0	0.02	0.52	
19	0	0	0		0		0	1.8		0	0.18	0.22	0	0	0	0			
20	0	0	0		0		0	0.02		0	0	0.69	0	0	0	0	1.68		
21	0	0.3	0		1.02		0		0.02	0	0	0	0	0	0	0			
22	0	0	0				0			0	0	0	0	0	0	0.52		0.25	
23	0	0	0				0			0	0	0	0	0	0	0	0.19		1.92
24	0	0	0		5.8		0		0.52	0.5	0	0	0.3	0	0	0.71			
25	0	0	0	1	0		0			0.07	0.5	0	0	0	0		0.58	0.15	0.5
26	0	0	0	0	0.06		0	0		0	0	0	0	0	0				
27	0	0	0	0			0			0	0	0	0	1.12	0	0.2			1.92
28	0	0	0	0.36			0	0		0	0	0	0	0.27	0	0.2		0.2	1.08
29	0	0	0	0.2			0			0	0	0	0	0.2	0	0			0.87
30	0	0	0	0	0.4		0				0.1	0.05	0	0	0	0	0.5		
31	0	0.6		0.62		0.2	0.5					0	0	0.42		0		0.25	1.5
Monthly Total	0.32	0.93	0	4.82	12.6	2.95	4.95	5.5	5.37	7.49	1.54	1.01	0.3	2.83	0	1.78	6.43	4.12	9.67
Yearly Total						46.96												41.32	

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	Jun-90
Rain Gage No. 7																			
1	0	0	0.09	0	0.35	0	0	0.36	0.01	0	0.2	0	0	0.3	0.69	0	0	0	0.06
2	0	0.04	0.14	0.7	0.34	0	0	0.1	0	0	0	0	0.02	0	0.2	0	0	0.04	0
3	0.1	0.13	0	0	0.16	0	0	0.11	0	0	0	0	1.26	0.04	0.35	0	0	0	0.95
4	0	0.16	0	0	0.43	0	0	0	0	0	0	0.46	1.95	0.48	0.4	0.13	0	0	0.62
5	0.02	0.07	0	0.2	0.96	0	0	0	0	0	0.06	0	0.73	0.22	0.33	0.02	0	0	0.34
6	0.38	0.43	0	0.52	0.3	0	0	0	0	0	0	0.05	0.05	1.1	0.31	0.1	0	0	0.01
7	0.05	0	0	0.43	0.08	0	0	0	0	0	0	0.29	0	1.23	0.04	0.42	0	0	0.37
8	0	0.24	0	0	0	0	0	0	0	0	0	0	0	1.04	0.55	0.29	0	0	0.15
9	0	0.24	0	0.05	0	0	0	0	0	0	0	0.96	0.64	1.78	0.11	0.6	0	0	0.08
10	0	0.1	0	0.42	0	0	0	0	0	0	0	0.33	0.09	1.33	0.92	0.66	0	0	0.73
11	0	0.01	0	0.45	0	0	0	0	0	0	0.1	0.7	0	0	0.55	0.02	0.14	0	0.2
12	0.12	0	0	0.6	0	0	0	0	0	0	0.42	1.65	0	0.06	0.11	0	0.06	0	0.13
13	0.13	0.39	0	0.43	0	0	0	0	0	0	0.15	0.03	0	0.18	0	0	0	0.11	0.12
14	0	0.22	0	0.25	0	0	0.32	0.02	0	0	0.1	0.37	0	0	0	0.52	0.36	0.06	0
15	0	0.15	0	0.06	0	0	0.04	0	0.11	0	0	0.04	0	0.1	0.11	0.05	0	0	0
16	0	0.53	0.13	0.28	0	0	0	0.16	0	0	0	0	0	0.11	0.37	0	0	0	0
17	0	0.18	0.85	0.17	0	0.01	0	0.38	0	0.05	0	0.58	0	0	1.5	0.16	0.11	0	0
18	0	0.35	0.55	0.17	0	0.61	0.04	0	0	0	0	0	0	0	0	0.23	0.08	0	0
19	0.44	0	0.23	0.17	0.04	0	0.08	0	0	0	0	0.16	0	0	0	0.02	0.05	0	0
20	0.16	0.12	0.07	0	0.15	0	0.34	0	0	0	0	0.04	0	0	0.65	0.07	0.16	0.03	0
21	0.3	0	0.02	0.37	0.21	0	0	0	0	0	0.73	0.16	0	0	0.12	0	0	0.14	0
22	0.3	0.4	0.5	0.02	0	0	0	0	0.35	0	0.47	0	0	0.4	0.02	0	0.09	0.2	0
23	0.3	0	0.29	0	0.11	0.14	0	0	0	0	0.4	0.4	0.08	0.36	0	0.23	0.52	0	0
24	0.3	0	0.18	0	0	0.04	0	0	0	0	0.37	0.47	0	0.03	0.04	0.02	0.02	0	0
25	0.3	0	0.28	0.97	0	0	0	0	0	0	0.08	0.35	0	0	0	0	0.3	0	0
26	0.3	0	0.03	0.05	0.02	0	0	0	0	0.11	0.52	0.35	0	0.6	0	0	0	0	0
27	0.3	0.1	0	0.27	0	0.4	0	0	0	0.11	0.31	0	0	0.51	0	0	0.2	0.02	0
28	0.3	0	0.02	0.31	0	0.29	0.08	0	0	0.02	0.05	0	0.24	0.58	0	0	0.2	0.06	0
29	0.3	0	0	0.2	0	0.28	0.18	0	0	0	0	0	0	0.62	0	0.05	0	0.01	0
30	0.3	0.02	0	0	0	0	0.11	0.02	0	0.06	0	0	0	0.45	0	0	0.02	0	0
31	0.04	0.29	0.37	0	0	0	0	0	0	0	0	0	0.11	0.23	0	0	0.96	0	0
Monthly Total	4.44	4.17	3.38	7.46	3.15	1.77	1.19	1.15	0.47	0.35	3.96	7.39	5.17	11.75	7.37	3.54	2.34	1.64	3.77
Yearly Total	39.59																		

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Jul-90	Aug-90	Sep-90	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Oct-91	Nov-91	Dec-91	Jan-92
Rain Gage No. 7																			
1		0	0	0	0.09	0.8	0.2	0.32	0.07		0	0	0	0	0.23	0	0	0.01	0
2		0	0	0.04	0	0	0	0.51	1.02		0	0	0	0	0	0	0	0	0.9
3		0	0	0.21	0.1	0.34	0	0.8	1.02		0	0	0	0	0	0	0	0	0.11
4		0	0	0.13	0.28	0.77	0	0.76	0.8		0	0	0	0	0	0	0.36	0.23	0.42
5		0	0	0.77	0	0.34	0	0.38	0.48		0.07	0	0	0	0	0	0.38	0.43	0
6		0	0	1.02	0	0.01	0	0	0.09		0	0	0	0	0	0	0.02	0.92	0
7		0	0	0	0.26	0	0.6	0	0.04		0.1	0	0	0	0	0	0.1	0.32	0
8		0	0	0	0	0.25	0.57	0.04	0		0.6	0	0	0	0	0	0.15	0	0
9		0	0	0	0.6	0.68	0.37	0	0		0.01	0	0	0.9	0	0	0.05	0.43	0
10		0	0	0.09	2.4	0.3	0.5	0	0.27		0	0	0	0.25	0	0	0.2	0	0.26
11		0	0	0	0.12	0	0.38	0	0.02		0	0.04	0	0	0	0	0.51	0.05	0.28
12		0	0	0.38	0	0.14	1.45	0.32	0.82		0	0	0	0	0	0	0.15	0.1	0
13		0	0	0	1.22	0.04	0.23	0.2	0.08		0	0	0	0	0	0	0.25	0.01	0
14		0	0	0.11	0.2	0.03	0.42	0.4	0		0.1	0.15	0	0	0	0	0.03	0	0.02
15		0	0	1.25	0.28	0	0.29	0	0		0	0.05	0.03	0	0	0	0	0	0
16		0	0	0.21	0.03	0.2	0	0.12	0		0	0.26	0	0	0	0	0.01	0	0.29
17		0	0	0	0.25	0.13	0.05	0.03	0		0	0.2	0	0	0	0.3	0.77	0	0.02
18		0.05	0	0.54	0	0	0.03	0	0		0.15	0	0	0	0	0	0.17	0.3	0
19		0	0	0.03	0	0.25	0	1.55	0.14		0.04	0	0	0	0	0	0.5	0.19	0
20		0.04	0	0	0	0	0	0.72	0		0	0.17	0	0	0	0	0.95	0	0
21		0.11	0	0.85	0.09	0	0	0	0		0	0.68	0	0	0	0	0.05	0	0.19
22		0.2	0	0	0.76	0	0	0	0		0	0.02	0	0	0	0	0	0	0
23		0	0	0	0.51	0	0	0	0.06		0	0	0	0	0	0.62	0.1	0	0.88
24		0	0	0	3.15	0	0.03	0	0.5		0.31	0	0	0	0	0.67	0.07	0	0.72
25		0	0	0	1.55	0	0	0	0.07		0.41	0	0.28	0	0	0.2	0.57	0	0.07
26		0	0	0.25	0.04	0	0	0	0.02		0	0	0	0	0	0.18	0.04	0	0.22
27		0	0	0	0.19	0.13	0	0	0		0	0		1.06	0	0	0.64	0	0.25
28		0	0	0.2	0.02	0	0	0	0		0	0		0.4	0	0.23	0.02	0	2.05
29		0	0	0.24	0.22	0	0	0	0		0	0		0.32	0	0	0	0.85	0.72
30		0.27	0	0.31	0.26	0	0	0	0		0.17	0.12		0.03	0	0	0	0.14	0.8
31		0.22		0.51		0.08	0.31		0		0			0.27		0		0.02	1
	Estimated								Estimated										
Monthly Total	2.33	0.89	0	7.14	12.62	4.49	5.43	6.15	5.30	3.63	1.96	1.69	0.31	3.23	0.23	2.2	6.09	4.00	9.2
Yearly Total						57.88												40.22	

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	Jun-90	
Rain Gage No. 8																				
1		0.01	0			0	0	0		0.016	0				0.6					
2		0	0.15		0.7	0	0	0.22		0.016	0									
3		0	0	1.12	0.03	0	0	0		0.016	0									
4	0		0	0	0.68	0	0	0.13		0.016	0									
5	0	0.5	0	0		0	0	0		0.016	0									
6	0.52	0.07	0	0.13	1.25	0	0	0		0.016	0									
7	0.01	0.23	0	0.25	0.05	0	0	0		0.016	0									
8	0	0.4	0	0.1	0	0	0	0		0.016	0			6						
9	0	0.02	0	0.13	0	0	0	0		0.016	0				2.52					
10	0.01	0	0		0	0	0	0		0.016	0					1.08	0.42			
11	0.03	0	0		0	0	0	0		0.016	0.1				0.62					
12	0.02	0	0	1.25	0	0	0	0		0.016	0									
13	0.06	0.02	0	0.35	0	0	0	0		0.016	0									
14	0.03	0.8	0	0.5	0	0	0.25	0		0.016	0.4									
15	0	0.2	0	0.03	0	0	0	0		0.016	0.19	3	2.25						2.27	
16	0	0.43	0.18	0.2	0	0	0.05	0		0.016	0.19									
17	0	0.4	1.22		0	0	0	0.4	0.16	0.016	0.19									
18	0	0	0.41	0.63	0	0	0	0	0.16	0.016	0.19			1.1						
19	0.3	0	0.29	0.08	0.1	0.7	0	0	0.16	0.016	0.19									
20	0	0	0	0.02	0	0	0.2	0	0.16	0.016	0.2									
21	0.37	0.1	0	0.3	0.02	0	0	0	0.16	0.016	0.2									
22	0.27	0.2	0.58	0	0	0	0	0	0.16	0.016	0.2									
23	0.33	0.07	0.35	0	0.4	0	0	0	0.16	0.016	0.2									
24	0.12	0.02	0.2	0	0	0.2	0	0		0.016	0.2									
25	0	0	0	0.6	0	0	0	0		0.016	0.2									
26	0	0	0.19		0	0	0	0		0.016	0.2									
27	0	0	0	0.65	0	1	0	0	0.02	0.016	0.2			0.68						
28	0	0	0.04	0.2	0	0	0	0	0	0.016	0.2				1.6					
29	0.25	0		0	0	0	0	0		0.016	0.2			1.15		3.25				
30	1.35	0		0.23	0	0	0.62	0		0.016	0.2			0.8			1.5			
31	0.15			0.2		0	0	0			0.2	2.1	0.34	0.5	0.1	0.05		1.76		
									Estimated											
Monthly Total	3.82	3.47	3.61	6.97	3.23	1.9	1.12	0.75	1.14	0.46	3.85	5.1	2.59	10.43	5.44	4.38	1.92	1.76	2.27	
Yearly Total													34.21							

Table ____

Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Jul-90	Aug-90	Sep-90	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Oct-91	Nov-91	Dec-91	Jan-92	
Rain Gage No. 8																				
1																				
2																				
3						0.13	0.33													
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12						4.55														
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24						5.25														
25						0.6														
26																				
27																				
28																				
29																				
30																				
31						6.12	0.93													
Monthly Total	No data	No data	No data	6.12	11.46	Data Incomplete														
Yearly Total															43.78					

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Dec-88	Jan-89	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89	Jan-90	Feb-90	Mar-90	Apr-90	May-90	Jun-90
Rain Gage No. 9																			
1	0	0.03	0.05	0.04	0.31	0	0	0.37	0	0	0.02	0		0.35	1.1	0	0		0.04
2	0	0	0.08	0.62	0.45	0	0	0.08	0	0.13	0	0	0.01	0	0.09	0	0	0.05	0
3	0.14	0.11	0	0.04	0.05	0	0	0.05	0	0	0	0.01	1.52	0.03	0.34	0	0	0.04	0.9
4	0	0.17	0		0.48	0	0	0.01	0	0	0	0.59	2.26	0.46	0.38	0.07	0	0	0.64
5	0	0.14	0	0.26	1.06	0	0	0	0	0	0.02	0	0.51	0.23	0.57	0.01	0	0	0.16
6	0.53	0.57	0	0.52	0.32	0	0	0	0	0	0	0.03	0.02	0.94	0.45	0.12	0	0	0.1
7	0.05	0.05	0	0.42	0.08	0	0	0	0	0	0	0.1	0	1.34	0.07	0.06	0	0.12	0.28
8	0.01	0.2	0	0.03	0	0	0	0	0	0	0	0	0.53	0.99	0.49	0.2	0	0	0.12
9	0	0.16	0	0		0	0	0	0	0	0	0.42	0.06	1.91	0.07	0.6	0	0	0.01
10	0	0.11	0	0.39		0.01	0	0	0	0	0	0.28	0	0.74	0.27	0.83	0	0	0.7
11	0	0	0	0.43		0	0	0	0	0	0.13	0.79	0	0	0.32	0.02	0.14	0	0.03
12	0.09	0	0	0.54		0	0	0	0	0	0.31	1.76	0	0.05	0.01	0	0.03	0	0.02
13	0.19	0.41	0	0.59		0	0	0	0	0	0.07	0.03	0	0.15	0	0	0.01	0	0.23
14	0	0.18	0	0.25		0	0.28	0.01	0	0	0.12	0.29	0	0	0	0.59	0.34	0.15	0
15	0	0.17	0	0.04		0	0.02	0	0.28	0	0	0	0	0.12	0.13	0.01	0	0.01	0
16	0	0.29	0.08	0.15		0	0	0.11	0	0	0	0	0	0.17	0.09	0	0	0	0
17	0	0.26	1.14	0.16		0.02	0	0.31	0	0.04	0	0.44	0	0	1.33	0.14	0.17	0	0
18	0	0.37	0.67	0.17		0.63	0	0	0	0	0	0	0	0	0	0.21	0.02	0	0
19	0.46	0	0.2	0.18	0.11	0.01	0.08	0	0	0	0.13	0.05	0	0	0	0	0.03	0	0
20	0.18	0	0.08	0	0.12	0	0.2	0	0	0	0	0.09	0.03	0	0.74	0.04	0.09	0.04	0
21	0.33	0.07	0.01	0.28	0.1	0	0	0	0.01	0	0.88	0.14	0	0.3	0.05	0	0.03	0.15	0
22	0.01	0.12	0.51	0.03	0	0	0	0	0.54	0	0.34	0	0	0.34	0.01	0	0.06	0.19	0
23	0.49	0.13	0.36	0	0.33	0.18	0	0	0	0	0.84	0.39	0.05	0	0	0.25	0.46	0.01	0.02
24	0.23	0	0.2			0.07	0	0	0	0	0.41	0.47	0.01	0	0.08	0	0.11	0	0
25	0	0.04	0.31	0.8		0	0	0	0	0	0.01	0.28	0	0	0	0	0.24	0	0
26	0	0	0	0.03	0.01	0.01	0	0	0	0.14	0.43	0.49	0	0.34	0	0	0.01	0	0
27	0	0.04	0.02	0.27	0	0.37	0	0	0	0.06	0.2	0	0	0.45	0	0	0.16	0.03	0
28	0	0	0.03	0.24		0.34	0.08	0	0	0	0.08	0	0.23	0.54	0	0	0.1	0.03	0.01
29	0.05	0		0.19		0.33	0.08	0	0	0	0	0	0	0.64		0	0.09	0.02	0
30	1.77	0		0		0	0.16	0.05	0	0.03	0		0	0.67		0	0.01	0.02	0
31	0.08	0.25		0.17		0		0	0		0		0.04	0.14		0		0.93	
Monthly Total	4.61	3.85	3.72	6.64	3.42	1.97	0.9	0.99	0.83	0.4	3.99	6.65	5.27	10.9	6.59	3.15	2.1	1.79	3.26
Yearly Total													38.83						

Table ____ Summary of Rainfall Data
 Vashon-Maury Island GWMA
 Project No. WA028.01

DAY	Jul-90	Aug-90	Sep-90	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Oct-91	Nov-91	Dec-91	Jan-92	
Rain Gage No. 9																				
1	0	0	0	0	0.33	0.61	0.05	0.33	0.07					0.02	0.22		0.03	0.02		
2	0.1	0	0	0.02	0	0.08	0.01	0.46	1.66	0.04									0.01	
3	0.29	0	0	0.24	0.06	0.18		0.71	1.3	0.45							0	0		
4	0	0	0	0.18	0.14	1.21		1.2	0.74	2.64							0.43	0.29		
5	0	0	0	0.75	0	0.41		0.39	0.3	2.76	0.04						0.49	0.52		
6	0.34	0	0	0.13	0.01			0.01	0.07	0.06	0.08						0.02	1.08		
7	0.11	0	0	0	0.15		0.58		0.01	0.27	0.02	0.02		0.04			0.09	0.2		
8	0	0	0		0.01	0.19	0.34	0.05		0.01	0.52	0.05		0.02	0.01		0.18			
9	0	0	0		0.92	0.75	0.31			0.5	0.02			0.78			0.01	0.46		
10	0	0	0	0.05	2.97	0.41	0.5	0.01	0.24	0.28				0.1			0.01	0.01	0.46	
11	0	0	0		0.22	0.07	0.45		0.02	0.01		0.02					0.22	0.01		
12	0	0	0	0.28	0	0.03	1.71	0.28	0.65								0.44	0.1		
13	0	0	0	0.01	1.11	0.04	0.26	0.38	0.08								0.08	0.06		
14	0	0	0	0.05	0.23		0.31	0.11			0.05						0.05			
15	0	0	0	1.07	0.21		0.12			0.1		0.01	0.04							
16	0	0	0	0.21	0.01	0.22		0.13				0.22					0.04			
17	0	0	0		0.19	0.1	0.05	0.05			0.1	0.22				0.13	1.3			
18	0	0.1	0	0.35	0.07	0.02	0.03	0.03			0.12						0.1	0.3		
19	0	0	0		0	0.19		1.71	0.21		0.05						0.53	0.2		
20	0	0.04	0		0.06			0.27			0.01	0.13					1.27	0		
21	0	0.23	0	0.71	0.05			0				0.65					0.09	0.25		
22	0	0.03	0	0.16	0.73													0.02		
23	0	0	0		0.43				0.07							0.66	0.04	0.04		
24	0	0	0		3.3				0.23	0.39	0.31					0.51	0.27	0		
25	0	0	0	0	1.83	0.03			0.24	0.16	0.24		0.26			0.21	0.47	0.11		
26	0	0	0	0.23	0.02	0.08				0.04			0.01			0.18	0.01	0.05		
27	0	0	0		1.12	0.03								0.94		0.07	0.6	0.14		
28	0	0	0	0.17	0.01		0.04							0.23		0.06	0.01	0.03		
29	0	0	0	0.21	0.19					0.14				0.52		0.22	0.01	0.2		
30	0	0.22	0	0.45	0.25						0.1	0.13		0.05				0.12		
31	0	0.34		0.34		0.05	0.28							0.22				0.02		
Monthly Total	0.84	0.96	0	5.61	14.62	4.7	5.04	6.12	5.89	7.85	1.66	1.45	0.31	2.92	0.23	2.04	7.12	4.35		
Yearly Total							54.52												44.98	

Table 12: Monthly Precipitation at Sea-Tac Airport
 Vashon Island, Washington
 Project No. WA028.01

Month-Year Day	Jan-88	Feb-88	Mar-88	Apr-88	May-88	Jun-88	Jul-88	Aug-88	Sep-88	Oct-88	Nov-88	Dec-88
	(in hundredths of an inch)											
1	0	0	T	5	1	22	14	0	0	0	3	0
2	0	1	10	70	33	42	12	0	0	0	89	7
3	0	0	T	22	6	5	0	0	0	0	80	0
4	0	0	14	2	T	6	0	0	0	T	39	0
5	0	0	15	64	T	1	2	0	T	4	101	8
6	T	T	T	59	2	3	0	0	T	0	0	49
7	0	6	0	4	0	5	0	0	T	T	2	T
8	30	24	47	0	T	0	0	0	0	T	35	T
9	35	16	3	0	T	28	0	T	6	0	23	T
10	7	2	0	0	0	38	T	0	T	0	47	T
11	13	0	0	0	0	0	T	0	0	T	21	6
12	20	T	0	0	49	0	22	0	0	T	7	16
13	39	0	T	1	7	0	0	0	0	34	0	T
14	161	11	0	0	T	0	0	0	0	40	0	T
15	18	0	0	0	13	0	0	9	T	17	19	0
16	5	0	0	13	64	0	0	14	2	68	108	0
17	T	5	0	6	2	T	0	T	3	0	28	0
18	T	T	0	0	8	T	0	0	31	17	T	44
19	0	0	T	T	0	0	0	0	2	T	39	5
20	10	0	10	T	0	0	0	0	0	0	5	26
21	0	0	4	3	0	T	0	0	0	2	40	6
22	9	0	24	5	3	6	0	0	0	0	79	34
23	0	0	33	T	T	0	0	0	1	0	15	11
24	T	0	42	10	0	0	0	0	66	0	42	6
25	T	0	45	0	0	0	0	0	34	0	T	0
26	0	0	96	0	3	0	0	0	28	T	0	0
27	T	0	T	0	31	0	0	0	2	0	21	0
28	59	0	25	13	61	T	0	0	0	0	T	2
29	T	6	7	28	0	0	0	5	0	T	0	85
30	1	M	0	15	T	0	0	0	0	42	0	39
31	0	M	0	M	18	M	0	0	M	0	M	4
Total (inches)	4.07	0.71	3.75	3.2	3.01	1.56	0.5	0.28	1.75	2.24	8.43	3.48
Year total (inches)		32.98										

T Trace
 M Missing data

Table A-2. Monthly Precipitation at Sea-Tac Airport
 Vashon Island, Washington
 Project No. WA028.01

Month-Year Day	Jan-89 (in hundredths of an inch)	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89
1	4	52	64	24	0	0	8	0	2	T	0	0
2	12	1	14	21	0	0	1	T	0	0	T	109
3	13	0	0	27	0	0	3	0	0	0	21	97
4	4	0	T	54	0	0	0	0	0	2	47	141
5	49	0	50	68	T	0	0	0	0	T	T	8
6	8	0	18	4	0	0	0	0	0	0	6	T
7	T	0	5	0	0	0	0	0	0	T	T	51
8	23	0	1	0	0	0	0	0	0	0	9	4
9	15	0	35	0	11	0	0	0	0	0	19	0
10	T	0	34	0	1	0	0	0	0	18	86	0
11	0	0	29	0	19	0	0	0	0	4	128	0
12	12	T	67	0	0	0	0	T	0	19	49	0
13	28	0	24	0	0	16	T	0	0	18	26	0
14	4	0	4	0	0	11	T	15	0	T	0	0
15	13	0	2	T	0	T	0	0	0	0	0	0
16	22	81	19	0	T	0	41	0	2	0	48	0
17	6	45	7	0	72	T	0	0	22	0	0	0
18	16	24	29	T	5	0	0	0	0	14	0	T
19	0	18	3	17	0	33	0	0	0	0	17	1
20	5	7	14	26	0	T	0	4	0	38	7	T
21	2	21	15	T	0	0	T	70	0	12	6	T
22	24	34	T	38	4	0	0	T	0	42	T	T
23	0	8	0	0	46	0	0	0	0	57	63	1
24	T	18	34	0	T	0	0	0	0	1	37	0
25	0	27	30	1	0	0	0	0	8	17	39	0
26	6	0	15	0	36	T	0	0	2	50	5	0
27	T	5	24	0	42	T	0	T	0	0	T	29
28	0	2	13	0	38	13	0	0	0	6	0	4
29	0	M	1	0	4	12	T	0	1	0	0	T
30	12	M	14	0	0	29	11	T	17	0	0	0
31	T	M	14	M	0	M	T	0	M	0	M	34
Total (inches)	2.78	3.43	5.79	2.8	2.78	1.14	0.64	0.89	0.54	2.98	6.13	4.79
Year total (inches)	34.69											
March to December total (inches)	28.5											

T Trace
 M Missing data

Table A-2. Monthly Precipitation at Sea-Tac Airport
 Vashon Island, Washington
 Project No. WA028.01

Month-Year Day	Jan-90 (in hundredths of an inch)	Feb-90	Mar-90	Apr-90	May-90	Jun-90	Jul-90	Aug-90	Sep-90	Oct-90	Nov-90	Dec-90
1	2	8	0	0	T	6	T	T	1	2	T	33
2	0	15	0	T	11	8	39	0	0	16	1	5
3	15	48	4	0	0	108	0	0	0	13	12	16
4	25	6	1	0	0	6	T	0	0	64	2	82
5	85	24	1	0	0	T	17	0	0	T	T	T
6	92	11	19	0	38	57	1	0	0	14	T	0
7	56	23	39	0	T	T	T	0	1	0	15	T
8	40	13	28	T	0	14	0	0	0	0	21	54
9	283	6	45	0	0	70	0	0	0	5	295	24
10	0	23	2	T	0	7	0	0	0	0	35	21
11	1	13	0	17	0	T	T	0	0	28	0	9
12	T	T	0	0	T	23	0	0	0	3	62	1
13	7	0	32	36	5	T	0	0	0	0	71	T
14	5	2	14	5	2	0	0	0	0	77	12	2
15	5	25	0	0	0	0	0	0	T	39	T	22
16	T	34	T	0	0	1	0	0	3	5	T	11
17	0	53	37	15	T	T	0	1	0	29	34	T
18	0	0	0	0	0	0	0	8	0	15	0	45
19	0	9	7	3	2	0	0	3	0	0	2	T
20	0	56	3	13	18	0	0	0	0	9	T	0
21	12	T	0	0	8	0	0	12	0	69	42	0
22	45	0	22	48	T	2	0	T	0	T	28	T
23	0	1	4	34	0	T	0	0	0	0	80	0
24	T	2	0	1	0	0	0	0	T	0	293	T
25	38	T	0	28	0	0	1	0	0	14	T	13
26	2	0	0	T	T	0	0	0	0	0	10	T
27	26	0	0	29	3	T	0	0	0	19	0	15
28	70	0	0	18	T	2	0	0	0	14	T	5
29	36	M	0	7	0	0	0	27	T	24	28	0
30	26	M	0	0	96	1	0	12	0	16	28	3
31	70	M	0	M	15	M	0	8	M	104	M	2
Total (inches)	9.41	3.72	2.58	2.54	1.98	3.05	0.58	0.71	0.05	5.79	10.71	3.63
Year total (inches)		44.75										

T Trace
 M Missing data

Table A-2. Monthly Precipitation at Sea-Tac Airport
 Vashon Island, Washington
 Project No. WA028.01

Month-Year Day	Jan-91 (in hundredths of an inch)	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Oct-91	Nov-91	Dec-91
1	1	24	55	T	0	0	0	T	0	0	T	5
2	0	50	104	20	0	0	0	0	0	0	0	T
3	0	55	79	146	0	T	0	0	0	0	4	T
4	0	68	25	264	0	0	0	0	0	0	54	20
5	0	T	32	70	6	0	0	T	0	0	22	122
6	9	0	T	12	T	T	0	2	0	0	0	17
7	50	T	2	T	37	10	0	2	T	0	10	T
8	35	0	T	38	T	T	0	0	T	0	18	4
9	35	0	24	7	T	0	0	61	0	0	20	37
10	31	0	13	26	0	T	0	T	0	0	1	0
11	73	10	29	0	0	T	0	0	0	0	50	6
12	94	23	37	0	0	T	0	0	T	0	T	10
13	28	38	T	0	1	4	0	0	T	0	11	0
14	22	7	T	3	T	0	T	0	0	0	T	0
15	T	15	T	7	0	34	T	0	0	0	0	0
16	T	2	0	0	8	14	0	0	0	20	47	0
17	6	1	0	0	16	0	0	0	0	0	25	T
18	0	18	24	0	8	0	0	0	0	0	8	38
19	0	158	2	0	T	T	0	0	0	0	82	T
20	0	T	0	0	0	55	0	0	0	0	19	13
21	0	0	1	0	T	T	T	0	0	T	0	17
22	0	0	T	0	0	T	0	0	0	20	0	T
23	T	0	3	32	4	0	0	0	0	T	9	2
24	T	0	36	13	42	0	28	0	0	57	58	5
25	0	0	T	1	8	0	T	0	0	15	2	2
26	0	0	0	0	4	0	0	T	0	T	74	4
27	4	0	0	T	2	0	0	66	T	1	5	4
28	T	T	0	7	T	0	0	43	T	15	14	13
29	0	M	0	7	3	10	0	6	0	0	0	T
30	0	M	0	0	0	2	0	0	0	0	T	12
31	58	M	T	M	0	M	T	37	M	3	M	0
Total (Inches)	4.46	4.69	4.66	6.53	1.39	1.29	0.28	2.17	0	1.31	5.33	3.31
Year total (inches)		35.42										

T Trace
 M Missing data

Table A-2. Monthly Precipitation at Sea-Tac Airport
 Vashon Island, Washington
 Project No. WA028.01

Month-Year Day	Jan-92 (in hundredths of an inch)	Feb-92	Mar-92	Apr-92
1	51	13	T	0
2	20	30	0	0
3	9	0	9	T
4	42	0	10	32
5	1	0	34	11
6	0	0	T	T
7	0	29	T	0
8	0	4	0	0
9	2	T	0	17
10	33	0	0	0
11	T	1	0	13
12	T	4	0	14
13	0	6	0	17
14	T	31	T	0
15	17	16	56	5
16	31	0	T	95
17	0	15	24	69
18	0	29	0	0
19	0	10	0	0
20	2	34	0	7
21	8	68	0	26
22	5	7	0	T
23	104	12	0	0
24	7	T	0	0
25	21	0	0	T
26	11	0	T	3
27	150	0	35	28
28	65	0	0	11
29	62	T	0	59
30	90	M	T	5
31	51	M	0	M
Total (inches)	7.82	3.09	1.68	4.12

T Trace
 M Missing data

DRAFT

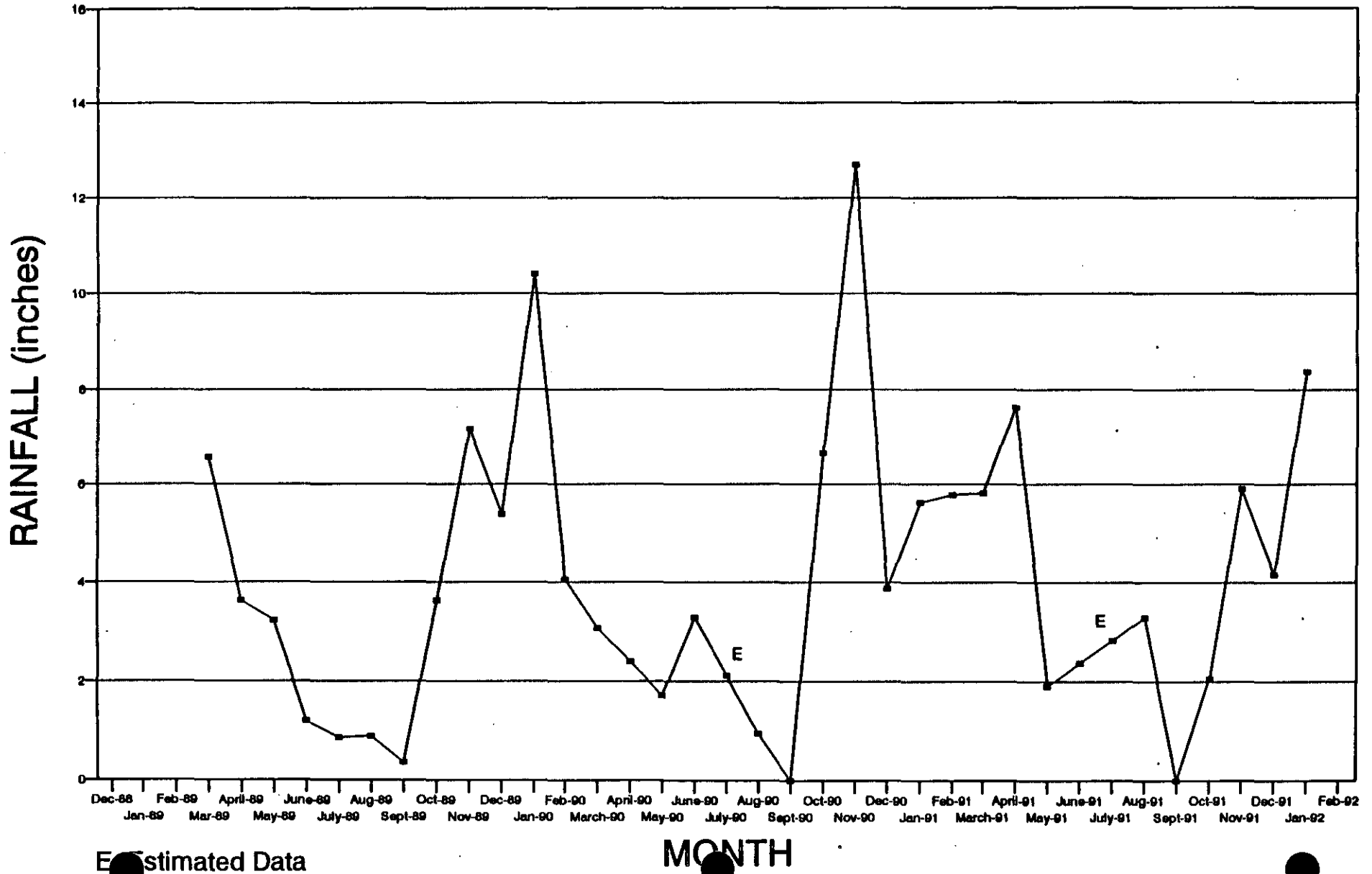
APPENDIX E

RAINFALL HYDROGRAPHS

(May 14, 1993 rev.)

MONTHLY RAINFALL

Rain Gage Station RG-1

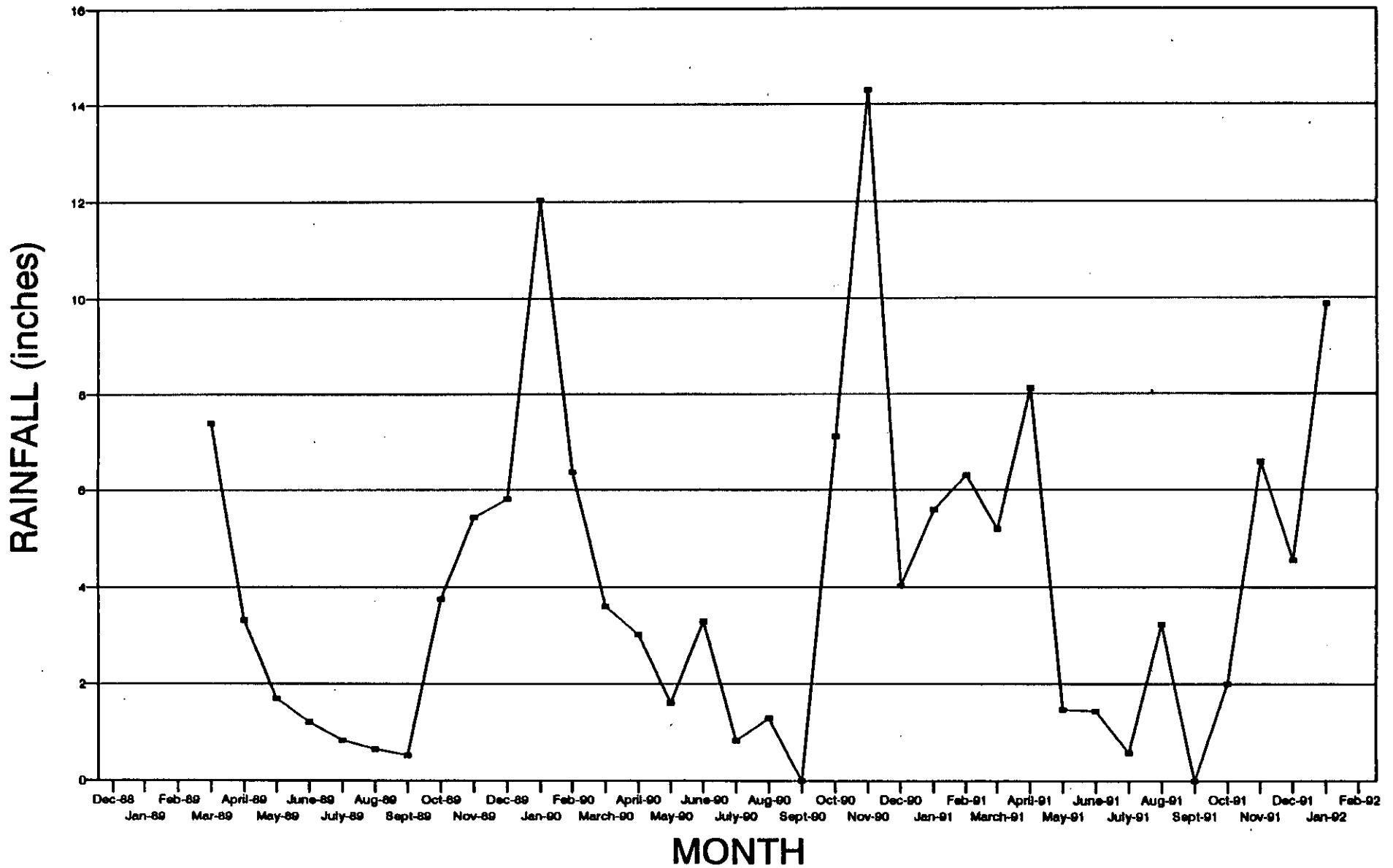


E Estimated Data

MONTH

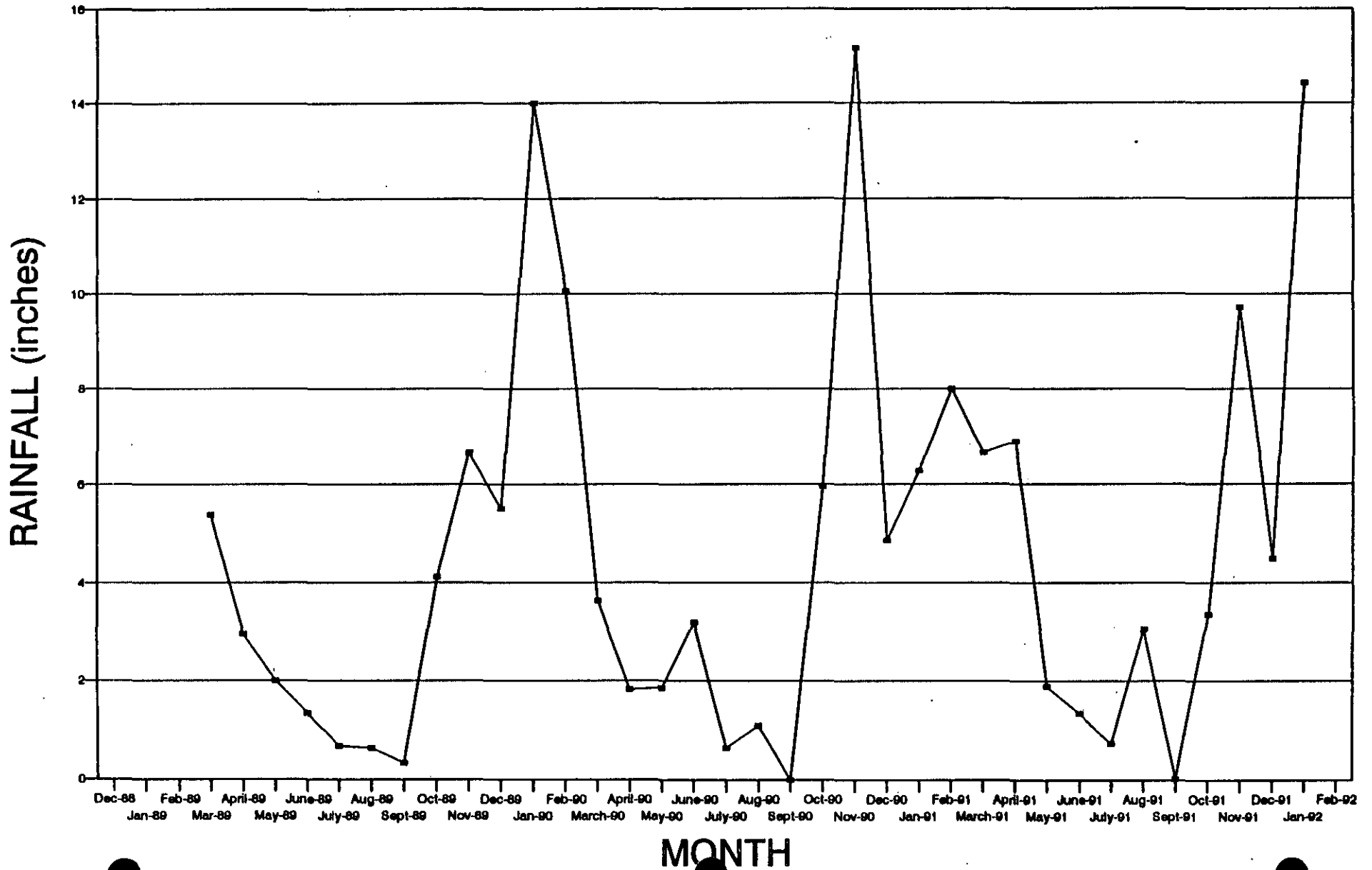
MONTHLY RAINFALL

Rain Gage Station RG-2



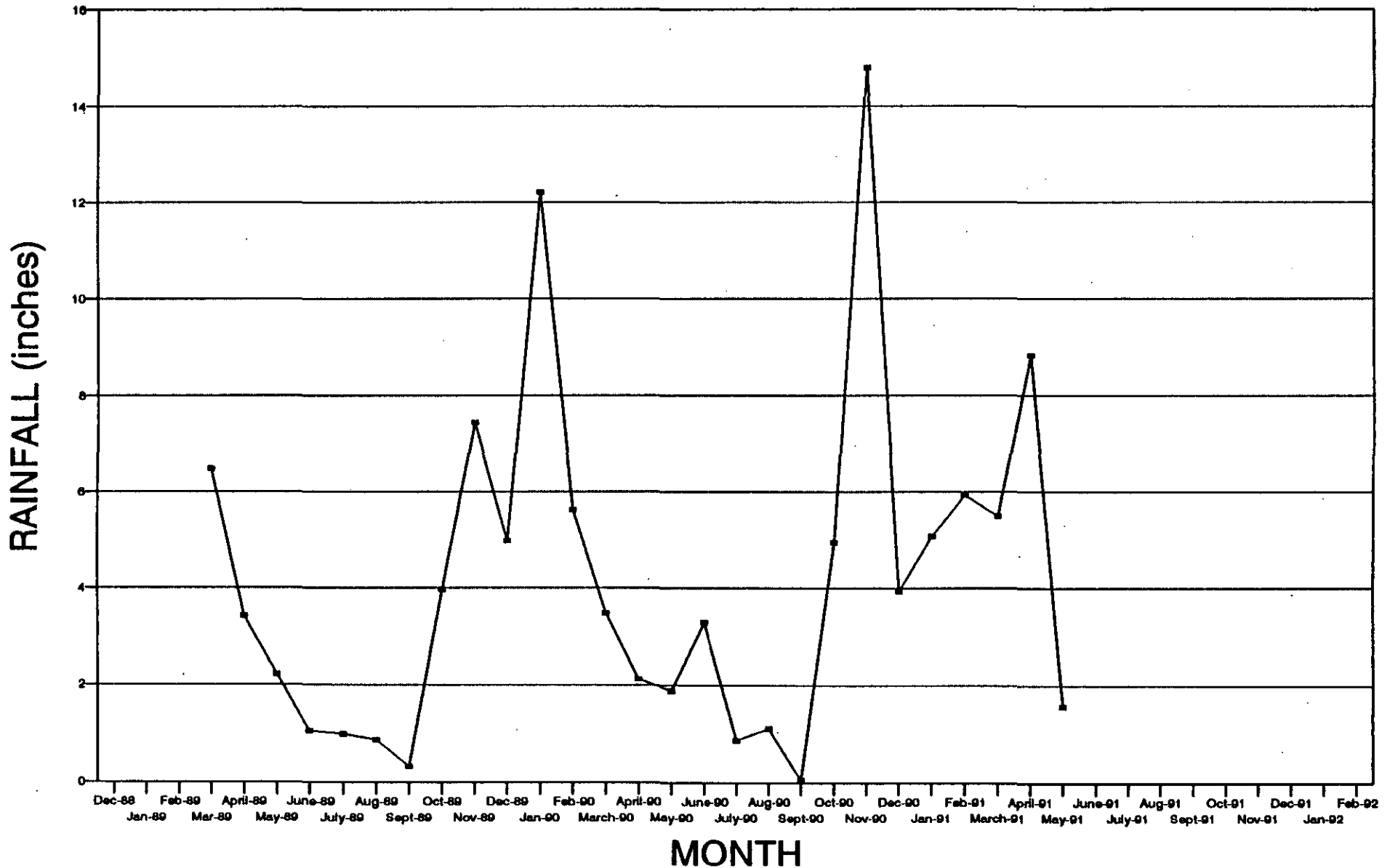
MONTHLY RAINFALL

Rain Gage Station RG-3



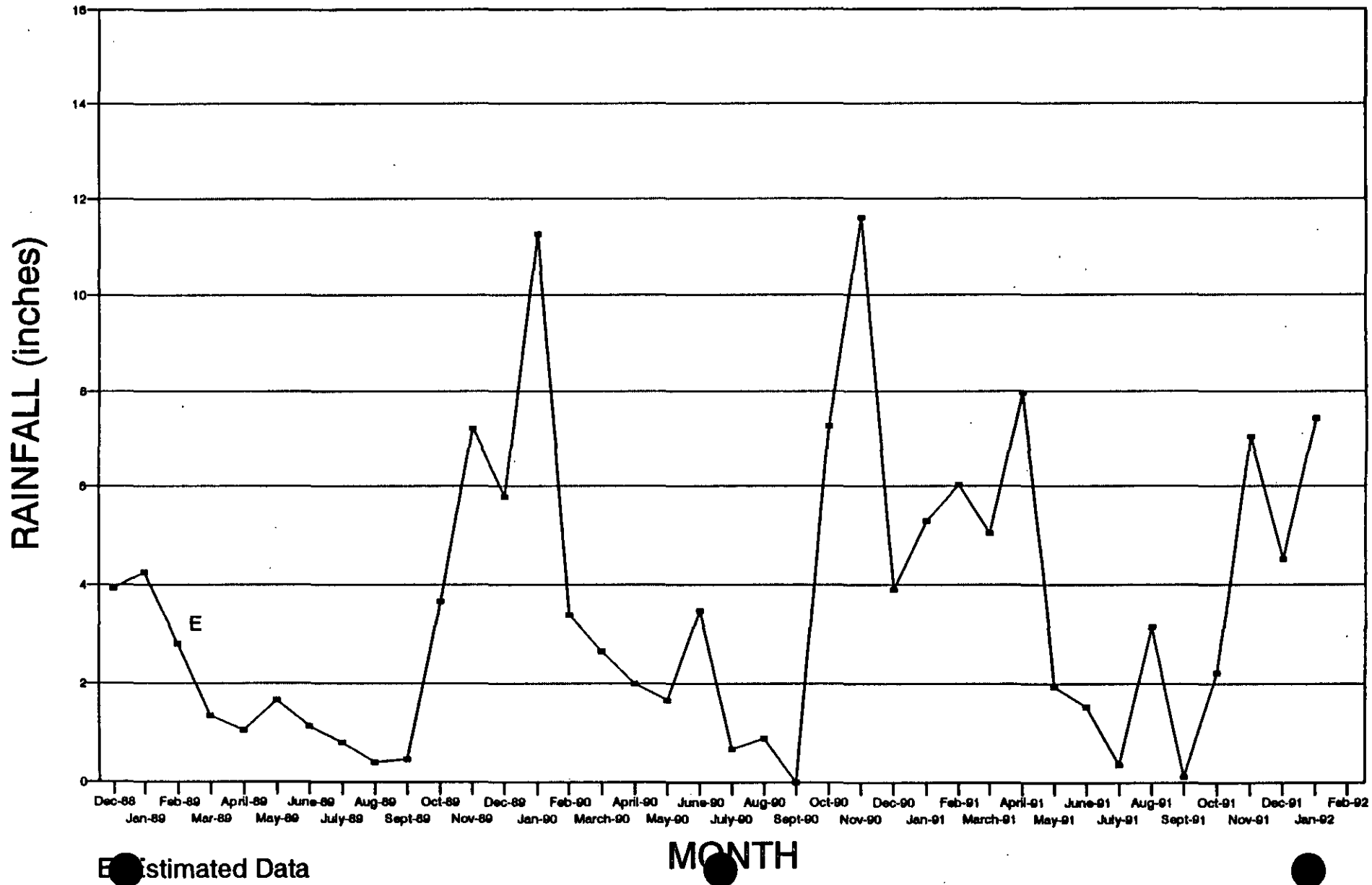
MONTHLY RAINFALL

Rain Gage Station RG-4



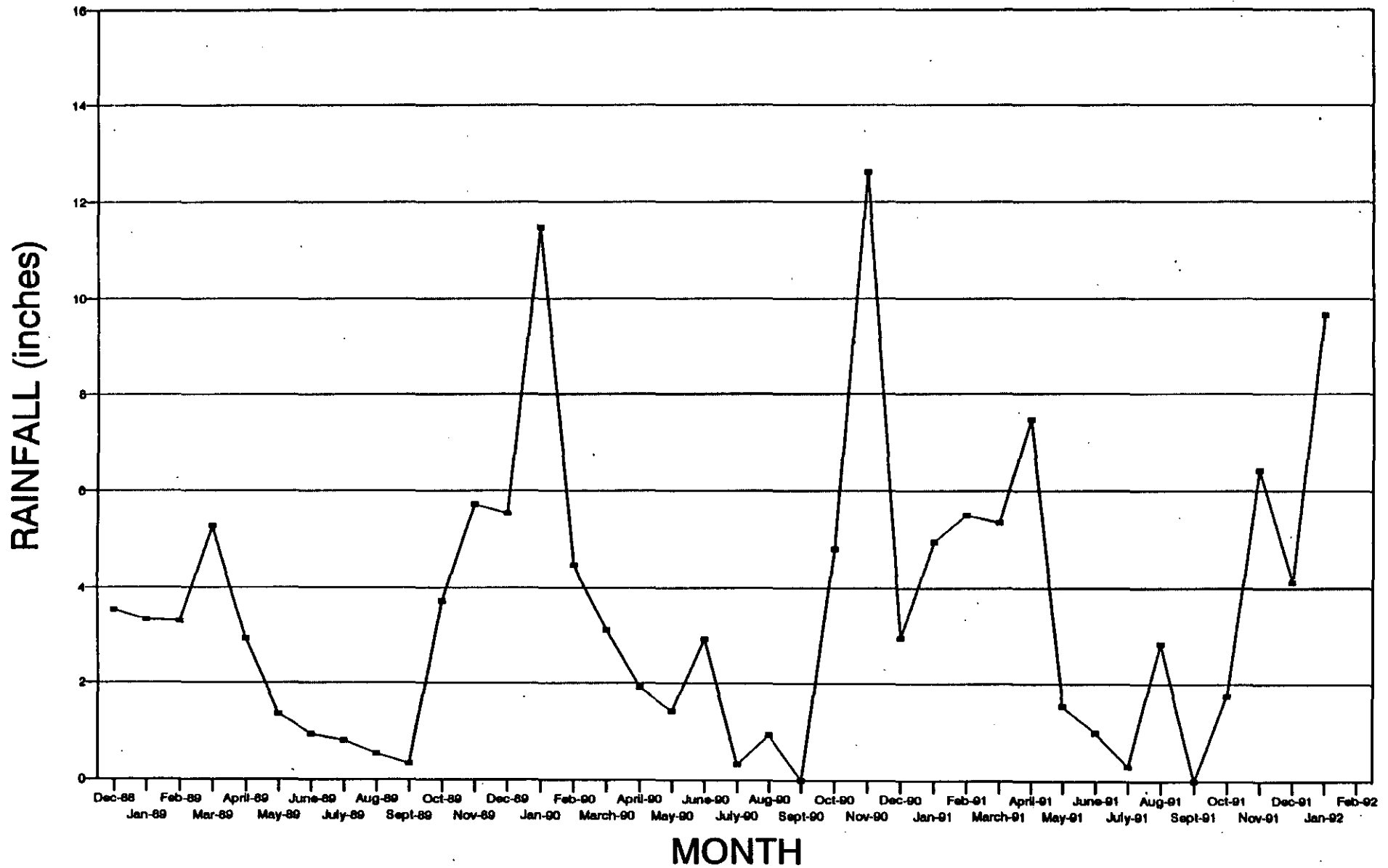
MONTHLY RAINFALL

Rain Gage Station RG-5



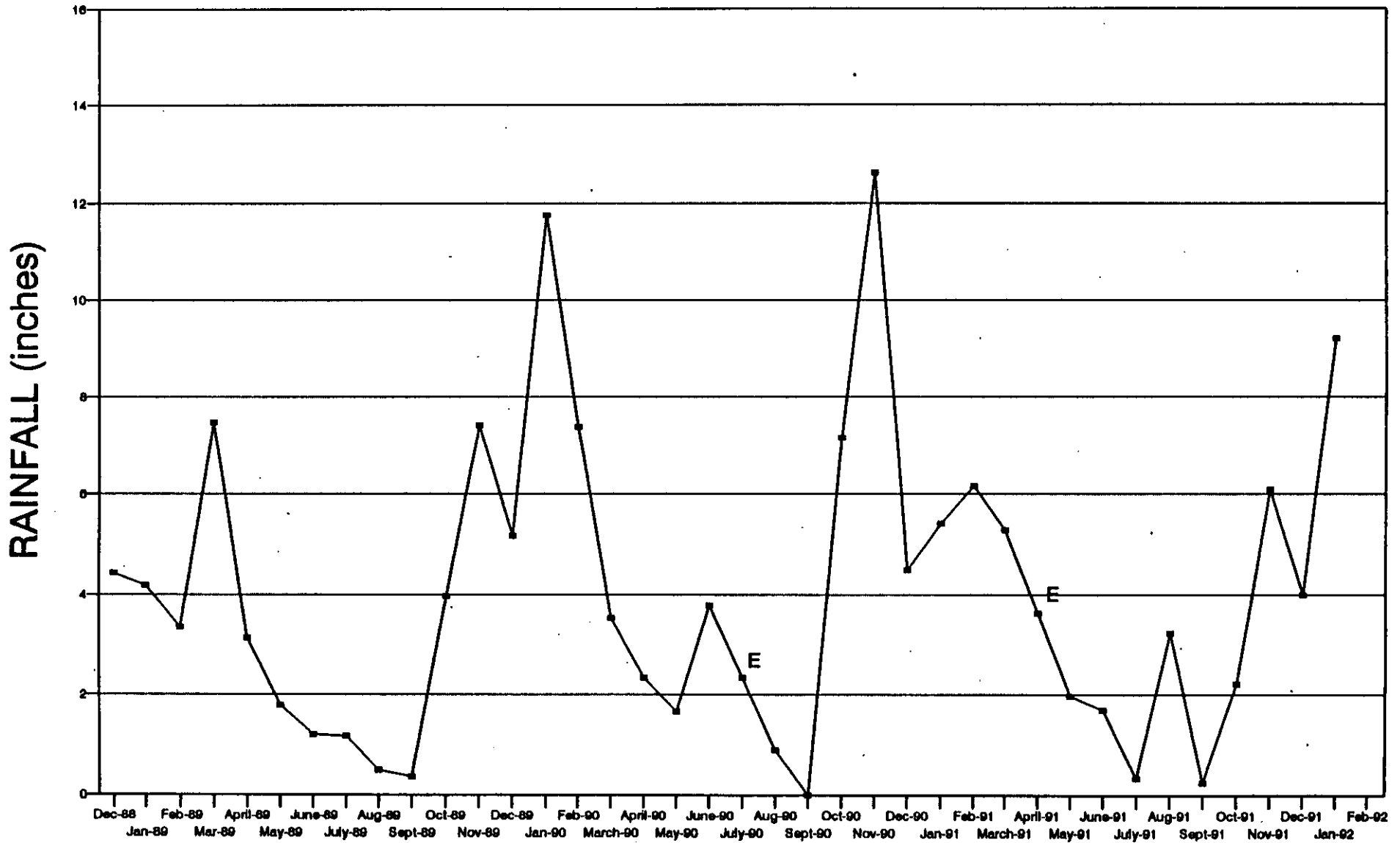
MONTHLY RAINFALL

Rain Gage Station RG-6



MONTHLY RAINFALL

Rain Gage Station RG-7

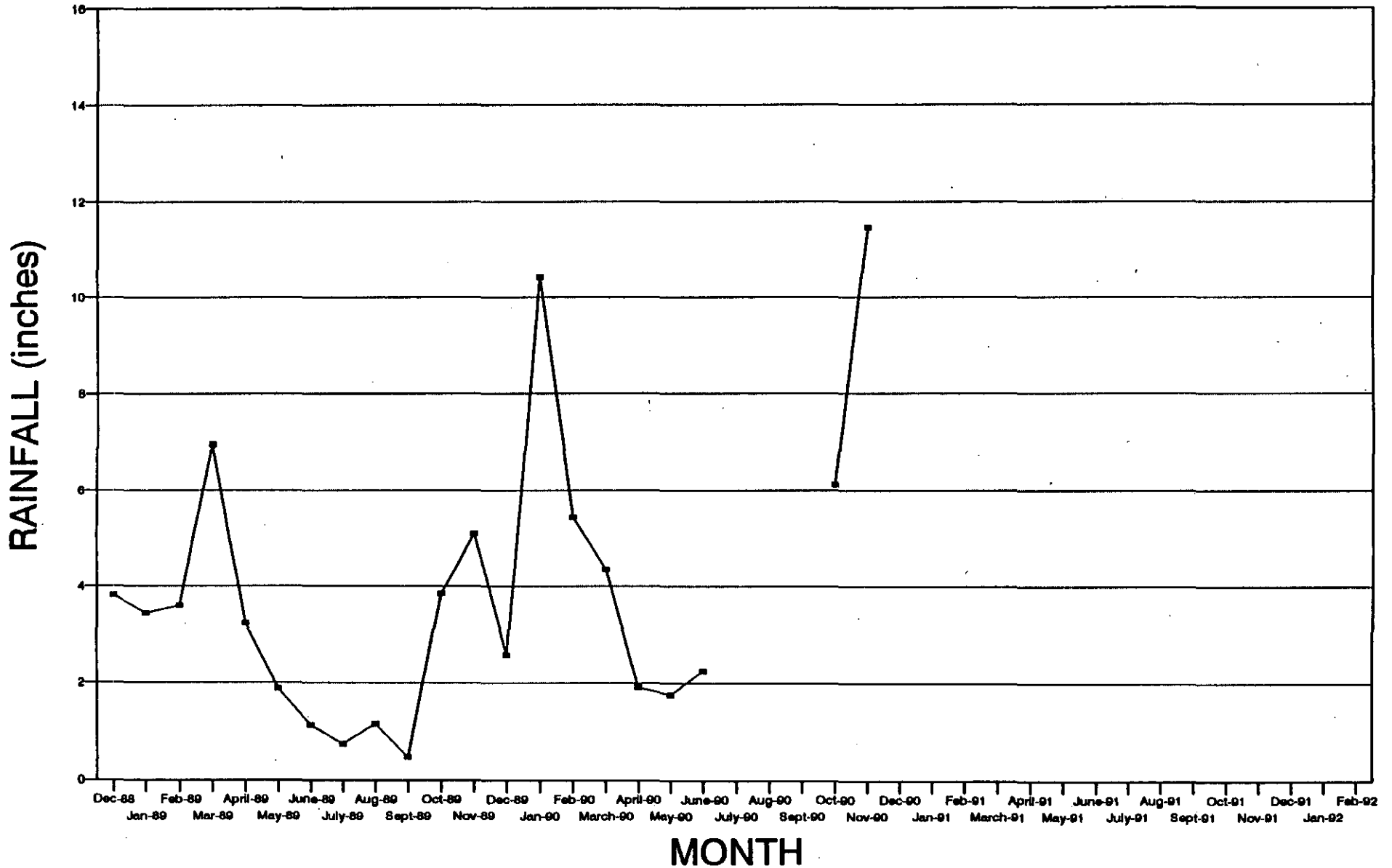


Estimated Data

MONTH

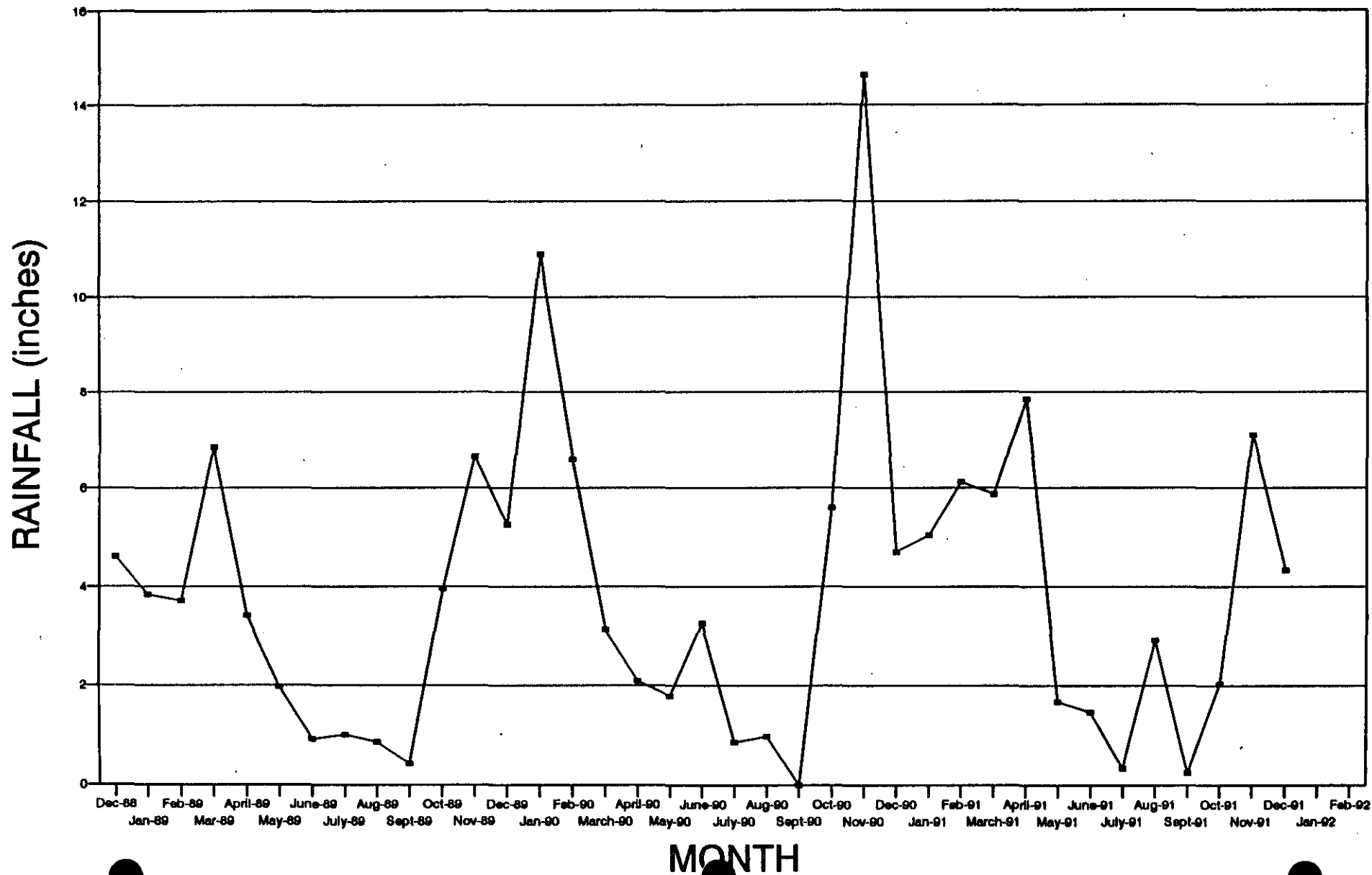
MONTHLY RAINFALL

Rain Gage Station RG-8



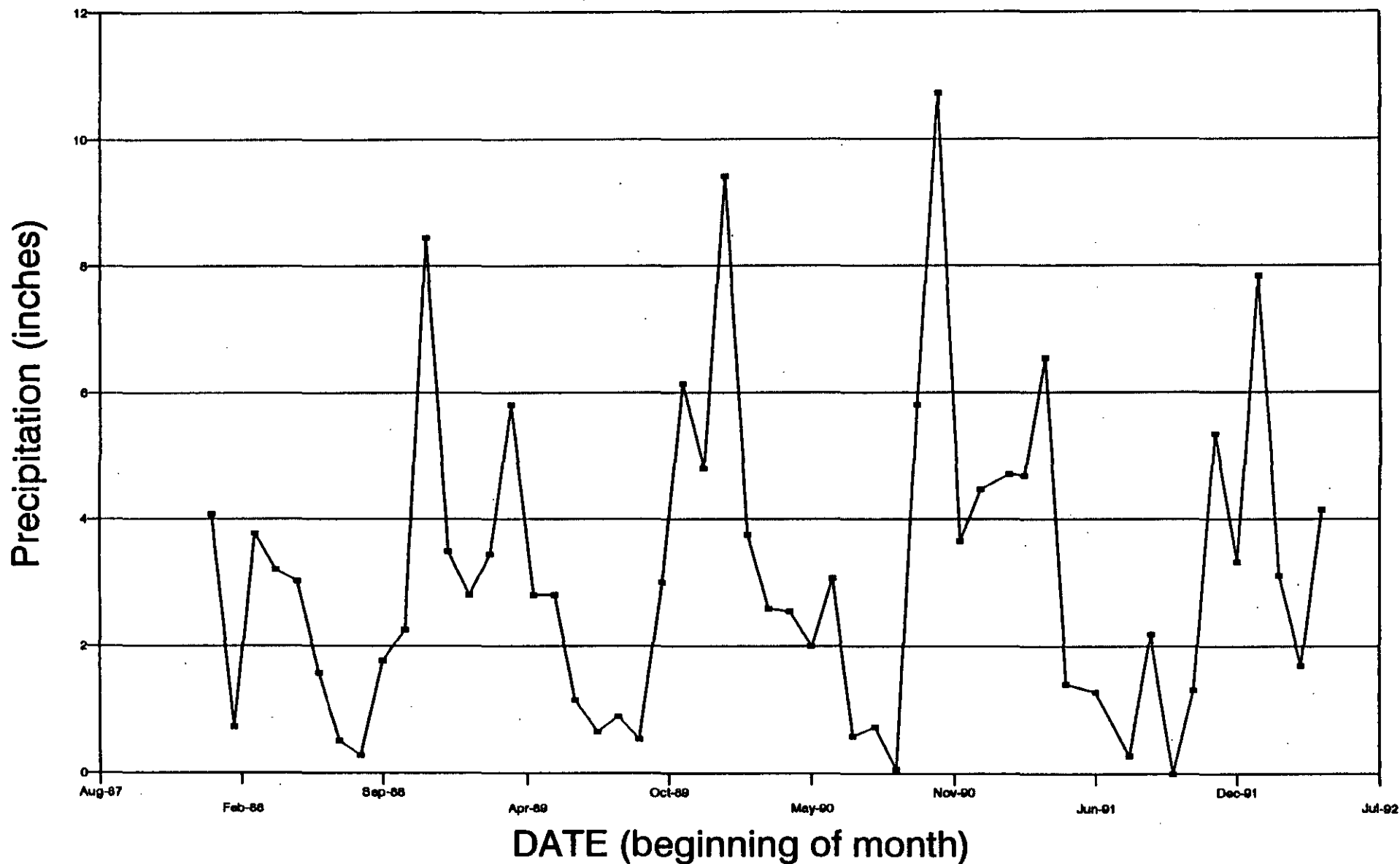
MONTHLY RAINFALL

Rain Gage Station RG-9



MONTHLY PRECIPITATION

Sea-Tac Airport



APPENDIX F
**STAFF-GAGE, V-NOTCH WEIR, AND STREAM-GAGE LOCATION
DESCRIPTIONS AND DATA**

DRAFT

(May 14, 1993 rev.)

URS Consultants Letter Report, June 26, 1992
Vashon Island Ground-Water and Surface-Water Management Programs
Stream Flow Observations

Overview

Stream runoff information was obtained at eight locations on Vashon Island using staff gages and 90-degree v-notch weirs. Water level heights on the v-notch weirs and staff gages were read daily by volunteers living on Vashon Island. The Ground Water Management Study which began in 1989 monitored five streams. These streams are Tahlequah Creek, Judd Creek, Needle Creek, Beal Creek, and Mileta Creek. Each stream had a dedicated staff gage, with the exception of Beal and Mileta Creeks where v-notch weirs were installed.

In 1990 as part of the Surface-Water Management Study, additional staff gages were installed at Upper Judd Creek, Fisher Creek, Green Creek, and Paradise Cove Creek. The staff gage at Paradise Cove Creek was later removed at the request of the property owners.

Stream flow rating curves were developed for each staff gage. The rating curve for each location compared stream speed measurements with different water levels indicated on the staff gage. Measurements of stream flow were made during periods of low flow in the summer months and high water flows during the winter. Rating curves were not developed for the v-notch weirs, which instead relied on standard weir height velocity tables for v-notch weirs to interpret stream speeds (BuRec, 1984).

Methodology

Hydraulic Permits

Prior to the staff gage and v-notch weir installation, hydraulic project application permits were submitted to the Departments of Fisheries and Wildlife for approval.

Staff Gages

The staff gages were Stevens Style C models graduated to a hundredth of a foot. Each gage was mounted on a metal fence post and driven into the streambed near the bank. The staff gage at Tahlequah Creek was mounted directly to a concrete retaining wall. The gages were positioned so the zero graduation mark rested on the stream bed. Instruction sheets were provided for each volunteer describing proper staff-gage-reading techniques.

V-Notch Weirs

The Mileta and Beal Creek 90-degree v-notch weirs were designed using the specifications described in the Water Measurement Manual (BuRec, 1984). The v-notch weir structure is 2 feet high by 8 feet long. The v-notch located in the center of the weir had a vertical depth of 12 inches to the center of the V on the weir crest plate. A small access door is mounted on one side of the v-notch for the removal of sediment and small debris. After the weir was placed across the streambed, sandbags were placed along the front edges and sides of the weir to offset erosion and structural stability problems. A staff gage was mounted on the upstream side of the weir near the stream bank. The zero graduation mark was aligned with the lowest point of the v-notch crest plate.

Stream Flow Rating Curves

Rating curves were developed for each stream by calculating the total discharge of the stream for various stream heights. Total discharge (Q) was calculated by dividing the stream cross section into 15 to 20 subsections and calculating the individual discharge component for each subsection. The total discharge is the summation of the individual discharge values from each subsection. **A complete explanation for the total discharge calculations are presented in Appendix A.**

The speed component for each stream subsection was obtained using a Marsh-McBirney model 201 electromagnetic flow meter. The model 201 has a range of -0.5 ft/sec to 10 ft/sec with an accuracy of +/- 2% of the reading. All stream-speed readings were measured using the 6/10 depth rule, where the sensor probe is placed at a level representing 6/10 of the total depth from the surface of the stream in each subsection. A set of three stabilized speed readings is recorded, which are then averaged to represent the speed at that particular subsection.

The procedure for field measurement of the total discharge at each stream involves the following steps:

- The staff gage height is read to the nearest hundredth of a foot.
- A measuring tape is extended across the stream bank, and the left and right banks are measured from the referenced initial point.
- Depending on the width, the stream is divided into 15 to 20 subsections, and the total depth of each subsection is measured.
- A series of three separate speed measurements is recorded at each subsection at 6/10 of the total depth of the stream at that subsection.

- When all of the subsection speeds are recorded, a final staff gage height is recorded to account for changes in water level.
- Drift corrections for the flow meter are obtained by placing the sensor unit in a bucket of stationary water to record any deviations from a zero stream speed.

Results

Stream staff gage and Mileta Creek weir daily readings obtained by the volunteer staff are presently in the possession of the King County Health Department. Discharge values obtained at each stream for the development of the rating curves is presented in Appendix B.

The Beal Creek weir measurements obtained by personnel at Water District 19 are presented in Appendix C. Daily discharge tables for stream flow (cu ft/sec) of the Beal Creek weir were computed using the weir water level, and discharge values obtained from the rate table for 90-degree v-notch weirs were found in the Department of Interior Water Measurement Manual (BuRec, 1984).

Problems Encountered

Some difficulties were encountered in maintaining continuous stream discharge records during the groundwater and surface water phases of the project. These difficulties included storm damage to the weir structures or staff gages, erosion and repositioning of the stream beds during these winter storms, and data gaps in daily staff gage readings.

The weirs on both Mileta and Beal Creek were washed out during a large storm event in January 1989. The weirs were replaced with more rigid structures which withstood the storms during the following winter. Even after the Beal Creek weir was repaired, large storm events created stream heights which overflowed the weir and eroded the banks around the structure.

An additional problem encountered at the Beal Creek weir was the accumulation of sand in the weir structure caused by periodic maintenance flushing of accumulated sand at the Water District 19 facility located upstream.

The stream beds at all of the permanent staff gage sites were altered during the winter storm events. The erosional forces created by the higher flow rates tended to scour out the stream bed in some locations or become depositional areas at others. The changing stream bed profile during the winter months made it difficult to produce accurate stream flow rating curves representing different stages of stream height. Two permanent staff

gages located on Lower Judd Creek and Needle Creek were washed out during winter storm events and were repaired shortly after.

Finally, the staff gage daily logs for each stream location contained periods where no daily readings were recorded. The reasons and frequency of these data gaps are not addressed in this letter report.

VASHON GROUNDWATER MANAGEMENT PROJECT

FISHER CREEK

DATE	TIME	GAUGE #1		GAUGE #2		COMMENTS
		STAFF LEVEL IN FEET		STAFF LEVEL IN FEET		
01/28/91	1645	0.34				LIGHT OVERCAST
01/29/91	1600	0.33				OVERCAST
01/30/91	1630	0.42				INTERMITTENT RAIN SHOWERS
01/31/91	1600	0.44				LIGHT SHOWERS
02/03/91	1600	0.69				RAINY WEEKEND
02/05/91	1600	0.49				PARTLY CLOUDY
02/06/91	1700	0.43				
02/07/91	1600	0.43				
02/10/91	1730	0.42				LIGHT RAIN P.M.
02/11/91	1600	0.44				SHOWERS
02/12/91	1600	0.45				RAIN
02/13/91	1700	0.44				PARTLY CLOUDY & WARM
02/14/91	1630	0.40				CLOUDY
02/18/91	1645	0.75				CLOUDY AFTER HEAVY RAIN
02/19/91	1700	0.71				
02/20/91	1720	0.58				SUNNY
02/24/91	1730	0.41				SUNNY
02/25/91	1730	0.41				SUNNY
02/26/91	1600	0.40				SUNNY
02/28/91	1630	0.47				
03/03/91	1600	0.80				
03/04/91	1700	0.73				
03/05/91	1500	0.59				
03/06/91	1730	0.51				
03/10/91	1700	0.47				
03/11/91	1830	0.53				
03/12/91	1630	0.47				
03/13/91	1800	0.46				
03/14/91	1800	0.42				
03/17/91	1800	0.42				
03/19/91		0.41				
03/21/91		0.40				
03/24/91		0.45				
03/25/91		0.42				
03/27/91		0.40				

VASHON GROUNDWATER MANAGEMENT PROJECT

FISHER CREEK

DATE	TIME	GAUGE #1	GAUGE #2	COMMENTS
		STAFF LEVEL IN FEET	STAFF LEVEL IN FEET	
03/28/91		0.40		
03/31/91	1800	0.40		
04/01/91	1700	0.46		
04/02/91	1800	0.69		
04/03/91	1630	1.81		
04/04/91	1700	1.52		
04/07/91	1830	0.79		
04/08/91	1730	0.68		
04/09/91	1830	0.67		
04/14/91	1830	0.51		
04/17/91		0.47		
04/22/91	1300	0.45		
04/23/91	1800	0.47		
04/25/91	1600	0.45		
04/30/91	1600	0.40		
05/01/91	1700	0.38		
05/05/91	1730	0.40		
05/06/91	1730	0.45		
05/08/91	1800	0.40		
05/13/91	1700	0.39		
05/14/91	1730	0.38		
05/15/91	1730	0.38		
05/20/91	1800	0.40		
05/21/91	1700	0.38		
05/22/91	1730	0.38		
05/23/91	1730	0.44		
05/27/91	1900	0.36		
05/28/91	1600	0.40		
05/29/91	1600	0.38		
05/30/91	1800	0.37		
06/02/91		0.35		
06/04/91		0.33		
06/09/91	1830	0.30		
06/13/91	1300	0.30		CLOUDS SOME SHOWERS
06/16/91	1800	0.29		

VASHON GROUNDWATER MANAGEMENT PROJECT
 FISHER CREEK

DATE	TIME	GAUGE #1	GAUGE #2	COMMENTS
		STAFF LEVEL IN FEET	STAFF LEVEL IN FEET	
06/19/91	1800	0.42		STEADY HEAVY RAIN
06/20/91	1730	0.31		PARTLY CLOUDY
06/23/91	1700	0.28		PARTLY CLOUDY
06/25/91		0.26		PARTLY CLOUDY
07/09/91	1126	0.29		MEASUREMENT TAKEN BY P. SHALLOW
07/14/91	1300	0.26		PARTLY CLOUDY
07/16/91	1700	0.25		PARTLY CLOUDY
08/05/91	805	0.24		READINGS TAKEN BY P. SHALLOW & B. MCCLE
09/09/91	1700	0.24		SUNNY
09/17/91	1045	0.24		READINGS TAKEN BY P. SHALLOW & B. MCLEA
09/30/91	1800	0.22		
10/08/91	1800	0.21		DRY
10/14/91	1800	0.20		DRY
10/15/91	1800	0.22		RAIN AM
10/16/91	1030	0.22		READING TAKEN BY P. SHALLOW & B. MCLEAN
10/20/91	1400	0.21		RAIN
10/24/91	1730	0.51		
10/29/91	1600	0.24		SUN
10/31/91		0.22		
11/04/91		0.30		
11/07/91		0.36		
11/12/91		0.27		
11/14/91		0.22		
11/17/91		0.25		
11/18/91	1905	0.65		READING TAKEN BY P. SHALLOW & B. MCLEAN
11/19/91		0.61		
11/20/91		0.29		
11/24/91		0.36		
11/25/91		0.34		
12/01/91		0.24		
12/02/91	1144	0.25		READING TAKEN BY P. SHALLOW
12/04/91		0.90		
12/09/91	1026	0.30		
12/23/91			830 0.80	CLOSE TO HIGH TIDE
12/24/91			835 1.58	CLOSE TO HIGH TIDE

VASHON GROUNDWATER MANAGEMENT PROJECT

FISHER CREEK

DATE	TIME	GAUGE #1		GAUGE #2		COMMENTS
		STAFF LEVEL IN FEET		STAFF LEVEL IN FEET		
12/25/91				838	1.95	CLOSE TO HIGH TIDE
12/26/91				1048	1.75	CLOSE TO HIGH TIDE
12/27/91				1001	2.00	CLOSE TO HIGH TIDE
12/28/91				1007	0.25	
01/02/92				1117	0.28	
01/03/92				853	0.40	
01/06/92				907	0.24	
01/09/92				1015	0.35	
01/15/92	1051	0.31				
01/16/92					0.22	
01/21/92				830	0.77	
01/22/92				850	0.94	
01/23/92				817	1.88	
01/24/92				836	2.50	
01/25/92				1445	0.60	
02/12/92	1026	0.46				
03/11/92	1033	0.29				
04/05/92	1435	0.25				

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VASHON GROUNDWATER MANAGEMENT PROJECT
GREEN VALLEY CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
01/10/91		1130 0.35	
01/11/91		1030 0.48	HEAVY RAIN NIGHT BEFORE
01/14/91		1130 0.24	
01/17/91		1100 0.22	
01/19/91		930 0.22	
01/22/91		1030 0.21	
01/25/91		1100 0.21	
01/29/91		1300 0.22	
02/02/91		900 0.28	HEAVY RAIN NIGHT BEFORE
02/03/91		1300 0.31	HEAVY RAIN NIGHT BEFORE
02/04/91		1600 0.24	
02/05/91		1600 0.22	
02/07/91		1400 0.21	
02/09/91		830 0.20	
02/11/91		1400 0.22	TWO DAYS OF RAIN
02/13/91		1600 0.21	
02/19/91		1600 0.22	HEAVY RAIN THE NIGHT BEFORE
02/20/91		1000 0.21	
02/21/91		1100 0.20	
02/22/91		1700 0.20	
02/25/91		1700 0.19	
03/03/91		0.28	
03/04/91		0.24	
03/05/91		0.20	
03/07/91		0.19	
03/08/91		0.18	
03/09/91		0.18	
03/11/91		0.19	
03/13/91		0.19	
03/14/91	1314	0.18	MEASUREMENT TAKEN BY P. SHALLOW
03/18/91		0.16	
03/21/91		0.16	
03/26/91		0.16	
03/27/91		0.16	
07/09/91	1313	0.13	MEASUREMENT TAKEN BY PAUL SHALLOW
10/16/91	1133	0.20	READING TAKEN BY SHALLOW/MCLEAN

VASHON GROUNDWATER MANAGEMENT PROJECT
GREEN VALLEY CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
11/21/91		1145 0.18	READING TAKEN BY SHALLOW/MCLEAN
12/10/91		1145 0.18	
03/11/92		1143 0.14	
04/08/92		1605 0.14	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
07/20/89	0830	0.42	
07/27/89	1600	0.43	
08/02/89	1500	0.42	
08/03/89	0800	0.42	
08/05/89	0800	0.42	
08/06/89	0800	0.42	
08/07/89	0800	0.42	
08/08/89	0800	0.42	
08/09/89	0800	0.42	
08/10/89	0800	0.42	
08/11/89	0800	0.42	
08/12/89	0800	0.42	
08/13/89	0800	0.42	
08/14/89	0800	0.42	
08/15/89	0800	0.42	
08/16/89	0800	0.42	
08/17/89	0800	0.42	
08/18/89	0800	0.42	
08/19/89	0800	0.42	
08/20/89	0800	0.42	
08/21/89	0800	0.42	
08/22/89	0800	0.42	
08/23/89	0800	0.42	
08/24/89	0800	0.42	
08/25/89	0800	0.42	
08/26/89	0800	0.42	
08/27/89	0800	0.42	
08/28/89	0800	0.42	
08/29/89	0800	0.42	
08/30/89	0800	0.42	
08/31/89	0800	0.42	
09/01/89	1700	0.42	DRY
09/02/89	1700	0.42	DRY
09/03/89	1700	0.42	DRY
09/04/89	1700	0.42	DRY

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
09/05/89	1700	0.42	DRY
09/06/89	1700	0.42	DRY
09/07/89	1700	0.42	DRY
09/08/89	1700	0.42	DRY
09/09/89	1700	0.42	DRY
09/10/89	1700	0.42	DRY
09/11/89	1700	0.42	DRY
09/12/89	1700	0.42	DRY
09/13/89	1700	0.42	DRY
09/14/89	1700	0.42	DRY
09/15/89	1700	0.42	DRY
09/16/89	1700	0.42	DRY
09/17/89	1700	0.42	DRY
09/18/89	1700	0.42	DRY
09/19/89	1700	0.42	DRY
09/20/89	1700	0.42	DRY
09/21/89	1700	0.42	DRY
09/22/89	1700	0.42	DRY
09/23/89	1700	0.42	DRY
09/24/89	1700	0.42	DRY
09/25/89	1700	0.42	DRY
09/26/89	1700	0.46	FIRST RAIN LAST NIGHT
09/27/89	1700	0.44	
09/28/89	1700	0.42	
09/29/89	1700	0.42	
09/30/89	1700	0.42	
10/01/89		0.42	
10/02/89		0.46	
10/03/89		0.48	
10/04/89		0.50	
10/05/89		0.50	
10/08/89		0.50	
10/09/89		0.50	
10/10/89		0.50	
10/11/89		0.52	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
10/12/89		0.52	
10/13/89		0.53	
10/14/89		0.53	
10/15/89		0.53	
10/16/89		0.53	
10/17/89		0.54	
10/18/89		0.55	
10/19/89		0.53	
10/23/89		0.62	
10/24/89		0.57	
10/29/89		0.55	
10/30/89		0.55	
10/31/89		0.55	
11/01/89		0.58	
11/02/89		0.58	
11/03/89		0.58	
11/04/89		0.58	
11/05/89		0.58	
11/06/89		0.57	
11/07/89		0.60	
11/08/89		0.65	
11/09/89		0.68	
11/10/89		0.69	
11/11/89		0.82	
11/12/89		0.88	
11/13/89		0.84	
11/14/89		0.72	
11/15/89		0.68	
11/16/89		0.68	
11/17/89		0.68	
11/18/89		0.67	
11/19/89		0.66	
11/20/89		0.66	
11/21/89		0.66	
11/22/89		0.64	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
11/23/89		0.62	
11/24/89		0.74	
11/25/89		0.74	
11/26/89		0.72	
11/27/89		0.70	
11/28/89		0.68	
11/29/89		0.68	
11/30/89		0.68	
12/03/89		0.76	
12/04/89		1.20	
12/05/89		0.88	
12/06/89		0.78	
12/07/89		0.70	
12/08/89		0.67	
12/09/89		0.67	
12/10/89		0.67	
12/11/89		0.67	
12/12/89		0.67	
12/13/89		0.67	
12/14/89		0.62	
12/15/89		0.56	
12/16/89		0.56	
12/17/89		0.54	
12/18/89		0.54	
12/19/89		0.54	
12/20/89		0.54	
12/21/89		0.54	
12/22/89		0.54	
12/23/89		0.54	
12/24/89		0.54	
12/25/89		0.54	
12/26/89		0.54	
12/27/89		0.44	
12/28/89	1148	0.45	
12/29/89		0.45	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
12/30/89		0.50	
12/31/89		0.50	
01/01/90		0.48	
01/02/90		0.48	
01/03/90		0.48	
01/04/90		0.48	
01/05/90		0.74	
01/06/90		0.76	
01/07/90		0.88	
01/08/90		1.06	
01/09/90		2.40	
01/10/90		1.90	
01/11/90		1.20	
01/12/90		0.70	
01/13/90		0.70	
01/14/90		0.65	
01/15/90		0.65	
01/16/90		0.65	
01/17/90		0.65	
01/18/90		0.65	
01/19/90		0.62	
01/20/90		0.60	
01/21/90		0.60	
01/22/90		0.60	
01/23/90		0.60	
01/24/90		0.60	
01/25/90		0.60	
01/26/90		0.60	
01/27/90		0.82	
01/28/90		0.86	
01/29/90		0.90	
01/30/90		0.92	
01/31/90		0.90	
02/01/90	1700	0.86	
02/02/90	1700	0.86	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
02/03/90	1700	0.86	
02/04/90	1700	0.86	
02/05/90	1700	0.96	
02/06/90	1700	0.94	
02/07/90	1700	0.90	
02/08/90	1700	0.86	
02/09/90	1700	0.82	
02/10/90	1700	0.80	
02/11/90	1700	0.80	
02/12/90	1700	0.80	
02/13/90	1700	0.80	
02/14/90	1700	0.80	
02/15/90	1700	0.80	
02/16/90	1700	0.82	
02/17/90	1700	0.82	
02/18/90	1700	0.84	
02/19/90	1700	0.84	
02/20/90	1700	0.90	
02/21/90	1700	0.86	
02/22/90	1700	0.86	
02/23/90	1700	0.84	
02/24/90	1700	0.84	
02/25/90	1700	0.82	
02/26/90	1700	0.78	
02/27/90	1700	0.74	
02/28/90	1700	0.72	
03/01/90	1700	0.72	
03/29/90	0936	0.61	MEASUREMENT TAKEN BY PAUL S.
03/30/90	0815	0.60	MEASUREMENT TAKEN BY PAUL S.
04/01/90		0.60	
04/02/90		0.60	
04/03/90		0.60	
04/04/90		0.62	
04/05/90		0.60	
04/06/90		0.60	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
04/07/90		0.60	
04/08/90		0.60	
04/09/90		0.60	
04/10/90		0.60	
04/11/90		0.60	
04/12/90		0.60	
04/13/90		0.62	
04/14/90		0.62	
04/15/90		0.64	
04/16/90		0.62	
04/17/90		0.60	
04/17/90		0.60	
04/18/90		0.60	
04/19/90		0.60	
04/20/90		0.60	
04/21/90		0.60	
04/22/90		0.60	
04/23/90		0.60	
04/24/90		0.60	
04/25/90		0.60	
04/26/90		0.60	
04/27/90		0.60	
04/28/90		0.60	
04/29/90		0.60	
04/30/90		0.60	
05/01/90		0.60	
05/02/90		0.60	
05/03/90		0.60	
05/04/90		0.60	
05/05/90		0.60	
05/06/90		0.60	
05/07/90		0.60	
05/08/90		0.60	
05/09/90		0.60	
05/10/90		0.60	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
05/11/90		0.60	
05/12/90		0.60	
05/13/90		0.60	
05/14/90		0.60	
05/15/90		0.60	
05/16/90		0.60	
05/17/90		0.60	
05/18/90		0.60	
05/19/90		0.62	
05/20/90		0.62	
05/21/90		0.62	
05/22/90		0.62	
05/23/90		0.62	
05/24/90		0.62	
05/25/90		0.62	
05/26/90		0.64	
05/27/90		0.64	
05/28/90		0.62	
05/29/90		0.62	
05/30/90		0.62	
05/31/90		0.62	
06/01/90		0.60	
06/03/90		0.60	
06/06/90		0.60	
06/08/90		0.60	
06/09/90		0.60	
06/11/90		0.60	
06/15/90		0.60	
06/16/90		0.60	
06/18/90		0.60	
06/20/90		0.60	
06/23/90		0.58	
06/25/90		0.58	
06/26/90		0.58	
06/28/90		0.58	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
06/30/90		0.58	
07/02/90		0.58	
07/06/90		0.58	
07/10/90		0.58	
07/12/90		0.58	
07/15/90		0.58	
07/20/90		0.58	
07/22/90		0.58	
07/24/90	0926	0.58	SAMPLE TAKEN BY PAUL S
07/26/90		0.58	
07/31/90		0.58	
08/01/90		0.58	
08/02/90		0.58	
08/03/90		0.58	
08/04/90		0.58	
08/05/90		0.58	
08/06/90		0.58	
08/07/90		0.58	
08/08/90		0.58	
08/09/90		0.58	
08/10/90		0.58	
08/11/90		0.58	
08/12/90		0.58	
08/13/90		0.58	
08/14/90		0.58	
08/15/90		0.58	
08/16/90		0.58	
08/17/90		0.58	
08/18/90		0.58	
08/19/90		0.58	
08/20/90		0.58	
08/21/90		0.58	
08/22/90		0.58	
08/23/90		0.58	
08/24/90		0.58	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
08/25/90		0.50	
08/26/90		0.58	
08/27/90		0.58	
08/28/90		0.58	
08/29/90		0.50	
08/30/90		0.58	
08/31/90		0.58	
09/01/90		0.58	
09/02/90		0.58	
09/03/90		0.58	
09/04/90		0.58	
09/05/90		0.58	
09/06/90		0.58	
09/07/90		0.58	
09/08/90		0.58	
09/09/90		0.58	
09/10/90		0.58	
09/11/90		0.58	
09/12/90		0.58	
09/13/90		0.58	
09/14/90		0.58	
09/15/90		0.58	
09/16/90		0.58	
09/17/90		0.58	
09/18/90		0.58	
09/19/90		0.58	
09/20/90		0.58	
09/21/90		0.58	
09/22/90		0.58	
09/23/90		0.58	
09/24/90		0.59	
09/25/90		0.60	
09/25/90		0.58	
09/26/90		0.58	
09/26/90		0.58	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
09/27/90		0.58	
09/28/90		0.58	
09/29/90		0.58	
09/30/90		0.58	
10/01/90		0.68	
10/02/90		0.68	VERY SMALL FLUCTUTATIONS
10/03/90		0.68	TOO SMALL TO MONITOR
10/04/90		0.68	
10/05/90		0.68	
10/06/90		0.68	
10/07/90		0.68	
10/08/90		0.68	
10/09/90		0.68	
10/10/90		0.68	
10/11/90	1011	0.60	MEASUREMENT TAKEN BY P. SHALLOW
10/12/90		0.68	
10/12/90		0.68	
10/13/90		0.68	
10/14/90		0.68	
10/15/90		0.68	
10/16/90		0.68	
10/17/90		0.68	
10/18/90		0.68	
10/19/90		0.68	
10/20/90		0.68	
10/21/90		0.68	
10/22/90	0956	0.60	MEASUREMENT TAKEN BY P. SHALLOW
10/23/90		0.68	
10/23/90		0.68	
10/24/90		0.68	
10/25/90		0.68	
10/26/90	0827	0.62	MEASUREMENT TAKEN BY P. SHALLOW
10/27/90		0.68	
10/27/90		0.68	
10/28/90		0.68	

VASHON GROUNDWATER MANAGEMENT PROJECT
NEEDLE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
10/29/90		0.68	
10/30/90		0.84	
10/31/90		0.68	
11/22/90	956	0.60	
11/26/90	827	0.62	
01/30/91	928	0.84	
02/10/91		0.90	
02/11/91		0.92	
02/12/91		0.94	
02/13/91		0.94	
02/14/91		0.92	
02/15/91		0.92	
02/16/91		0.92	
02/17/91		0.92	
02/18/91		1.60	
02/19/91		1.40	
02/20/91		1.00	
02/21/91		0.90	
02/22/91		0.84	
02/23/91		0.76	
02/24/91		0.74	
02/25/91		0.72	
02/26/91		0.70	
02/27/91		0.70	
03/17/91	924	0.13	

VASHON GROUNDWATER MANAGEMENT PROJECT
 PARADISE COVE CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
01/11/91	1000	0.25	RAINING HARD
01/15/91	1400	0.16	OVER CAST
01/20/91	1500	0.15	SUNNY
01/25/91	1515	0.15	SUNNY
01/30/91	1400	0.14	LIGHT RAIN
02/01/91	1250	0.17	MEASUREMENT TAKEN BY P. SHALLOW
02/05/91	1530	0.18	CLEAR
02/09/91	1000	0.17	FOG
02/13/91	1100	0.16	FOG
02/19/91	1300	0.19	HEAVY RAIN
02/23/91	1400	0.18	CLEAR
02/27/91	1500	0.19	RAIN
02/28/91	1500	0.23	HEAVY RAIN
03/04/91	1030	0.25	
03/08/91	1000	0.21	
03/12/91	1400	0.19	
03/15/91	1224	0.21	MEASUREMENT TAKEN BY P. SHALLOW
03/19/91	1600	0.18	
03/23/91	1400	0.18	
03/28/91	1600	0.20	
04/03/91	1600	0.23	HEAVY RAIN
04/07/91	1400	0.25	OVERCAST
04/10/91	1500	0.23	OVERCAST A LITTLE RAIN
04/13/91	1330	0.23	
04/18/91	1430	0.21	SOME SUN
04/22/91	1530	0.17	DUG OUT GAUGE
04/27/91	1000	0.19	
07/09/91	1218	0.17	

VASHON GROUNDWATER MANAGEMENT PROGRAM

TALEQUAH CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
07/20/89	900	0.44	
07/28/89	1430	0.42	
11/28/89	1230	0.73	
12/27/89	1241	0.58	
12/28/89	1102	0.59	
01/13/90	1400	0.60	
01/14/90	1300	0.58	
01/16/90	1400	0.55	
01/17/90	1435	0.53	
01/23/90	1600	0.55	
01/25/90	1500	0.64	
01/26/90	1400	0.64	
01/29/90	1400	0.70	
01/30/90	1500	0.72	
02/02/90	1400	0.75	rainy
02/03/90	1500	0.76	
02/05/90	1400	0.73	rainy
02/08/90	1200	0.74	cloudy, drizzely
02/10/90	0800	0.95	very rainy
02/12/90	0330	0.77	cloudy
02/14/90	1600	0.65	clear
02/17/90	1430	0.70	rainy
02/20/90	1100	0.85	rainy
02/23/90	1330	0.68	clear
02/25/90	1400	0.60	clear
02/26/90	1530	0.58	clear
02/27/90	1222	0.57	
02/28/90	1400	0.56	clear
03/05/90	1600	0.54	
03/07/90	1800	0.62	rainy
03/11/90	1700	0.58	clear
03/12/90	1630	0.56	clear
03/14/90	1400	0.60	cloudy/some rain
03/19/90	1700	0.54	cloudy
03/21/90	1400	0.52	clear

VASHON GROUNDWATER MANAGEMENT PROGRAM
 TALEQUAH CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
03/26/90	1200	0.50	clear
03/27/90	1700	0.48	clear
03/29/90	1320	0.48	MEASUREMENT TAKEN BY PAUL S.
04/01/90	1600	0.48	CLEAR
04/02/90	1700	0.48	CLEAR
04/05/90	1730	0.45	CLEAR
04/09/90	1930	0.43	CLEAR
04/12/90	1630	0.44	CLOUDY SOME RAIN
04/16/90	1930	0.42	CLEAR
04/19/90	1105	0.44	MEASUREMENT TAKEN BY PAUL SHALLOW
04/21/90	1900	0.42	CLOUDY
04/30/90	1800	0.42	CLEAR
05/30/90		0.40	
06/28/90	1230	0.40	MEASUREMENT TAKEN BY PAUL S
07/24/90	1235	0.43	SAMPLE TAKEN BY PAUL S
08/29/90	1215	0.50	GAUGE READING TAKEN BY P. SHALLOW
09/24/90	1204	0.50	
11/27/90	1222	0.54	
01/29/91	1235	0.51	
02/26/91	1214	0.54	
03/17/91	1235	0.54	
04/17/91	1215	0.59	
07/25/91	1248	0.43	
08/07/91	800	0.45	
09/17/91	1225	0.42	
10/16/91	1050	0.47	
11/20/91	805	0.55	
12/09/91	1101	0.54	
01/15/92	1117	0.54	
02/12/92	1043	0.55	
03/11/92	1059	0.48	
04/05/92	1150	0.46	

VASHON GROUNDWATER MANAGEMENT PROJECT
JUDD CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
07/20/89	0915	0.91	
07/27/89	1455	0.88	
10/02/89	1900	0.89	
10/06/89	0530	0.91	
10/09/89	1845	0.91	
10/11/89	1845	0.91	
10/14/89	1400	0.93	
10/16/89	1845	0.92	
10/18/89	1845	0.94	
10/20/89	1600	0.94	
10/22/89	1700	1.18	
10/23/89	1845	1.18	
10/24/89	1845	1.01	
10/25/89	2130	0.99	
10/30/89	1845	0.97	
11/02/89	1455	0.97	
11/03/89	1100	1.01	
11/06/89	1700	1.01	
11/07/89	1800	0.98	
11/08/89	1115	0.97	
11/08/89	1800	1.06	
11/09/89	2000	1.08	
11/10/89	1700	1.50	
11/12/89	1200	1.34	
11/13/89	1830	1.18	
11/14/89	1830	1.07	
11/15/89	1830	1.05	
11/16/89	2100	1.20	
11/18/89	1800	1.05	
11/20/89	1900	1.05	
11/21/89	1700	1.05	
11/22/89	1300	1.06	
11/23/89		1.06	
11/24/89	1400	1.18	
11/26/89	1800	1.16	

VASHON GROUNDWATER MANAGEMENT PROJECT
 JUDD CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
11/27/89	1830	1.08	
11/28/89	1830	1.06	
11/29/89	1830	1.06	
12/02/89	1700	1.54	
12/03/89	1900	1.50	
12/05/89			GAUGE WASHED OUT
12/07/89			GAUGE REINSTALLED
12/08/89		1.00	
12/11/89	1800	1.50	
12/12/89	1800	1.48	
12/18/89	1800	1.42	
12/21/89	1900	1.40	
12/23/89	1500	1.39	
12/27/89	1730	1.44	
12/28/89			Started raining @ 1400
12/31/89	1500	1.43	
01/02/90	1830	1.41	
01/03/90	1830	1.50	
01/04/90	NOTE: NEED NEW RATING CURVE FROM THIS DATE ON		
01/05/90	1830	2.10	LOST FLASHLIGHT
01/06/90	1800	1.80	HIGH WATER/FAST
01/07/90	1530	1.85	
01/08/90	1830	1.86	
01/09/90			GAUGE WASHED OUT
01/17/90	1415	1.34	
01/18/90	1930	1.32	
01/20/90	1600	1.28	
01/22/90	1830	1.36	
01/23/90	1830	1.37	
01/24/90	1830	1.30	
01/26/90	1600	1.33	
01/28/90	1630	1.80	
01/29/90	2100	1.73	
01/30/90	1830	1.60	
01/31/90	1830	1.68	

VASHON GROUNDWATER MANAGEMENT PROJECT
JUDD CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
02/05/90	1730	1.75	
02/07/90	1300	1.57	
02/11/90	1830	1.54	
02/12/90	1830	1.44	
02/19/90	1615	1.35	
02/21/90	2030	1.64	
02/23/90	2045	1.45	
02/25/90	2000	1.37	
02/26/90	1830	1.34	
02/28/90	1830	1.30	
03/07/90	1800	1.45	
03/08/90	1730	1.76	
03/10/90	1830	1.44	
03/12/90	1830	1.34	
03/13/90	1530	1.36	
03/15/90	1845	1.36	
03/17/90	1830	1.37	
03/19/90	1830	1.32	
03/21/90	1845	1.28	
03/23/90	1600	1.30	
03/24/90	1630	1.26	
03/27/90	1845	1.23	
03/29/90	1630	1.21	
05/16/90	1830	1.16	
05/19/90	1845	1.15	
05/20/90	1830	1.16	
05/21/90	1600	1.17	
05/23/90	1830	1.17	
05/27/90	1630	1.16	
05/28/90	1845	1.14	
05/29/90	1830	1.13	
05/31/90	1830	2.00	
06/02/90	1830	1.14	
06/03/90	2000	1.38	
06/04/90	1900	1.29	

VASHON GROUNDWATER MANAGEMENT PROJECT
JUDD CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
06/05/90	1800	1.18	
06/06/90	2100	1.26	
06/07/90	1900	1.17	
06/10/90	1400	1.30	
06/11/90	1900	1.18	
06/12/90	1900	1.19	
06/13/90	1830	1.17	
06/14/90	2100	1.16	
06/17/90	1900	1.11	
06/19/90	2000	1.10	
06/24/90	1800	1.07	
06/26/90	1830	1.07	
06/29/90	1830	1.04	
07/02/90	1730	1.18	
07/04/90	1800	1.06	
07/05/90	2100	1.26	
07/06/90	2000	1.11	heavy rain @ 1600
07/09/90	1900	1.06	
07/11/90	1830	1.05	
07/13/90	1900	1.04	
07/16/90	1900	1.03	
07/18/90	2000	1.02	
07/20/90	1830	1.03	
07/24/90	1900	1.04	
07/30/90	2000	1.02	
08/08/90	1130	1.04	SUNNY & WARM
08/11/90	1230	1.04	SUNNY & WARM
08/14/90	1000	1.05	SUNNY & WARM
08/18/90	900	1.06	AFTERNOON SHOWERS
08/22/90	2000	1.05	
08/28/90	1830	1.03	
09/03/90	1600	1.06	
09/06/90	1800	1.04	
09/10/90	1830	1.06	
09/13/90	2000	1.06	

VASHON GROUNDWATER MANAGEMENT PROJECT
JUDD CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
09/17/90	1830	1.08	
09/20/90	1900	1.07	
09/24/90	1830	1.08	
09/28/90	1600	1.07	
09/30/90	1830	1.06	
10/02/90	1830	1.11	
10/04/90	1730	1.13	
10/06/90	1500	1.11	
10/07/90	1830	1.09	
10/08/90	1830	1.11	
10/09/90	1830	1.11	
10/12/90	1700	1.16	
10/14/90	1830	1.31	
10/15/90	1900	1.16	
10/16/90	1830	1.16	
10/18/90	1700	1.15	
10/20/90	1800	1.17	
10/22/90	1600	1.13	
10/24/90	1900	1.19	
10/27/90	1700	1.24	
10/28/90	1830	1.22	
10/30/90	1830	1.26	
11/01/90	1730	1.18	
11/03/90	1600	1.18	
11/04/90	1830	1.17	
11/06/90	1815	1.20	
11/09/90	1700	1.67	
11/10/90	1800	1.38	
11/14/90	1830	1.40	
11/15/90	1830	1.34	
11/17/90	1800	1.33	
11/19/90	1800	1.30	
11/21/90	1600	1.54	
11/23/90			GAUGE WASHED OUT
02/01/91	953	0.52	

VASHON GROUNDWATER MANAGEMENT PROJECT
JUDD CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
03/15/91	950	0.40	
03/15/91	1032	0.40	
07/09/91	1000	0.20	
07/25/91	1147	0.20	
08/05/91	1154	0.19	
09/17/91	1045	0.19	
10/16/91	1010	0.21	
11/18/91	1102	0.95	
12/09/91	1026	0.49	
01/15/92	1018	0.58	
02/12/92	954	0.40	
03/11/92	1013	0.34	
04/06/92	1605	0.28	

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VASHON GROUNDWATER MANAGEMENT PROJECT
 UPPER JUDD CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
01/10/91	915	0.91	CLOUDY, SW WIND SHOWERING 45 DEGREES
01/11/91	1200	2.80	TURBID AFTER HEAVY RAINS SW WINDS 50 DEGREES
01/12/91	1630	1.37	CLOUDY, SHOWERY, WIND SW 50 DEGREES
01/13/91	1100	1.21	LIGHT RAIN WIND SW 52 DEGREES
01/14/91	1100	0.93	CLOUDY WINDS VARY FROM WEST 51 DEGREES
01/17/91	1330	0.72	CLEAR, VARIABLE WIND 52 DEGREES
01/18/91	1530	0.68	CLEAR, WIND NW 44 DEGREES
01/22/91	1230	0.64	CLOUDY WIND VARIABLE NORTH 37 DEGREES
01/26/91	1500	0.59	CLOUDY 36 DEGREES
01/27/91	1400	0.59	CLEAR 37 DEGREES
01/30/91	900	0.67	RAINING VARIABLE SOUTH WIND 44 DEGREES
01/31/91	930	0.66	STREAM CLEAR, STEADY RAIN, WIND VARIABLE SOUTH, 46 DEGREES
02/02/91	430	1.58	CLOUDY WATER, HEAVY SHOWERS, WIND SOUTHWEST, 51 DEGREES
02/03/91	2230	1.72	STREAM BROWN, SHOWERS DRIZZLE, WIND SOUTHWEST, 53 DEGREES
02/04/91	800	1.19	STREAM BROWN, WEATHER CLEAR, WIND VARIABLE WEST, 41 DEGREES
02/05/91	800	0.77	STREAM CLEAR, WEATHER CLEAR, WIND TO WEST, HIGH CLOUDS, 35 DE
02/09/91	1630	0.54	CLEAR 47 DEGREES
02/10/91	1700	0.54	INTERMITTENT RAIN 46 DEGREES
02/11/91	1000	0.60	INTERMITTENT RAIN 48 DEGREES
02/14/91	800	0.55	PARTLY CLOUDY 50 DEGREES
02/18/91	800	3.29	AFTER 7 HRS OF STEADY RAIN
02/18/91	2300	1.56	BROWN WATER, BUT CLEARING
	730	1.18	BROWN WATER, BOTTOM VISIBLE
02/20/91	730	0.78	CLEAR 37 DEGREES
02/22/91	1500	0.60	CLEAR 40 DEGREES
02/25/91	2200	0.52	CLEAR 44 DEGREES
03/01/91	1500	2.02	
03/02/91	1000	2.06	
03/04/91	745	1.00	
03/11/91	745	0.90	
03/12/91	745	0.62	
03/14/91	1115	0.61	
03/21/91	745	0.50	
03/30/91	1500	0.48	
04/02/91	2245	2.83	

VASHON GROUNDWATER MANAGEMENT PROJECT
UPPER JUDD CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
04/03/91	930	2.77	
04/04/91	1800	2.43	
04/05/91	700	1.66	
04/06/91	1230	1.13	
04/08/91	800	1.16	
04/10/91	800	0.87	
04/11/91	745	0.77	
04/14/91	745	0.60	
04/17/91	800	0.53	
04/20/91	1200	0.47	
04/23/91	800	0.62	
04/24/91	800	0.56	
04/26/91	1815	0.49	
05/02/91	800	0.46	
05/03/91	1300	0.43	
05/07/91	800	0.46	
05/09/91	800	0.37	
05/12/91		0.38	
05/13/91	800	0.37	
05/17/91	1500	0.38	
05/19/91	800	0.34	
05/21/91	800	0.34	
05/24/91	1200	0.35	
05/26/91	1000	0.31	
05/27/91	800	0.31	
05/29/91	2100	0.30	
05/31/91		0.29	
06/06/91	800	0.34	
06/10/91	800	0.35	
06/13/91	2100	0.34	
06/27/91	830	0.33	
07/06/91	1100	0.34	
07/09/91	1043	0.34	MEASUREMENT TAKEN BY PAUL SHALLOW
07/29/91	1200	0.33	
08/08/91	1030	0.53	HEAVY RAIN, EARLY AM

VASHON GROUNDWATER MANAGEMENT PROJECT
 UPPER JUDD CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
08/09/91	1630	0.35	CLEAR
11/01/91	900	0.38	BROWN TRANSLUCENT WATER
11/09/91	1000	0.48	BROWN, TRANSLUCENT WATER
11/14/91	900	0.54	NEEDLE LITTER IN WOODS IS FINALLY SATURATED
11/16/91	1200	0.58	
11/18/91	1000	0.74	BROWN TRANSLUCENT WATER RAINING STEADILY
11/18/91	1600	0.89	
11/19/91	800	0.71	BROWN TRANSLUCENT WATER-SOME SEDIMENT. HARD RAIN 5:30 AM
11/26/91	1000	0.56	CLEAR
12/02/91	800	0.42	WATER CLEAR
12/04/91	1215	1.20	BROWN TRANSLUCENT WATER, RAINING STEADILY
12/05/91	1600	0.57	CLEAR WATER
12/06/91	1030	0.50	CLEAR WATER
12/08/91	830	0.72	BROWN TRANSLUCENT WATER, RAINED OVERNIGHT
12/09/91	1030	0.47	WATER CLEAR
12/12/91	800	0.47	CLEAR WATER, KILLING FROST
12/13/91	800	0.46	FROSTY
12/21/91	930	0.46	CLEAR WATER
12/26/91	900	0.47	
12/29/91	800	0.47	
01/01/92	920	0.66	
01/02/92	730	0.53	
01/04/92	1400	0.53	
01/06/92	1000	0.47	
01/07/92	800	0.45	
01/10/92	800	0.50	
01/11/92	800	0.47	
01/14/92	830	0.45	
01/16/92	1430	0.47	
01/17/92	1230	0.45	
01/22/92	845	1.01	
01/22/92	1400	0.93	
01/22/92	2015	1.64	
01/23/92	800	1.03	
01/23/92	1015	0.94	

VASHON GROUNDWATER MANAGEMENT PROJECT
UPPER JUDD CREEK

DATE	TIME	STAFF LEVEL IN FEET	COMMENTS
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01/23/92	1200	0.91	
01/24/92	1030	0.65	
01/25/92	930	0.64	
01/26/92	1330	1.64	
01/26/92	2030	3.17	
01/27/92	1545	2.17	
01/28/92	930	2.50	
01/29/92	1300	1.63	
01/30/92	730	2.10	

VASHON GROUNDWATER MANAGEMENT PROJECT
 BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
09/17/89		0.49	0.42	
09/18/89	0800	0.64	0.82	
09/19/89		0.64	0.82	
09/20/89		0.41	0.27	
09/21/89		0.42	0.29	
09/22/89		0.56	0.59	
09/23/89		0.44	0.32	
09/24/89		0.46	0.36	
09/25/89		0.5	0.44	
09/26/89		0.5	0.44	
09/27/89		0.48	0.40	
09/28/89		0.48	0.40	
09/29/89		0.45	0.34	
09/30/89		0.52	0.49	
10/01/89	0800	0.54	0.54	
10/02/89	0800	0.5	0.44	
10/03/89	0800	0.52	0.49	
10/04/89	0800	0.6	0.70	
10/05/89	0800	0.51	0.46	
10/06/89	0800	0.51	0.46	
10/07/89	0800	0.51	0.46	
10/08/89	0800	0.51	0.46	
10/09/89	0800	0.6	0.70	
10/10/89	0800	0.52	0.49	
10/11/89	0800	0.54	0.54	.13" RAIN
10/12/89	0800	0.56	0.59	.31" RAIN
10/13/89	0800	0.52	0.49	.07" RAIN
10/14/89	0800	0.63	0.79	

VASHON GROUNDWATER MANAGEMENT PROJECT
 BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
10/15/89	0800	0.52	0.49	
10/16/89	0800	0.51	0.46	
10/17/89	0800	0.57	0.61	
10/18/89	0800	0.54	0.54	RAINING
10/19/89	0800	0.52	0.49	.13" RAINING
10/20/89	0800	0.7	1.02	
10/21/89	0800	0.81	1.48	.88" RAIN & RAINING
10/22/89	0800	0.79	1.39	.34" RAIN & RAINING
10/23/89	0800	0.72	1.10	.84 RAIN & RAINING
10/24/89	0800	0.62	0.76	.41" RAIN & RAINING
10/25/89	0800	0.64	0.82	.01" RAIN & RAINING
10/26/89	0800	0.62	0.76	.48" RAIN & RAINING
10/27/89	0800	0.66	0.88	.20 RAIN & RAINING
10/28/89	0800	0.63	0.79	
10/29/89	0800	0.63	0.79	
10/30/89	0800	0.63	0.79	
10/31/89	0800	0.51	0.46	
11/01/89	0800	0.5	0.44	
11/02/89	0800	0.5	0.44	
11/03/89	0800	0.65	0.85	
11/04/89	0800	0.64	0.82	
11/05/89	0800	0.63	0.79	
11/06/89	0800	0.63	0.79	
11/07/89	0800	0.61	0.73	
11/08/89	0800	0.66	0.88	
11/09/89	0800	0.66	0.88	
11/10/89	0800	0.64	0.82	
11/11/89	0800	0.68	0.95	

VASHON GROUNDWATER MANAGEMENT PROJECT
BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
11/12/89	0800	0.68	0.95	
11/13/89	0800	0.64	0.82	
11/14/89	0800	0.63	0.79	
11/15/89	0800	0.56	0.59	
11/16/89	0800	0.63	0.79	
11/17/89	0800	0.63	0.79	
11/18/89	0800	0.63	0.79	
11/19/89	0800	0.63	0.79	
11/20/89	0800	0.64	0.82	
11/21/89	0800	0.63	0.79	
11/22/89	0800	0.66	0.88	
11/23/89	0800	0.63	0.79	
11/24/89	0800	0.63	0.79	
11/25/89	0800	0.63	0.79	
11/26/89	0800	0.62	0.76	
11/27/89	0800	0.63	0.79	
11/28/89	0800	0.63	0.79	
11/29/89	0800	0.63	0.79	
11/30/89	0800	0.63	0.79	
12/01/89	0800	0.63	0.79	
12/02/89	0800	0.66	0.88	
12/03/89	0800	0.95	2.20	
12/04/89	0800	0.79	1.39	
12/05/89	0800	0.76	1.26	
12/06/89	0800	0.64	0.82	
12/07/89	0800	0.68	0.95	
12/08/89	0800	0.64	0.82	
12/09/89	0800	0.63	0.79	

VASHON GROUNDWATER MANAGEMENT PROJECT
 BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
12/10/89	0800	0.62	0.76	
12/11/89	0800	0.53	0.51	
12/12/89	0800	0.61	0.73	
12/13/89	0800	0.61	0.73	
12/14/89	0800	0.61	0.73	
12/15/89	0800	0.61	0.73	
12/16/89	0800	0.62	0.76	
12/17/89	0800	0.61	0.73	
12/18/89	0800	0.62	0.76	
12/19/89	0800	0.62	0.76	
12/20/89	0800	0.62	0.76	
12/21/89	0800	0.61	0.73	
12/25/89	0800	0.61	0.73	
12/26/89	0800	0.61	0.73	
12/27/89	0800	0.61	0.73	
12/28/89	0800	0.60	0.70	
12/29/89	0800	0.60	0.70	
12/30/89	0800	0.61	0.73	
01/16/90		0.68	0.95	
01/23/90		0.68	0.95	
01/29/90		0.68	0.95	
01/30/90		0.77	1.30	
02/26/90		0.67	0.92	
02/27/90		0.68	0.95	
02/28/90		0.68	0.95	
03/01/90		0.68	0.95	
03/02/90		0.67	0.92	
03/03/90		0.67	0.92	

VASHON GROUNDWATER MANAGEMENT PROJECT
BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
03/04/90		0.67	0.92	
03/05/90		0.67	0.92	
03/06/90		0.72	1.10	
03/07/90		0.69	0.99	
03/08/90		0.77	1.30	
03/09/90		0.78	1.34	
03/10/90		0.77	1.30	
03/11/90		0.71	1.06	
03/12/90		0.69	0.99	
03/13/90		0.77	1.30	
03/14/90		0.71	1.06	
03/15/90		0.69	0.99	
03/18/90		0.69	0.99	
03/19/90		0.68	0.95	
03/20/90		0.67	0.92	
03/21/90		0.66	0.88	
03/22/90		0.64	0.82	
03/23/90		0.52	0.49	
03/24/90		0.58	0.64	
03/25/90		0.65	0.85	
03/26/90		0.55	0.56	
03/27/90		0.67	0.92	
03/28/90		0.58	0.64	
03/29/90		0.58	0.64	
03/30/90		0.59	0.67	
03/31/90		0.67	0.92	
04/01/90		0.67	0.92	
04/02/90		0.66	0.88	

VASHON GROUNDWATER MANAGEMENT PROJECT
 BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
04/03/90		0.56	0.59	
04/04/90		0.54	0.54	
04/05/90		0.67	0.92	
04/06/90		0.51	0.46	
04/07/90		0.5	0.44	
04/08/90		0.51	0.46	
04/09/90		0.51	0.46	
04/10/90		0.5	0.44	
04/11/90		0.37	0.21	
04/12/90		0.51	0.46	
04/13/90		0.56	0.59	
04/14/90		0.56	0.59	
04/16/90		0.53	0.51	
04/17/90		0.52	0.49	
04/18/90		0.53	0.51	
04/19/90		0.54	0.54	
04/22/90		0.5	0.44	
05/18/90		0.53	0.51	
05/19/90		0.63	0.79	
05/20/90		0.62	0.76	
05/21/90		0.63	0.79	
05/22/90		0.63	0.79	
05/23/90		0.51	0.46	
05/24/90		0.49	0.42	
05/25/90		0.62	0.76	
05/26/90		0.47	0.38	
05/27/90		0.62	0.76	
05/29/90		0.65	0.85	

VASHON GROUNDWATER MANAGEMENT PROJECT
 BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
05/30/90		0.68	0.95	
05/31/90		0.65	0.85	
06/07/90		0.65	0.85	
06/14/90		0.64	0.82	
06/27/90		0.62	0.76	
07/12/90	1220	0.3	0.12	
07/23/90		0.41	0.27	
07/26/90		0.65	0.85	
07/31/90		0.67	0.92	
08/01/90		0.64	0.82	
08/02/90		0.44	0.32	
08/03/90		0.67	0.92	
08/04/90		0.67	0.92	
08/05/90		0.44	0.32	
08/06/90		0.48	0.40	
08/07/90		0.64	0.82	
08/08/90		0.47	0.38	
08/09/90		0.46	0.36	
08/10/90		0.42	0.29	
08/12/90		0.59	0.67	
08/13/90		0.42	0.29	
08/14/90		0.42	0.29	
08/15/90		0.42	0.29	
08/16/90		0.68	0.95	
08/17/90		0.68	0.95	
08/18/90		0.69	0.99	
08/19/90		0.69	0.99	
08/20/90		0.71	1.06	

VASHON GROUNDWATER MANAGEMENT PROJECT
 BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
08/21/90		0.68	0.95	
08/22/90		0.67	0.92	
08/23/90		0.58	0.64	
08/24/90		0.52	0.49	
08/25/90		0.53	0.51	
08/26/90		0.64	0.82	
08/27/90		0.59	0.67	
08/28/90		0.58	0.64	
08/29/90		0.58	0.64	
08/30/90		0.69	0.99	
09/23/90	1545	0.55	0.56	
09/30/90		0.59	0.67	
10/01/90		0.68	0.95	
10/02/90		0.69	0.99	
10/11/90		0.69	0.99	
10/12/90		0.57	0.61	
10/13/90		0.69	0.99	
10/14/90		0.78	1.34	
10/15/90		0.72	1.10	
10/16/90		0.62	0.76	
10/17/90		0.73	1.14	
10/18/90		0.62	0.76	
10/21/90		0.73	1.14	
10/22/90		0.62	0.76	
10/23/90		0.62	0.76	
10/24/90		0.72	1.10	
10/25/90		0.71	1.06	
10/26/90		0.73	1.14	

VASHON GROUNDWATER MANAGEMENT PROJECT
BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
10/27/90		0.72	1.10	
10/28/90		0.78	1.34	
10/29/90		0.79	1.39	
10/30/90		0.8	1.43	
10/31/90		0.71	1.06	
11/01/90		0.7	1.02	
11/02/90		0.63	0.79	
11/03/90		0.62	0.76	
11/04/90		0.64	0.82	
11/05/90		0.63	0.79	
11/06/90		0.64	0.82	
11/07/90		0.73	1.14	
11/08/90		0.88	1.82	
11/09/90		0.83	1.57	
11/10/90		0.76	1.26	
11/11/90		0.73	1.14	
11/12/90		0.84	1.62	
11/13/90		0.84	1.62	
11/14/90		0.74	1.18	
11/15/90		0.64	0.82	
11/16/90		0.72	1.10	
11/18/90		0.72	1.10	
11/19/90		0.73	1.14	
11/20/90		0.73	1.14	
11/21/90		0.75	1.22	
11/22/90		0.74	1.18	
11/23/90		0.96	2.26	
11/28/90		0.79	1.39	

VASHON GROUNDWATER MANAGEMENT PROJECT
 BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
11/29/90		0.77	1.30	
01/01/91	800	0.68	0.95	
01/02/91	800	0.73	1.14	
01/03/91	800	0.73	1.14	
01/04/91	800	0.67	0.92	
01/05/91	800	0.73	1.14	
01/06/91	800	0.81	1.48	
01/07/91	800	0.8	1.43	
01/08/91	800	0.81	1.48	
01/09/91	800	0.82	1.52	
01/10/91	800	0.87	1.76	
01/11/91	800	1.24	4.28	
01/21/91	800	0.58	0.64	
01/22/91	800	0.72	1.10	
01/23/91	800	0.6	0.70	
01/24/91	800	0.1	0.01	
01/25/91	800	0.73	1.14	
01/26/91	800	0.7	1.02	
01/27/91	800	0.62	0.76	
01/28/91	800	0.62	0.76	
01/29/91	800	0.63	0.79	
01/30/91		0.73	1.14	
01/31/91	849	0.69	0.99	
02/01/91		0.73	1.14	
02/02/91		0.78	1.34	
02/03/91		1	2.50	
02/05/91		0.95	2.20	
02/06/91		0.94	2.14	

VASHON GROUNDWATER MANAGEMENT PROJECT
 BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
02/07/91		0.84	1.62	
02/10/91		0.8	1.43	
02/11/91		0.86	1.71	
02/12/91		0.77	1.30	
02/13/91		0.74	1.18	
02/14/91		0.74	1.18	
03/18/91	1330	0.58	0.64	
03/19/91		0.38	0.22	
03/20/91		0.41	0.27	
03/21/91		0.4	0.25	
03/22/91		0.58	0.64	
03/23/91		0.64	0.82	
03/24/91		0.63	0.79	
03/25/91		0.28	0.10	
03/26/91		0.27	0.09	
03/27/91		0.42	0.29	
03/28/91		0.43	0.30	
03/29/91		0.34	0.17	
03/30/91		0.34	0.17	
05/09/91	1218	0.62	0.76	
05/10/91		0.75	1.22	
05/11/91		0.67	0.92	
05/12/91		0.76	1.26	
05/13/91		0.76	1.26	
05/14/91		0.65	0.85	
05/15/91		0.67	0.92	
05/16/91		0.77	1.30	
05/17/91		0.77	1.30	

VASHON GROUNDWATER MANAGEMENT PROJECT
BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
05/18/91		0.76	1.26	
05/19/91		0.67	0.92	
05/20/91		0.66	0.88	
05/21/91		0.66	0.88	
05/22/91		0.66	0.88	
05/23/91		0.82	1.52	
05/27/91		0.8	1.43	
05/28/91		0.8	1.43	
05/29/91		0.73	1.14	
05/30/91		0.71	1.06	
05/31/91		0.72	1.10	
06/01/91		0.72	1.10	
06/02/91		0.71	1.06	
06/03/91		0.71	1.06	
06/04/91		0.69	0.99	
06/05/91		0.78	1.34	
06/06/91		0.71	1.06	
06/07/91		0.68	0.95	
06/08/91		0.67	0.92	
06/09/91		0.69	0.99	
06/10/91		0.73	1.14	
06/11/91		0.73	1.14	
06/12/91		0.73	1.14	
06/13/91		0.72	1.10	
06/14/91		0.73	1.14	
06/15/91		0.74	1.18	
06/16/91		0.8	1.43	
06/17/91		0.79	1.39	

VASHON GROUNDWATER MANAGEMENT PROJECT
 BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
06/18/91		0.73	1.14	
06/19/91		0.74	1.18	
06/20/91		0.8	1.43	
06/21/91		0.78	1.34	
06/22/91		0.73	1.14	
06/23/91		0.72	1.10	
06/24/91		0.72	1.10	
06/25/91		0.71	1.06	
07/16/91		0.77	1.30	
07/17/91		0.73	1.14	
07/18/91		0.61	0.73	
07/19/91		0.76	1.26	
07/20/91		0.73	1.14	
07/21/91		0.59	0.57	
07/22/91		0.55	0.56	
07/23/91		0.56	0.59	
07/24/91		0.73	1.14	
07/25/91	1053	0.66	0.88	
07/29/91	1406	0.5	0.44	
07/30/91		0.59	0.57	
07/31/91		0.6	0.70	
08/01/91		0.62	0.76	
08/02/91		0.58	0.64	
08/03/91		0.58	0.64	
08/04/91		0.59	0.67	
08/05/91		0.58	0.64	
08/06/91		0.58	0.64	
08/07/91		0.61	0.73	

VASHON GROUNDWATER MANAGEMENT PROJECT
BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
08/08/91		0.73	1.14	
08/09/91		0.69	0.99	
08/10/91		0.61	0.73	
08/11/91		0.74	1.18	
08/12/91		0.51	0.46	
08/13/91		0.74	1.18	
08/14/91		0.6	0.70	
08/15/91		0.58	0.64	
08/16/91		0.73	1.14	
08/17/91		0.73	1.14	
08/18/91		0.58	0.64	
08/19/91		0.57	0.61	
08/20/91		0.58	0.64	
08/21/91		0.6	0.70	
08/22/91		0.58	0.64	
08/23/91		0.58	0.64	
08/24/91		0.74	1.18	
08/25/91		0.58	0.64	
08/26/91		0.82	1.52	
08/30/91		0.82	1.52	
08/31/91		0.73	1.14	
09/01/91		0.73	1.14	
09/02/91		0.62	0.76	
09/03/91		0.58	0.64	
09/04/91		0.58	0.64	
09/05/91		0.6	0.70	
09/06/91		0.58	0.64	
09/07/91		0.58	0.64	

VASHON GROUNDWATER MANAGEMENT PROJECT
BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
09/08/91		0.6	0.70	
09/09/91		0.57	0.61	
09/10/91		0.58	0.64	
09/11/91		0.57	0.61	
09/12/91		0.59	0.67	
09/13/91		0.56	0.59	
09/14/91		0.56	0.59	
09/15/91		0.55	0.56	
09/16/91		0.57	0.61	
09/17/91		0.54	0.54	
09/18/91		0.66	0.88	
09/19/91		0.59	0.67	
09/20/91		0.54	0.54	
09/21/91		0.64	0.82	
09/22/91		0.54	0.54	
09/23/91		0.53	0.51	
09/24/91		0.54	0.54	
09/25/91		0.53	0.51	
10/01/91		0.49	0.42	
10/02/91		0.58	0.64	
10/03/91		0.56	0.59	
10/04/91		0.58	0.64	
10/05/91		0.7	1.02	
10/06/91		0.69	0.99	
10/07/91		0.69	0.99	
10/08/91		0.56	0.59	
10/09/91		0.62	0.76	
10/10/91		0.68	0.95	

VASHON GROUNDWATER MANAGEMENT PROJECT
 BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
10/11/91		0.69	0.99	
10/12/91		0.68	0.95	
10/13/91		0.69	0.99	
10/14/91		0.7	1.02	
10/15/91		0.76	1.26	
10/16/91		0.57	0.61	
10/17/91	920	0.57	0.61	
10/18/91		0.7	1.02	
10/19/91		0.7	1.02	
10/20/91		0.56	0.59	
10/21/91		0.54	0.54	
10/22/91		0.72	1.10	
10/23/91		0.76	1.26	
10/24/91		0.72	1.10	
10/25/91		0.73	1.14	
10/26/91		0.72	1.10	
10/27/91		0.72	1.10	
10/28/91		0.71	1.06	
10/29/91		0.56	0.59	
10/30/91		0.72	1.10	
10/31/91		0.54	0.54	
11/01/91		0.52	0.49	
11/19/91	1850	0.23	0.06	
12/09/91	920	0.17	0.03	
01/15/92	914	0.35	0.18	
02/12/92	855	0.71	1.06	
03/11/92	919	0.76	1.26	

VASHON GROUNDWATER MANAGEMENT PROJECT
BEAL CREEK

DATE	TIME	STAFF LEVEL FEET	Weir Flow cu ft/s	COMMENTS
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VASHON GROUNDWATER MANAGEMENT PROJECT
 MILETA CREEK

DATE	TIME	STAFF LEVEL IN FEET	Weir Flow cu ft/s	COMMENTS
07/20/89	1200	0.13	0.02	
08/08/89	1330	0.11	0.01	SUNNY
08/20/89	1300	0.13	0.02	HAD A RAIN STORM LAST NIGHT
08/30/89	1330	0.13	0.02	SUNNY
09/09/89		0.15	0.02	AFTER RAIN
10/24/89	1200	0.15	0.02	SUN & CLOUDS
11/02/89		1.50	6.86	
11/11/89		1.60	8.06	
11/28/89		1.60	8.06	
01/24/90				WEIR GONE
02/02/90		1.59	7.94	
02/12/90		1.62	8.32	
02/23/90		1.77	10.38	HEAVY RAINS
04/19/90		1.00	2.49	THREE WEEKS SUN
05/24/90		0.90	1.91	SOME RAIN
06/19/90		0.89	1.86	
06/26/90		0.83	1.56	
07/03/90		0.81	1.47	
07/10/90		0.79	1.38	
07/17/90		0.78	1.34	
07/24/90		0.78	1.34	
07/31/90		0.78	1.34	
08/07/90		0.78	1.34	HOT
08/14/90		0.78	1.34	HOT
08/21/90		0.79	1.38	
08/29/90		0.90	1.91	90 DEGREES+ VERY HOT MONTH-VERY SMALL AMT. RAINF
08/30/90	1345	0.90	1.91	LEAK FIXED, LEVEL WENT UP
11/28/90	1034	0.56	0.58	
05/09/91	1435	4.05	82.19	
08/07/91	1215	3.80	70.09	
09/17/91	1015	3.85	72.42	
10/16/91	952	4.00	79.68	
12/09/91	952	4.22	91.09	
01/15/92	950	4.20	90.02	
02/12/92	937	4.21	90.55	

VASHON GROUNDWATER MANAGEMENT PROJECT
MILETA CREEK

DATE	TIME	STAFF LEVEL IN FEET	Weir Flow cu ft/s	COMMENTS
03/11/92	954	4.00	79.68	

DRAFT

APPENDIX G

**STREAM-FLOW/STREAM STAGE HYDROGRAPHS
AND STREAM DISCHARGE RATING CURVES**

(May 14, 1993 rev.)

URS CONSULTANTS

MEMORANDUM

TO: Larry Roberts
FROM: Bruce Titus
DATE: July 22, 1992
SUBJECT: Vashon Island GWM and SWM Discharge Rating Curves

Enclosed are the discharge rating curves for the staff gages installed as part of the Groundwater (GWM) and Surface water (SWM) Management Programs. The GWM rating curve flow measurements were collected during the period of August 1989 through October 1990. The SWM flow data occurred February through December 1991. Due to the stream bank changes which occurred during the data collection period, some assumptions were made in drawing the rating curves. The Tahlequah Creek discharge rating curve consists of two separate curves representing the stream during different bed configurations.

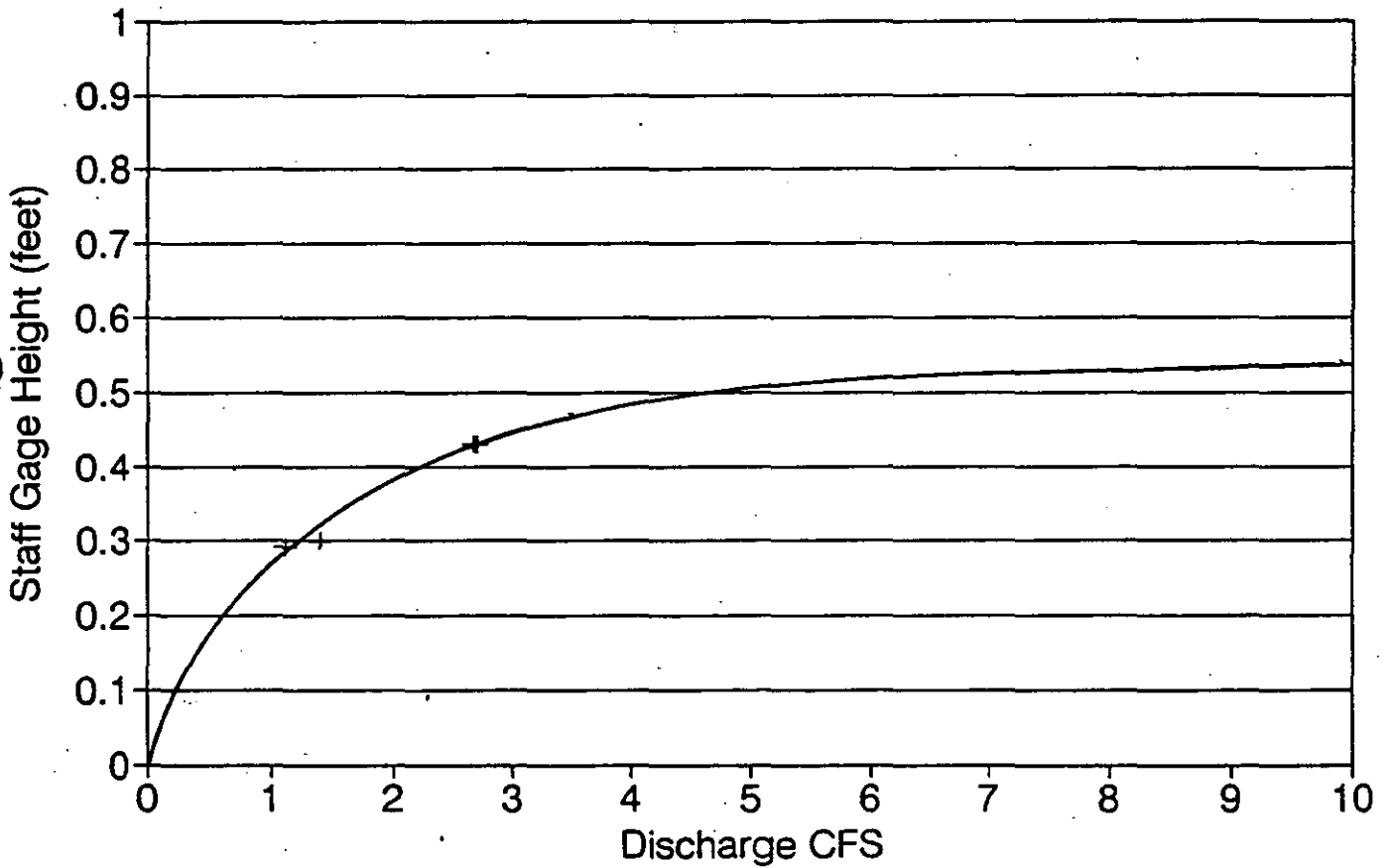
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GEORGE W. MILLER, INC.
WASHINGTON

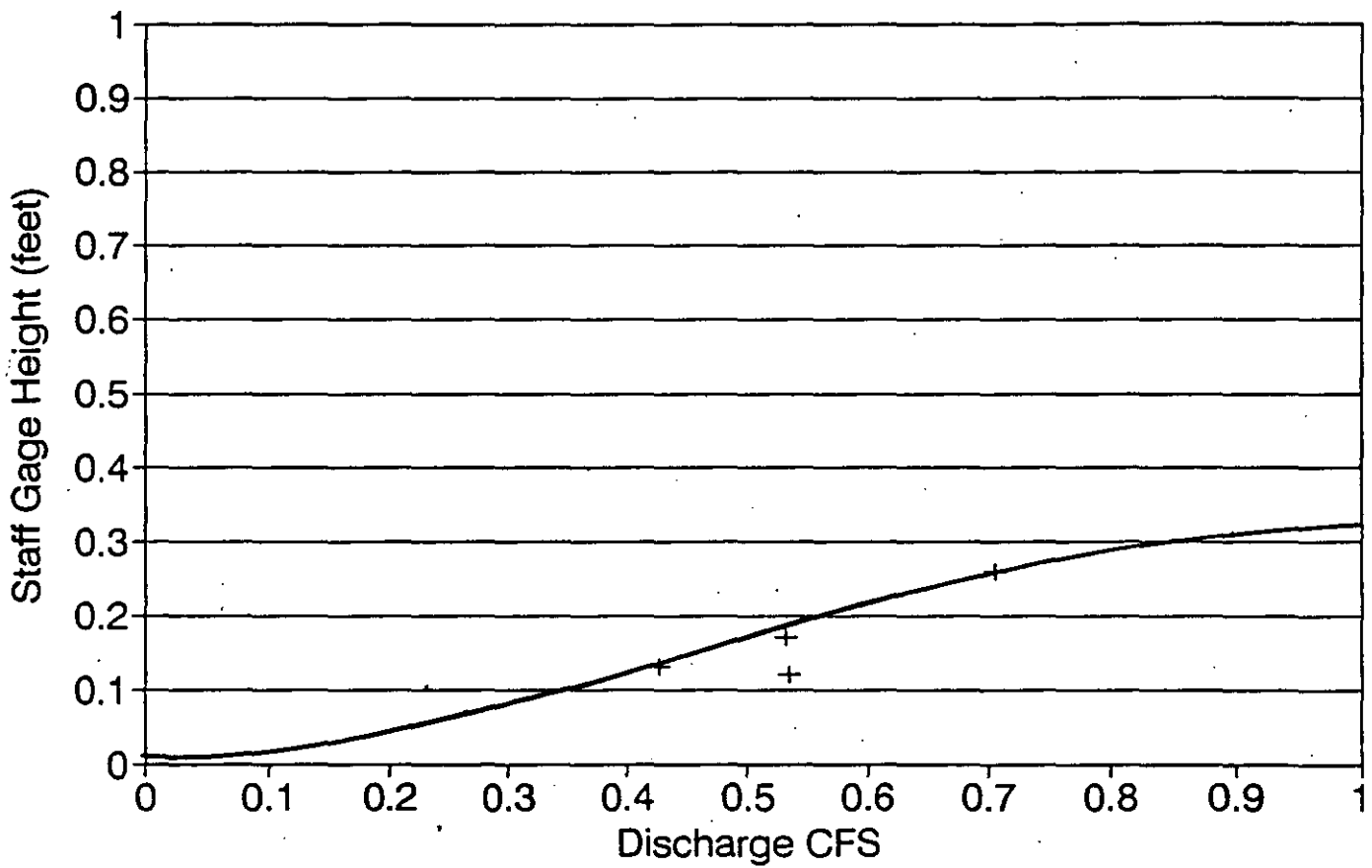
Vashon SWM Program

Fisher Creek Discharge Rating Curve



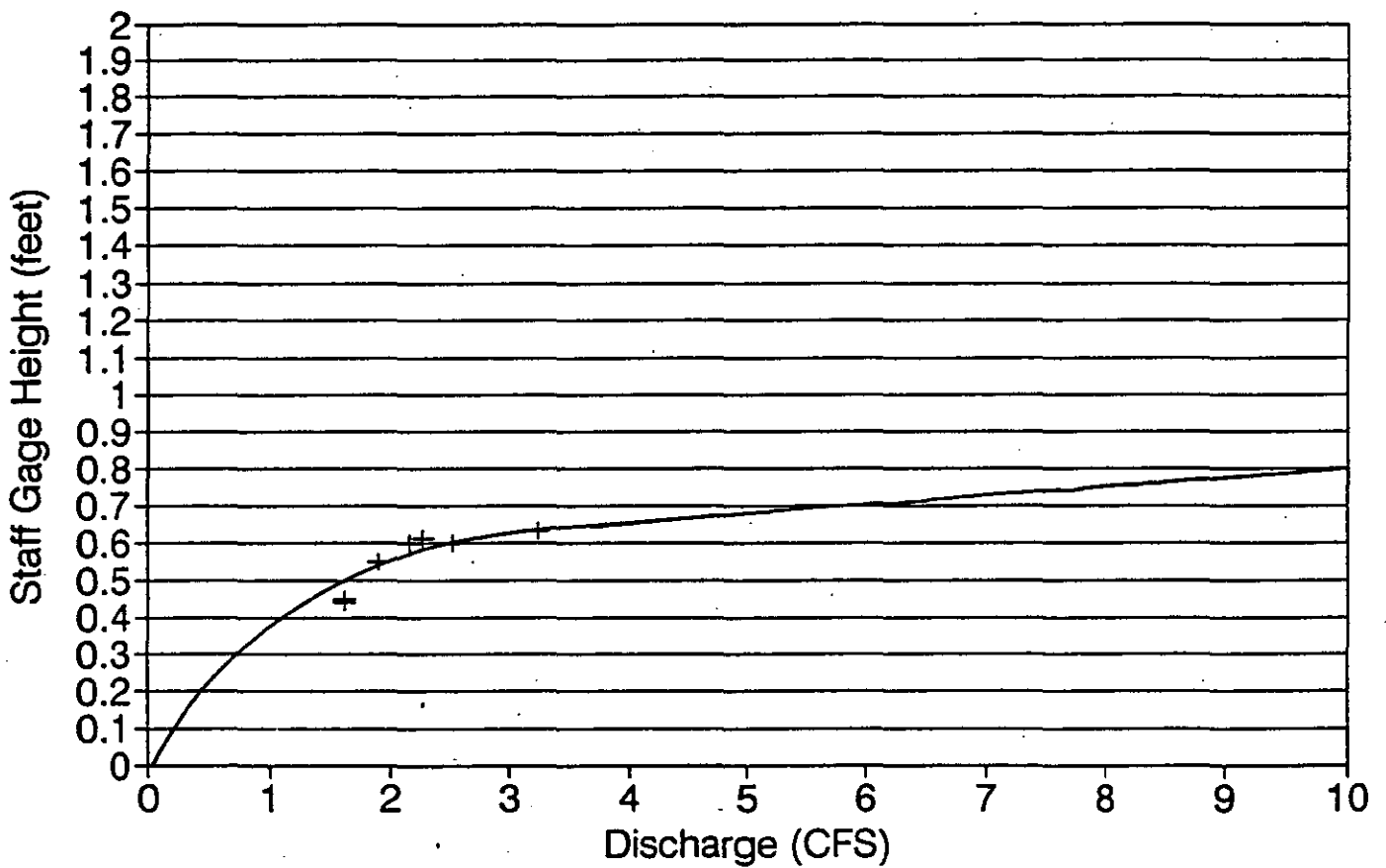
Vashon SWM Program

Green Creek Discharge Rating Curve



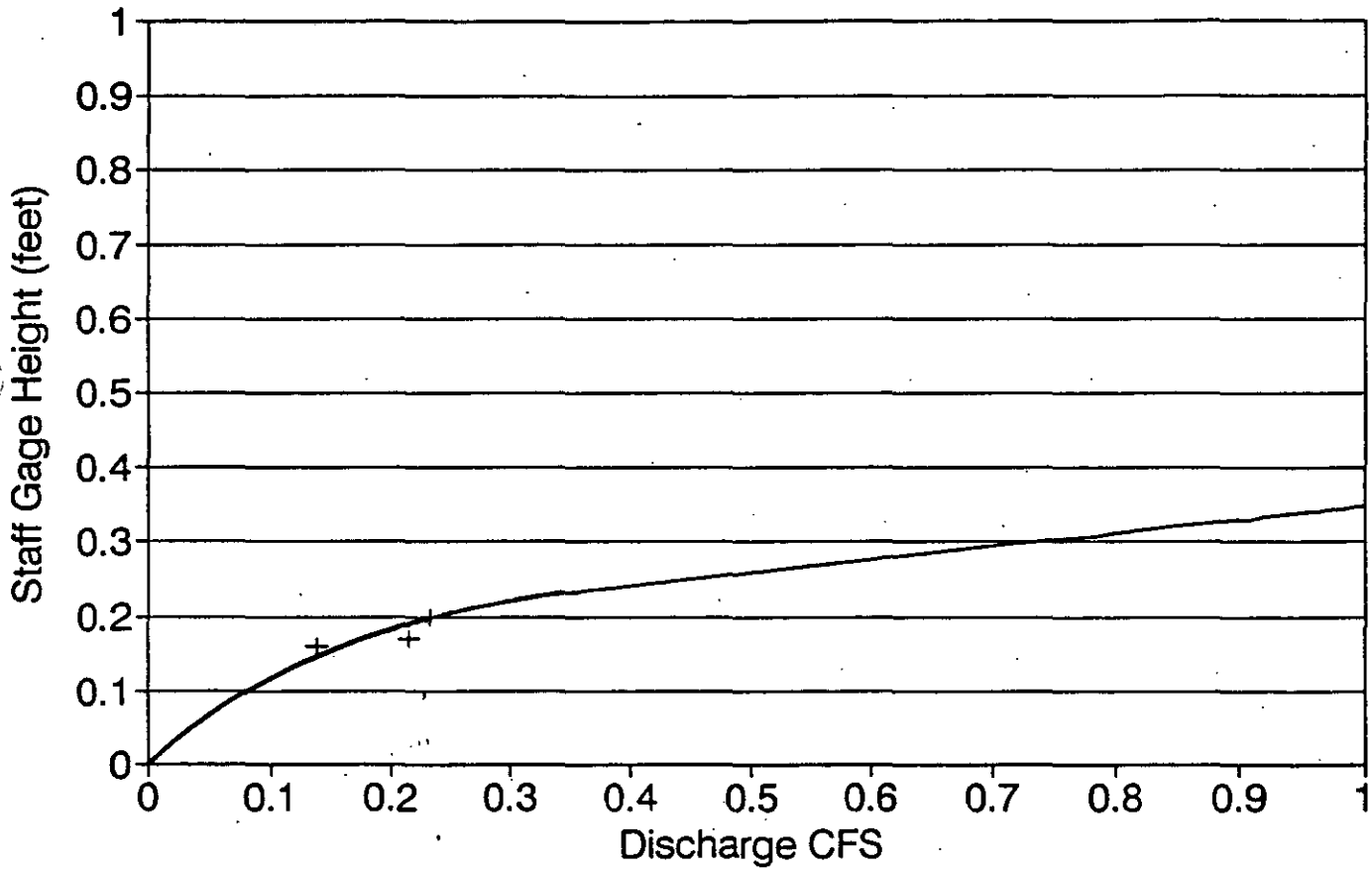
Vashon GWM Program

Needle Creek Discharge Rating Curves



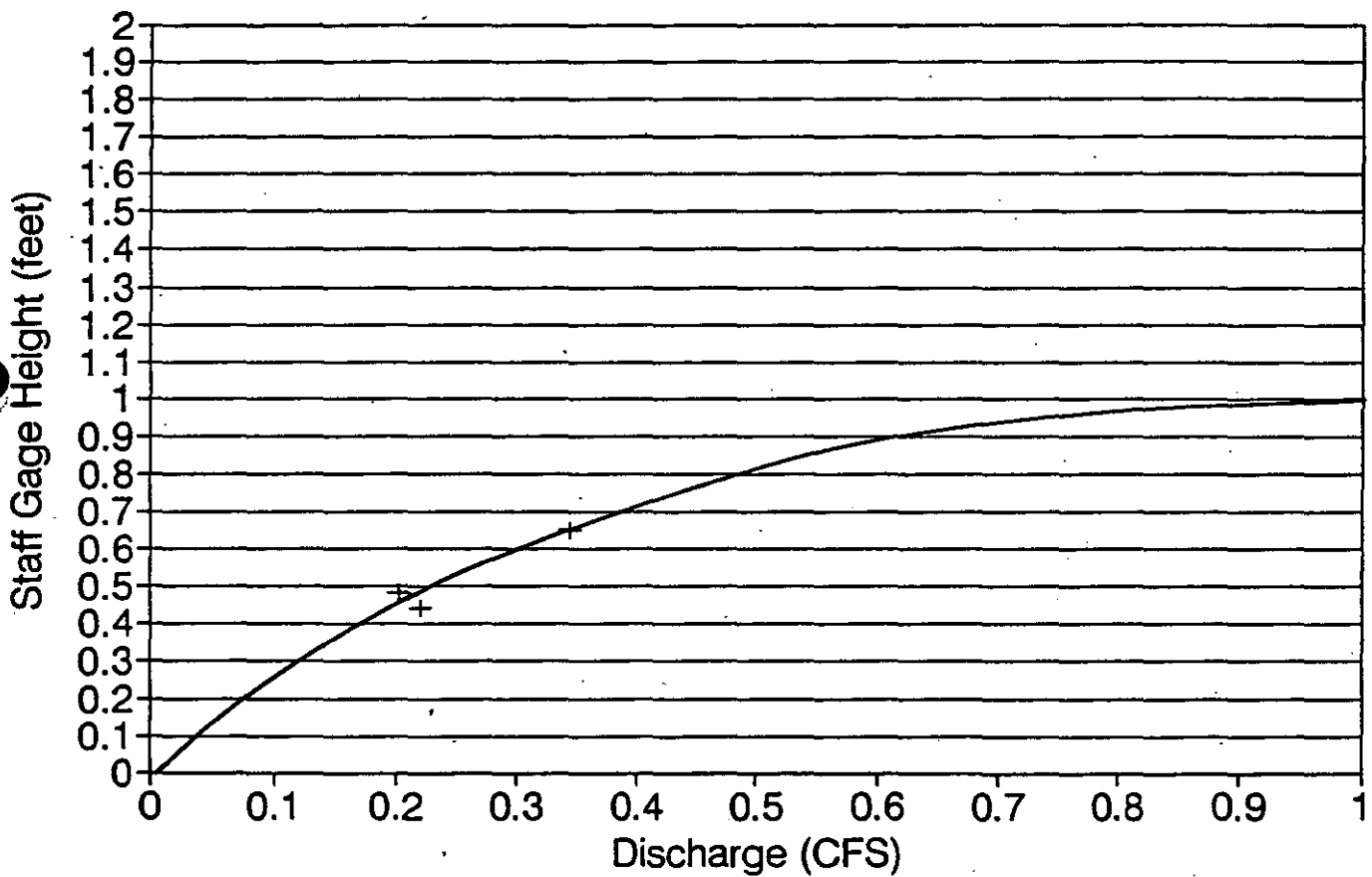
Vashon SWM Program

Paradise Creek Discharge Rating Curve



Vashon GWM Program

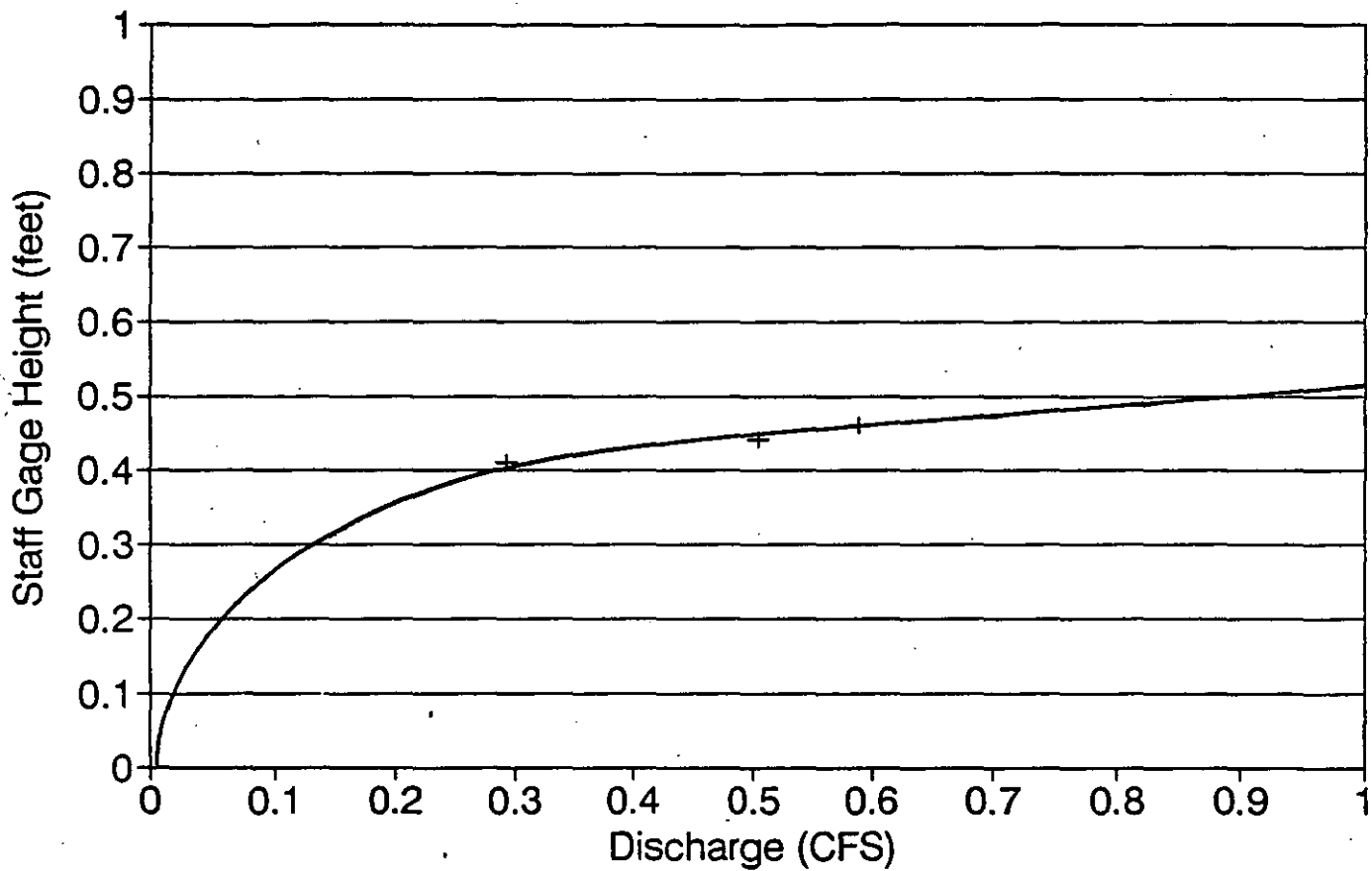
Tahlequah Creek Discharge Rating Curve



This rating curve uses flow data collected 8/24 through 10/24/89.

Vashon GWM Program

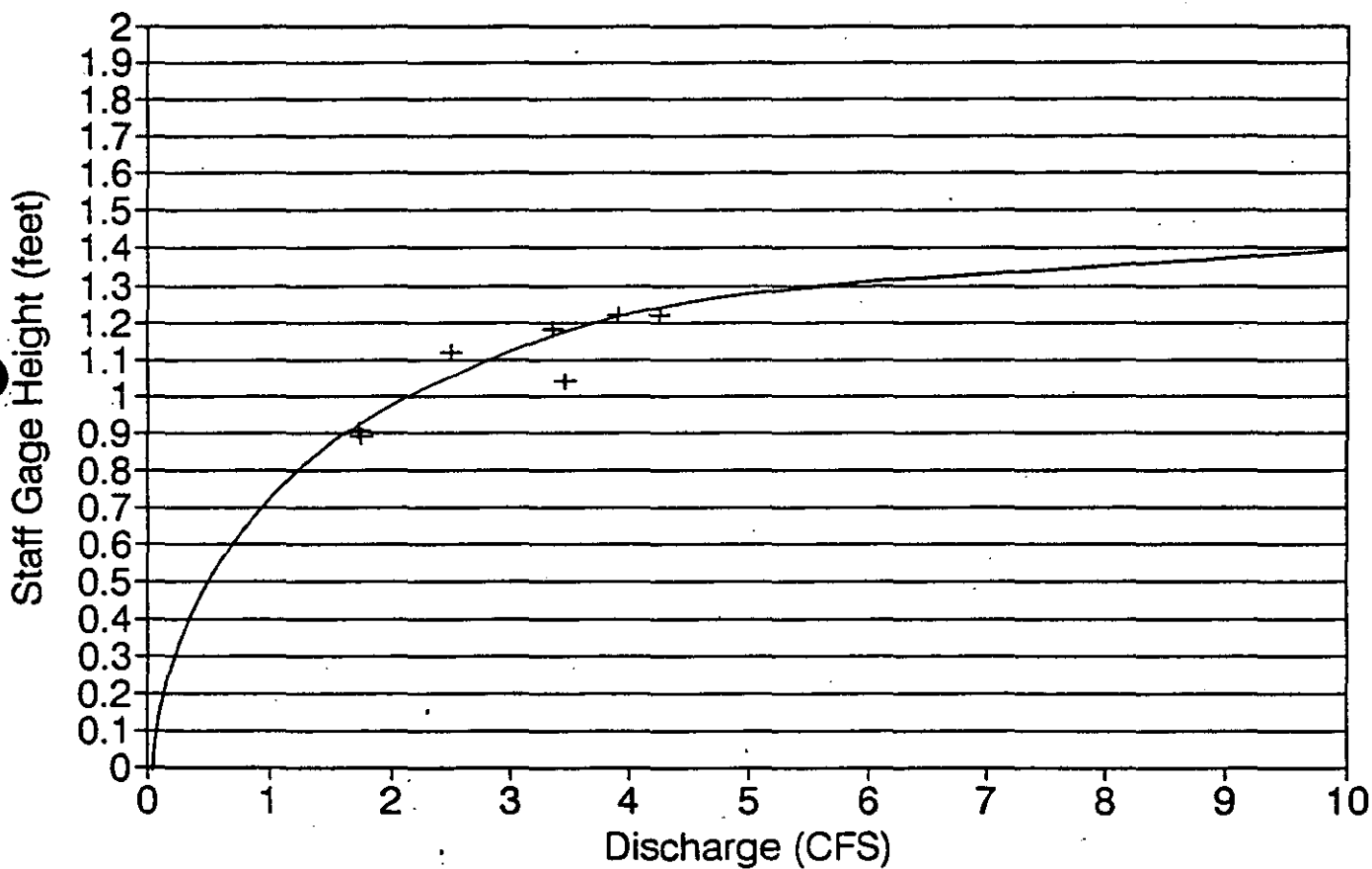
Tahlequah Creek Discharge Rating Curve



This rating curve uses flow data collected 4/20 through 7/20/90.

Vashon GWM Program

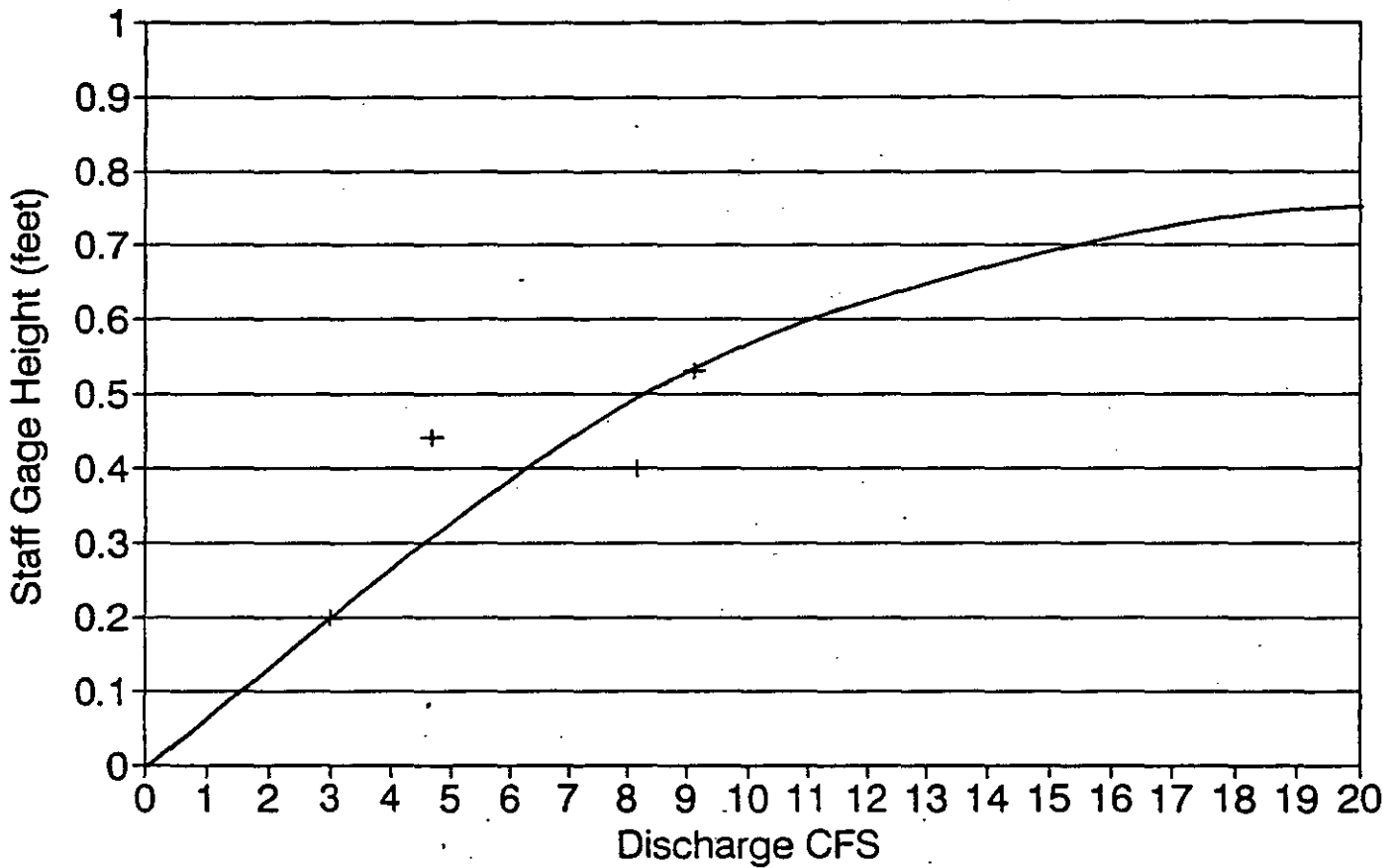
Judd Creek Discharge Rating Curve



This rating curve uses flow data collected 8/24/89 through 11/23/90.

Vashon SWM Program

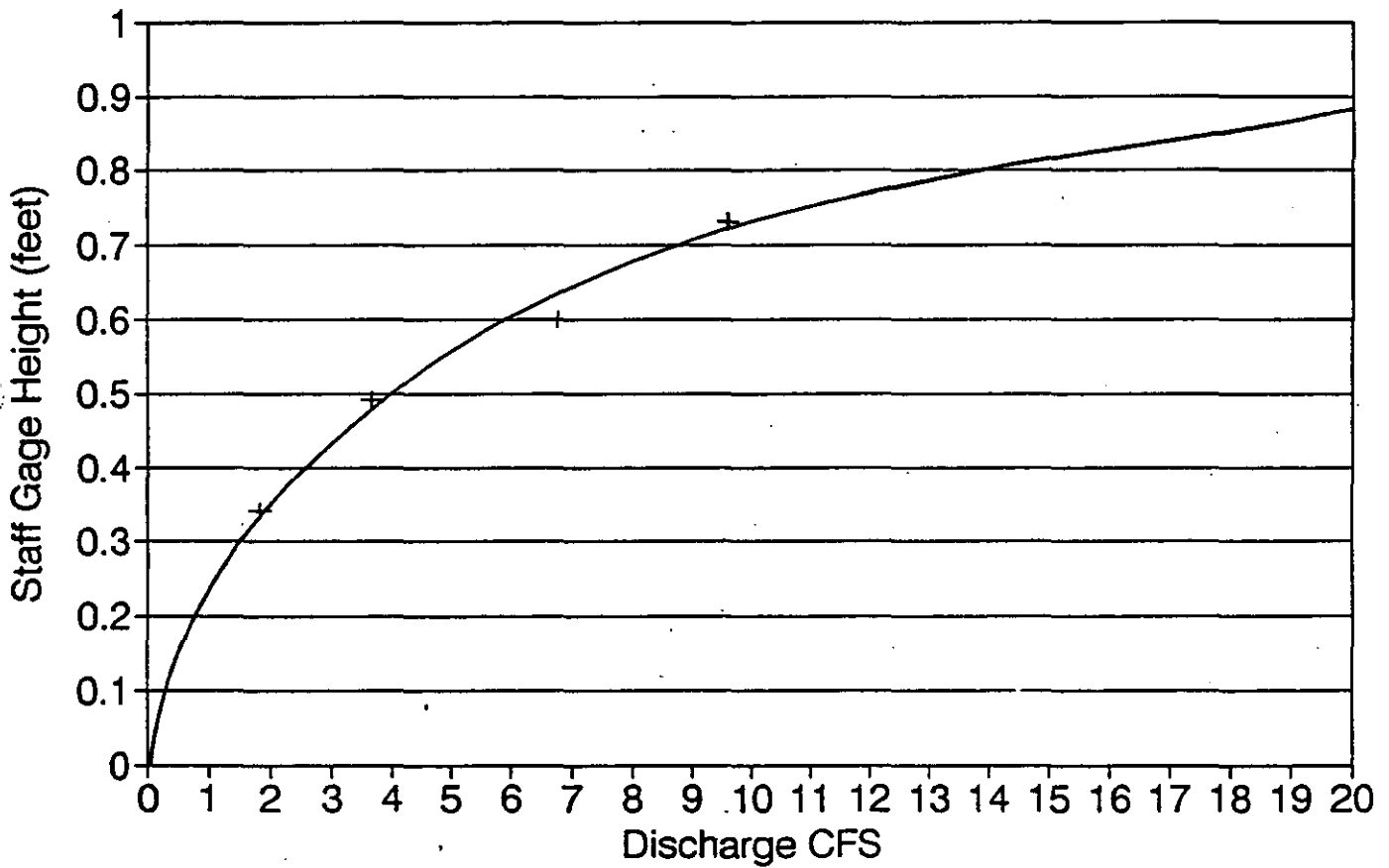
Judd Creek Discharge Rating Curve



This rating curve uses flow data collected 2/1/91 through 12/13/91.

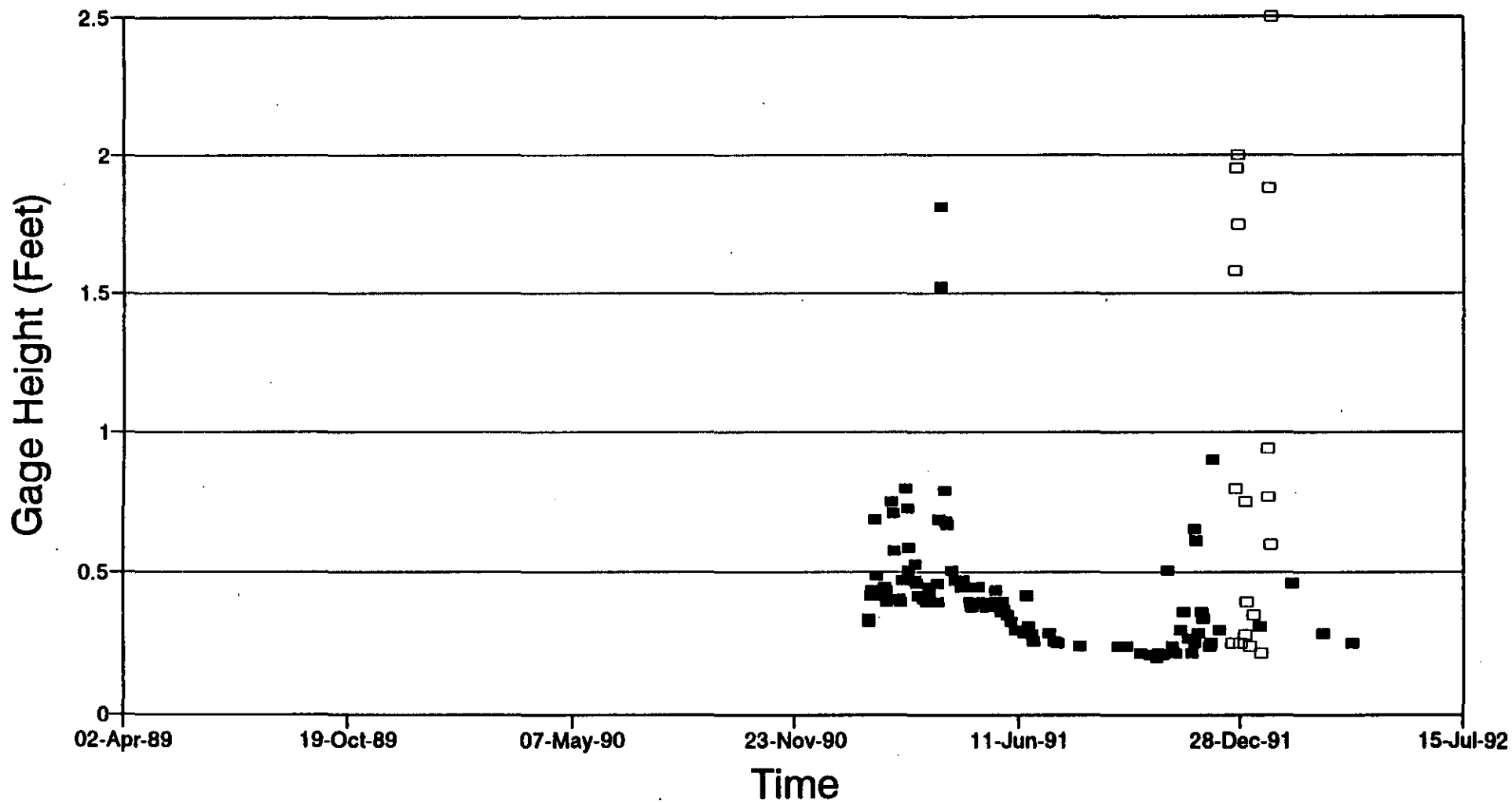
Vashon SWM Program

Upper Judd Creek Discharge Rating Curve



Fisher Creek

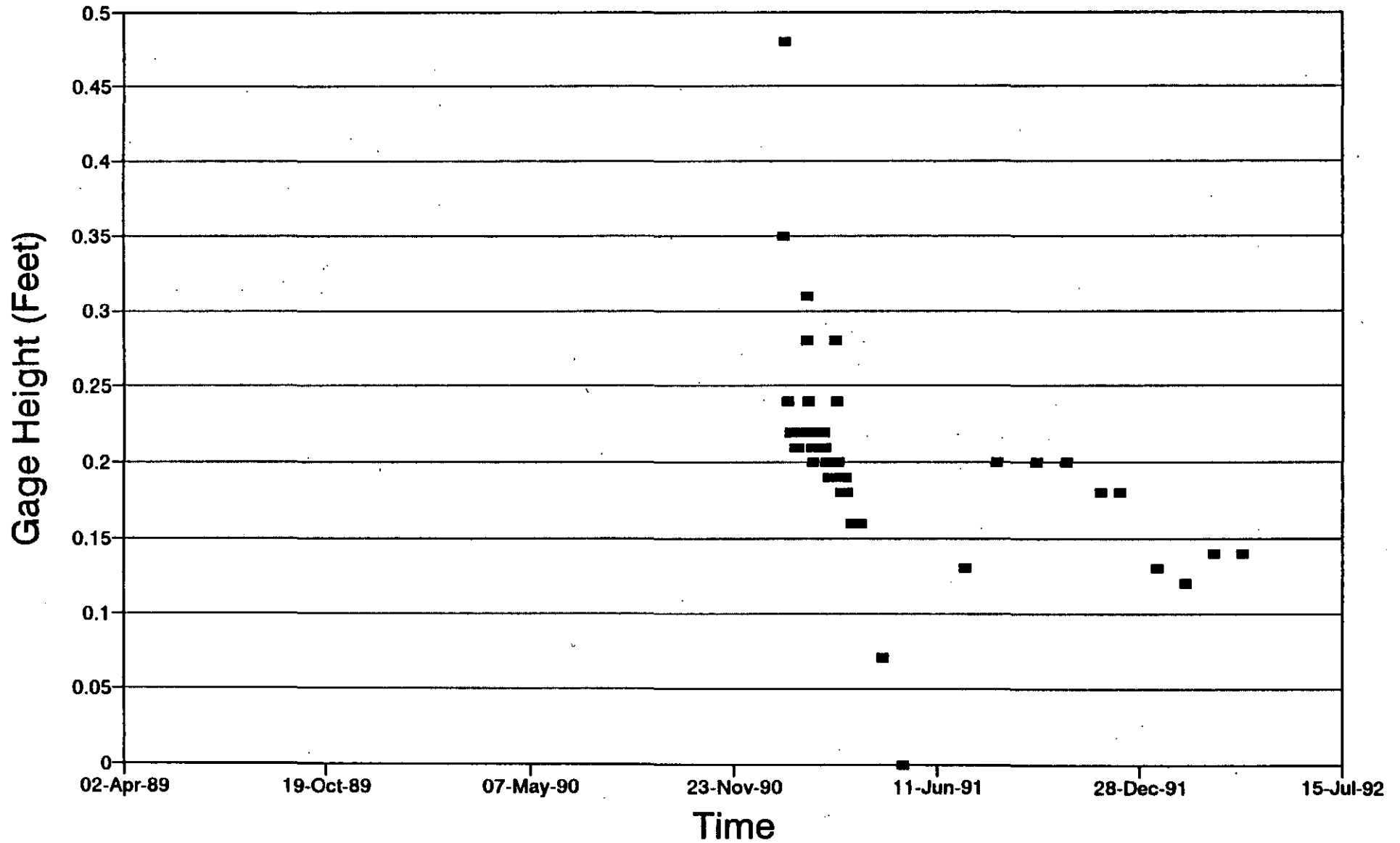
Stream Gage Data



■ Gage 1 □ Gage 2

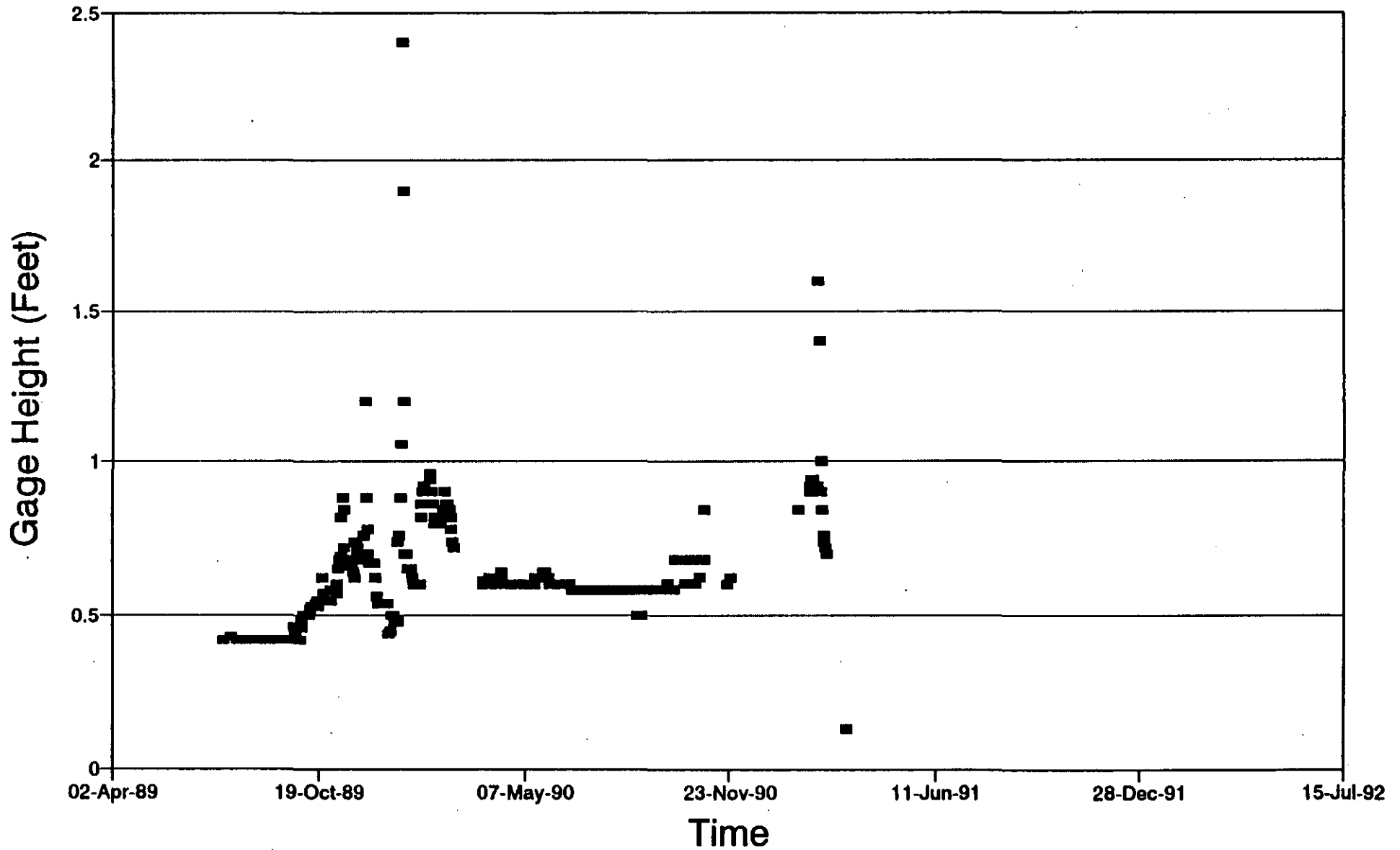
Green Valley Creek

Stream Gage Data



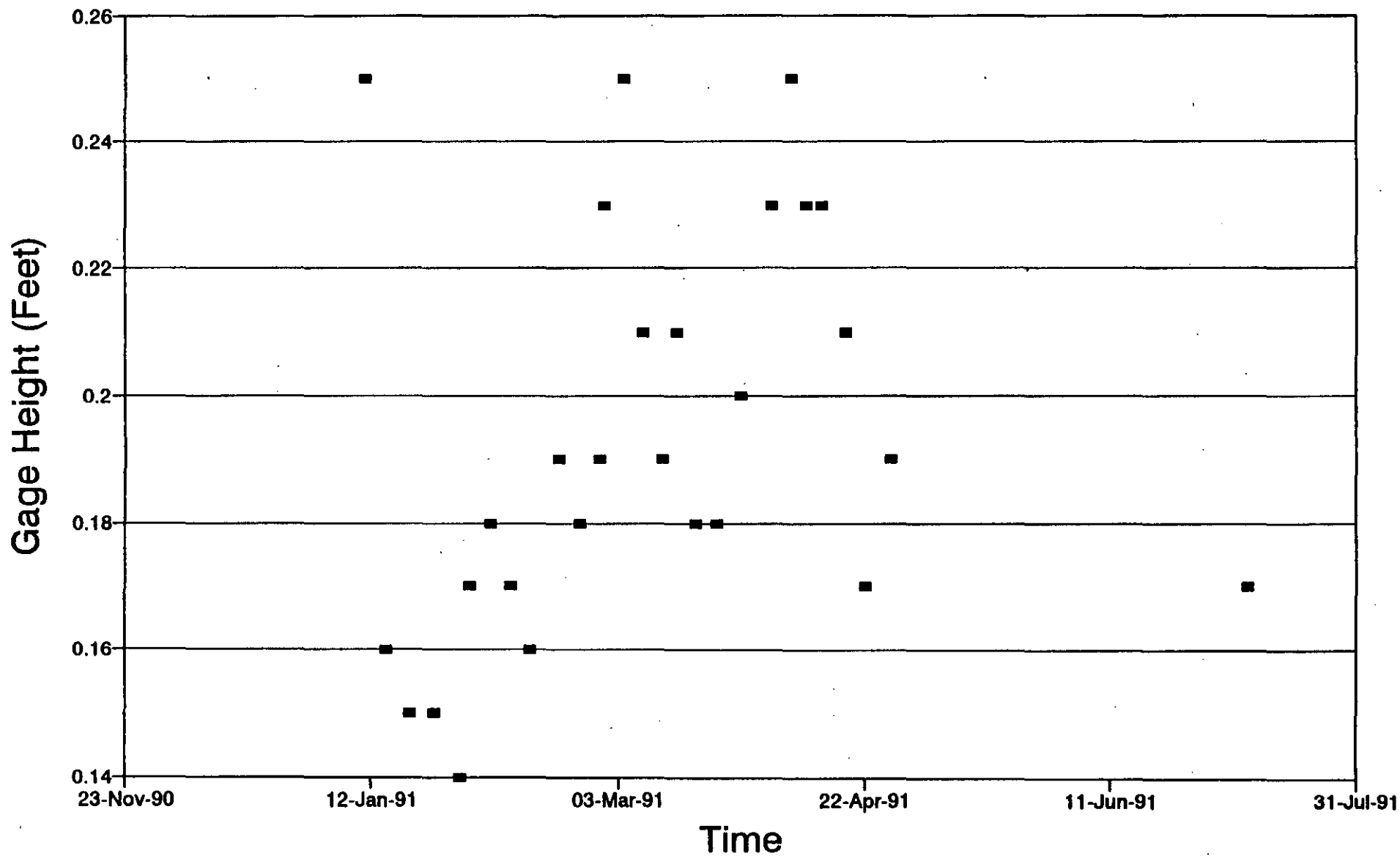
Needle Creek

Stream Gage Data



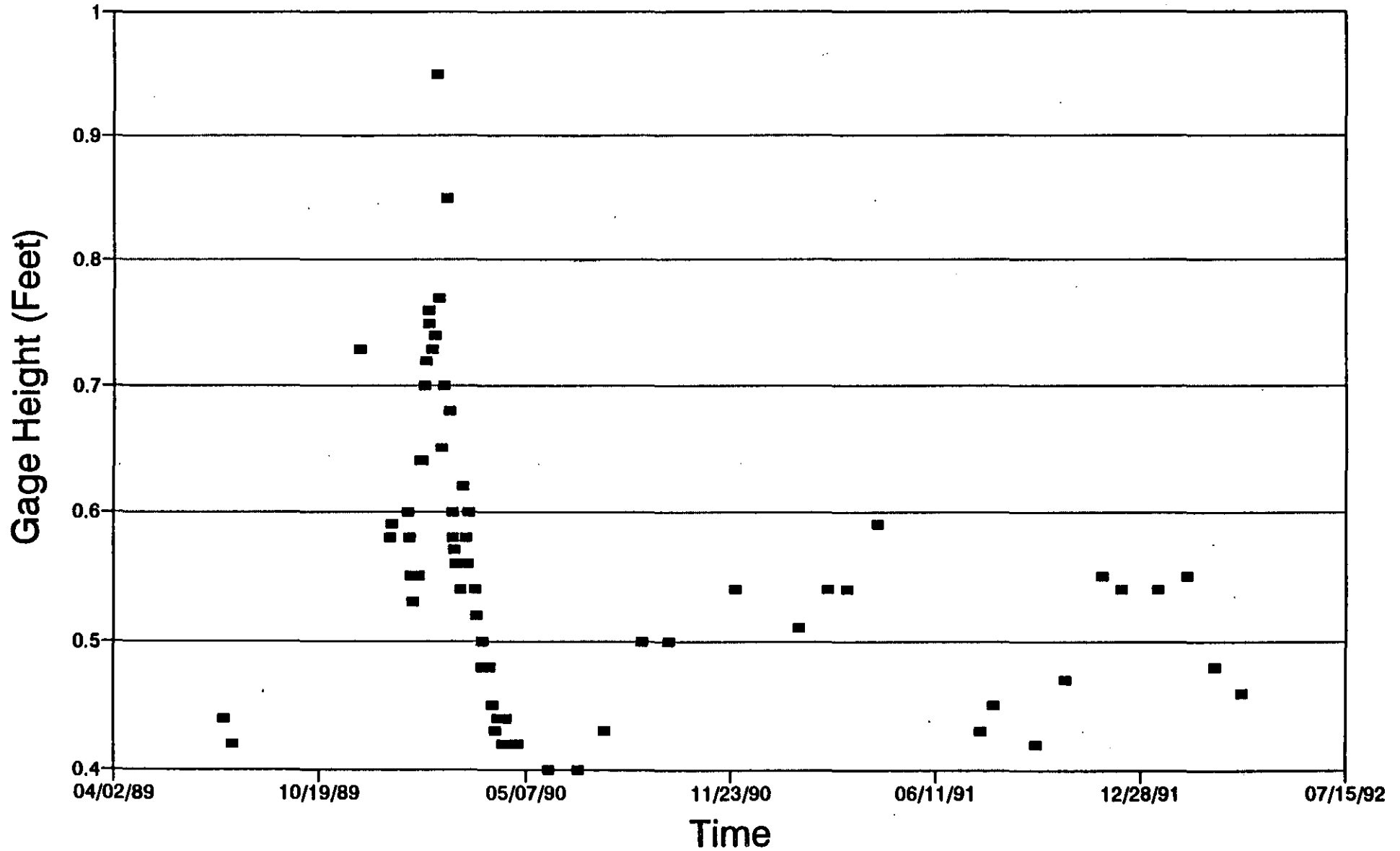
Paradise Cove Creek

Stream Gage Data

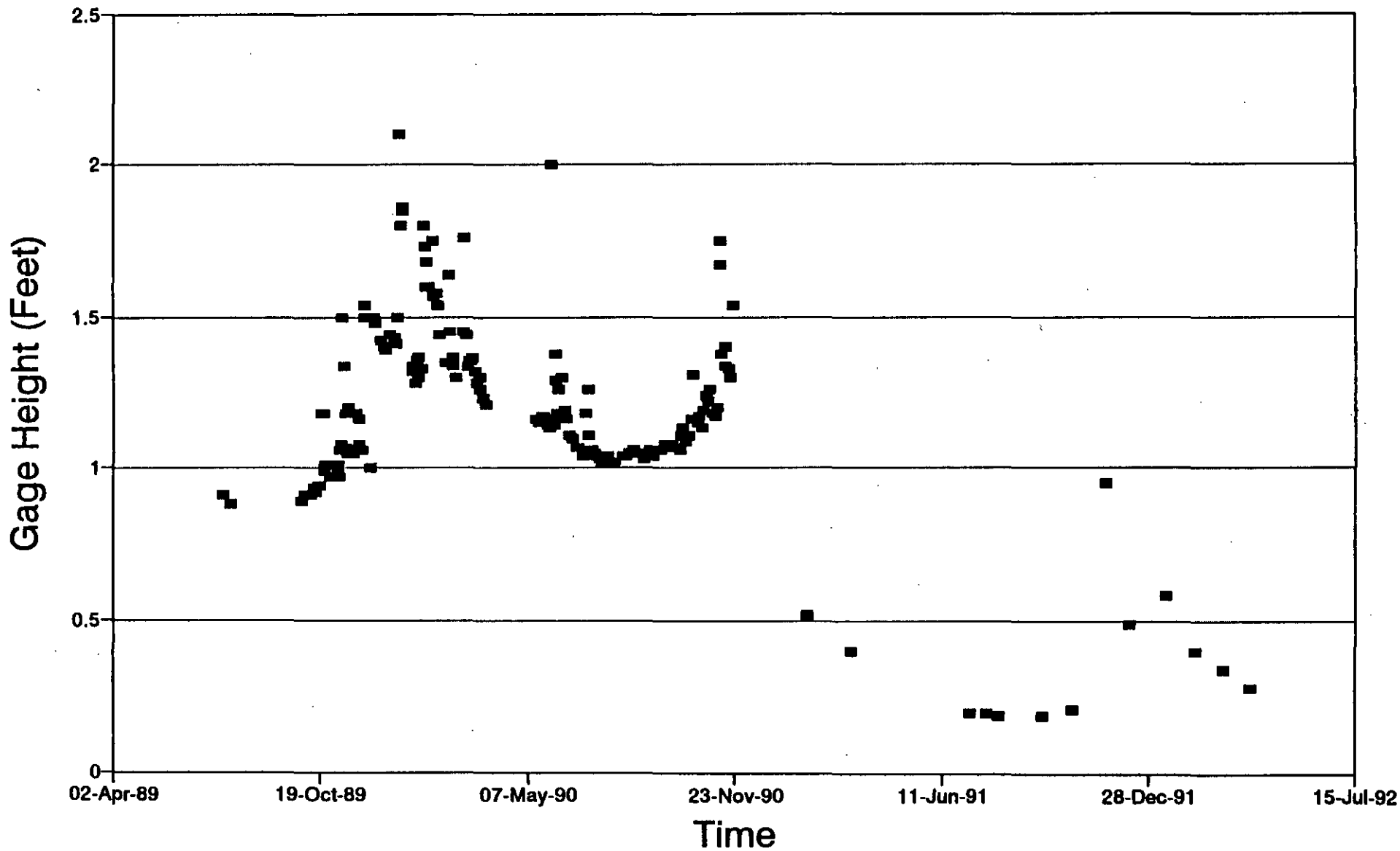


Tahlequah Creek

Stream Gage Data

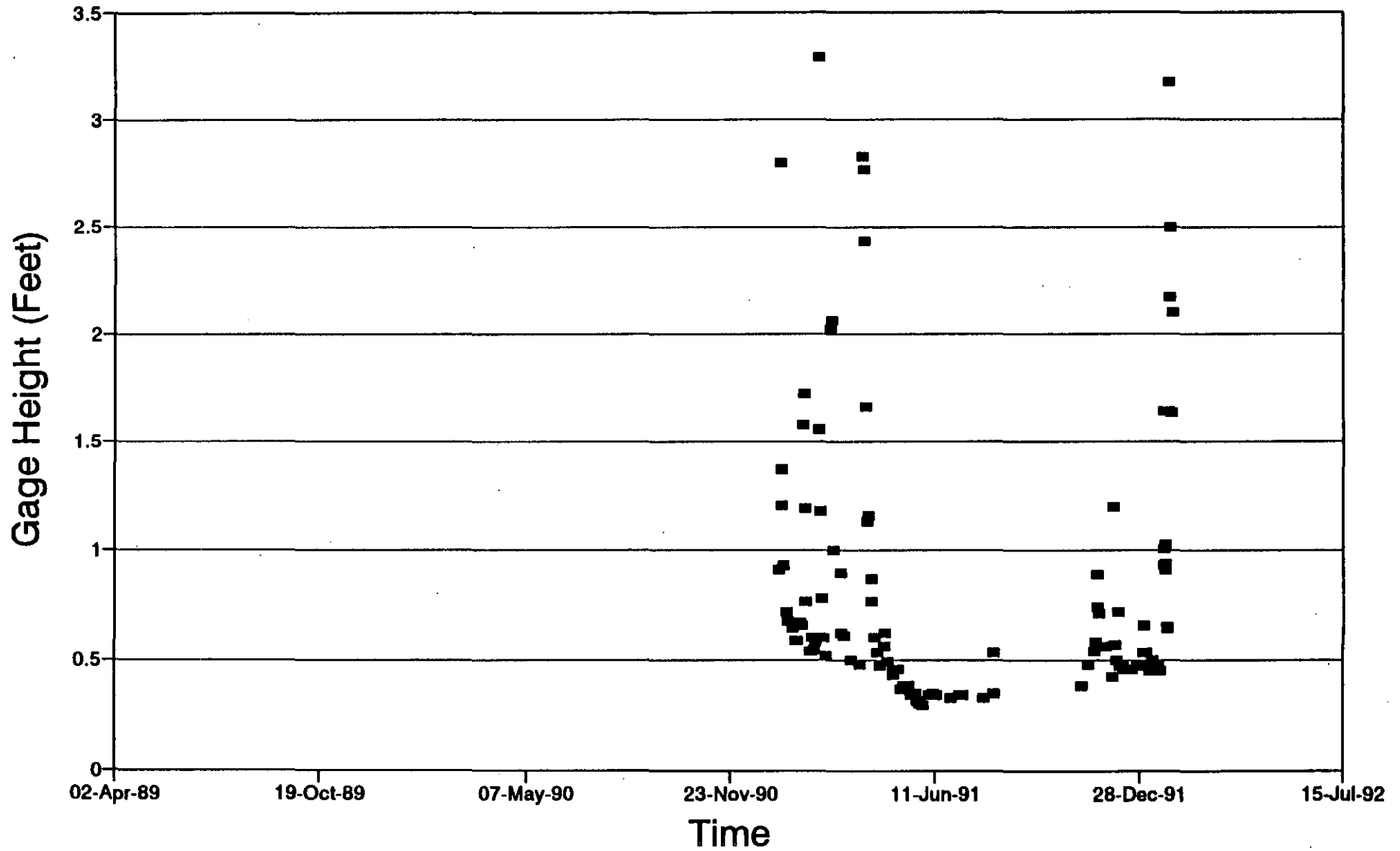


Judd Creek Stream Gage Data



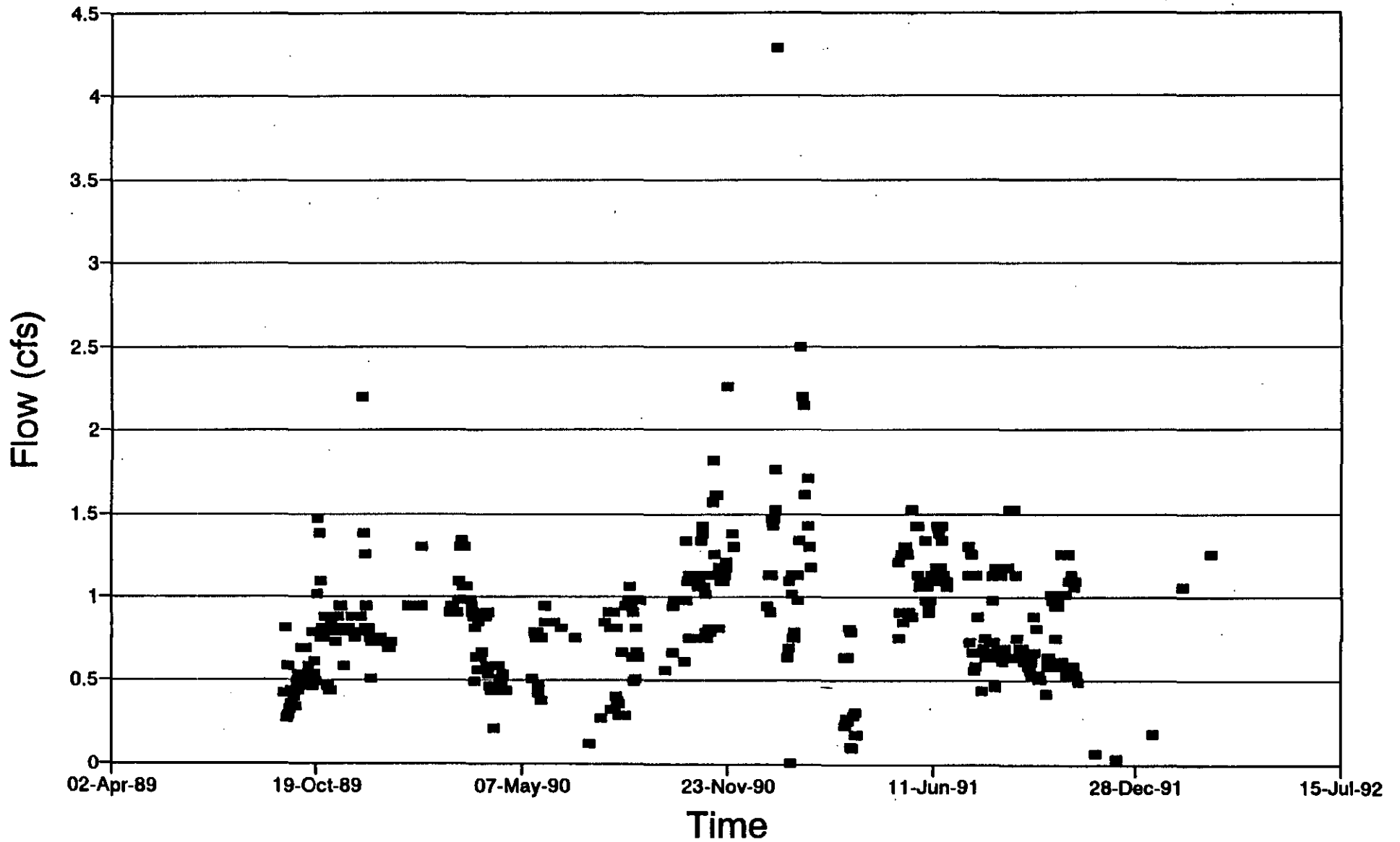
Upper Judd Creek

Stream Gage Data



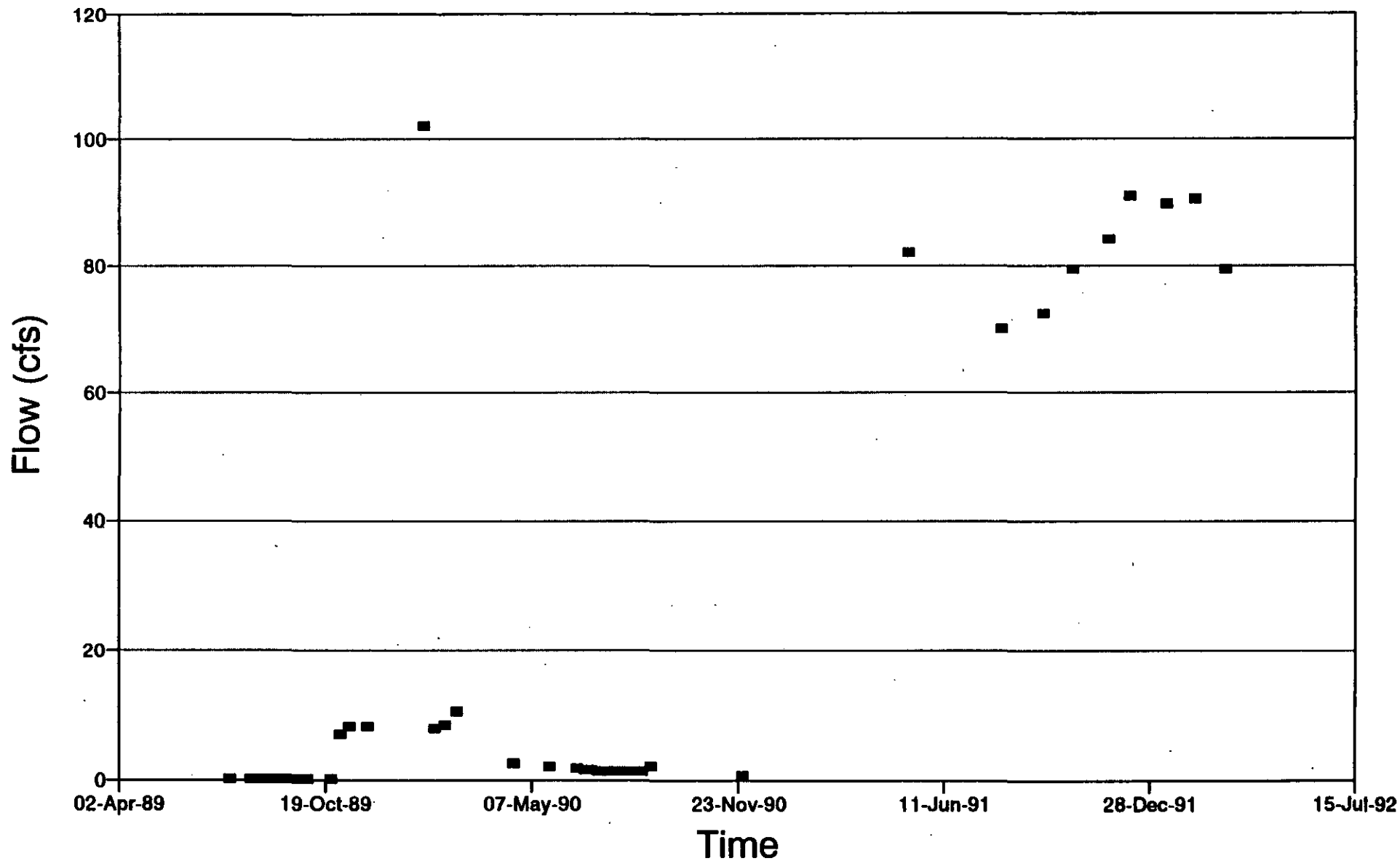
Beal Creek

Stream Flow Data



Mileta Creek

Stream Flow Data



DRAFT

APPENDIX H

**GROUND-WATER LEVEL DATA BY SEATTLE-KING
COUNTY DEPARTMENT OF PUBLIC HEALTH**

(May 14, 1993 rev.)

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-1	13-Sep-89	0940	83.29	116.71
	03-Oct-89	0935	81.39	118.61
	01-Nov-89	0830	80.04	119.96
	03-Nov-89	0940	79.71	120.29
	28-Nov-89	0915	79.21	120.79
	27-Dec-89	0920	78.87	121.13
	30-Jan-90	0850	79.15	120.85
	27-Feb-90	0840	78.53	121.47
	29-Mar-90	0924	77.73	122.27
	16-Apr-90	0933	87.43	112.57
	30-May-90	0912	76.30	123.70
	28-Jun-90	0917	77.03	122.97
	24-Jul-90	0908	79.74	120.26
	29-Aug-90	0907	82.42	117.58
	24-Sep-90	0912	79.20	120.80
	22-Oct-90	0916	78.31	121.69
	28-Nov-90	0917	77.65	122.35
	30-Jan-91	0913	78.05	121.95
	27-Feb-91	0903	87.50	112.50
	18-Mar-91	0908	77.10	122.90
	18-Apr-91	0908	76.45	123.55
	23-May-91	0905	76.05	123.95
	17-Jun-91	0825	76.41	123.59
29-Jul-91	0928	78.35	121.65	
29-Aug-91	0918	77.81	122.19	
30-Sep-91	0928	76.80	123.20	
31-Oct-91	0911	91.52	108.48	
01-Dec-91	0940	78.50	121.50	
10-Mar-92	0937	77.35	122.65	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-2A	09-Aug-89	0950	146.05	83.95
	03-Oct-89	0845	145.85	84.15
	30-Oct-89	0900	146.00	84.00
	28-Nov-89	0845	146.00	84.00
	27-Dec-89	0839	145.58	84.42
	30-Jan-90	0920	145.75	84.25
	27-Feb-90	1632	145.60	84.40
	29-Mar-90	0848	145.40	84.60
	16-Apr-90	0840	145.40	84.60
	30-May-90	0839	145.10	84.90
	28-Jun-90	0841	145.06	84.94
	24-Jul-90	0841	145.73	84.27
	29-Aug-90	0838	145.61	84.39
	24-Sep-90	0841	145.74	84.26
	22-Oct-90	0841	145.45	84.55
	28-Nov-90	0842	144.99	85.01
	30-Jan-91	0840	144.86	85.14
	27-Feb-91	0836	145.24	84.76
	18-Mar-91	0842	145.25	84.75
	18-Apr-91	0844	144.99	85.01
	23-May-91	0838	144.27	85.73
	17-Jun-91	1028	144.41	85.59
	29-Jul-91	0857	143.97	86.03
	29-Aug-91	0845	143.89	86.11
	30-Sep-91	0845	144.20	85.80
	31-Oct-91	0833	143.69	86.31
01-Dec-91	0845	144.32	85.68	
10-Mar-92	0905	144.55	85.45	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-2B	09-Aug-89	1015	112.13	87.87
	03-Oct-89	0855	111.67	88.33
	30-Oct-89	0845	111.75	88.25
	28-Nov-89	0855	111.75	88.25
	27-Dec-89	0852	111.33	88.67
	30-Jan-90	0930	111.46	88.54
	27-Feb-90	1647	111.25	88.75
	29-Mar-90	0905	110.97	89.03
	16-Apr-90	0855	110.88	89.12
	30-May-90	0850	110.70	89.30
	28-Jun-90	0852	110.67	89.33
	24-Jul-90	0852	111.31	88.69
	29-Aug-90	0848	111.23	88.77
	24-Sep-90	0850	111.32	88.68
	22-Oct-90	0850	111.07	88.93
	28-Nov-90	0852	110.71	89.29
	30-Jan-91	0850	110.54	89.46
	27-Feb-91	0845	110.87	89.13
	18-Mar-91	0850	110.82	89.18
	18-Apr-91	0855	110.49	89.51
	23-May-91	0848	109.75	90.25
	17-Jun-91	1003	109.98	90.02
	29-Jul-91	0908	109.57	90.43
	29-Aug-91	0955	109.47	90.53
	30-Sep-91	0850	109.81	90.19
	31-Oct-91	0843	109.36	90.64
01-Dec-91	0853	109.99	90.01	
10-Mar-92	0914	110.12	89.88	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-3	27-Oct-89		128.58	21.42
	03-Nov-89	0845	128.79	21.21
	28-Nov-89	1535	128.71	21.29
	27-Dec-89	1530	128.46	21.54
	30-Jan-90	1512	128.08	21.92
	27-Feb-90	1426	128.41	21.59
	29-Mar-90	1523	128.50	21.50
	18-Apr-90	0848	128.61	21.39
	30-May-90	1539	128.30	21.70
	28-Jun-90	1543	128.53	21.47
	24-Jul-90	1513	128.65	21.35
	30-Aug-90	0905	128.71	21.29
	24-Sep-90	1426	128.19	21.81
	24-Sep-90	1420	129.05	20.95
	24-Oct-90	0836	128.62	21.38
	28-Nov-90	1430	127.89	22.11
	30-Jan-91	1504	128.27	21.73
	27-Feb-91	1420	127.97	22.03
	18-Mar-91	1500	128.31	21.69
	19-Apr-91	0856	128.42	21.58
	23-May-91	1427	128.45	21.55
	18-Jun-91	1420	128.71	21.29
	30-Jul-91	1446	128.60	21.40
	30-Aug-91	1228	128.48	21.52
	01-Oct-91	1208	128.44	21.56
	01-Nov-91	1315	128.32	21.68
02-Dec-91	1351	128.37	21.63	
13-Mar-92	1305	120.57	29.43	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-4	13-Sep-89	1035	203.50	-13.50
	03-Oct-89	1620	197.29	-7.29
	01-Nov-89	0915	197.14	-7.14
	28-Nov-89	1557	196.79	-6.79
	28-Dec-89	1130	199.41	-9.41
	28-Dec-89	0850	200.00	-10.00
	30-Jan-90	1537	196.66	-6.66
	27-Feb-90	1501	199.60	-9.60
	29-Mar-90	1540	201.20	-11.20
	18-Apr-90	0940	200.00	-10.00
	30-May-90	1514	197.58	-7.58
	28-Jun-90	1518	198.16	-8.16
	24-Jul-90	1427	199.14	-9.14
	30-Aug-90	0836	198.68	-8.68
	24-Sep-90	1504	198.63	-8.63
	24-Oct-90	0917	198.01	-8.01
	28-Nov-90	1451	196.97	-6.97
	30-Jan-91	1447	198.58	-8.58
	27-Feb-91	1357	204.04	-14.04
	18-Mar-91	1428	199.66	-9.66
	19-Apr-91	0914	201.86	-11.86
	23-May-91	1449	199.81	-9.81
	17-Jun-91	1636	203.71	-13.71
	30-Jul-91	1700	203.70	-13.70
	30-Aug-91	1250	298.51	-108.51
	01-Oct-91	1230	197.99	-7.99
	01-Nov-91	1325	197.83	-7.83
	02-Dec-91	1409	199.05	-9.05
13-Mar-92	1325	197.77	-7.77	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-5	07-Sep-89	0955	176.46	13.54
	04-Oct-89	0840	178.04	11.96
	28-Nov-89	1458	176.08	13.92
	27-Dec-89	1501	175.75	14.25
	30-Jan-90	1450	176.50	13.50
	27-Feb-90	1442	177.88	12.12
	29-Mar-90	1506	178.77	11.23
	16-Apr-90	1405	177.45	12.55
	30-May-90	1458	177.61	12.39
	28-Jun-90	1451	177.75	12.25
	24-Jul-90	1402	177.92	12.08
	30-Aug-90	0847	177.79	12.21
	24-Sep-90	1402	177.59	12.41
	22-Oct-90	1322	177.11	12.89
	28-Nov-90	1413	176.53	13.47
	31-Jan-91	1322	175.90	14.10
	27-Feb-91	1402	213.25	-23.25
	18-Mar-91	1441	179.51	10.49
	19-Apr-91	1400	253.59	-63.59
	19-Apr-91	0930	250.00	-60.00
	23-May-91	1403	177.71	12.29
	17-Jun-91	1607	178.69	11.31
	30-Jul-91	1422	178.31	11.69
	30-Aug-91	1202	177.16	12.84
	30-Sep-91	1200	178.83	11.17
	01-Nov-91	1300	176.29	13.71
02-Dec-91	1335	176.12	13.88	
13-Mar-92	1245	177.25	12.75	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-6	19-Jul-89	1100	145.23	254.77
	03-Oct-89	1100	147.08	252.92
	30-Oct-89	1245	148.00	252.00
	02-Nov-89	1135	148.10	251.90
	28-Nov-89	1032	150.87	249.13
	27-Dec-89	1037	149.00	251.00
	30-Jan-90	1035	149.08	250.92
	27-Feb-90	0952	147.42	252.58
	29-Mar-90	1026	144.95	255.05
	20-Apr-90	0837	144.21	255.79
	30-May-90	1032	143.91	256.09
	28-Jun-90	1032	146.56	253.44
	24-Jul-90	1020	147.24	252.76
	29-Aug-90	1032	148.10	251.90
	24-Sep-90	1010	146.87	253.13
	22-Oct-90	1250	147.64	252.36
	28-Nov-90	1042	150.13	249.87
	30-Jan-91	1032	148.62	251.38
	27-Feb-91	1017	145.35	254.65
	18-Mar-91	1016	144.09	255.91
	18-Apr-91	1019	141.95	258.05
	23-May-91	1012	139.79	260.21
	17-Jun-91	1133	140.18	259.82
	29-Jul-91	1036	141.05	258.95
	29-Aug-91	1030	142.08	257.92
	30-Sep-91	1025	145.75	254.25
	31-Oct-91	1019	143.99	256.01
	01-Dec-91	1033	147.63	252.37
10-Mar-92	1037	146.25	253.75	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-7	28-Sep-89	1600	231.96	48.04
	03-Oct-89	1358	237.52	42.48
	04-Oct-89	1205	233.54	46.46
	01-Nov-89	1205	233.17	46.83
	28-Nov-89	1432	232.08	47.92
	27-Dec-89	1433	231.42	48.58
	30-Jan-90	1427	231.00	49.00
	27-Feb-90	1355	231.58	48.42
	29-Mar-90	1440	233.66	46.34
	18-Apr-90	1248	232.26	47.74
	30-May-90	1424	230.70	49.30
	28-Jun-90	1407	231.09	48.91
	24-Jul-90	1325	231.49	48.51
	30-Aug-90	1415	232.05	47.95
	24-Sep-90	1334	232.40	47.60
	24-Oct-90	1238	232.70	47.30
	28-Nov-90	1352	231.83	48.17
	30-Jan-91	1423	237.94	42.06
	31-Jan-91	1202	232.60	47.40
	27-Feb-91	1325	232.01	47.99
	18-Mar-91	1346	232.18	47.82
	18-Apr-91	1306	232.18	47.82
	23-May-91	1347	231.84	48.16
	17-Jun-91	1530	232.92	47.08
	29-Jul-91	1402	232.79	47.21
	29-Aug-91	1415	232.71	47.29
	30-Sep-91	1416	250.58	29.42
	31-Oct-91	1335	232.23	47.77

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-8	09-Aug-89	1140	44.27	5.73
	04-Oct-89	0910	44.29	5.71
	01-Nov-89	1028	44.10	5.90
	29-Nov-89	0915	44.41	5.59
	28-Dec-89	0915	43.54	6.46
	31-Jan-90	0835	42.71	7.29
	28-Feb-90	0933	43.39	6.61
	30-Mar-90	1002	43.73	6.27
	18-Apr-90	1135	43.60	6.40
	31-May-90	0936	43.77	6.23
	29-Jun-90	0902	44.31	5.69
	27-Jul-90	0912	44.27	5.73
	30-Aug-90	1040	45.23	4.77
	25-Sep-90	0935	44.17	5.83
	23-Oct-90	1224	43.82	6.18
	29-Nov-90	0857	43.26	6.74
	31-Jan-91	1144	44.39	5.61
	28-Feb-91	0939	43.56	6.44
	19-Mar-91	0928	43.28	6.72
	19-Apr-91	1014	43.37	6.63
	24-May-91	0932	45.06	4.94
	18-Jun-91	0945	44.52	5.48
	30-Jul-91	0907	44.96	5.04
	30-Aug-91	0900	44.06	5.94
	01-Oct-91	0900	45.36	4.64
	01-Nov-91	0902	44.82	5.18
02-Dec-91	1006	43.96	6.04	
13-Mar-92	0905	43.04	6.96	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-9A	09-Aug-89	1530	397.50	2.50
	04-Oct-89	1020	391.17	8.83
	31-Oct-89	1000	391.00	9.00
	29-Nov-89	1015	390.25	9.75
	28-Feb-90	1006	390.00	10.00
	30-Mar-90	1026	389.88	10.12
	17-Apr-90	0950	389.63	10.37
	31-May-90	1000	389.81	10.19
	29-Jun-90	0932	391.40	8.60
	27-Jul-90	0939	392.04	7.96
	30-Aug-90	1102	392.11	7.89
	25-Sep-90	1000	391.96	8.04
	23-Oct-90	0946	390.49	9.51
	24-Oct-90	1052	391.17	8.83
	29-Nov-90	0917	390.08	9.92
	31-Jan-91	0940	389.96	10.04
	28-Feb-91	0904	389.10	10.90
	19-Mar-91	0906	389.52	10.48
	19-Apr-91	1035	389.71	10.29
	24-May-91	0950	390.45	9.55
	18-Jun-91	1015	389.84	10.16
	30-Jul-91	0928	389.90	10.10
	30-Aug-91	0928	389.90	10.10
01-Nov-91	0927	389.87	10.13	
02-Dec-91	1026	389.96	10.04	
13-Mar-92	0931	389.77	10.23	
W-9B	09-Apr-81		340	35.00
	09-Aug-89	1410	343.54	31.46
	04-Oct-89	1500	339.00	36.00
	31-Oct-89	0945	338.88	36.12
	29-Nov-89	1000	338.79	36.21
	28-Dec-89	0935	339.00	36.00

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-10A	09-Aug-89	1530	92.00	-7.00
	04-Oct-89	1355	89.38	-4.38
	31-Oct-89	0855	88.79	-3.79
	29-Nov-89	1145	88.33	-3.33
	28-Dec-89	1035	91.29	-6.29
	31-Jan-90	0950	90.29	-5.29
	28-Feb-90	1048	85.19	-0.19
	30-Mar-90	1108	88.66	-3.66
	17-Apr-90	0905	84.15	0.85
	17-Apr-90	0855	87.86	-2.86
	31-May-90	1038	84.78	0.22
	29-Jun-90	1014	89.10	-4.10
	27-Jul-90	1029	91.74	-6.74
	30-Aug-90	1140	89.29	-4.29
	25-Sep-90	1035	93.23	-8.23
	23-Oct-90	0855	88.98	-3.98
	29-Nov-90	1058	87.23	-2.23
	31-Jan-91	1028	84.94	0.06
	28-Feb-91	0953	87.13	-2.13
	19-Mar-91	1010	84.46	0.54
	19-Apr-91	1147	81.21	3.79
	24-May-91	1027	80.26	4.74
	18-Jun-91	1053	81.38	3.62
	30-Jul-91	1005	86.41	-1.41
	30-Aug-91	1005	84.49	0.51
	01-Oct-91	1015	83.15	1.85
	01-Nov-91	1003	87.85	-2.85
	02-Dec-91	1058	86.20	-1.20
13-Mar-92	1015	82.69	2.31	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-10B	09-Aug-89	1540	86.13	-4.13
	04-Oct-89	1350	87.35	-5.35
	31-Oct-89	0845	86.79	-4.79
	29-Nov-89	1135	86.38	-4.38
	28-Dec-89	1030	85.50	-3.50
	31-Jan-90	0945	84.42	-2.42
	28-Feb-90	1057	83.22	-1.22
	30-Mar-90	1112	82.60	-0.60
	17-Apr-90	0849	82.13	-0.13
	31-May-90	1044	82.77	-0.77
	29-Jun-90	1021	83.72	-1.72
	27-Jul-90	1035	93.11	-11.11
	30-Aug-90	1145	87.29	-5.29
	25-Sep-90	1040	87.55	-5.55
	22-Oct-90	0859	86.97	-4.97
	29-Nov-90	1103	85.22	-3.22
	31-Jan-91	1033	82.93	-0.93
	28-Feb-91	1000	81.86	0.14
	19-Mar-91	1015	80.93	1.07
	19-Apr-91	1150	79.20	2.80
	24-May-91	1035	78.46	3.54
	18-Jun-91	1102	79.38	2.62
	30-Jul-91	1009	88.51	-6.51
	30-Aug-91	1010	82.49	-0.49
	01-Oct-91	1008	85.19	-3.19
	01-Nov-91	1008	82.73	-0.73
02-Dec-91	1103	82.77	-0.77	
13-Mar-92	1018	80.67	1.33	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-11	13-Sep-89	1315	294.92	65.08
	04-Oct-89	1330	245.00	115.00
	31-Oct-89	1320	245.63	114.37
	29-Nov-89	1320	245.19	114.81
	28-Dec-89	1300	245.33	114.67
	31-Jan-90	1130	245.25	114.75
	28-Feb-90	1137	245.13	114.87
	30-Mar-90	1202	250.87	109.13
	17-Apr-90	1332	245.79	114.21
	31-May-90	1130	245.38	114.62
	29-Jun-90	1145	260.00	100.00
	27-Jul-90	1200	266.56	93.44
	30-Aug-90	1227	245.22	114.78
	25-Sep-90	1145	244.59	115.41
	23-Oct-90	1121	256.50	103.50
	29-Nov-90	1134	243.79	116.21
	31-Jan-91	1122	244.98	115.02
	28-Feb-91	1100	244.44	115.56
	19-Mar-91	1101	244.77	115.23
	19-Apr-91	1112	244.64	115.36
	24-May-91	1121	244.45	115.55
	30-Jul-91	1023	250.77	109.23
	30-Aug-91	1057	243.40	116.60
01-Oct-91	1108	245.54	114.46	
01-Nov-91	1058	291.64	68.36	
13-Mar-92	1110	276.39	83.61	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-12	19-Jul-89	1445	91.15	13.85
	04-Oct-89	1040	88.92	16.08
	31-Oct-89	1050	89.90	15.10
	29-Nov-89	1111	89.00	16.00
	28-Dec-89	1010	88.75	16.25
	31-Jan-90	1008	87.83	17.17
	28-Feb-90	1034	89.44	15.56
	30-Mar-90	1055	90.60	14.40
	17-Apr-90	1030	88.88	16.12
	31-May-90	1025	89.06	15.94
	29-Jun-90	0956	141.50	-36.50
	27-Jul-90	1004	89.23	15.77
	30-Aug-90	1125	90.00	15.00
	25-Sep-90	1023	88.65	16.35
	23-Oct-90	1018	90.62	14.38
	29-Nov-90	1047	87.85	17.15
	31-Jan-91	1004	89.15	15.85
	28-Feb-91	0927	88.98	16.02
	19-Mar-91	0947	89.04	15.96
	19-Apr-91	1052	141.76	-36.76
	24-May-91	1022	90.69	14.31
	18-Jun-91	1037	89.68	15.32
	30-Jul-91	0950	142.57	-37.57
	30-Aug-91	0955	129.64	-24.64
01-Oct-91	0957	89.96	15.04	
01-Nov-91	0950	89.32	15.68	
02-Dec-91	1045	89.08	15.92	
13-Mar-92	1000	88.24	16.76	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-13	07-Sep-89	1340	14.00	236.00
	03-Oct-89	1553	14.46	235.54
	03-Nov-89	1215	14.60	235.40
	28-Nov-89	1337	14.33	235.67
	27-Dec-89	1410	14.00	236.00
	30-Jan-90	1405	12.29	237.71
	27-Feb-90	1321	10.91	239.09
	29-Mar-90	1406	10.68	239.32
	19-Apr-90	1220	10.81	239.19
	30-May-90	1356	11.48	238.52
	28-Jun-90	1347	11.75	238.25
	24-Jul-90	1256	12.34	237.66
	29-Aug-90	1317	13.17	236.83
	24-Sep-90	1312	13.55	236.45
	24-Oct-90	1153	13.88	236.12
	28-Nov-90	1323	12.40	237.60
	30-Jan-91	1352	10.76	239.24
	27-Feb-91	1304	9.62	240.38
	18-Mar-91	1320	8.78	241.22
	18-Apr-91	1233	7.62	242.38
23-May-91	1326	8.35	241.65	
17-Jun-91	1507	8.98	241.02	
29-Jul-91	1338	10.33	239.67	
29-Aug-91	1322	10.85	239.15	
30-Sep-91	1355	11.41	238.59	
31-Oct-91	1312	11.92	238.08	
01-Dec-91	1320	11.95	238.05	
10-Mar-92	1402	10.24	239.76	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-14	21-Jul-89	1330	165.38	224.62
	04-Oct-89	1135	165.54	224.46
	02-Nov-89	1350	165.83	224.17
	28-Nov-89	1310	165.42	224.58
	27-Dec-89	1324	164.71	225.29
	30-Jan-90	1315	164.67	225.33
	27-Feb-90	1207	165.60	224.40
	29-Mar-90	1318	165.00	225.00
	19-Apr-90	1008	165.15	224.85
	30-May-90	1326	176.70	213.30
	28-Jun-90	1315	164.81	225.19
	24-Jul-90	1224	164.79	225.21
	29-Aug-90	1206	164.93	225.07
	24-Sep-90	1246	165.20	224.80
	25-Oct-90	1015	164.74	225.26
	28-Nov-90	1300	164.69	225.31
	30-Jan-91	1314	164.17	225.83
	27-Feb-91	1202	164.95	225.05
	18-Mar-91	1224	164.78	225.22
	18-Apr-91	1200	164.78	225.22
	23-May-91	1245	164.32	225.68
	17-Jun-91	1420	164.98	225.02
	29-Jul-91	1255	164.03	225.97
	29-Aug-91	1242	165.92	224.08
	30-Sep-91	1244	164.24	225.76
	31-Oct-91	1226	163.67	226.33
01-Dec-91	1245	165.76	224.24	
10-Mar-92	1235	163.95	226.05	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-15	04-Oct-89	1115	160.31	219.69
	01-Nov-89	1340	160.71	219.29
	28-Nov-89	1217	160.52	219.48
	27-Dec-89	1345	159.92	220.08
	30-Jan-90	1340	159.54	220.46
	27-Feb-90	1143	160.69	219.31
	29-Mar-90	1212	160.35	219.65
	19-Apr-90	0931	160.17	219.83
	30-May-90	1222	159.89	220.11
	28-Jun-90	1221	160.22	219.78
	24-Jul-90	1207	160.25	219.75
	29-Aug-90	1225	160.31	219.69
	24-Sep-90	1154	160.84	219.16
	25-Oct-90	0938	160.13	219.87
	28-Nov-90	1213	160.04	219.96
	30-Jan-91	1221	160.66	219.34
	27-Feb-91	1133	159.80	220.20
	18-Mar-91	1206	160.14	219.86
	18-Apr-91	1144	160.19	219.81
	23-May-91	1226	159.69	220.31
	17-Jun-91	1355	160.12	219.88
	29-Jul-91	1232	159.60	220.40
	29-Aug-91	1224	159.21	220.79
	30-Sep-91	1228	159.72	220.28
	31-Oct-91	1208	159.15	220.85
	01-Dec-91	1230	159.45	220.55
10-Mar-92	1220	159.33	220.67	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-16A	19-Jul-89	1330	21.75	263.25
	03-Oct-89	1510	25.79	259.21
	30-Oct-89	1310	27.23	257.77
	28-Nov-89	1145	27.42	257.58
	27-Dec-89	1218	27.92	257.08
	30-Jan-90	1201	19.38	265.62
	27-Feb-90	1112	13.58	271.42
	29-Mar-90	1146	12.91	272.09
	19-Apr-90	0850	14.25	270.75
	30-May-90	1153	16.95	268.05
	28-Jun-90	1147	18.65	266.35
	24-Jul-90	1135	21.04	263.96
	29-Aug-90	1138	23.58	261.42
	24-Sep-90	1124	24.85	260.15
	25-Oct-90	0847	26.15	258.85
	28-Nov-90	1148	23.13	261.87
	30-Jan-91	1154	15.20	269.80
	27-Feb-91	1122	11.23	273.77
	18-Mar-91	1142	9.50	275.50
	18-Apr-91	1120	7.23	277.77
	23-May-91	1130	10.96	274.04
	17-Jun-91	1309	9.37	275.63
	29-Jul-91	1208	17.62	267.38
	29-Aug-91	1155	19.70	265.30
	30-Sep-91	1205	17.19	267.81
	31-Oct-91	1142	23.82	261.18
01-Dec-91	1201	24.84	260.16	
10-Mar-92	1150	17.33	267.67	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-16B	19-Jul-89	1310	53.48	236.52
	03-Oct-89	1515	54.96	235.04
	30-Oct-89	1330	55.71	234.29
	28-Nov-89	1153	56.60	233.40
	27-Dec-89	1226	56.81	233.19
	30-Jan-90	1212	57.00	233.00
	27-Feb-90	1121	56.55	233.45
	29-Mar-90	1153	53.83	236.17
	19-Apr-90	0857	51.94	238.06
	30-May-90	1202	50.74	239.26
	28-Jun-90	1202	51.13	238.87
	24-Jul-90	1148	51.94	238.06
	29-Aug-90	1145	52.90	237.10
	24-Sep-90	1133	53.84	236.16
	25-Oct-90	0859	54.50	235.50
	28-Nov-90	1155	55.56	234.44
	30-Jan-91	1202	54.17	235.83
	27-Feb-91	1126	51.49	238.51
	18-Mar-91	1148	49.18	240.82
	18-Apr-91	1129	43.51	246.49
	23-May-91	1139	41.58	248.42
	29-Jul-91	1158	46.83	243.17
	29-Aug-91	1204	48.44	241.56
	30-Sep-91	1210	50.46	239.54
	31-Oct-91	1150	51.71	238.29
	01-Dec-91	1210	53.24	236.76
10-Mar-92	1202	56.92	233.08	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-17	07-Sep-89	1130	169.83	30.17
	03-Oct-89	1436	170.03	29.97
	02-Nov-89	1040	170.91	29.09
	28-Nov-89	1122	171.29	28.71
	27-Dec-89	1153	171.21	28.79
	30-Jan-90	1137	171.16	28.84
	27-Feb-90	1050	169.77	30.23
	29-Mar-90	1125	168.94	31.06
	20-Apr-90	1100	168.86	31.14
	30-May-90	1129	169.06	30.94
	28-Jun-90	1126	169.43	30.57
	24-Jul-90	1118	169.81	30.19
	29-Aug-90	1117	170.29	29.71
	24-Sep-90	1100	170.68	29.32
	26-Oct-90	1135	171.23	28.77
	28-Nov-90	1127	170.83	29.17
	30-Jan-91	1124	169.93	30.07
	27-Feb-91	1050	169.76	30.24
	18-Mar-91	1115	169.02	30.98
	18-Apr-91	1103	168.14	31.86
	23-May-91	1111	167.46	32.54
	17-Jun-91	1238	168.30	31.70
	29-Jul-91	1142	168.63	31.37
	29-Aug-91	1130	169.12	30.88
30-Sep-91	1130	170.03	29.97	
31-Oct-91	1119	169.88	30.12	
01-Dec-91	1140	170.69	29.31	
10-Mar-92	1130	170.32	29.68	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-18	07-Sep-89	1040	75.29	114.71
	03-Oct-89	1145	75.54	114.46
	03-Nov-89	1125	75.18	114.82
	28-Nov-89	1055	75.75	114.25
	27-Dec-89	1123	75.23	114.77
	30-Jan-90	1111	74.75	115.25
	27-Feb-90	1028	75.78	114.22
	29-Mar-90	1105	75.43	114.57
	20-Apr-90	1004	75.45	114.55
	30-May-90	1106	75.00	115.00
	28-Jun-90	1104	75.18	114.82
	24-Jul-90	1053	75.33	114.67
	29-Aug-90	1057	75.41	114.59
	24-Sep-90	1038	75.56	114.44
	26-Oct-90	1033	75.73	114.27
	28-Nov-90	1107	75.37	114.63
	30-Jan-91	1103	74.97	115.03
	27-Feb-91	1039	75.10	114.90
	18-Mar-91	1048	75.36	114.64
	18-Apr-91	1048	75.45	114.55
	23-May-91	1050	75.30	114.70
	17-Jun-91	1214	75.59	114.41
	29-Jul-91	1119	75.36	114.64
	29-Aug-91	1006	75.11	114.89
	30-Sep-91	1005	75.57	114.43
	31-Oct-91	1058	75.32	114.68
01-Dec-91	1118	75.72	114.28	
10-Mar-92	1112	75.72	114.28	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-19	19-Jul-89	0930	123.05	336.95
	03-Oct-89	1125	144.04	315.96
	02-Nov-89	0845	144.21	315.79
	29-Nov-89	0843	144.50	315.50
	27-Dec-89	1104	143.79	316.21
	30-Jan-90	1055	143.75	316.25
	27-Feb-90	1010	144.26	315.74
	29-Mar-90	1052	143.95	316.05
	20-Apr-90	0910	144.16	315.84
	30-May-90	1050	143.66	316.34
	28-Jun-90	1050	143.56	316.44
	24-Jul-90	1039	153.18	306.82
	29-Aug-90	1046	143.54	316.46
	24-Sep-90	1025	143.67	316.33
	26-Oct-90	0943	144.01	315.99
	28-Nov-90	1055	152.45	307.55
	30-Jan-91	1047	143.12	316.88
	27-Feb-91	1029	143.21	316.79
	18-Mar-91	1031	143.66	316.34
	18-Apr-91	1038	143.48	316.52
	23-May-91	1035	142.99	317.01
	17-Jun-91	1158	143.26	316.74
	29-Jul-91	1057	152.12	307.88
29-Aug-91	1046	141.94	318.06	
30-Sep-91	1043	142.35	317.65	
31-Oct-91	1040	151.60	308.40	
01-Dec-91	1055	142.29	317.71	
10-Mar-92	1055	142.89	317.11	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
VASHON ISLAND, WASHINGTON

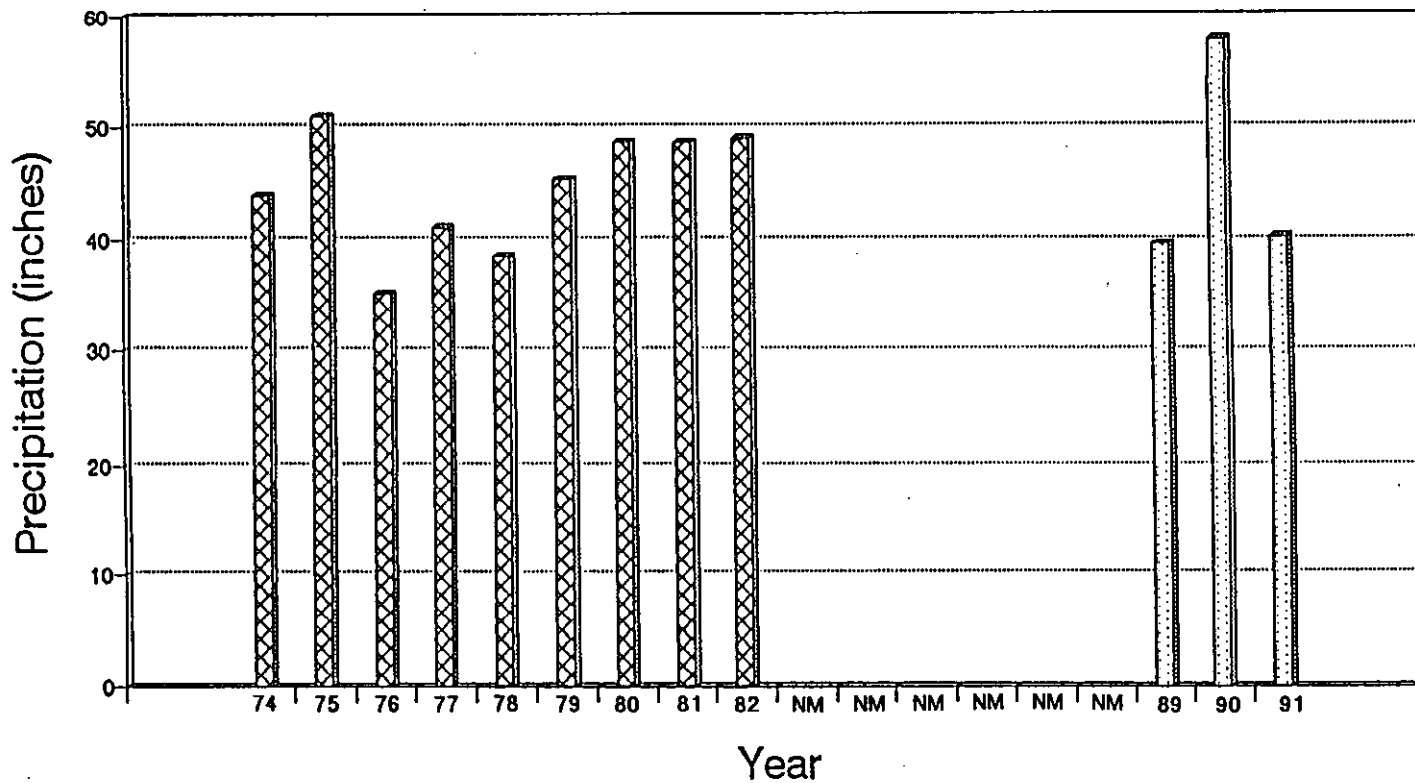
Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-20	19-Jul-89	1020	87.37	282.63
	03-Oct-89	1037	88.08	281.92
	03-Oct-89	1035	88.23	281.77
	30-Oct-89	1120	88.91	281.09
	28-Nov-89	1015	89.33	280.67
	27-Dec-89	1015	89.25	280.75
	30-Jan-90	1020	88.71	281.29
	27-Feb-90	0935	87.37	282.63
	29-Mar-90	1010	86.53	283.47
	16-Apr-90	1146	86.19	283.81
	30-May-90	1015	85.99	284.01
	28-Jun-90	1018	86.28	283.72
	24-Jul-90	1005	86.94	283.06
	29-Aug-90	1019	87.20	282.80
	25-Sep-90	0840	87.42	282.58
	22-Oct-90	1125	87.98	282.02
	28-Nov-90	1025	88.30	281.70
	30-Jan-91	1007	86.88	283.12
	27-Feb-91	0956	87.81	282.19
	18-Mar-91	1000	85.85	284.15
18-Apr-91	1005	84.02	285.98	
23-May-91	0955	83.77	286.23	

SUMMARY OF WATER LEVEL ELEVATION DATA THROUGH MARCH, 1992
 VASHON ISLAND, WASHINGTON

Well ID	Date Measured	Time	Water Level	Water Level Elevation
W-21	21-Jul-89	1210	114.21	75.79
	03-Oct-89	1010	114.17	75.83
	30-Oct-89	0955	114.38	75.62
	28-Nov-89	0945	114.50	75.50
	27-Dec-89	0950	113.33	76.67
	30-Jan-90	1002	113.83	76.17
	27-Feb-90	0915	114.18	75.82
	30-Mar-90	0830	114.05	75.95
	16-Apr-90	1032	113.91	76.09
	30-May-90	0955	113.92	76.08
	28-Jun-90	1002	113.76	76.24
	24-Jul-90	0946	113.86	76.14
	29-Aug-90	0938	113.78	76.22
	24-Sep-90	0945	113.85	76.15
	22-Oct-90	1012	114.00	76.00
	28-Nov-90	1006	113.67	76.33
	30-Jan-91	0946	113.26	76.74
	27-Feb-91	0937	113.72	76.28
	18-Mar-91	0939	113.87	76.13
	18-Apr-91	0952	113.88	76.12
	23-May-91	0942	113.50	76.50
	17-Jun-91		113.88	76.12
	29-Jul-91	1004	113.35	76.65
	29-Aug-91	1005	112.93	77.07
	30-Sep-91	1004	113.27	76.73
	31-Oct-91	0952	112.66	77.34
	01-Dec-91	1010	113.06	76.94
10-Mar-92	1019	113.18	76.82	

FIGURES
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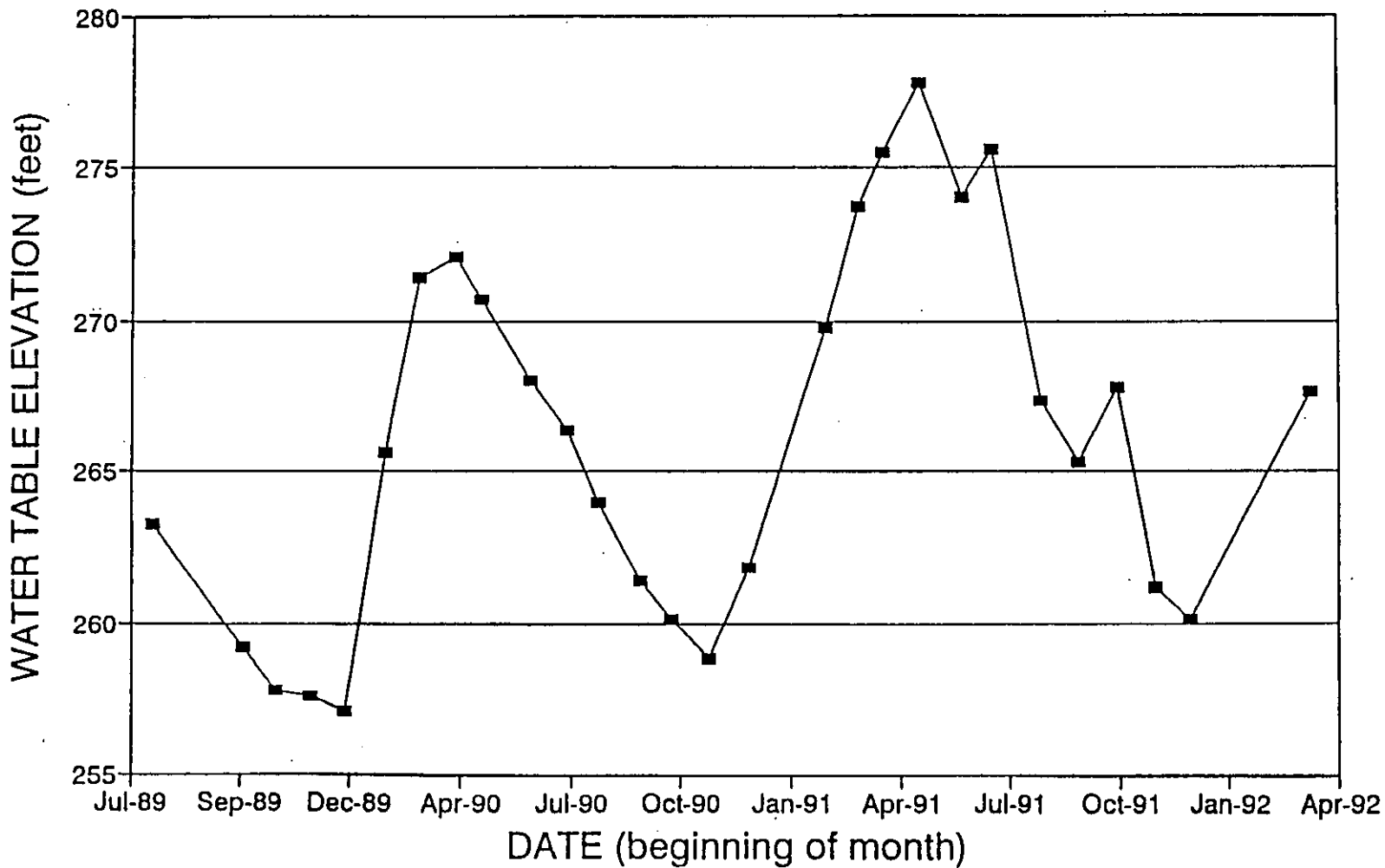
(May 14, 1993 rev.)



NOTE: Krimmel Rain-Gage is located approximately one mile west of Rain-Gage #7.

NM = Not Measured

Source of Krimmel Data: Carr 1985



SOURCE: Geraghty & Miller 1992.



WATER TABLE ELEVATIONS, WELL W-16A

VASHON GROUND-WATER MANAGEMENT PLAN

MAY 14 1993
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FIGURE

8-20

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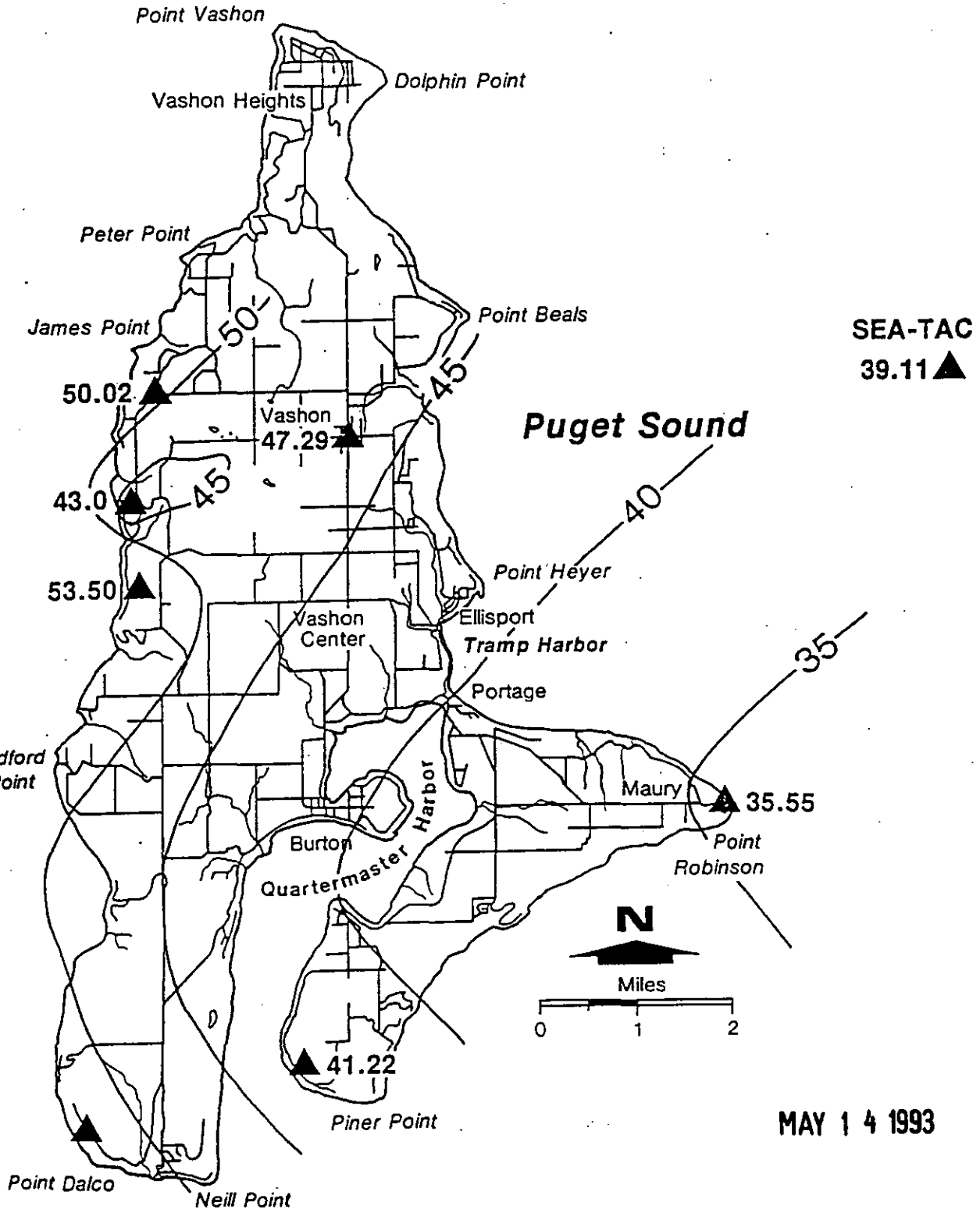
CHECKED:

DRAWN:

FILE NO.:

PRJCT NO.: WA028.02

DATE: MAR 1993



MAY 14 1993

SOURCE: Carr 1983.



**ISOHYETAL (TOTAL PRECIPITATION)
MAP, 1981 - 1982**



VASHON GROUND-WATER MANAGEMENT PLAN.

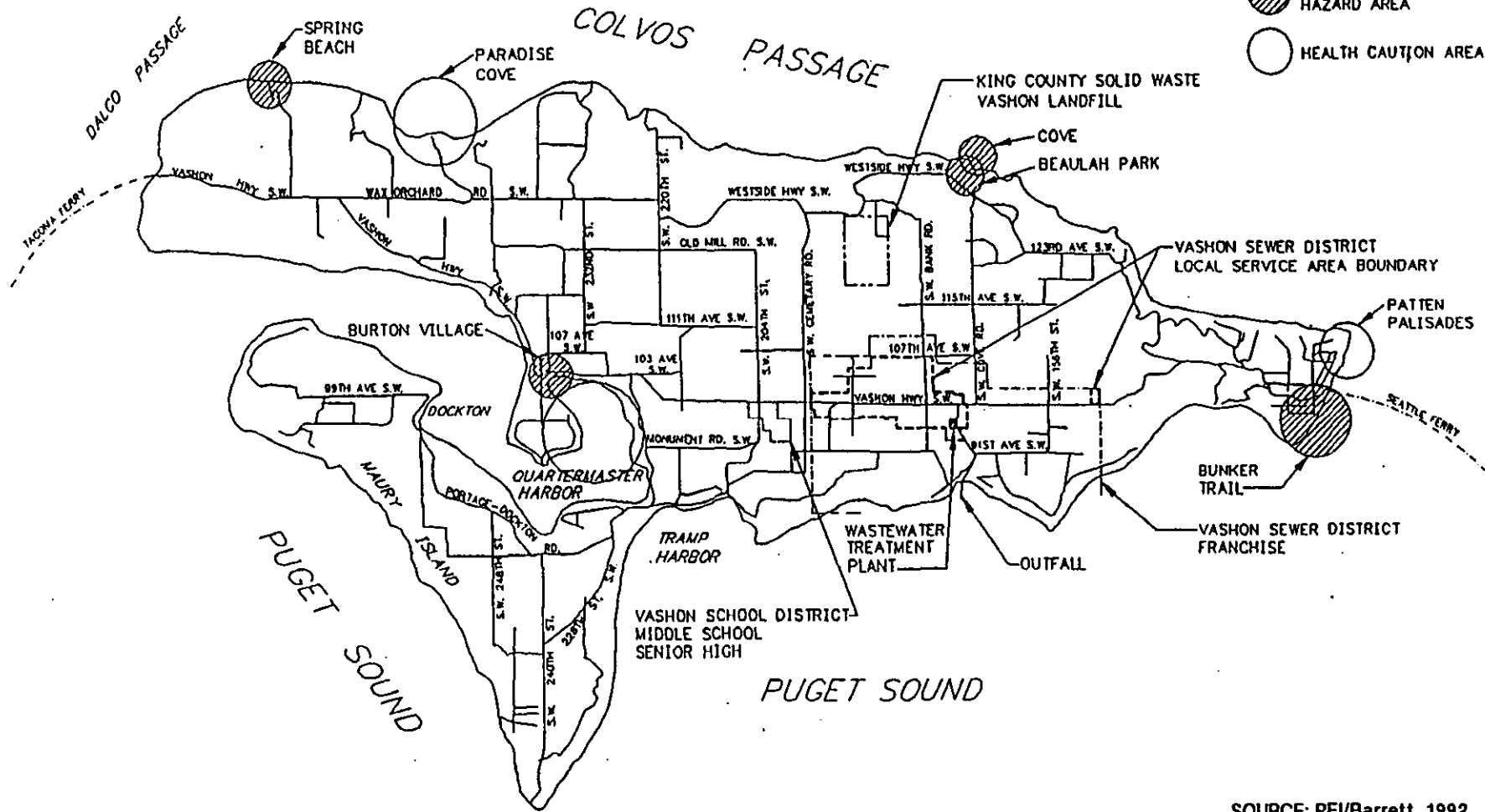
FIGURE
4-1

DRAFT

N
NO SCALE

LEGEND

-  SEVERE PUBLIC HEALTH HAZARD AREA
-  HEALTH CAUTION AREA



SOURCE: PEI/Barrett 1992.



LOCATION OF SEVERE PUBLIC HEALTH HAZARD AND HEALTH CAUTION AREAS

VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE

DRAFT 6-3
MAY 14 1993

DRAFT

APPROVED: LER

CHECKED:

DRAWN:

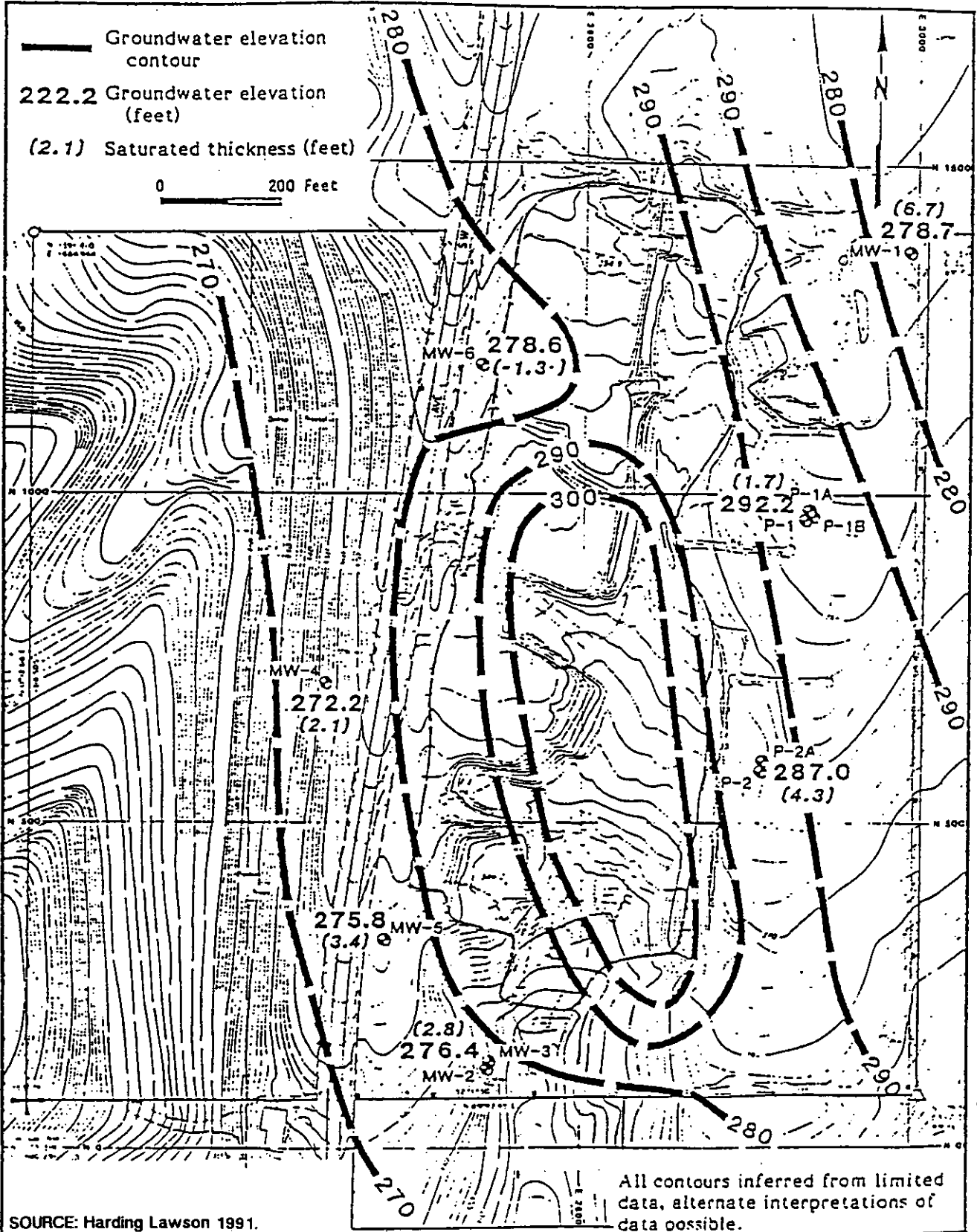
FILE NO.:

PRJCT NO.: WA028.02

DATE: MAR 1993

Groundwater elevation contour
 222.2 Groundwater elevation (feet)
 (2.1) Saturated thickness (feet)

0 200 Feet



SOURCE: Harding Lawson 1991.

All contours inferred from limited data, alternate interpretations of data possible.



**GROUND WATER ELEVATIONS OF
 UPPER GROUND-WATER ZONE
 FOR VASHON LANDFILL**
 VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE
5-3

MAY 14 1993

DRAFT

DRAFTER: SAC

APPROVED: LER

CHECKED:

DRAWING:

FILE NO.:

PRJCT NO.: WA028.02

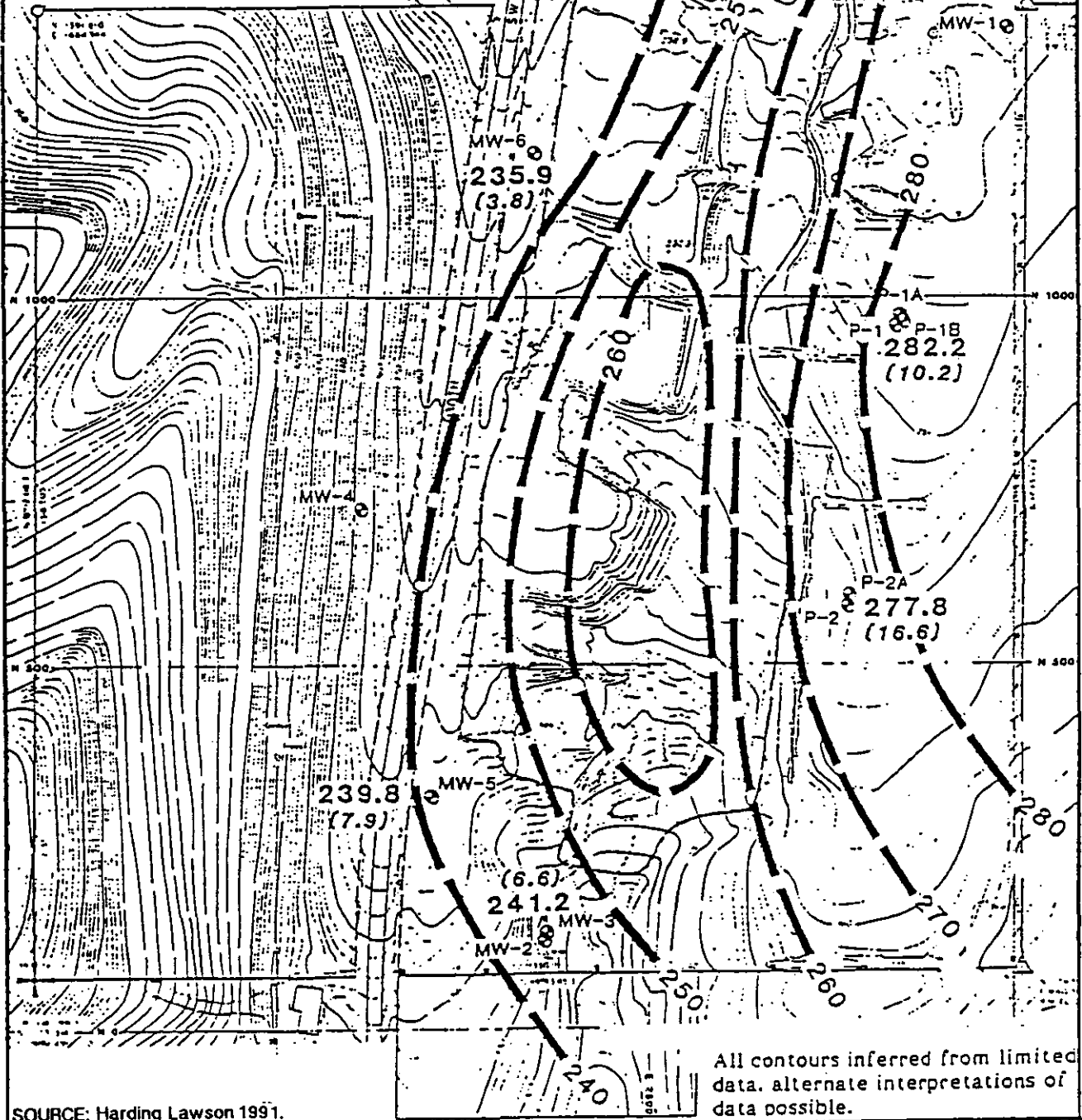
DATE: MAR 1993

Groundwater elevation contour

242.2 Groundwater elevation (feet)

(3.8) Saturated thickness (feet)

0 200 Feet



SOURCE: Harding Lawson 1991.

All contours inferred from limited data. alternate interpretations of data possible.



GROUND WATER ELEVATIONS OF LOWER GROUND WATER ZONE FOR VASHON LANDFILL

VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE

5-4

DRAFT

MAY 14 1993

DRAFTER: C

APPROVED: LER

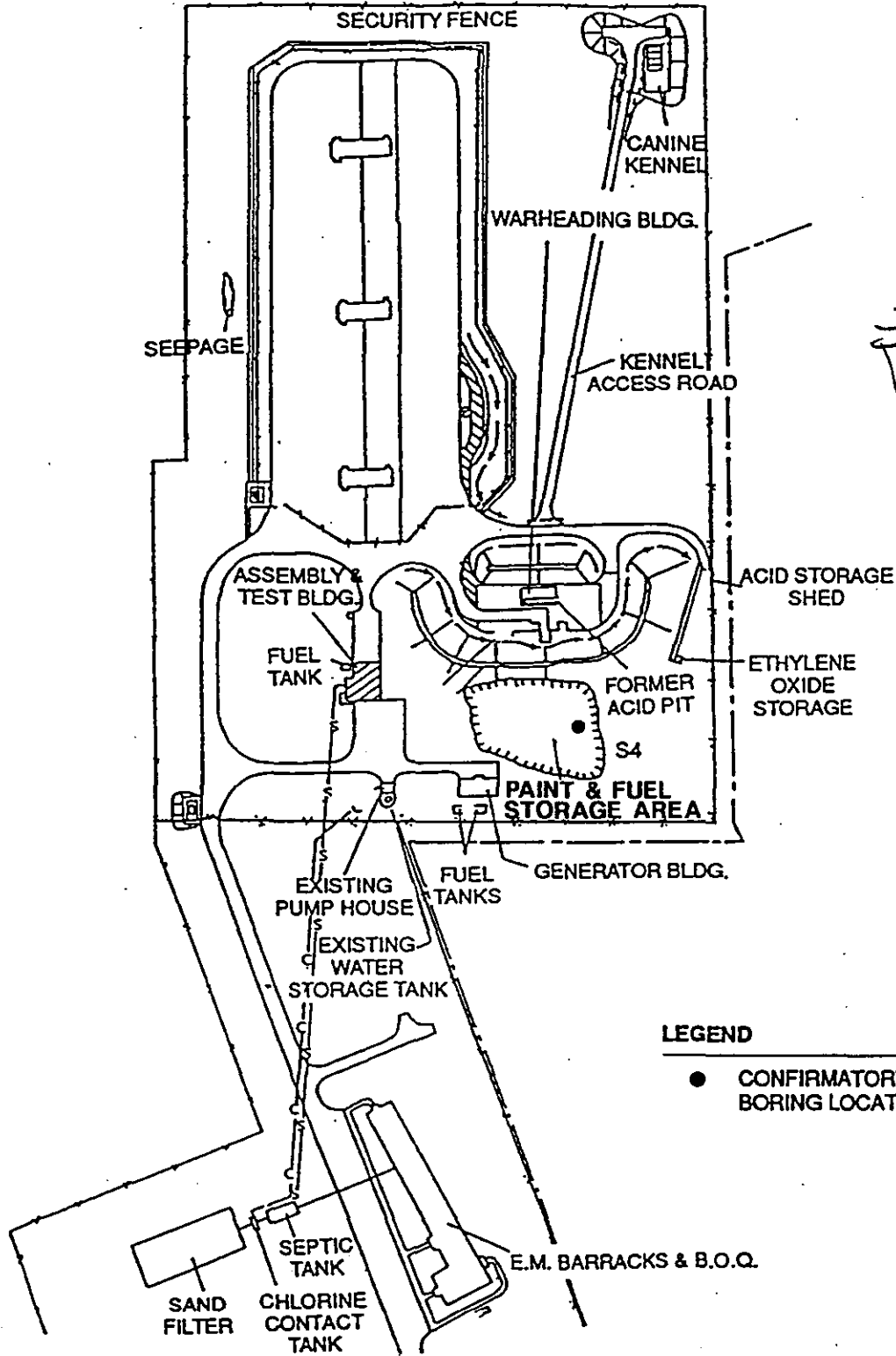
CHECKED:

DRAWING

FILE NO.:

PRJCT NO.: WAD28.02

DATE: MAR 1993



LEGEND

- CONFIRMATORY STUDY BORING LOCATION

SOURCE: SHAPIRO 1992



LAUNCH SITE MAP
FORMER NIKE MISSILE SITE
VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE

5-7

MAY 14 1993

DRAFT

DRAFT... SAC

APPROVED: LER

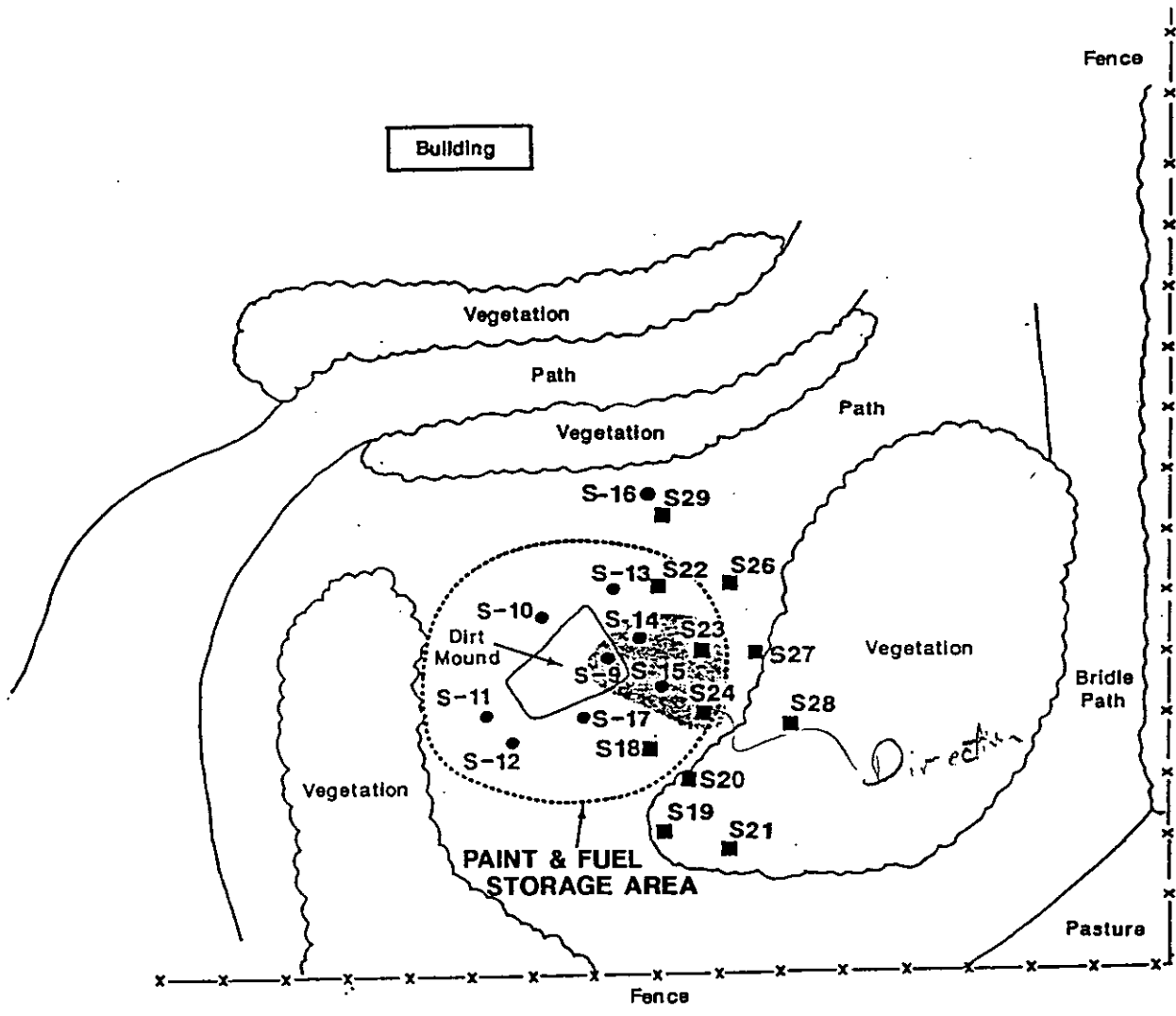
CHECKED:

DRAI

FILE NO.:

PRCT NO.: WA028.02

NO DATE: MAR 1993



LEGEND

- S-11 ● Soil Boring number & approximate location
- S23 ■ USACE Test Pit number & approximate location

Approximate horizontal extent of soil contamination defined by the presence of volatile organic compounds and fuel hydrocarbons above their Method A cleanup levels. Vertical extent of these contaminants vary (see text). This area was estimated using field boring logs and chemical results.



0 25 50
Scale in Feet

SOURCE: SHAPIRO 1992



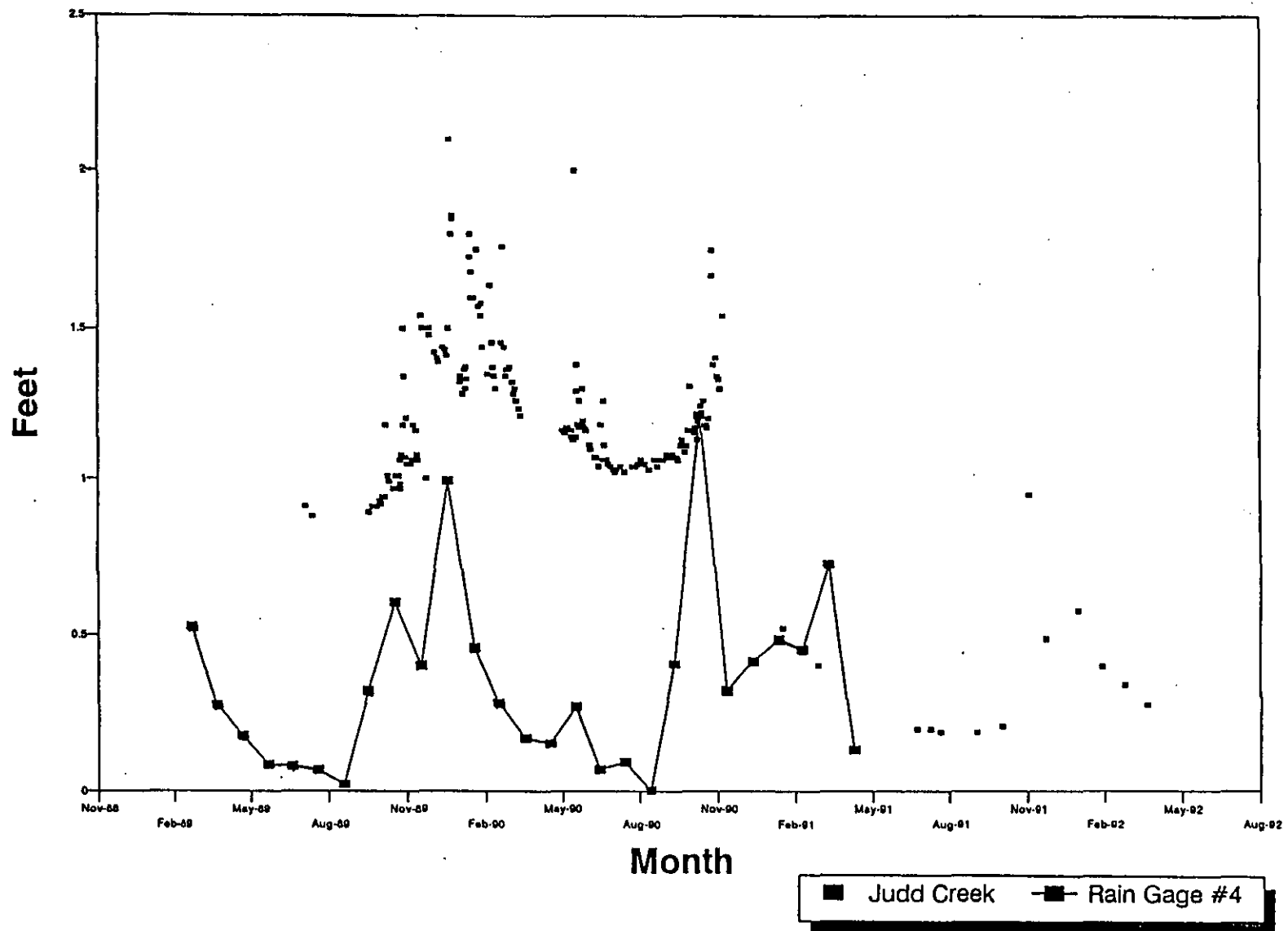
**EXTENT OF SOIL CONTAMINATION
FORMER NIKE MISSILE SITE**
VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE

5-8

MAY 14 1993

DRAFT

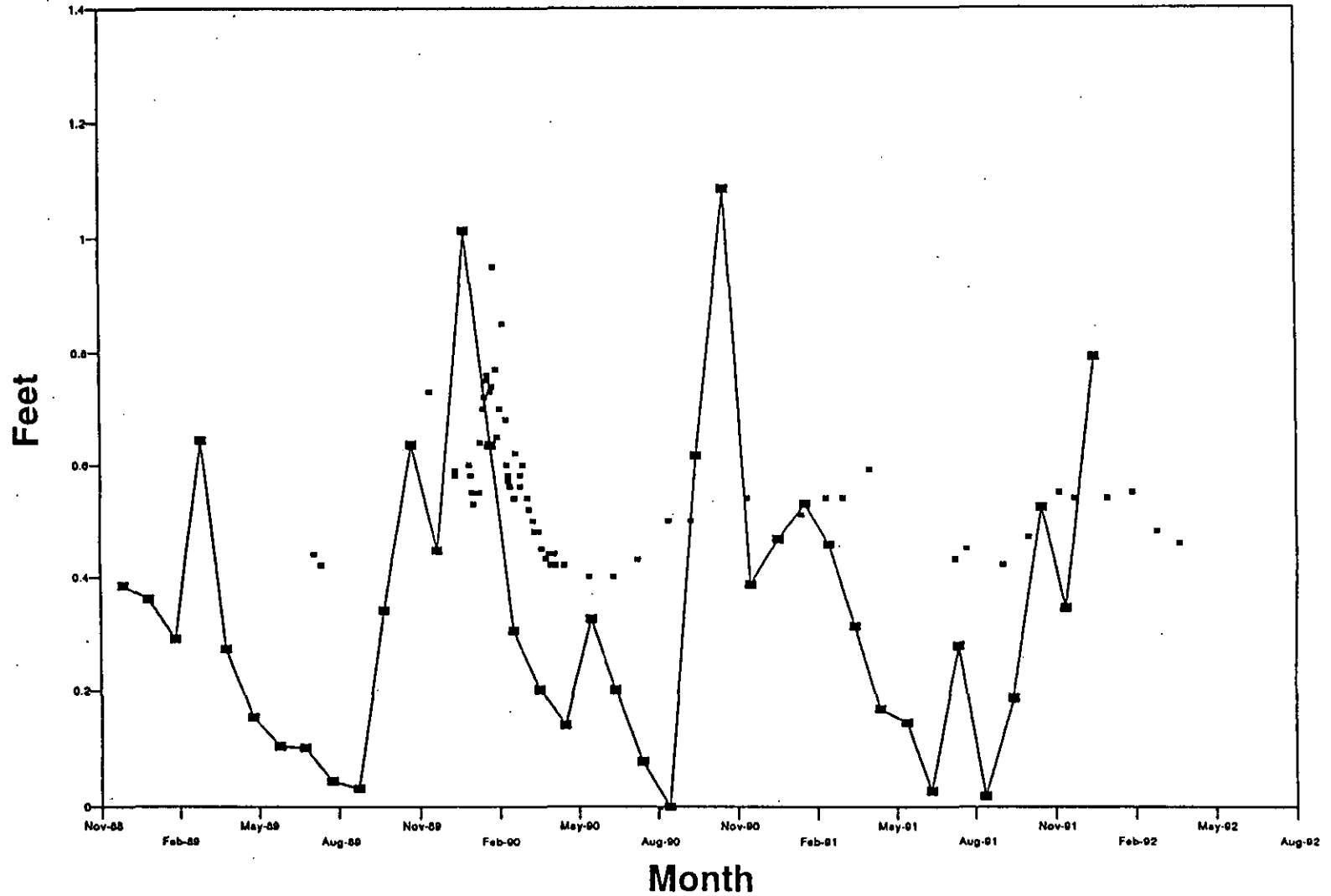


STREAM-GAGE DATA VS. RAIN-GAGE DATA
JUDD CREEK VS. RAIN-GAGE 4
 VASHON GROUND-WATER MANAGEMENT PLAN

MAY 14 1993
DRAFT

FIGURE
8-14

163135



■ Tahlequah Creek —●— Rain Gage #7



STREAM-GAGE DATA VS. RAIN-GAGE DATA

TAHLEQUAH CREEK VS. RAIN-GAGE 7

VASHON GROUND-WATER MANAGEMENT PLAN

MAY 14 1993
DRAFT

FIGURE

8-15

163135

DESCRIPTION OF MAP UNITS

Postglacial Deposits

- m Modified land (Holocene)
- Db Beach deposits (Holocene)
- Qw Wetland deposits (Holocene)
- Qs1 Alluvium (Holocene)
- Qls Landslide deposits (Holocene)
- Qmw Mass-wasting deposits (Holocene)

Glacial and Nonglacial Deposits

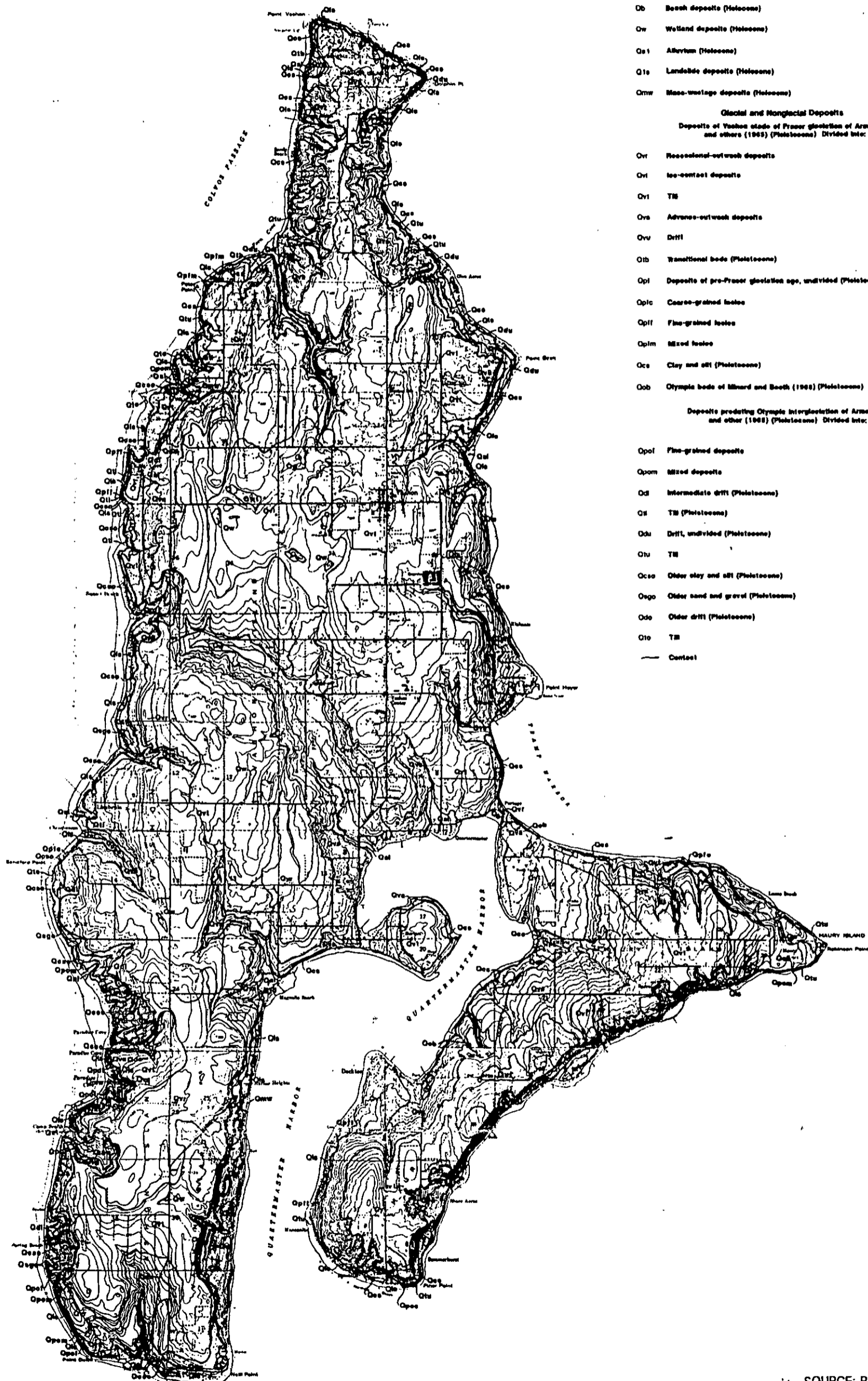
Deposits of Vashon stage of Fraser glaciation of Armstrong and others (1963) (Pleistocene) Divided into:

- Qvt Recessional-outwash deposits
- Qvt1 Ice-contact deposits
- Qvt1 Till
- Qva Advance-outwash deposits
- Qvv Drift
- Qtb Transitional beds (Pleistocene)
- Qpt Deposits of pre-Fraser glaciation age, undivided (Pleistocene)
- Qptc Coarse-grained loess
- Qptf Fine-grained loess
- Qptm Mixed loess
- Qcs Clay and silt (Pleistocene)
- Qob Olympic beds of Minard and Booth (1968) (Pleistocene)

Deposits predating Olympic interglaciation of Armstrong and others (1963) (Pleistocene) Divided into:

- Qpd1 Fine-grained deposits
- Qpom Mixed deposits
- Qod Intermediate drift (Pleistocene)
- Qst Till (Pleistocene)
- Qdu Drift, undivided (Pleistocene)
- Qtu Till
- Qcso Older clay and silt (Pleistocene)
- Qogo Older sand and gravel (Pleistocene)
- Qdo Older drift (Pleistocene)
- Qto Till

— Contact



SOURCE: Booth 1991.



GEOLOGIC MAP OF VASHON ISLAND
VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE
DRAFT8-1

MAY 14 1993

DRAFTER: SAC

APPROVED: LER

CHECKED:

DRAWING:

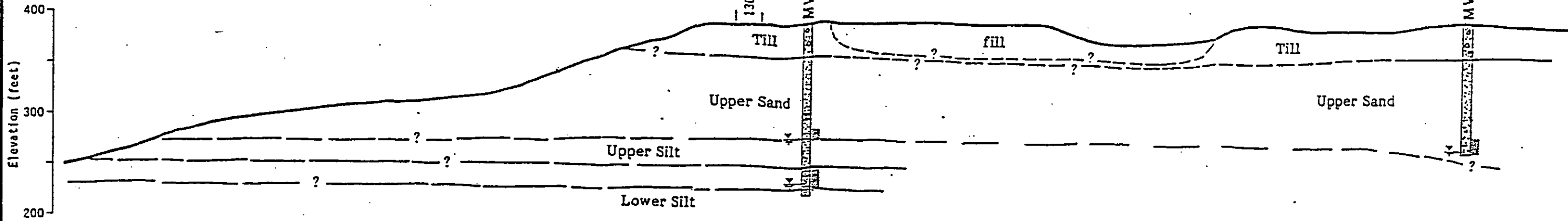
FILE NO.:

PRCT NO.: WA028.02

DWG DATE: MAR 1993

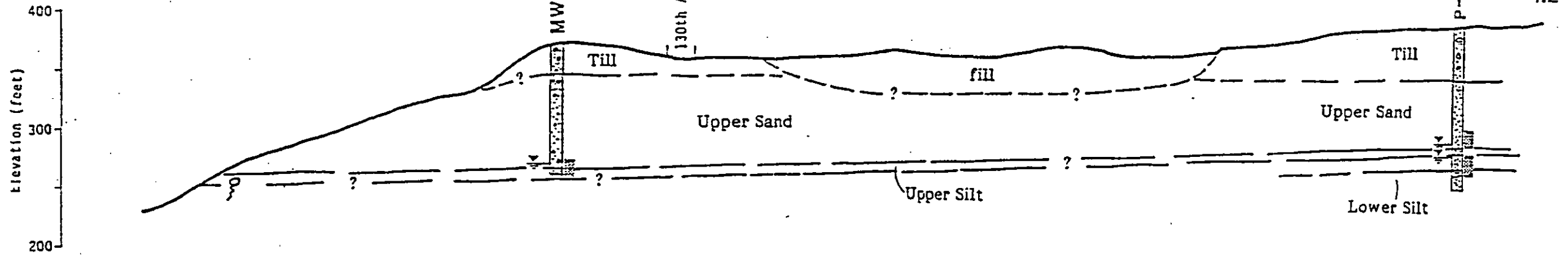
A SW

A' NE



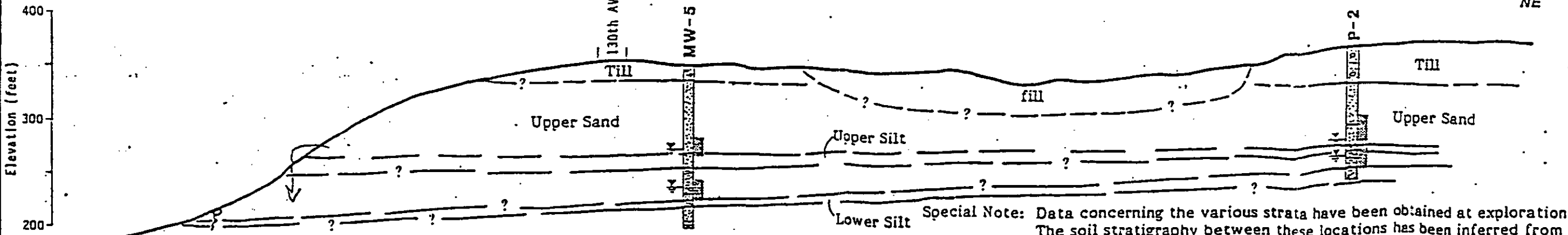
B SW

B' NE



C SW

C' NE



Special Note: Data concerning the various strata have been obtained at exploration locations only. The soil stratigraphy between these locations has been inferred from geological evidence and so may vary from that shown.

- Contact, dashed where inferred
- Measured water level
- Spring
- Gravel Pack Interval



SOURCE: Harding Lawson 1991.



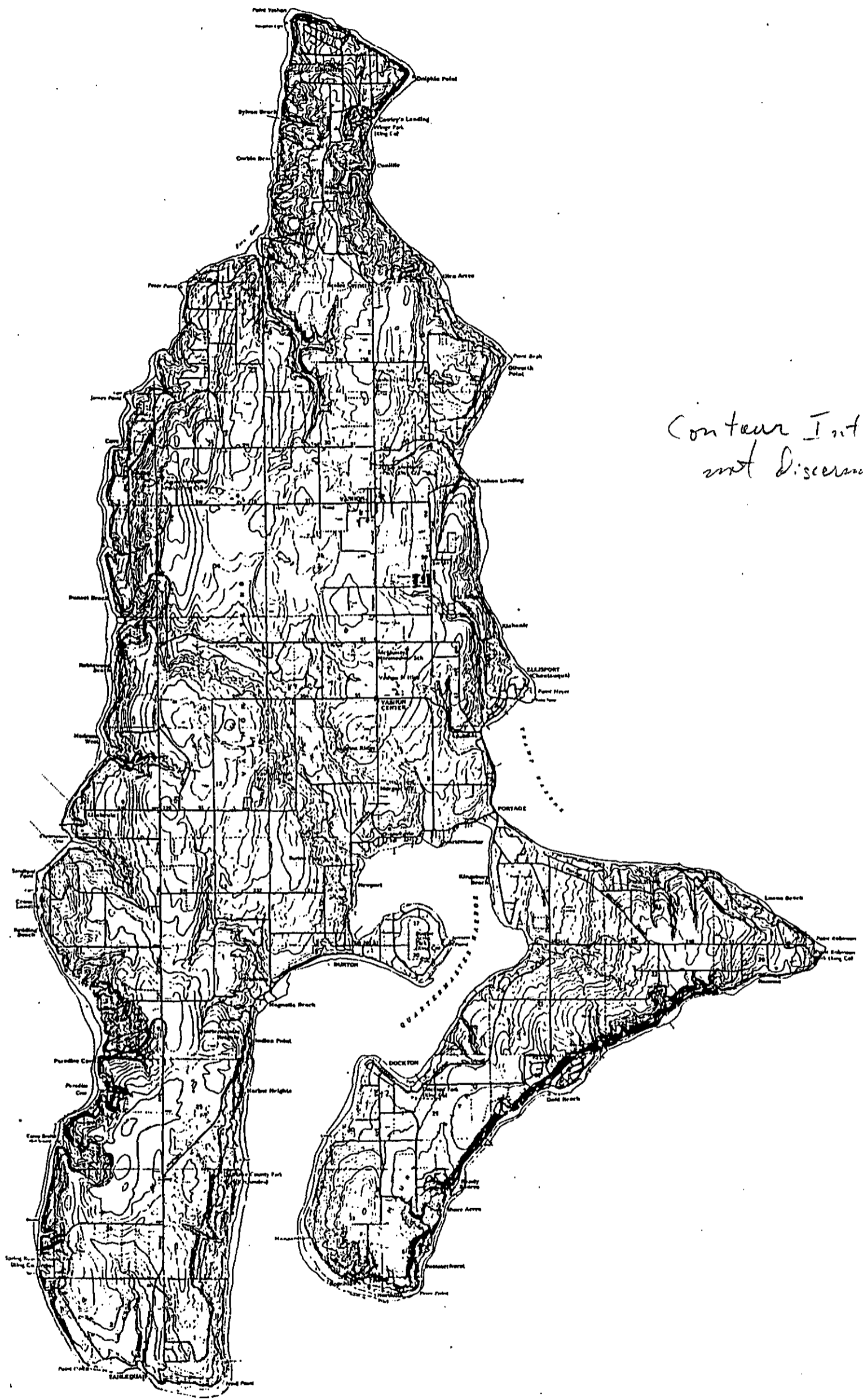
GEOLOGIC CROSS SECTIONS
VASHON LANDFILL
 VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE
5-5

MAY 14 1993

DRAFT

163135



Contour Int not discernible.



MAY 14 1993

SOURCE: Geraghty & Miller 1993.

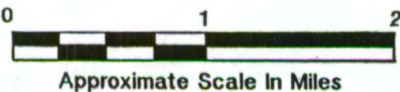
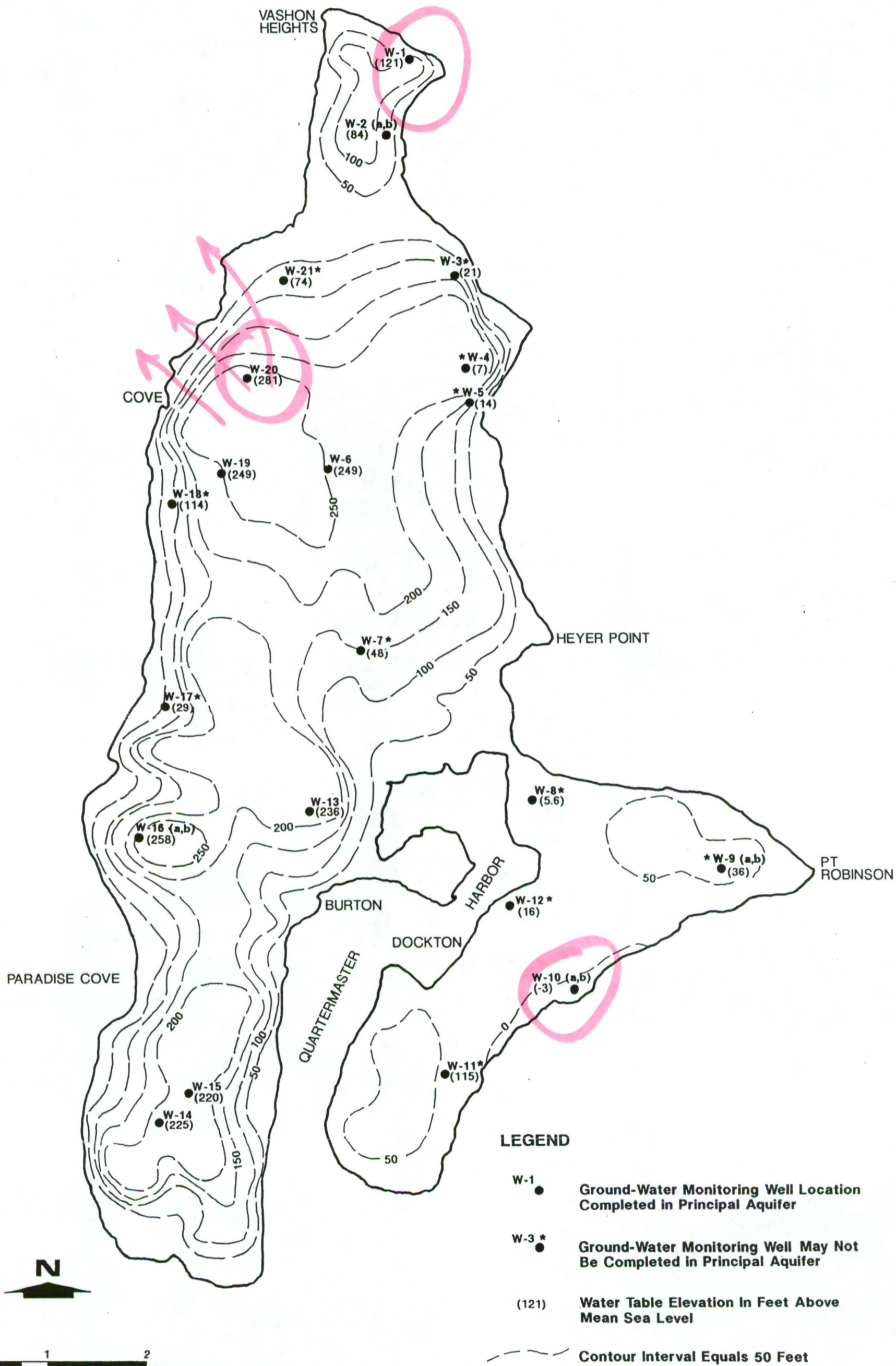


GROUND-WATER MANAGEMENT AREA
VASHON GROUND-WATER MANAGEMENT PLAN

DRAFT

FIGURE
2-1

181135



LEGEND

- W-1 ● Ground-Water Monitoring Well Location Completed in Principal Aquifer
- W-3* ● Ground-Water Monitoring Well May Not Be Completed in Principal Aquifer
- (121) Water Table Elevation In Feet Above Mean Sea Level
- - - - - Contour Interval Equals 50 Feet

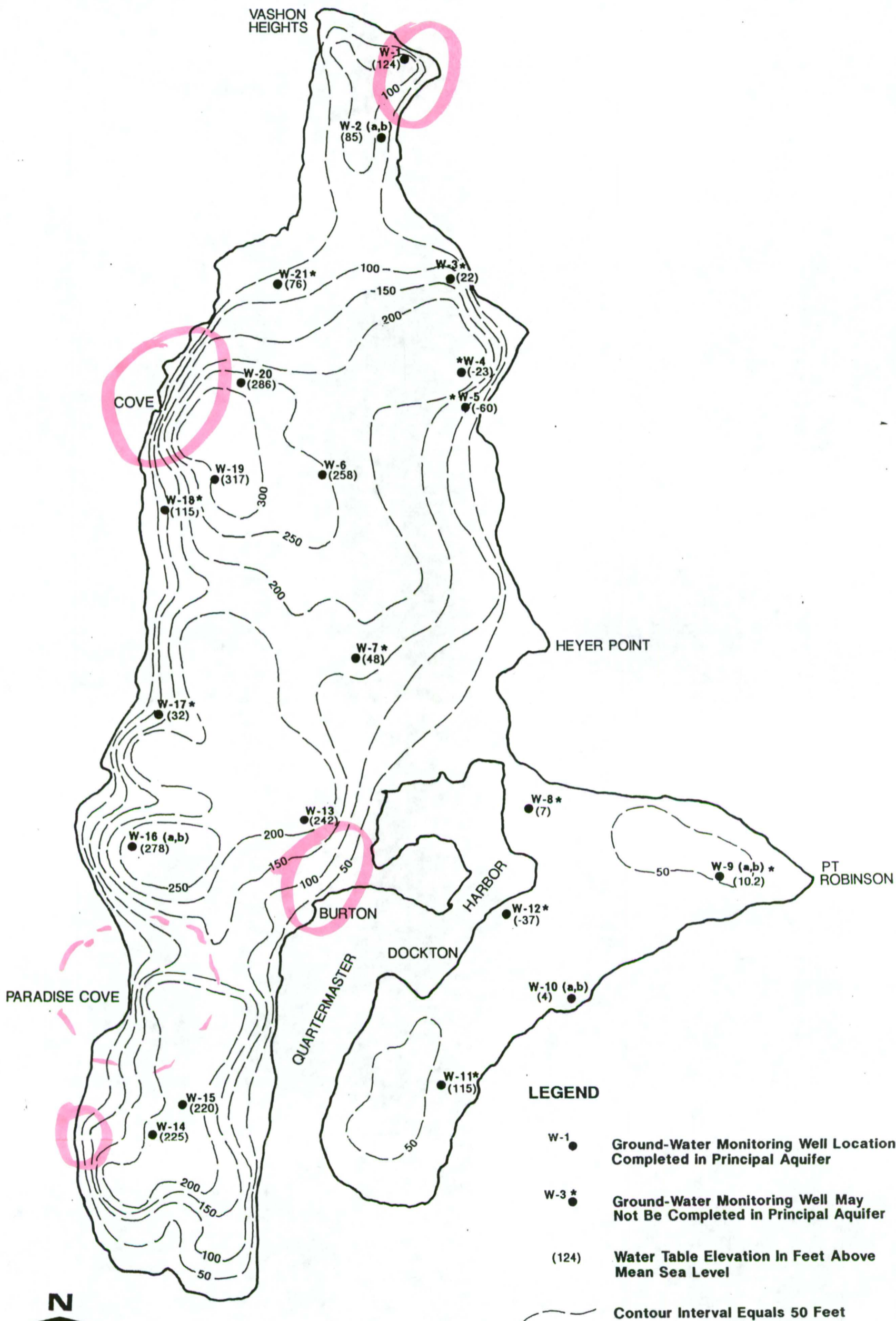
Modified from Carr 1983



GENERALIZED WATER TABLE ELEVATIONS FOR PRINCIPAL AQUIFER, NOVEMBER 1989 MAY 14 1993
 VASHON GROUND-WATER MANAGEMENT PLAN **DRAFT**

FIGURE 8-17

163135



Modified from Carr 1983



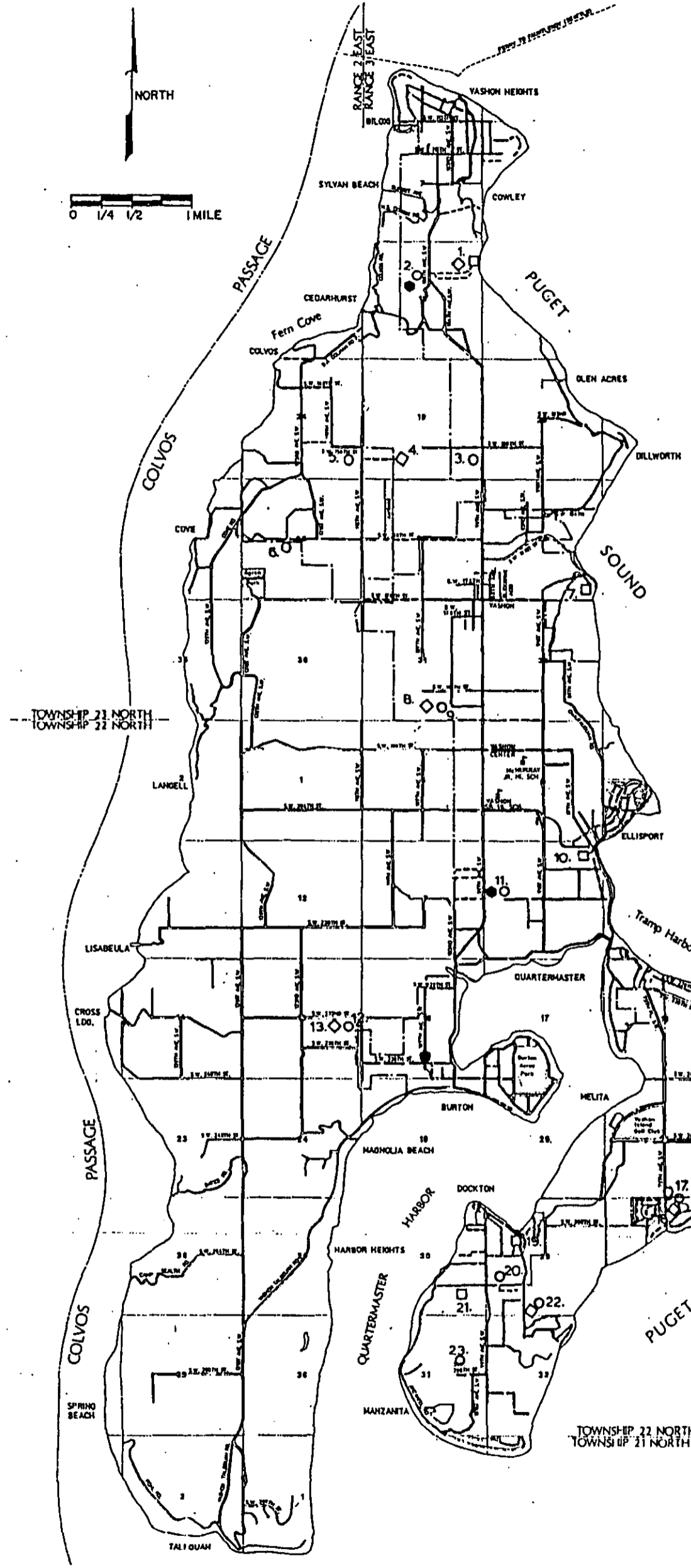
GENERALIZED WATER TABLE ELEVATIONS

FOR PRINCIPAL AQUIFER, APRIL 1991 MAY 14 1993

VASHON GROUND-WATER MANAGEMENT PLAN **DRAFT**

FIGURE

8-18



- HEIGHTS**
1. SOURCE: 283 GPM
 2. STORAGE: 0.32 MG; OF 438'
 3. STORAGE: 0.01 MG; OF 481'
- YESISIDE**
4. SOURCE: 110-140-GPM
 5. STORAGE: 0.153 MG; OF 440'
 6. STORAGE: 0.1 MG; OF 440'
- WATER DISTRICT NO. 19**
7. SOURCE: 200 GPM
 8. SOURCE: 150 GPM
 9. STORAGE: 1.826 MG; OF 494'
 10. SOURCE: 286 MG
 11. STORAGE: 0.1 MG; OF 306'
- BURTON**
12. SOURCE: 150 GPM
 13. STORAGE: 0.13 MG; OF 276'
- MAVRY MUTUAL**
14. STORAGE: 0.03 MG; OF 305'
 15. SOURCE: 35 GPM
 16. STORAGE: 0.023 MG; OF 600'
- GOLD BEACH**
17. STORAGE: 0.05 LOW ZONE
0.036 HIGH ZONE
 18. SOURCE: 250 GPM
- DOCKTON**
19. SOURCE: 80-100 GPM
 20. STORAGE: 0.065 MG; OF 317'
 21. SOURCE: 30-40 GPM
 22. SOURCE: 100-110 GPM
STORAGE: 0.001 MG
 23. STORAGE: 0.316 MG; OF 486'

- 4" AND SMALLER LINES
- 6" AND 8" LINES
- LARGER THAN 8" LINES
- SURFACE WATER SOURCE
- ◇ WELLS/WELLPOINTS
- STORAGE FACILITIES
- PURVEYOR BOUNDARY

SOURCE: HORTON DENNIS 1989.



THE 7 MAJOR PURVEYORS' WATER SYSTEMS IN THE VASHON GWMA: SOURCES, AREAS OF DISTRIBUTION, AND STORAGE FACILITIES

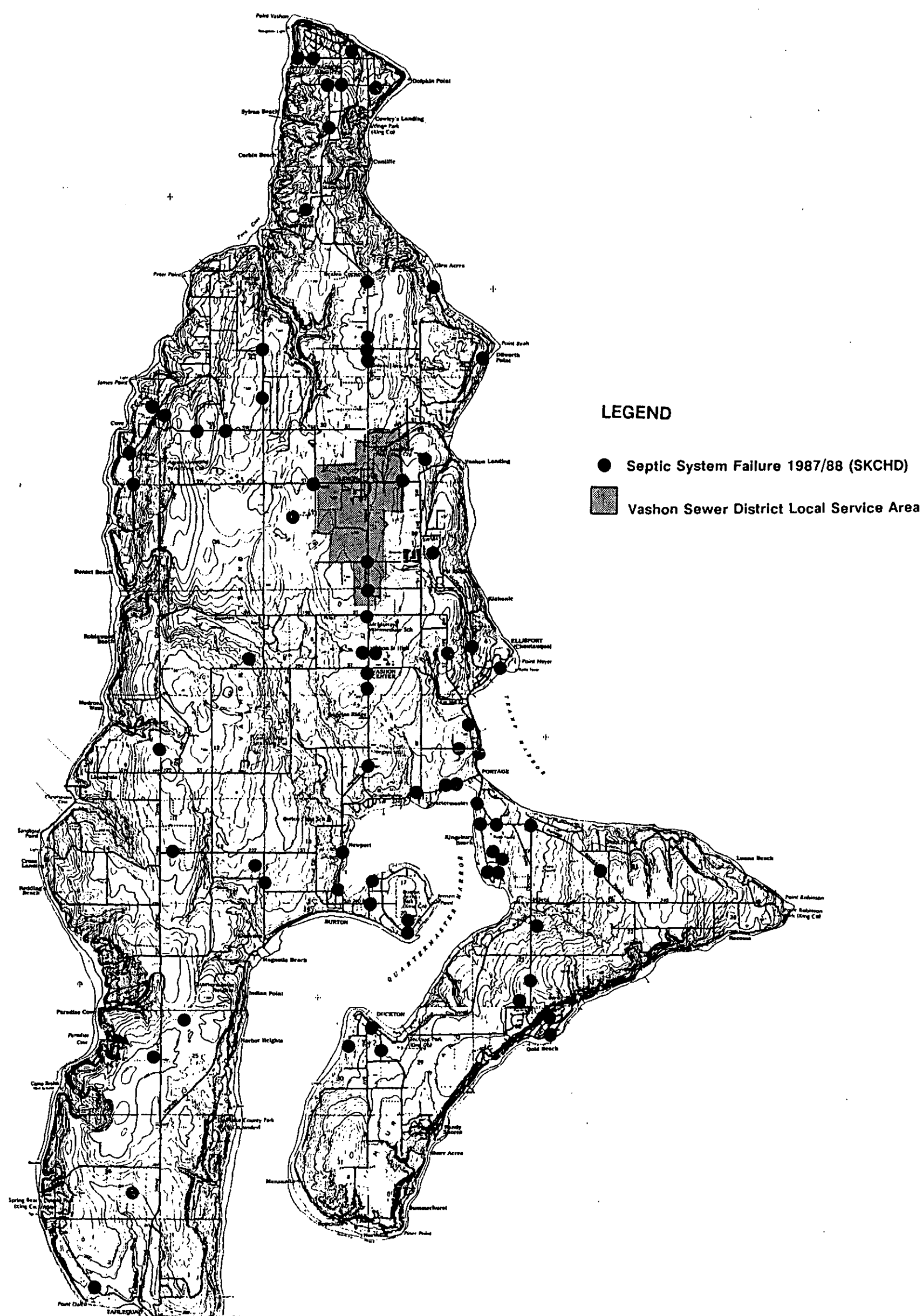
VASHON GROUND-WATER MANAGEMENT PLAN
MAY 14 1993

DRAFT

FIGURE
6-1

163135

183135



LEGEND

- Septic System Failure 1987/88 (SKCHD)
- ▨ Vashon Sewer District Local Service Area



Approximate Scale in Miles

MAY 14 1993

DRAFT

SOURCE: Geraghty & Miller 1991

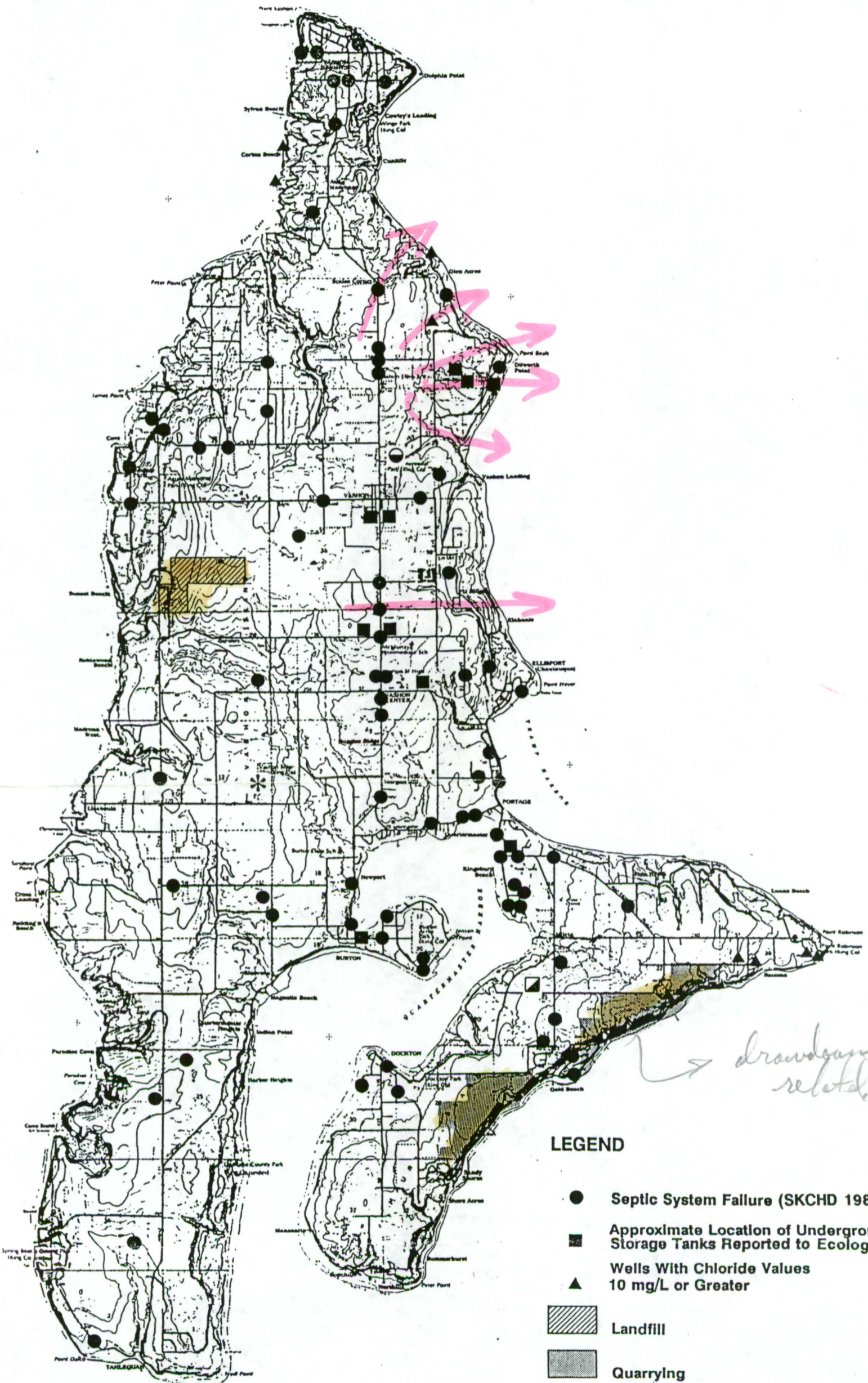


VASHON SEWER DISTRICT LOCAL SERVICE AREA AND SEPTIC SYSTEM FAILURES REPORTED TO SKCHD 1987/88

VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE
5-9

161135



LEGEND

- Septic System Failure (SKCHD 1987)
- Approximate Location of Underground Storage Tanks Reported to Ecology
- ▲ Wells With Chloride Values 10 mg/L or Greater
- ▨ Landfill
- ▩ Quarrying
- * Former NIKE Missile Site
- ◻ Golf Course
- Vashon Sewage Treatment Plant

drawings related

MAY 14 1993



MODIFIED FROM: Geraghty & Miller 1990.

NOTE: Some potential point sources of contamination may not be shown.



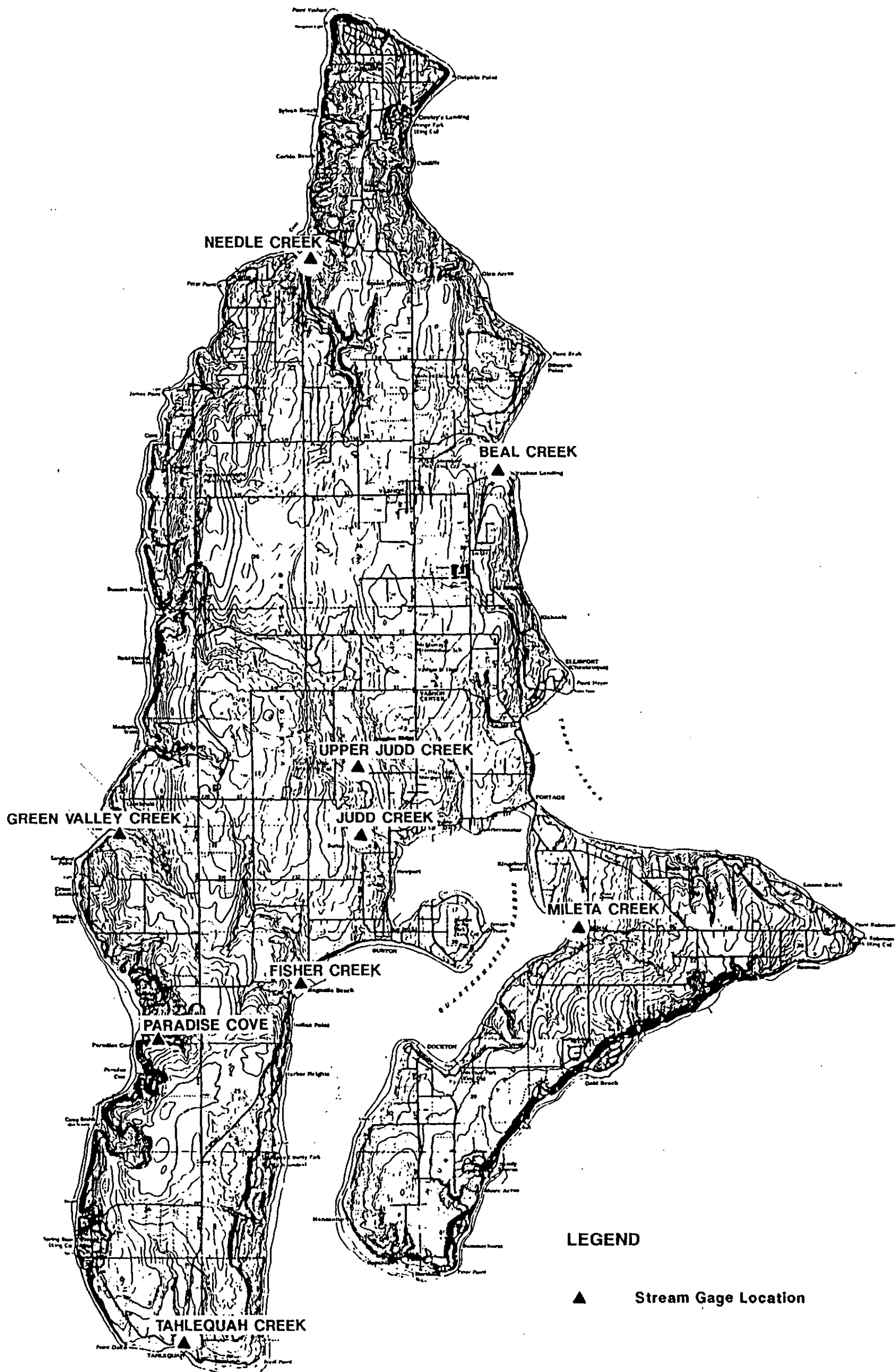
POTENTIAL POINT SOURCES OF CONTAMINATION

VASHON GROUND-WATER MANAGEMENT PLAN

DRAFT

FIGURE
5-1

163135



LEGEND

▲ Stream Gage Location



SOURCE: Geraghty & Miller. 1993.



STREAM-GAGE LOCATIONS

MAY 14 1993

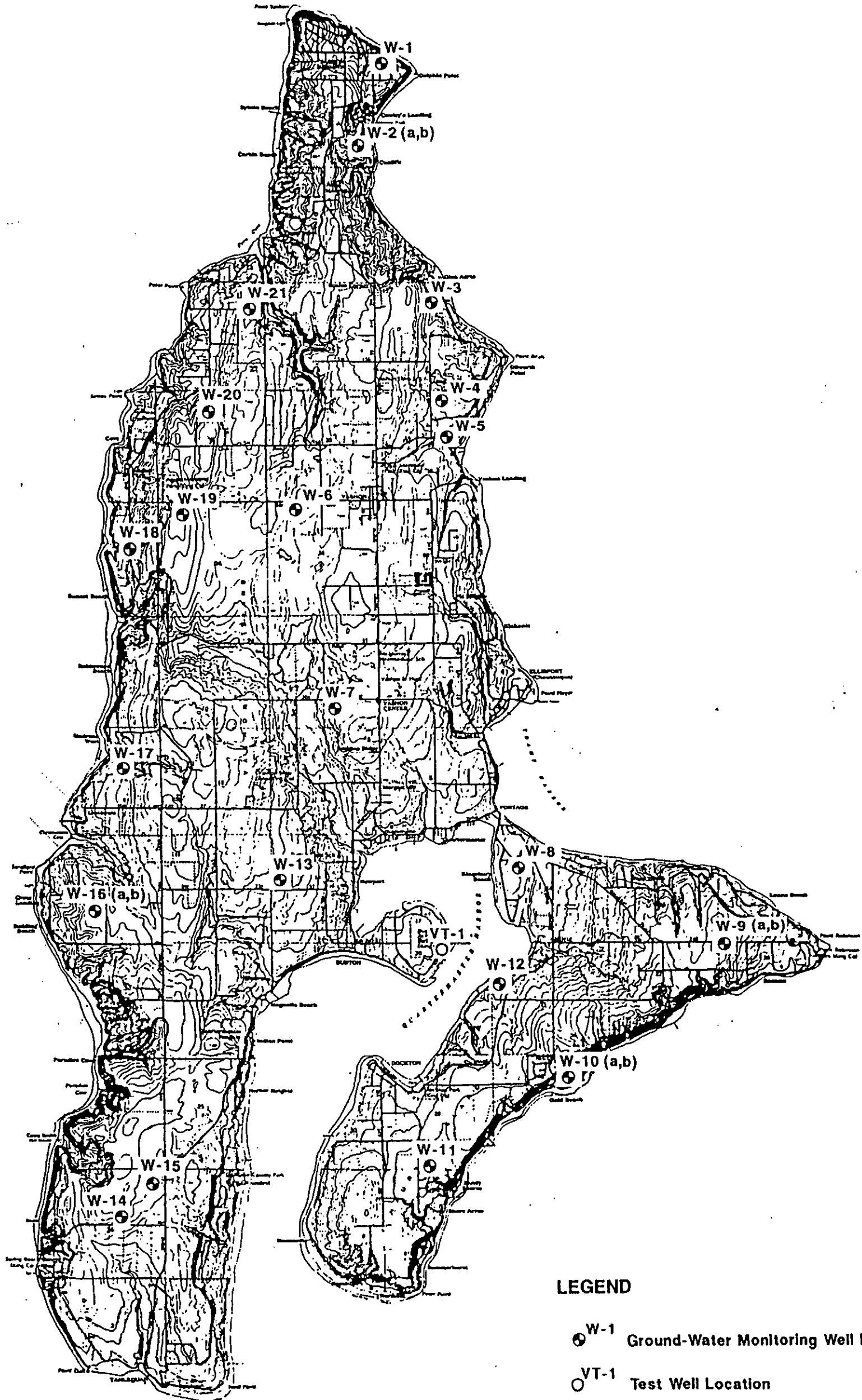
VASHON GROUND-WATER MANAGEMENT PLAN

DRAFT

FIGURE

8-13

163135



Approximate Scale In Miles

SOURCE: Geraghty & Miller 1993.



WELL LOCATIONS

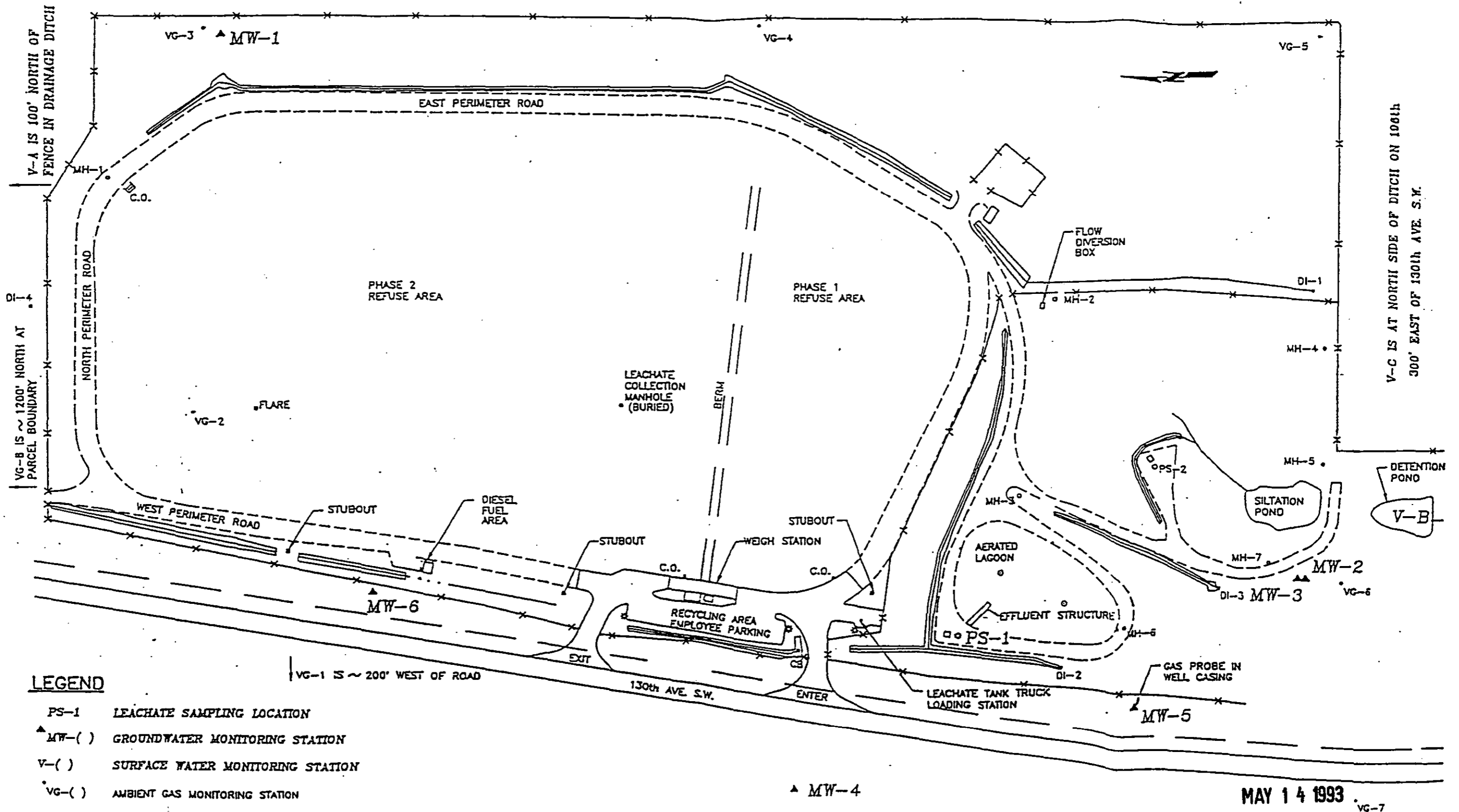
VASHON GROUND-WATER MANAGEMENT PLAN

MAY 14 1993

DRAFT

FIGURE

8-16



LEGEND

- PS-1 LEACHATE SAMPLING LOCATION
- ▲ MW-() GROUNDWATER MONITORING STATION
- V-() SURFACE WATER MONITORING STATION
- VG-() AMBIENT GAS MONITORING STATION

MAY 14 1993

SOURCE: Harding Lawson 1991.

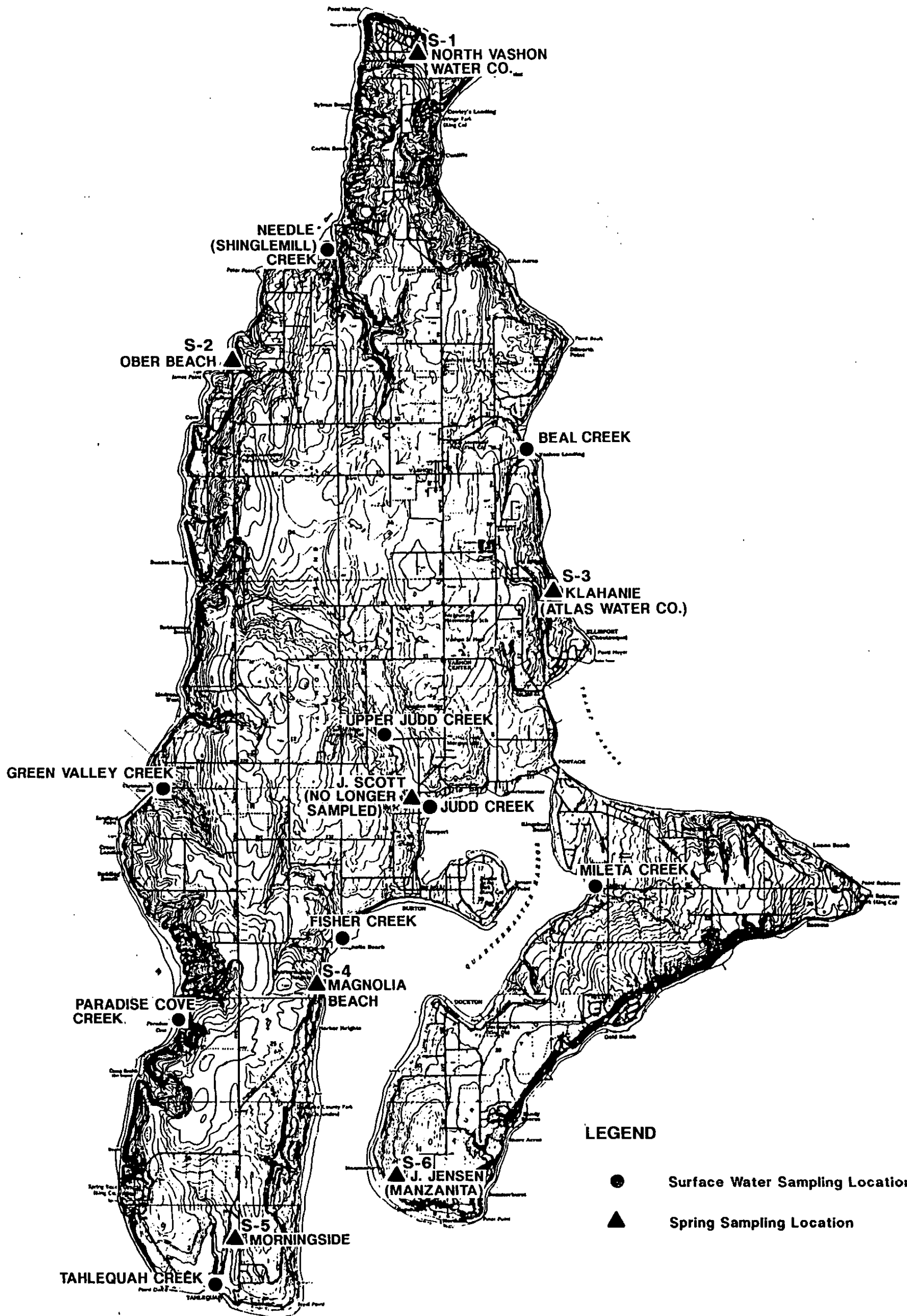


VASHON ISLAND LANDFILL SAMPLING LOCATIONS
VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE 5-2

DRAFT

163135



LEGEND

- Surface Water Sampling Location
- ▲ Spring Sampling Location

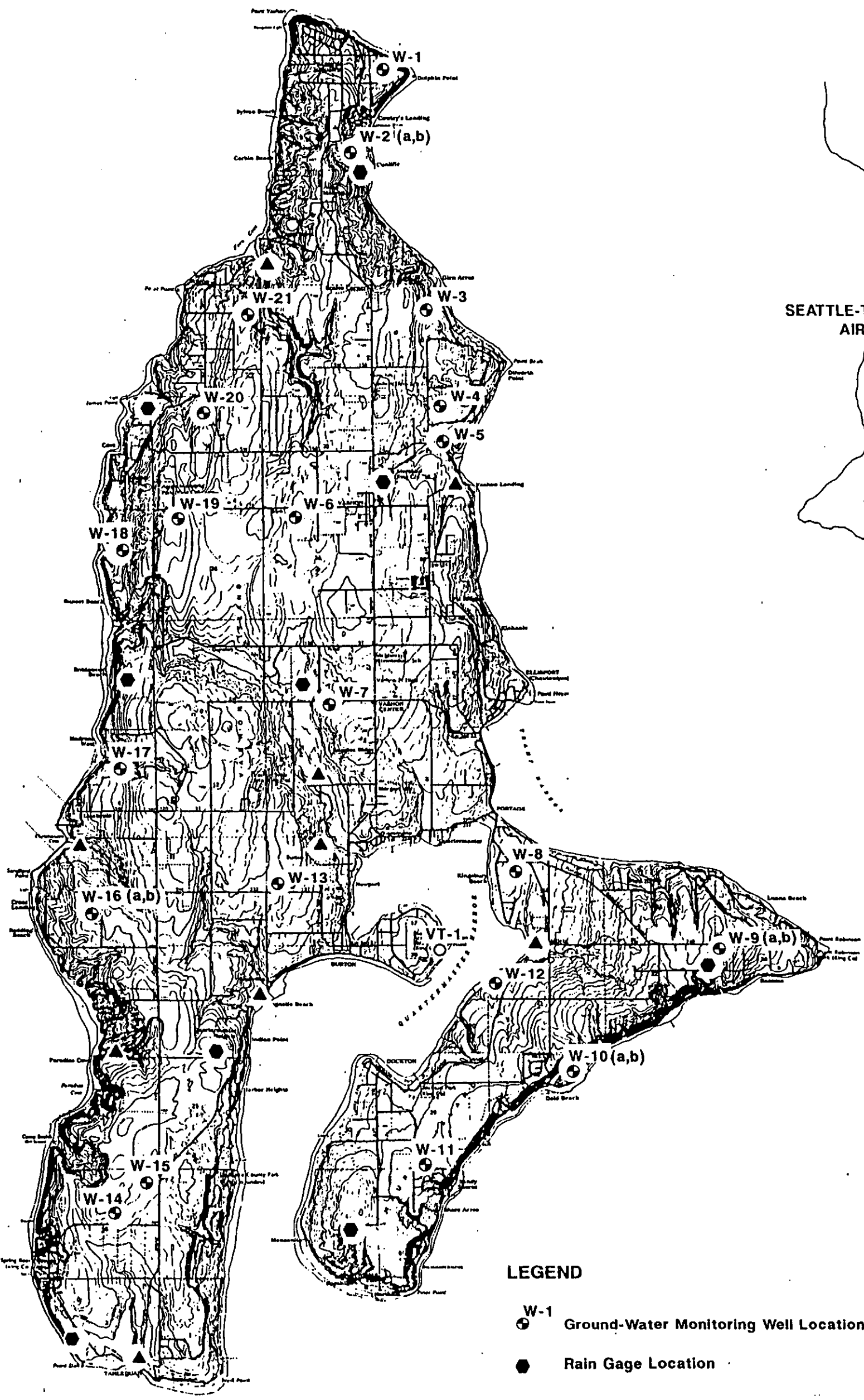
NOTE: Marine and shellfish samples collected offshore in the Sound.



SURFACE-WATER AND SPRING-WATER SAMPLING LOCATIONS
 VASHON GROUND-WATER MANAGEMENT PLAN

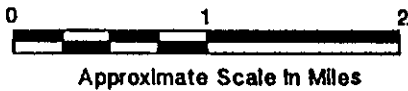
MAY 14 1993
DRAFT 8-26

FIGURE



LEGEND

- ⊕ W-1 Ground-Water Monitoring Well Location
- Rain Gage Location
- ▲ Stream Gage Location
- VT-1 Test Well Location



SOURCE: Geraghty & Miller, 1993.



RAIN-GAGE, STREAM-GAGE, AND WELL LOCATIONS

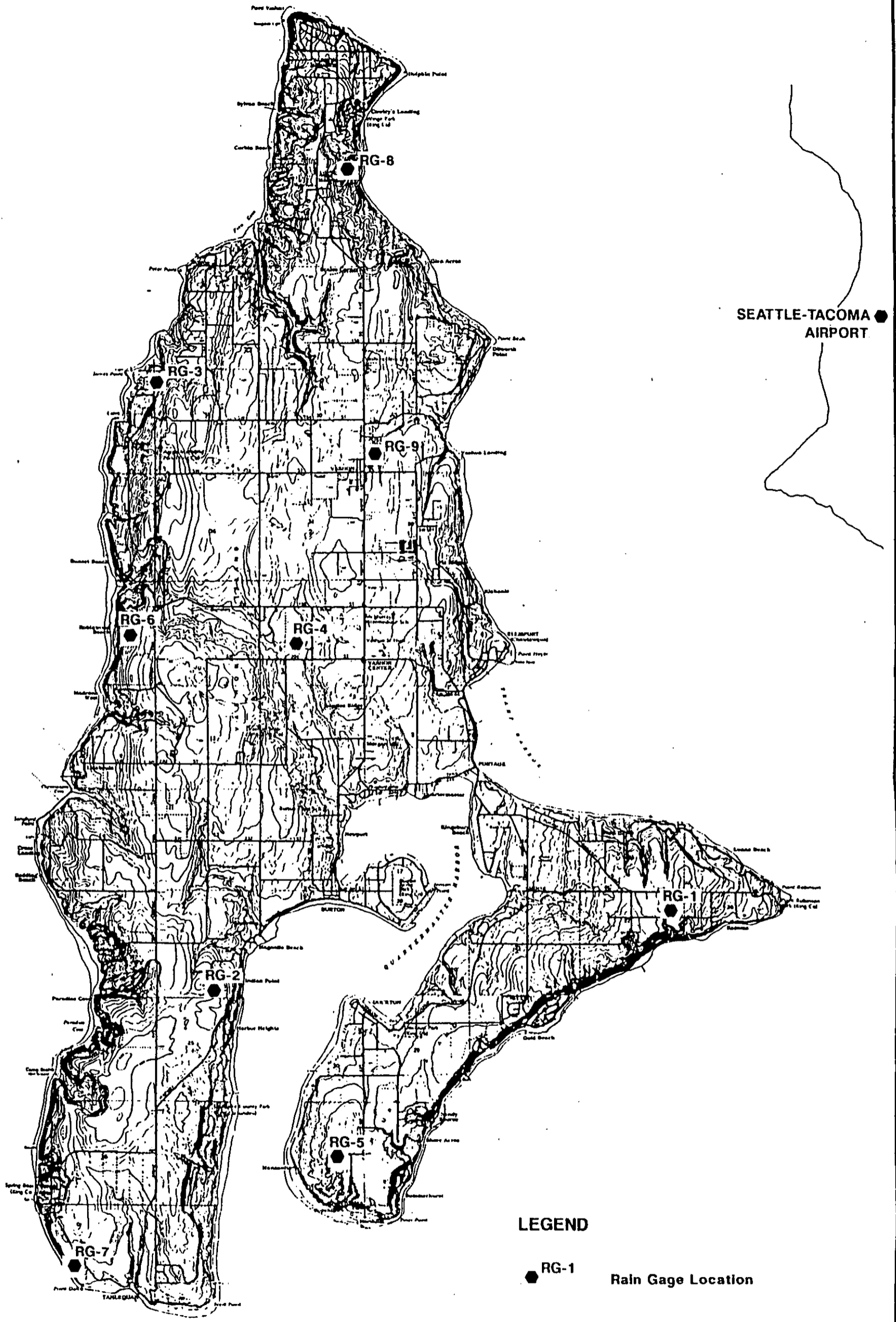
VASHON GROUND-WATER MANAGEMENT PLAN

MAY 14 1993
DRAFT

FIGURE

8-6

151135



SOURCE: Geraghty & Miller 1993.

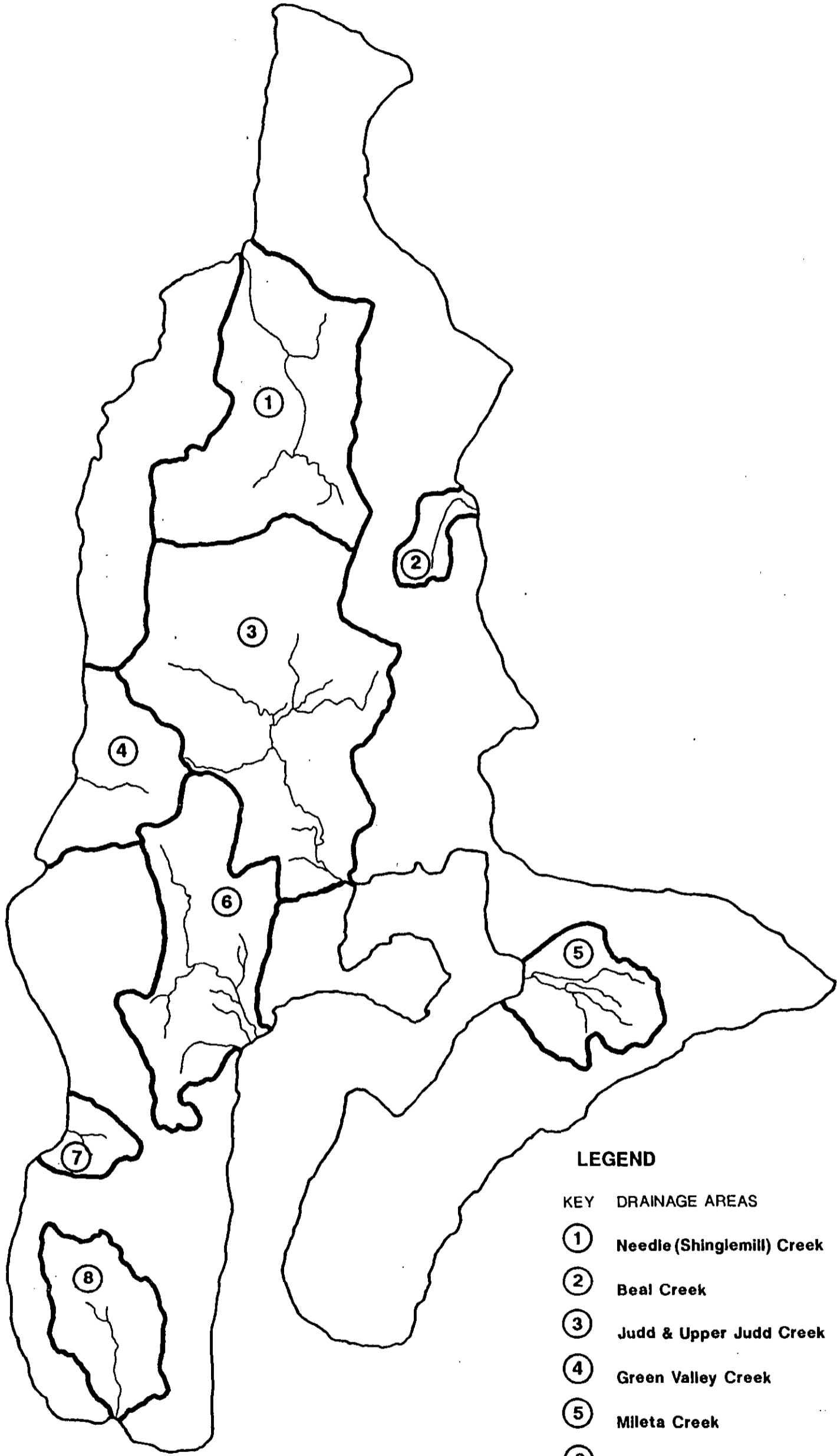


RAIN-GAGE LOCATIONS
VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE
8-7
DRAFT

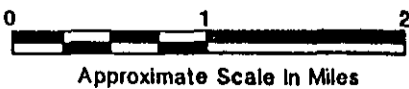
MAY 14 1993

163135



LEGEND

KEY	DRAINAGE AREAS	ACRES
①	Needle (Shinglemill) Creek	1996
②	Beal Creek	211
③	Judd & Upper Judd Creek	3149
④	Green Valley Creek	762
⑤	Mileta Creek	700*
⑥	Fisher Creek	1549
⑦	Paradise Cove Creek	200*
⑧	Tahlequah Creek	780



Approximate Scale In Miles

SOURCE: Modified from Carr 1983

* Estimated



DRAINAGE BASIN MAP

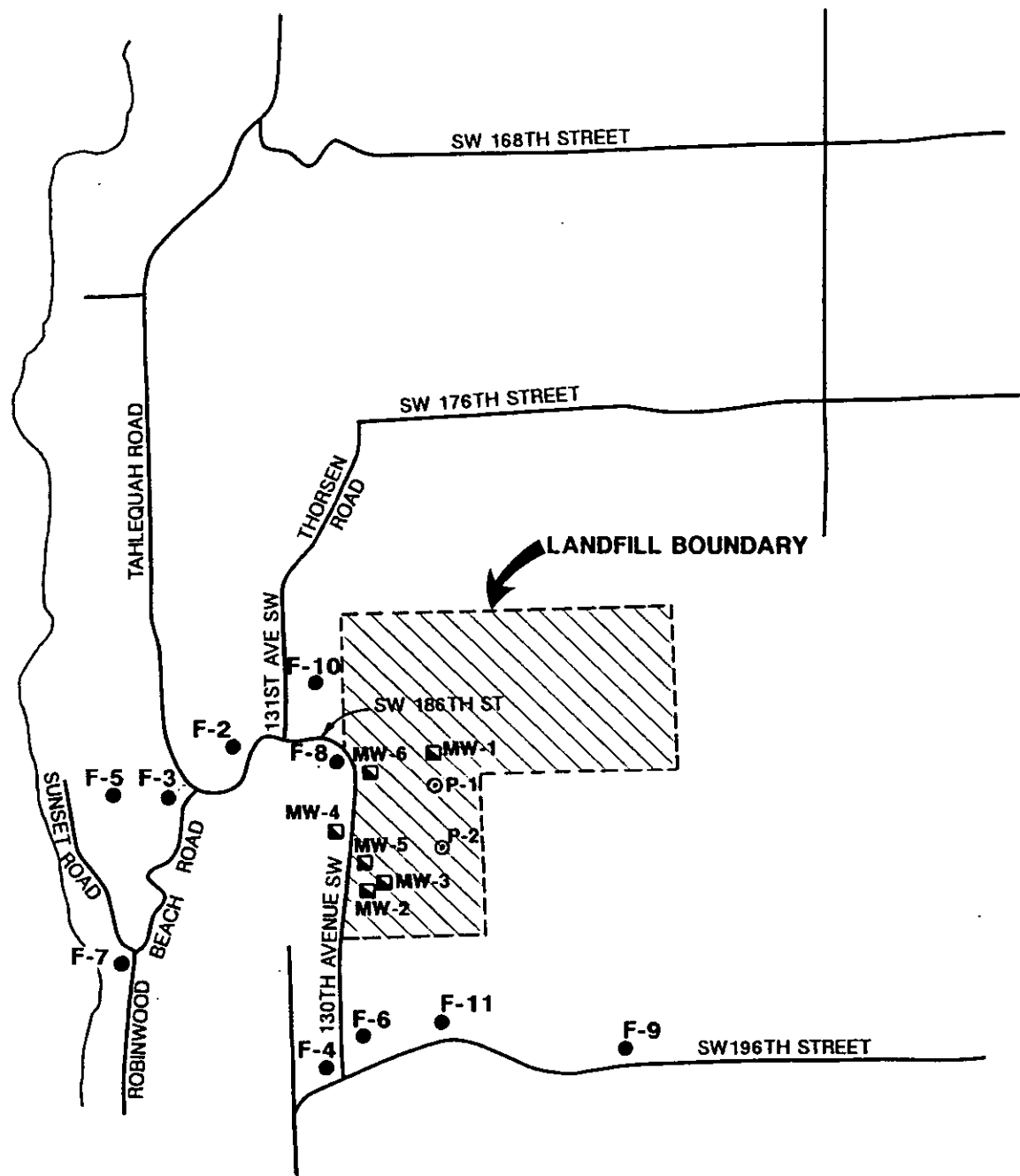
MAY 14 1993

FIGURE

VASHON GROUND-WATER MANAGEMENT PLAN

DRAFT 8-5

DWG DATE: APR 1993 | PRJCT NO.: WAD28.02 | FILE NO.: | DRAWING: | CHECKED: | APPROVED: LER | DRAFTER: SAC



LEGEND

- F-2 ● Sampling Location Outside Vashon Landfill
- MW-1 ◻ Monitoring Well Inside Vashon Landfill
- P-1 ⊙ Piezometer Inside Vashon Landfill



SOURCE: SKCHD 1993.



SAMPLING LOCATIONS OUTSIDE OF VASHON LANDFILL

VASHON GROUND-WATER MANAGEMENT PLAN

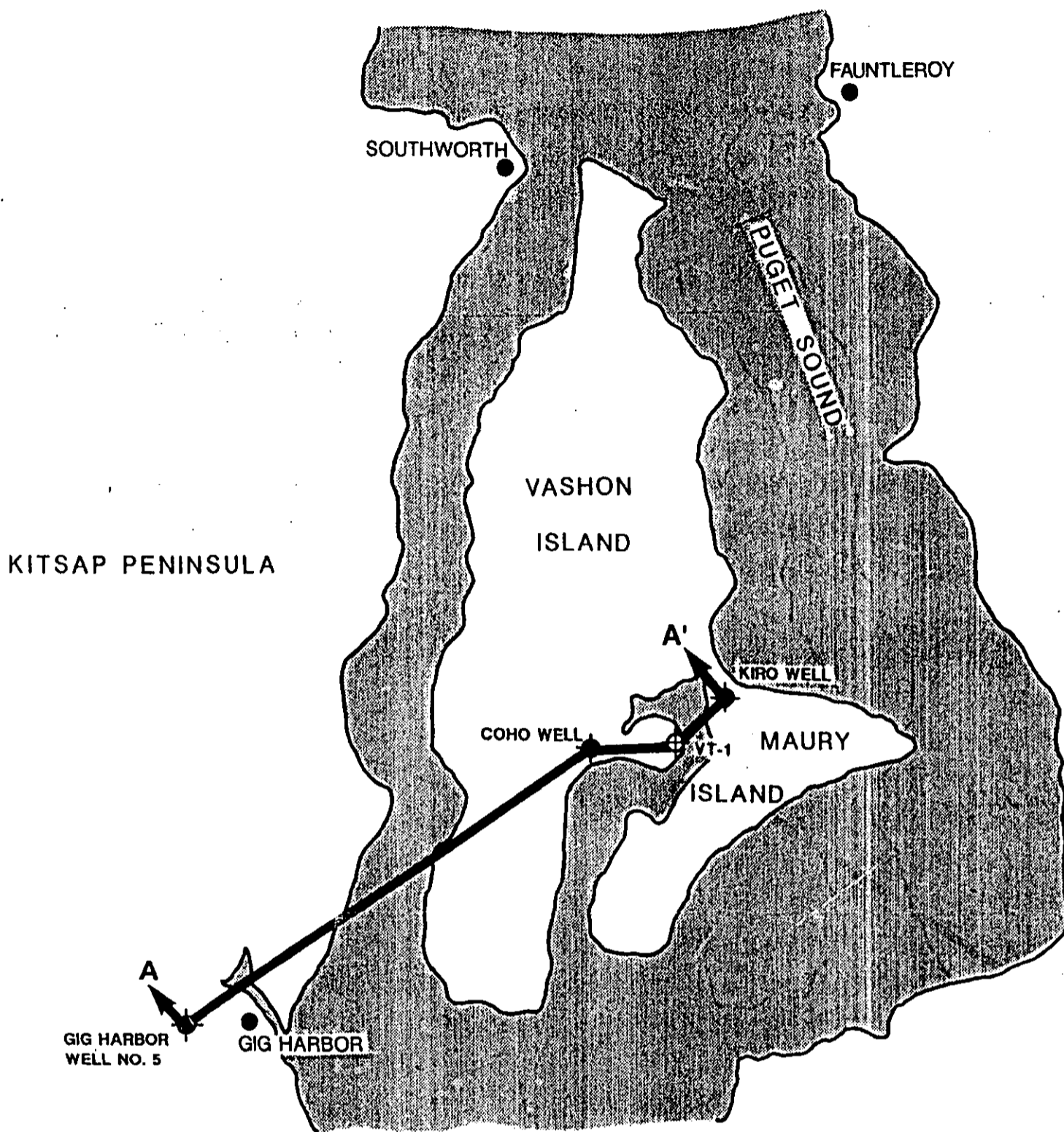
FIGURE

5-6




MAY 14 1993

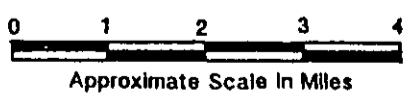
DRAFT

163135



LEGEND

-  Location of Exploratory Well VT-1
-  Location of Production Well
-  Cross Section Transect Location



DRAFTER: SAC

APPROVED: LER

CHECKED:

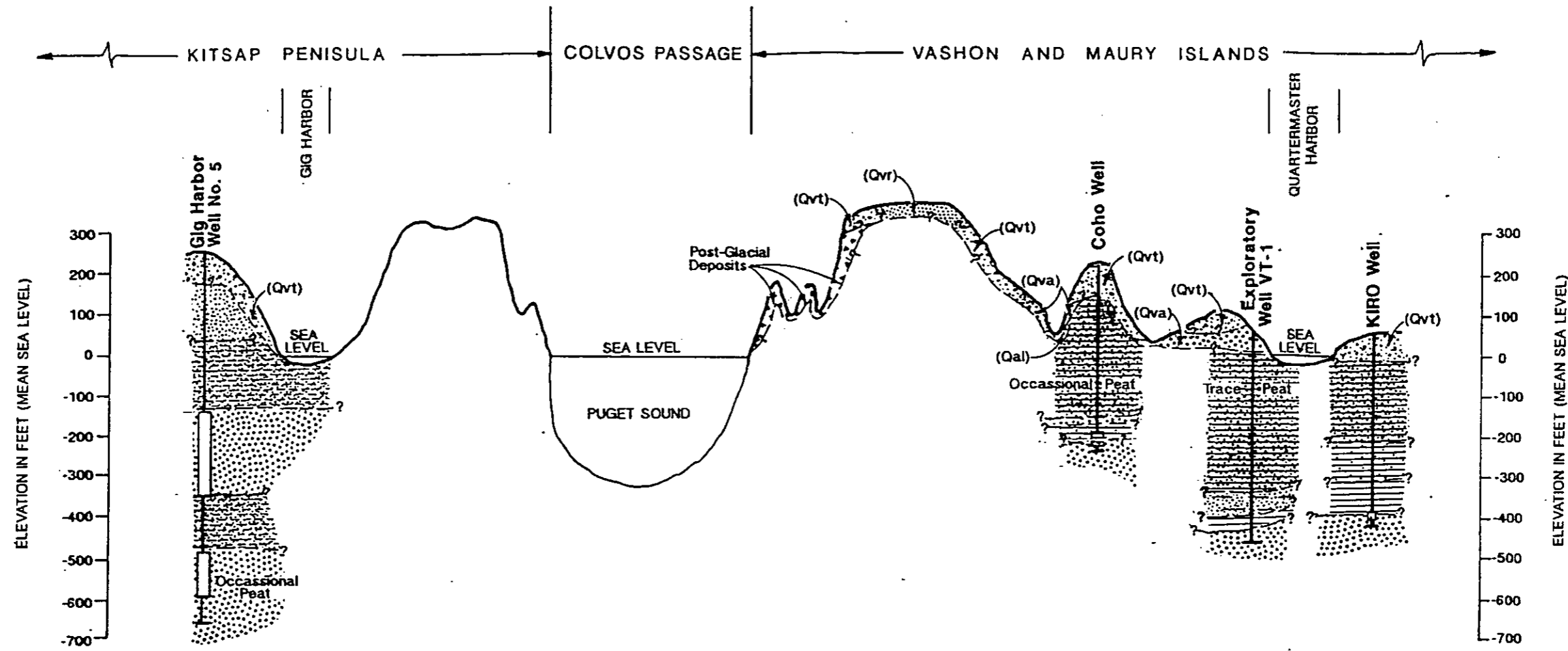
DRAWING:

FILE NO.:

WA028.02

PRCT NO.:

APR 1993



SUBSURFACE UNITS LEGEND

- Clay
- Sandy Clay
- Interbedded Silt, Silty Clay and Clay
- Interbedded Silty Sand and Silt
- Sand
- Interbedded Sand, Silt and Sandy/Silty Gravel

- Well Screen Interval
- Approximate Lithologic Contact

NOTE: Gig Harbor Well No. 5 data obtained from Hart Crowser Consultants, report dated May 1990. Coho Well data obtained from Carr/Associates, report dated June 11, 1991. KIRO Well data obtained from State of Washington water well log, dated October 1941.

SCALE: 1" = 1 MILE HORIZONTAL
VERTICAL EXAGGERATION 17.6X

SURFACE UNITS LEGEND

- Post Glacial Deposits: Landslide, mass wasting, beach deposits
- Alluvium (Qal): Cobble, gravel, sand and sandy silt
- Vashon Till (Qvt): Compact diamict with subangular to rounded clasts
- Advance Outwash (Qva): Well-bedded sandy gravel and fine to medium grained sand
- Recessional Outwash (Qvr): Stratified sandy gravel and fine to medium grained sand

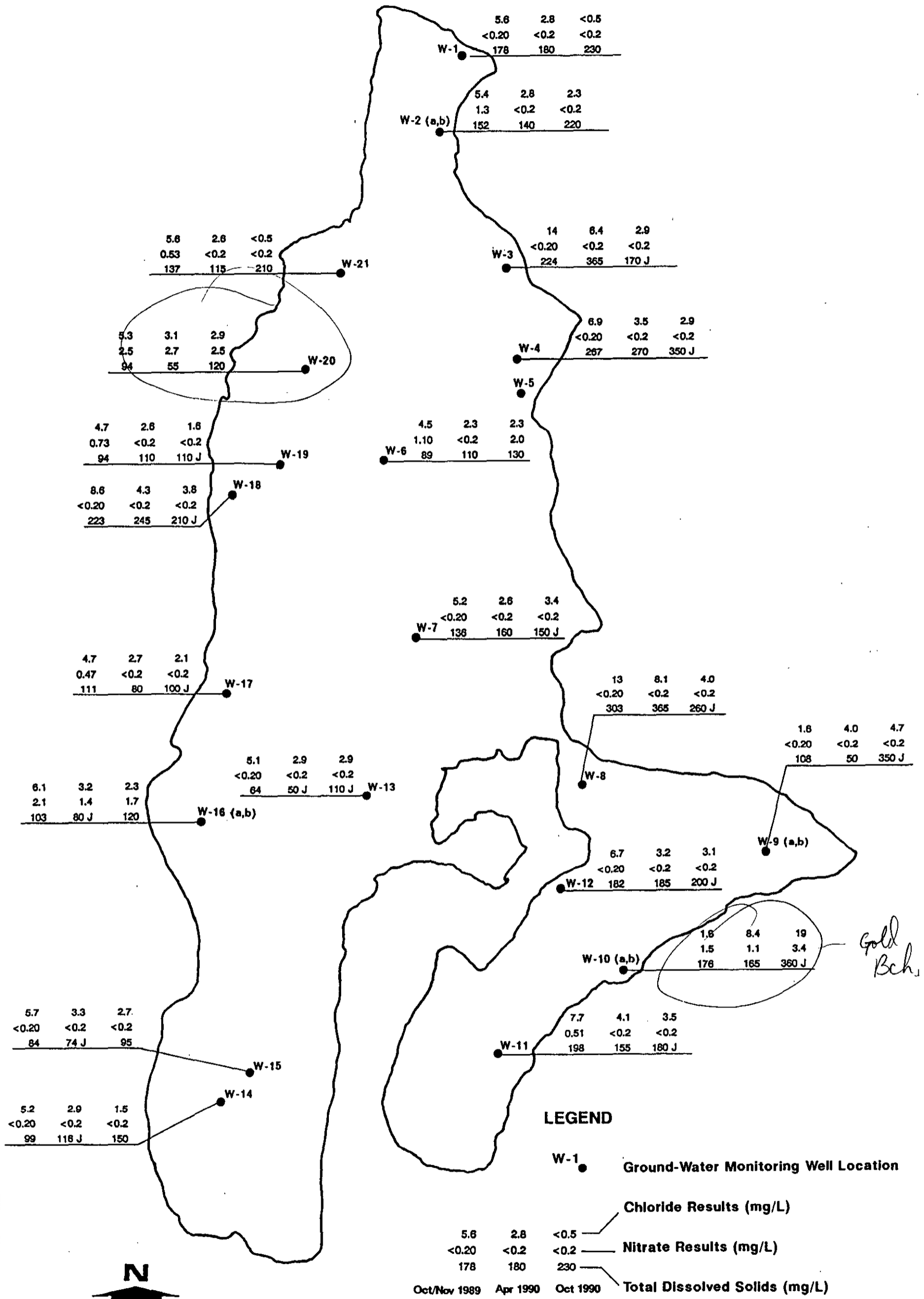
Surface units interpreted from Booth, D.B., 1991. Geologic Map of Vashon and Maury Islands, King County, Washington. U.S. Geologic Survey. Miscellaneous field studies Map MF-2161.
Ground surface elevations from Gig Harbor and Vashon Island, Washington 7.5 Minute. U.S.G.S. Topographic Quadrangle Maps, Photorevised 1981 and 1968, respectively.



**CROSS SECTION A-A' SHOWING
HYDROSTRATIGRAPHY OF DEEP PRODUCTION WELLS**
VASHON GROUND-WATER MANAGEMENT PLAN **DRAFT**

FIGURE **9-2**

163135



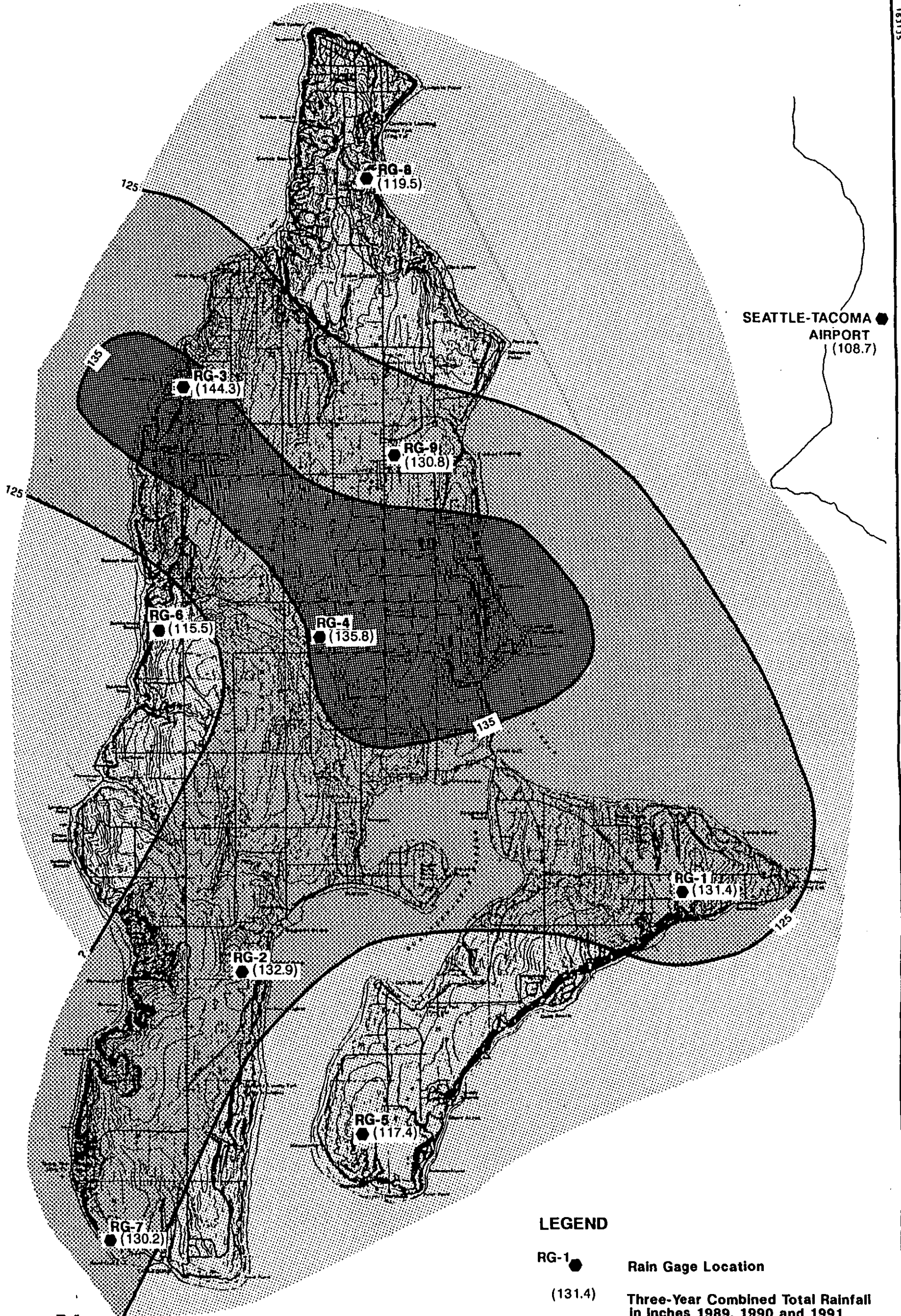
Gold Beach

SOURCE: Geraghty & Miller, 1993.

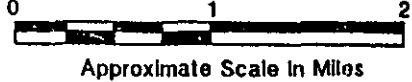


GROUND-WATER QUALITY RESULTS FOR MAY 14 1993
CHLORIDE, NITRATE AND TOTAL DISSOLVED SOLIDS FOR
OCTOBER/NOVEMBER 1989, APRIL 1990, AND OCTOBER 1990
 VASHON GROUND-WATER MANAGEMENT PLAN **DRAFT**

FIGURE **8-27**



SEATTLE-TACOMA AIRPORT (108.7)



NOTE: 1989 rainfall measurements for all locations do not include January and February
Some estimates made for rain gages with incomplete information.

LEGEND

- RG-1 (131.4) Rain Gage Location
- (131.4) Three-Year Combined Total Rainfall in Inches 1989, 1990 and 1991
- High Rainfall Area
- ▨ Medium Rainfall Area
- ▧ Low Rainfall Area

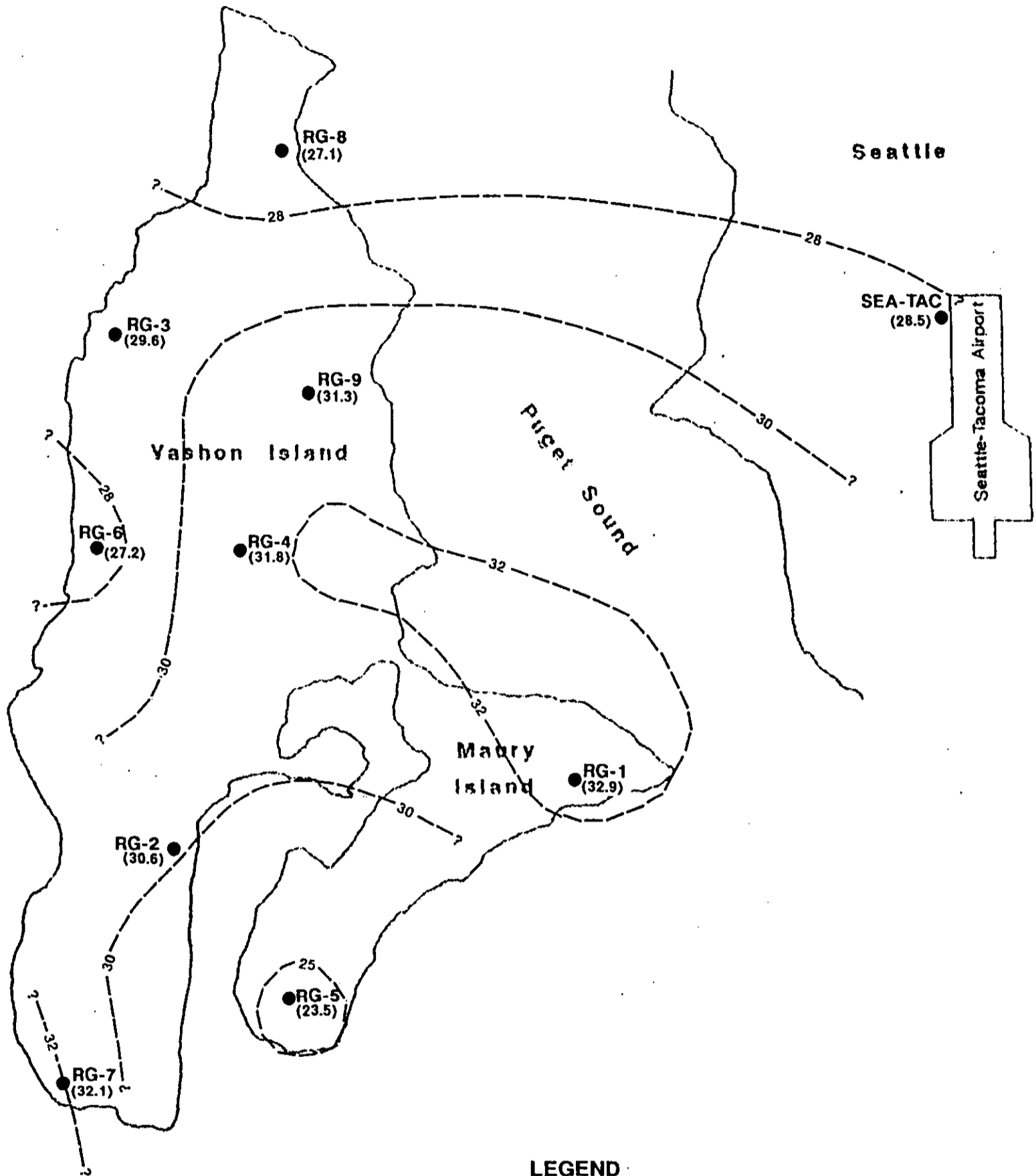


COMBINED TOTAL RAINFALL FOR 1989, 1990 AND 1991

VASHON GROUND-WATER MANAGEMENT PLAN

FIGURE 8-11
MAY 14 1993
DRAFT

163135



LEGEND

- RG-1 Location of Rainfall Gaging Station
- (27.2) Total Rainfall Shown in Parentheses;
*Rainfall Data Included Are March-December 1989
- Lines of Equal Total Rainfall



SOURCE: Geraghty & Miller 1993.



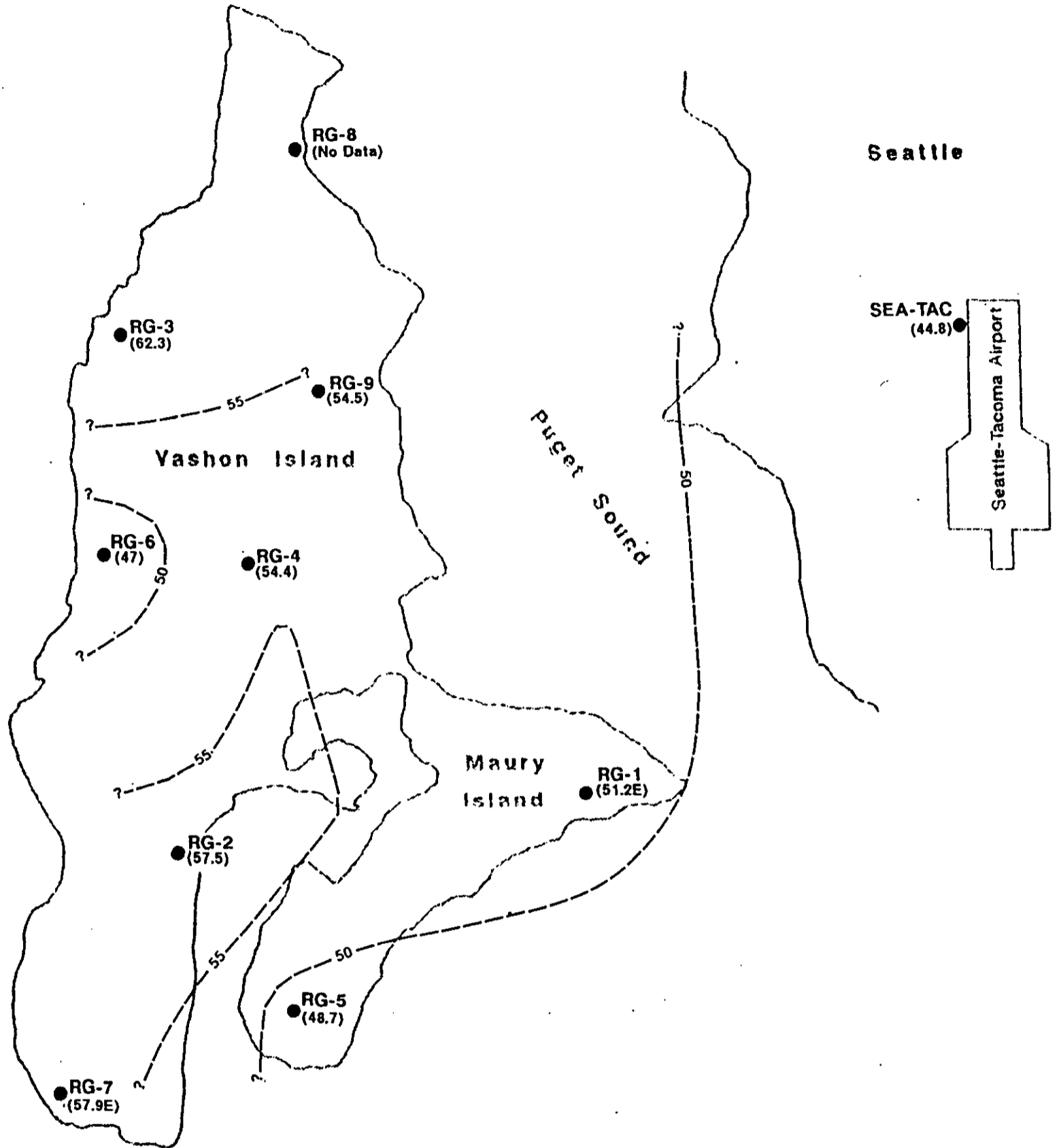
1989 ISOHYETAL (TOTAL RAINFALL) MAP*

VASHON GROUND-WATER MANAGEMENT PLAN

MAY 14 1993

FIGURE

DRAFT8-8



LEGEND

- RG-1 Location of Rainfall Gaging Station
- (62.3) Total Annual Rainfall Shown in Parentheses; Qualified with E Where Estimated Data Are Included
- Lines of Equal Total Rainfall



0 1/2 1 1 1/2 2
Approximate Scale in Miles

SOURCE: Geraghty & Miller, 1993.



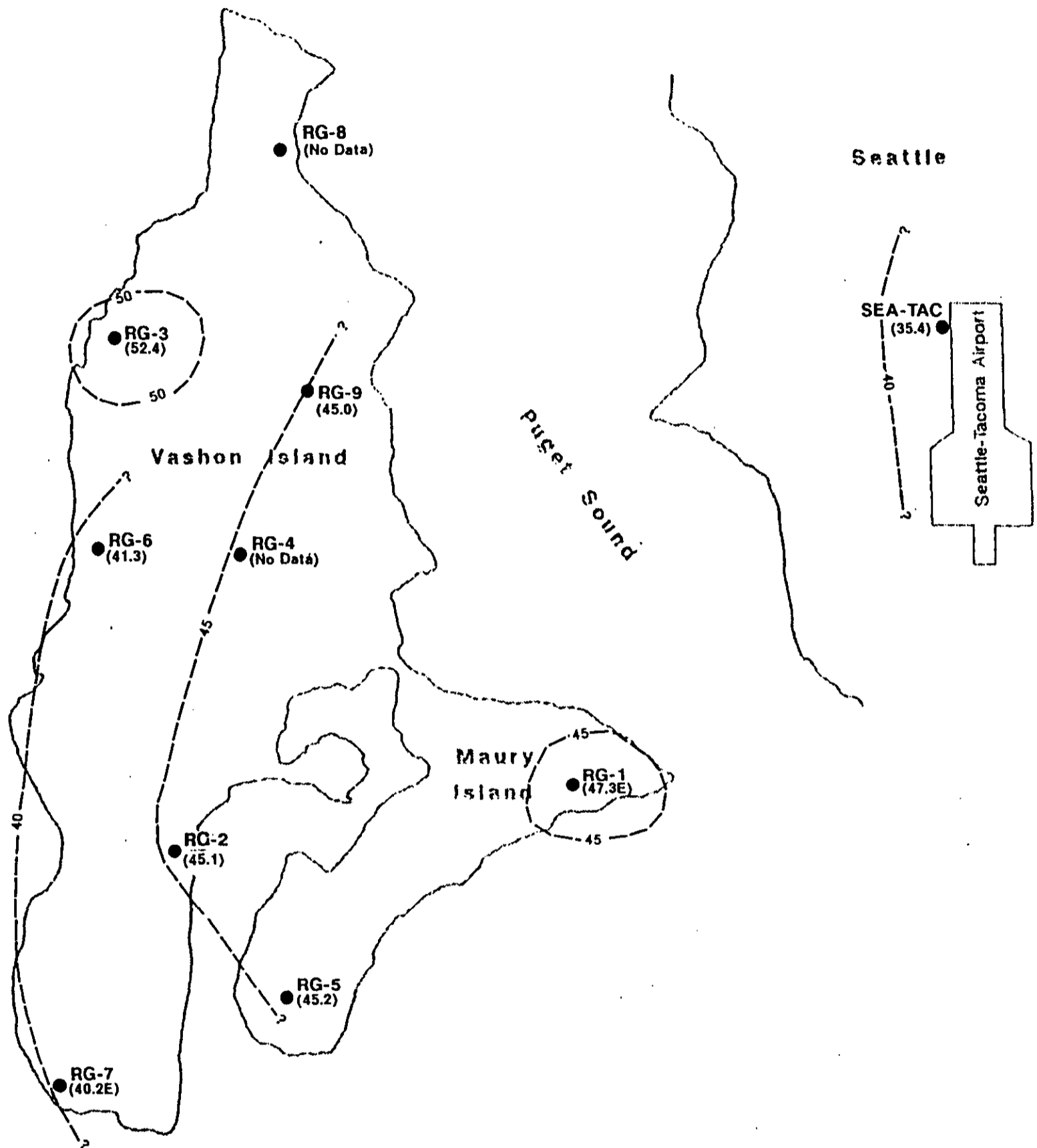
1990 ISOHYETAL (TOTAL RAINFALL) MAP

VASHON GROUND-WATER MANAGEMENT PLAN

MAY 14 1993

FIGURE

DRAFT 8-9



LEGEND

- RG-1 Location of Rainfall Gaging Station
- (41.3) Total Annual Rainfall Shown in Parentheses;
Qualified with E Where Estimated Data Are Included
- Lines of Equal Total Rainfall



SOURCE: Geraghty & Miller 1993



1991 ISOHYETAL (TOTAL RAINFALL) MAP

VASHON GROUND-WATER MANAGEMENT PLAN

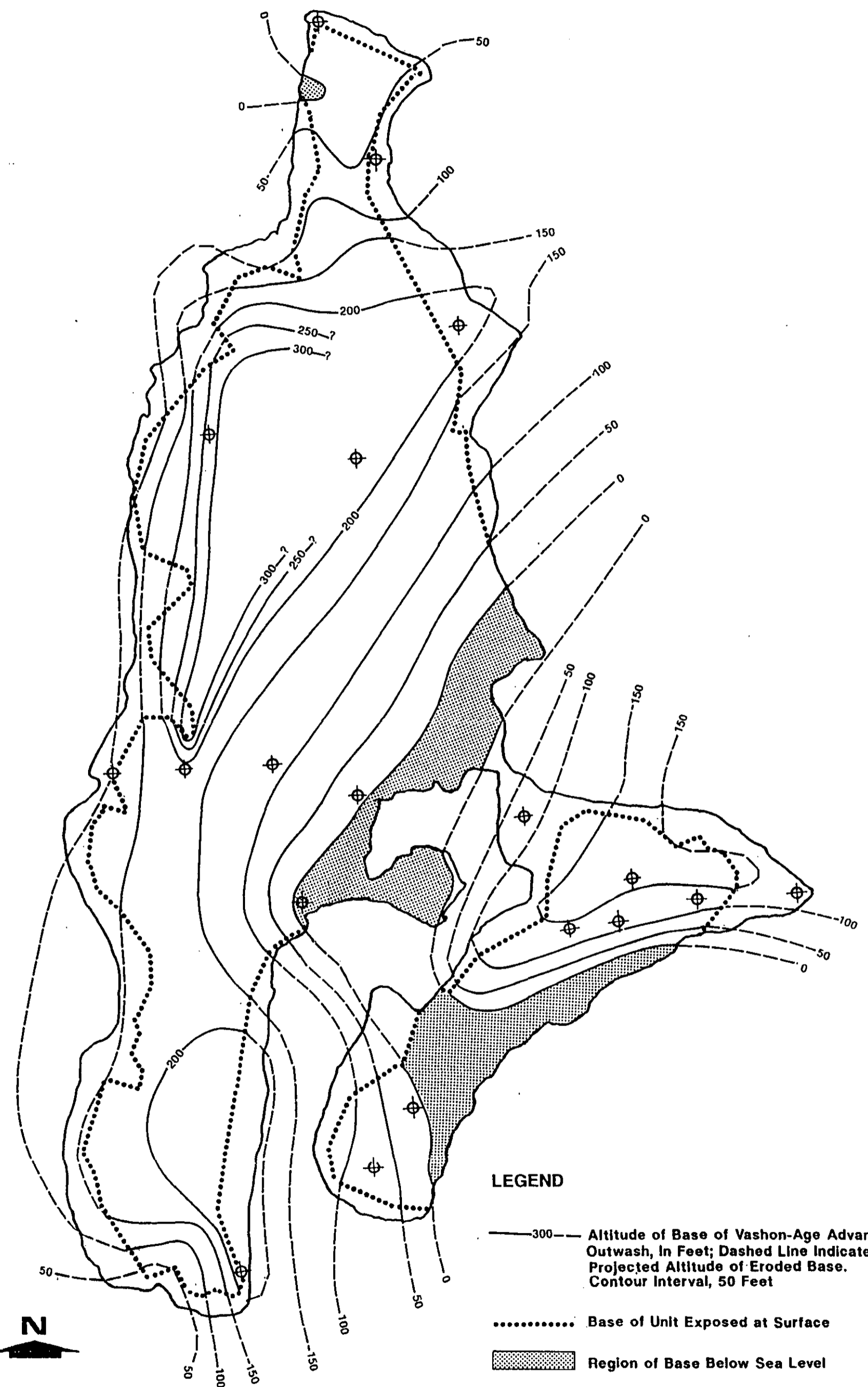
MAY 14 1993

DRAFT

FIGURE

8-10

163125



LEGEND

- 300 — Altitude of Base of Vashon-Age Advance Outwash, in Feet; Dashed Line Indicates Projected Altitude of Eroded Base. Contour Interval, 50 Feet
- Base of Unit Exposed at Surface
- Region of Base Below Sea Level
- ⊕ Well Log Location



Modified from: Booth, D.B., 1991, Geologic Map of Vashon and Maury Islands, King County, Washington. U.S. Geologic Survey Miscellaneous field studies Map MF-2161.

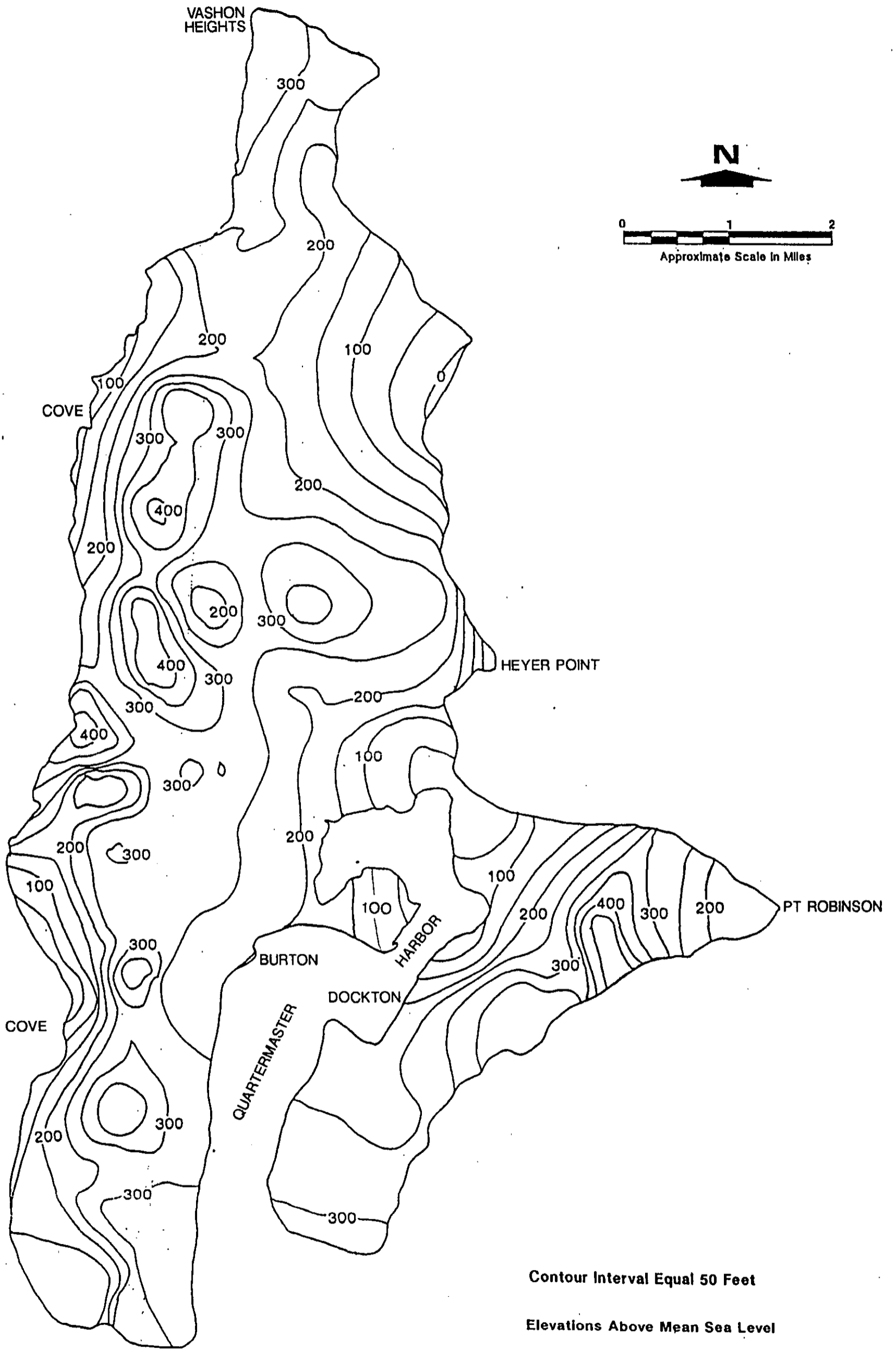


STRUCTURE CONTOUR MAP SHOWING ALTITUDE OF BASE OF VASHON-AGE ADVANCE OUTWASH, IN FEET

VASHON GROUND-WATER MANAGEMENT PLAN
MAY 14 1993

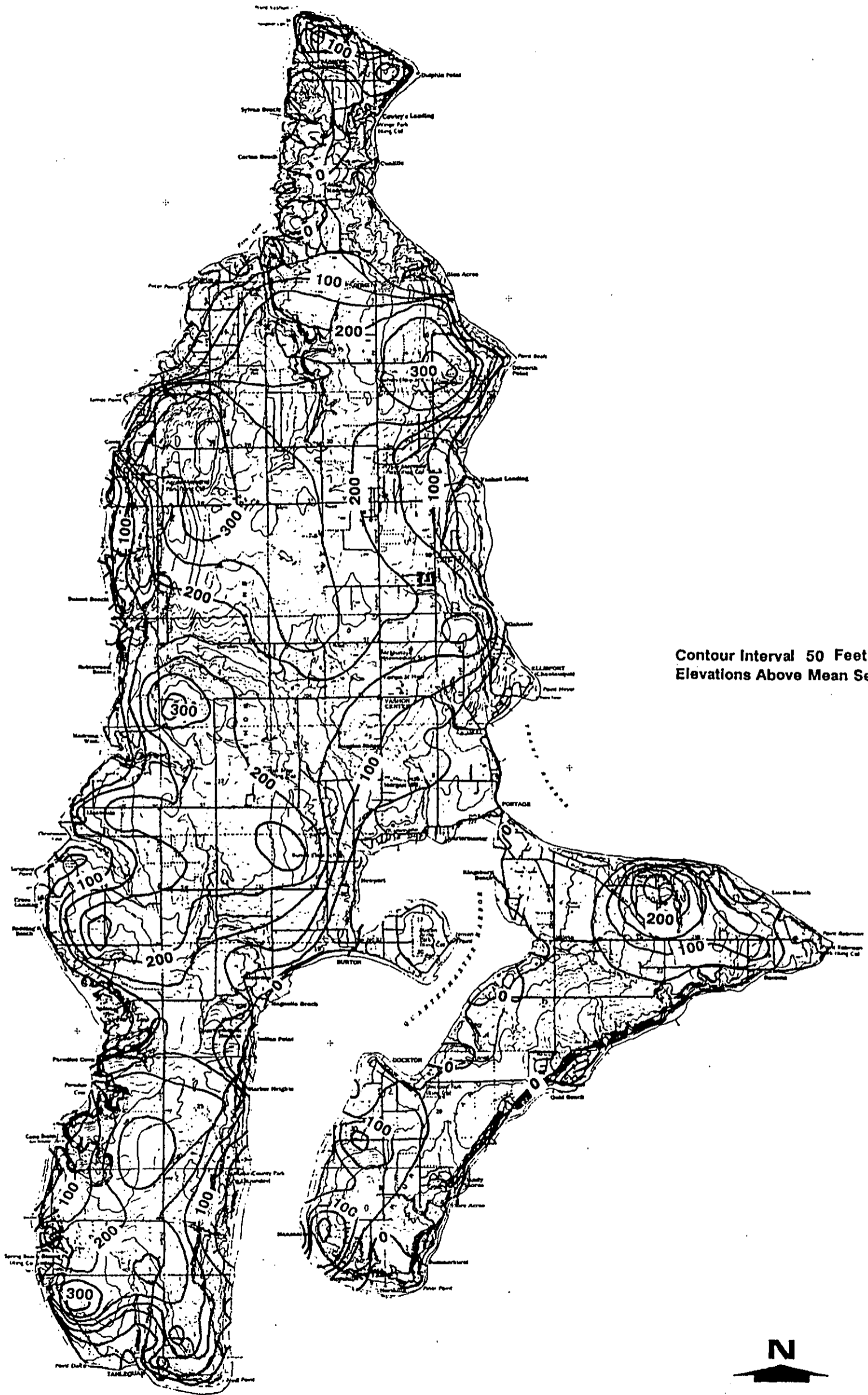
DRAFT 8-2

FIGURE



SOURCE: Modified from Carr 1983.

163135



Contour Interval 50 Feet
Elevations Above Mean Sea Level



SOURCE: Carr 1983

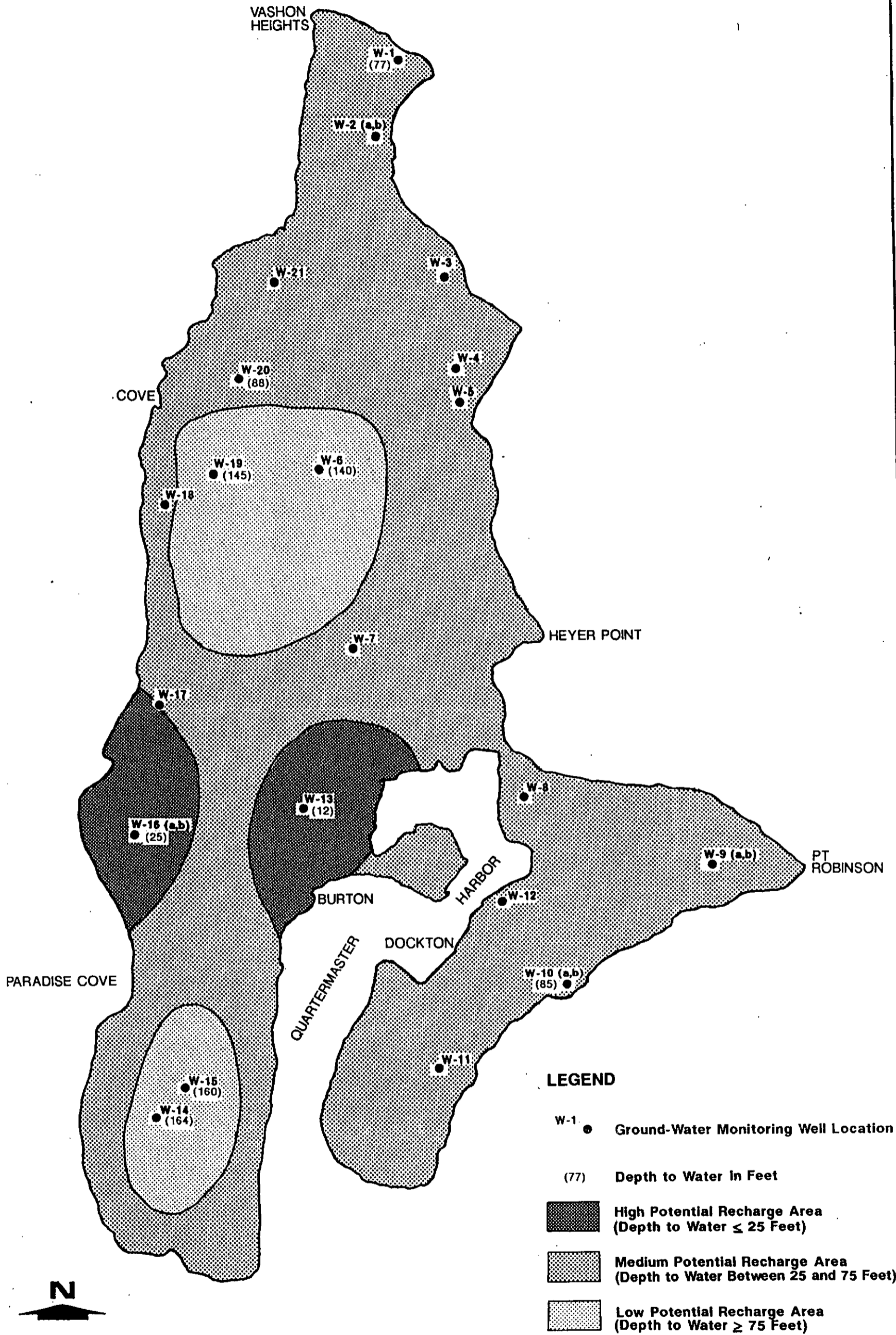


**GENERALIZED WATER TABLE ELEVATIONS
FOR PRINCIPAL AQUIFER, FALL 1982**
VASHON GROUND-WATER MANAGEMENT PLAN

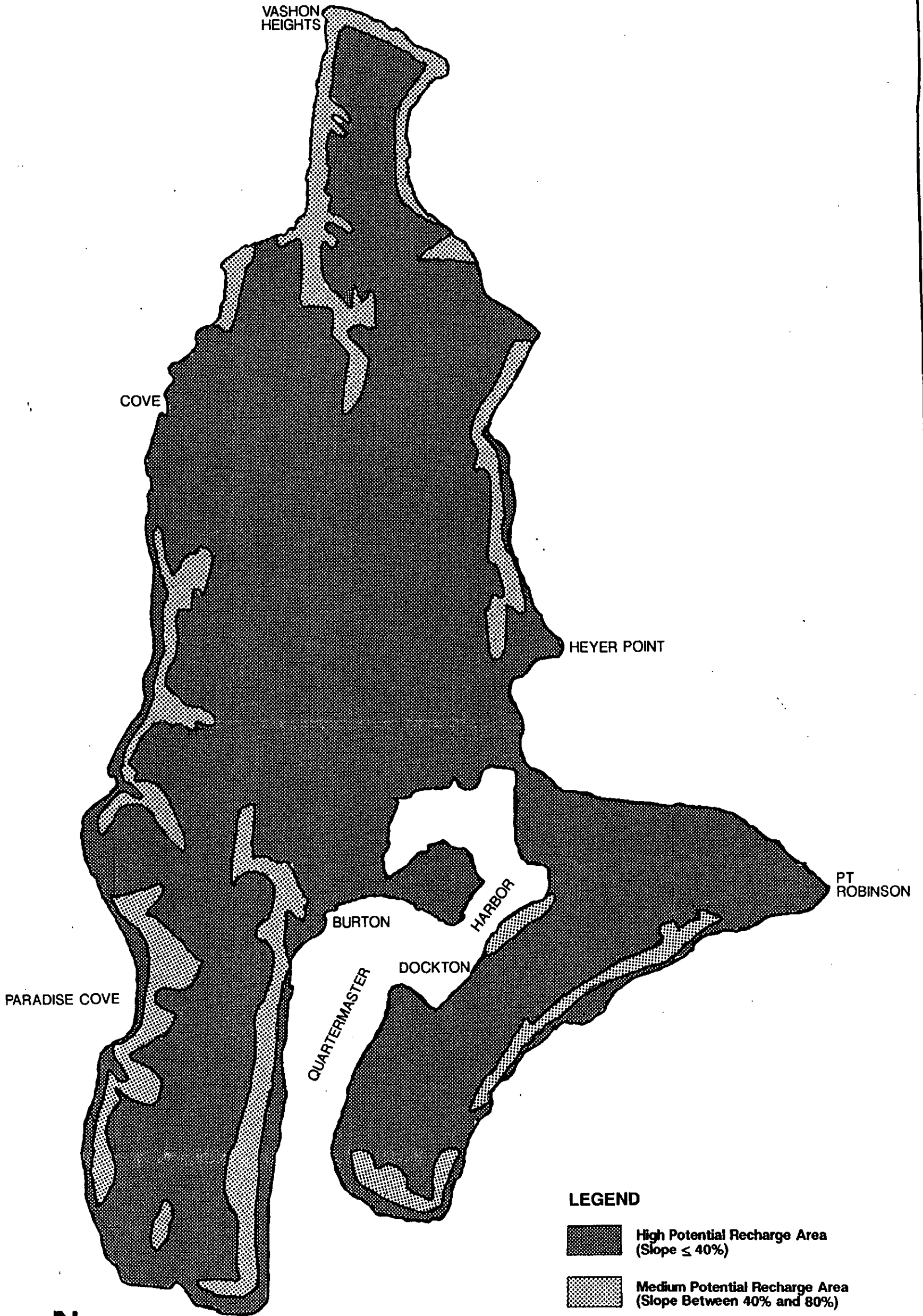
MAY 14 1993
DRAFT

FIGURE
8-21

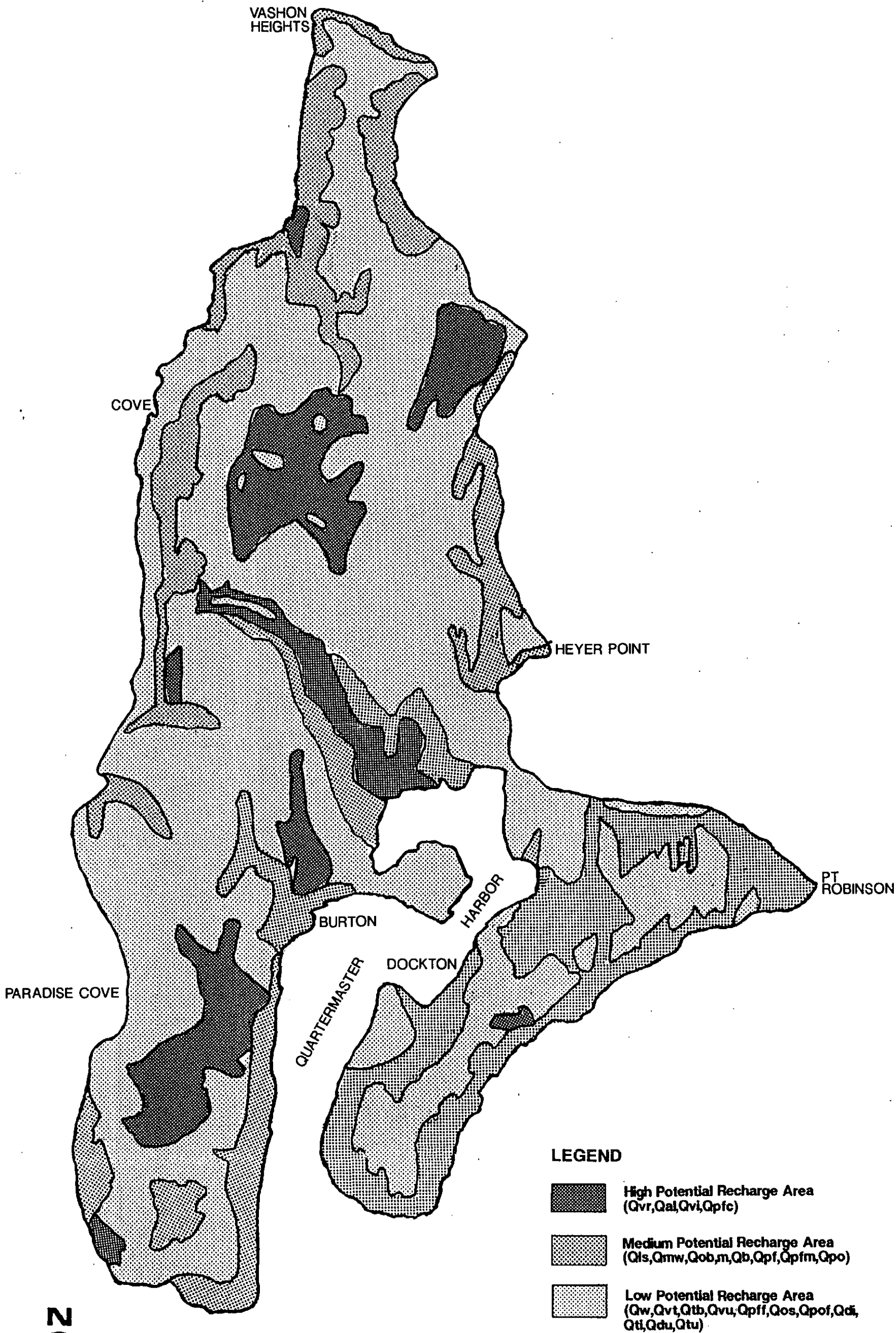
5E113






163135

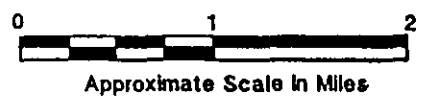


163135



LEGEND

-  High Potential Recharge Area (Qvr, Qal, Qvi, Qpfc)
-  Medium Potential Recharge Area (Qls, Qmw, Qob, m, Qb, Qpf, Qpfm, Qpo)
-  Low Potential Recharge Area (Qw, Qvt, Qtb, Qvu, Qpff, Qos, Qpof, Qdi, Qti, Qdu, Qtu)



SOURCE: Modified from Booth 1991



**SURFICIAL GEOLOGIC FORMATION PERMEABILITY
WITH RESPECT TO RECHARGE**

VASHON GROUND-WATER MANAGEMENT PLAN

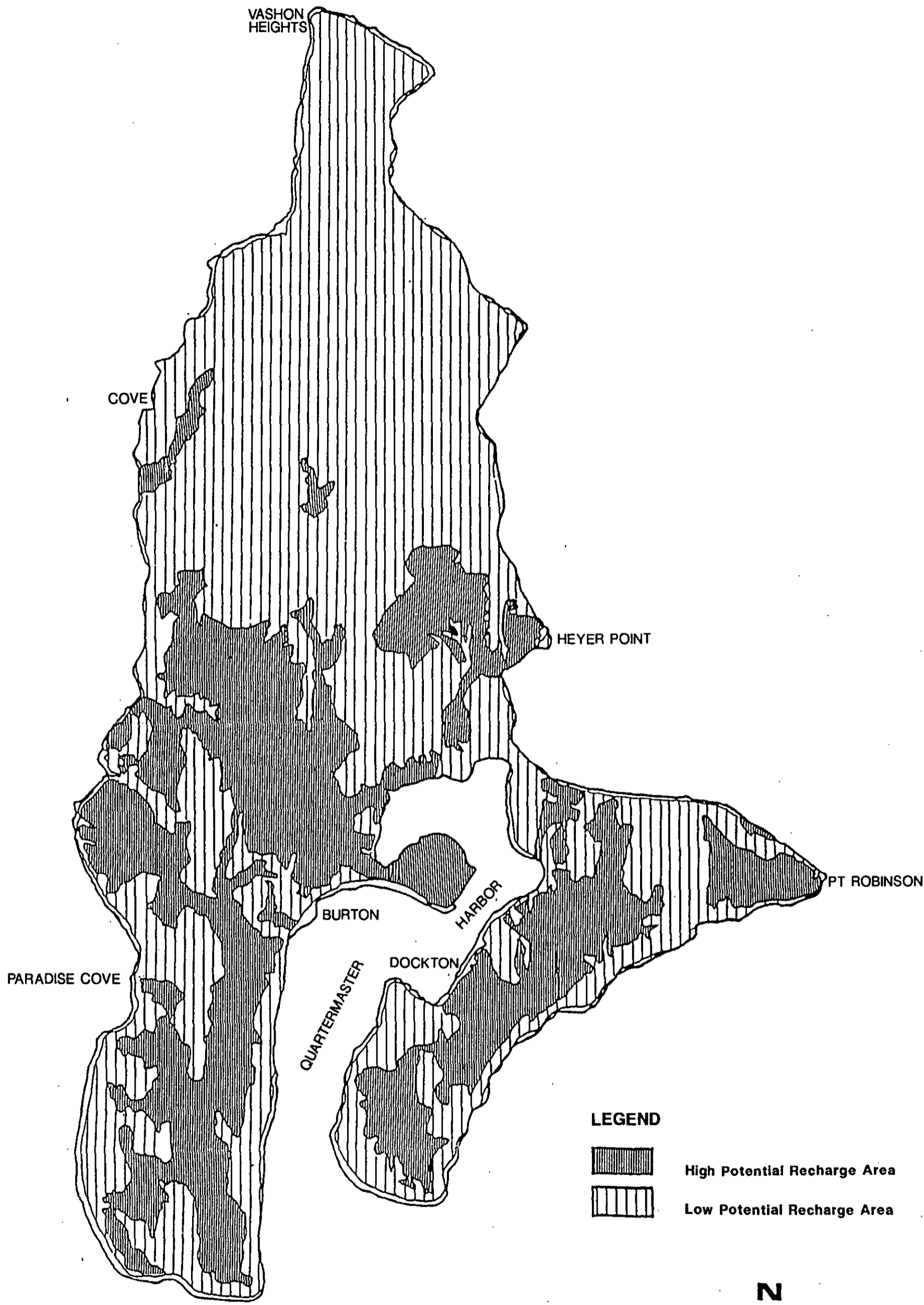
DRAFT

MAY 14 1993

FIGURE

8-24

163135



SOURCE: Carr 1983.

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Environmental Services

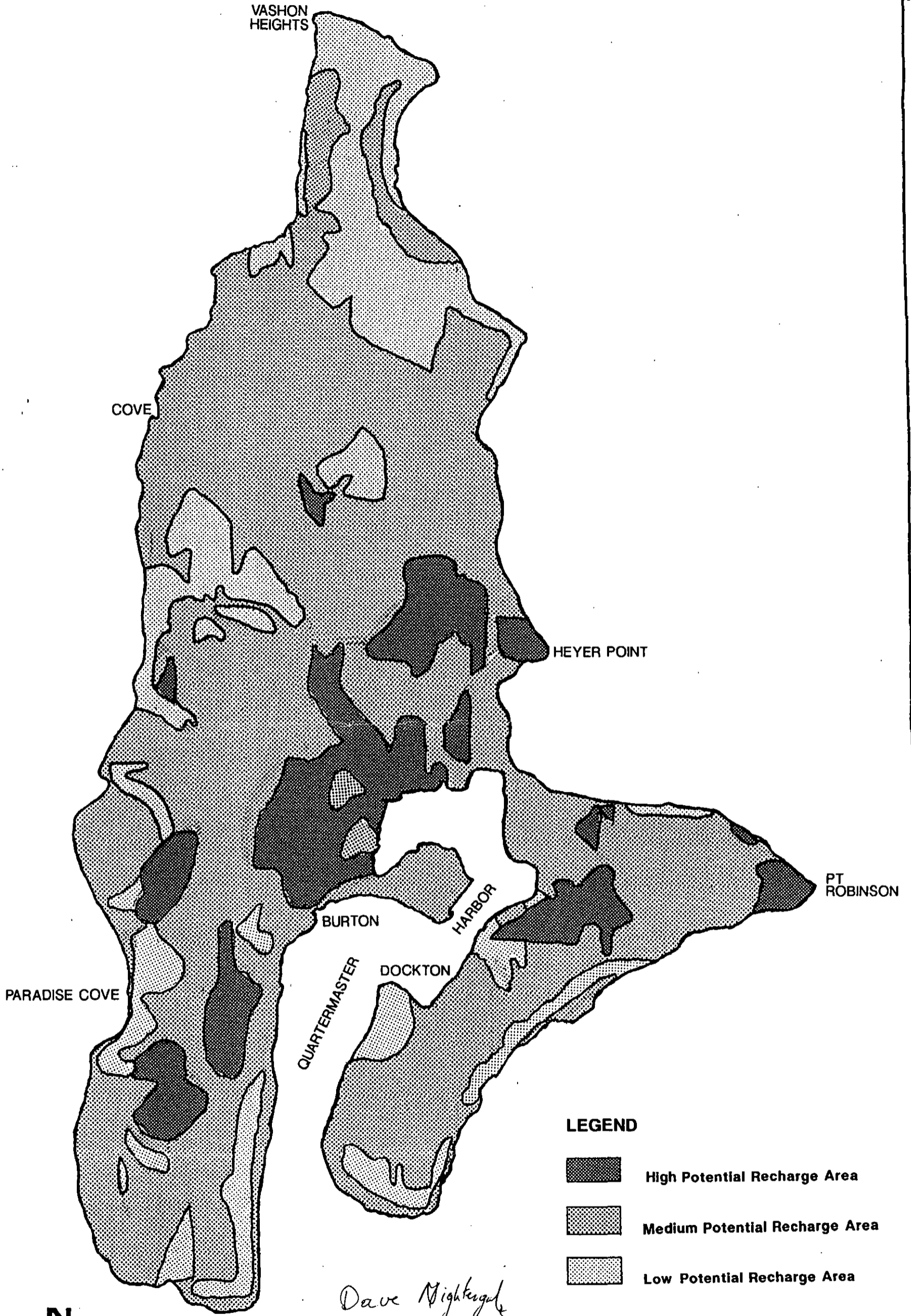
SOIL PERMABILITY WITH RESPECT TO RECHARGE

VASHON GROUND-WATER MANAGEMENT PLAN **DRAFT**

MAY 14 1993

FIGURE 8-25

163135



NOTE: Map constructed by compositing Geologic Permeability, Soil Permeability, Slope, Depth To Water and Precipitation Maps.



AQUIFER-SENSITIVITY MAP (POTENTIAL RECHARGE AREAS)

FIGURE

VASHON GROUND-WATER MANAGEMENT PLAN

MAY 14 1993

DRAFT 8-4

DRAFT

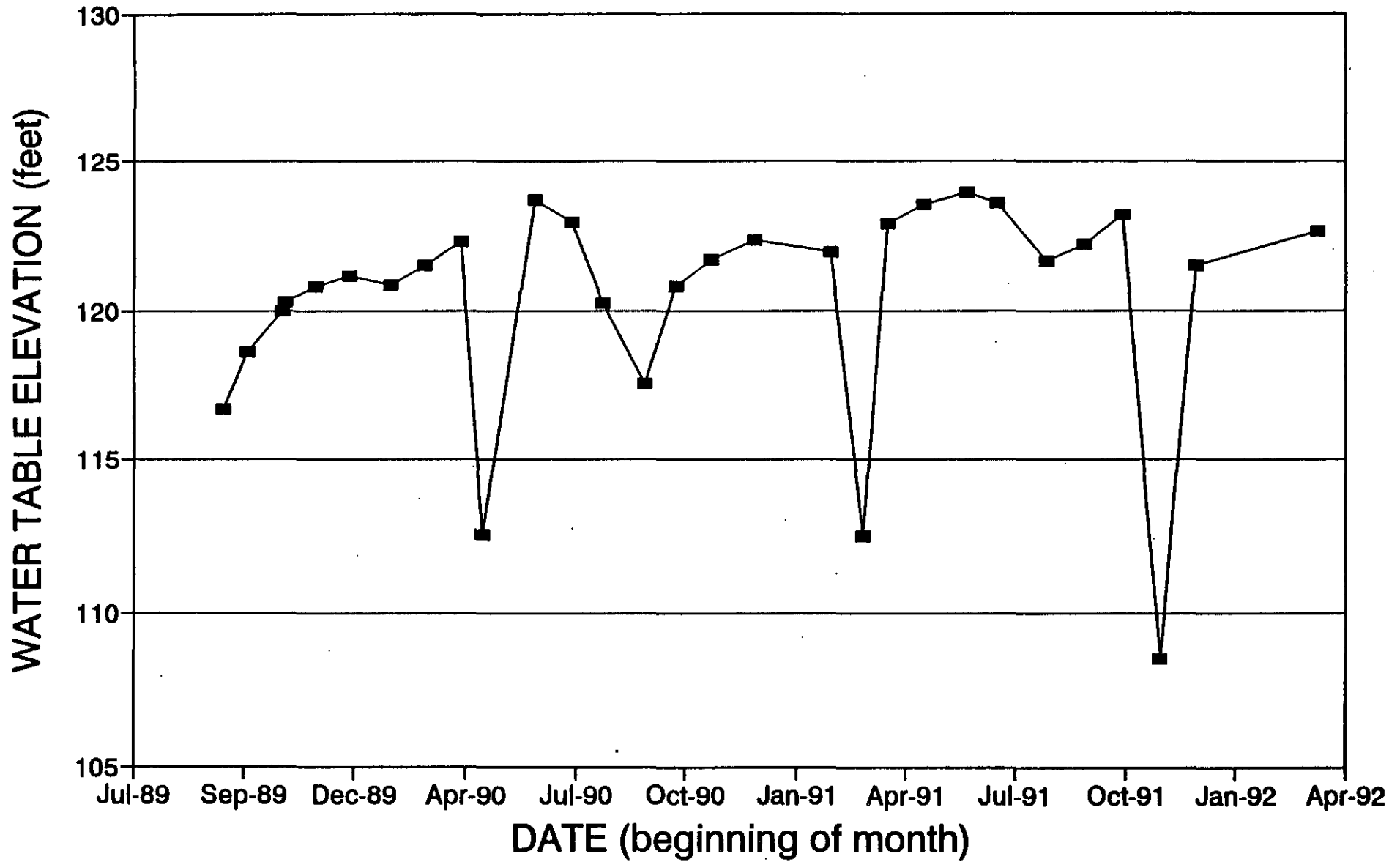
APPENDIX I

**HYDROGRAPHS OF WATER-TABLE ELEVATIONS
AND OF
RAINFALL vs. WATER-TABLE ELEVATION**

(May 14, 1993 rev.)

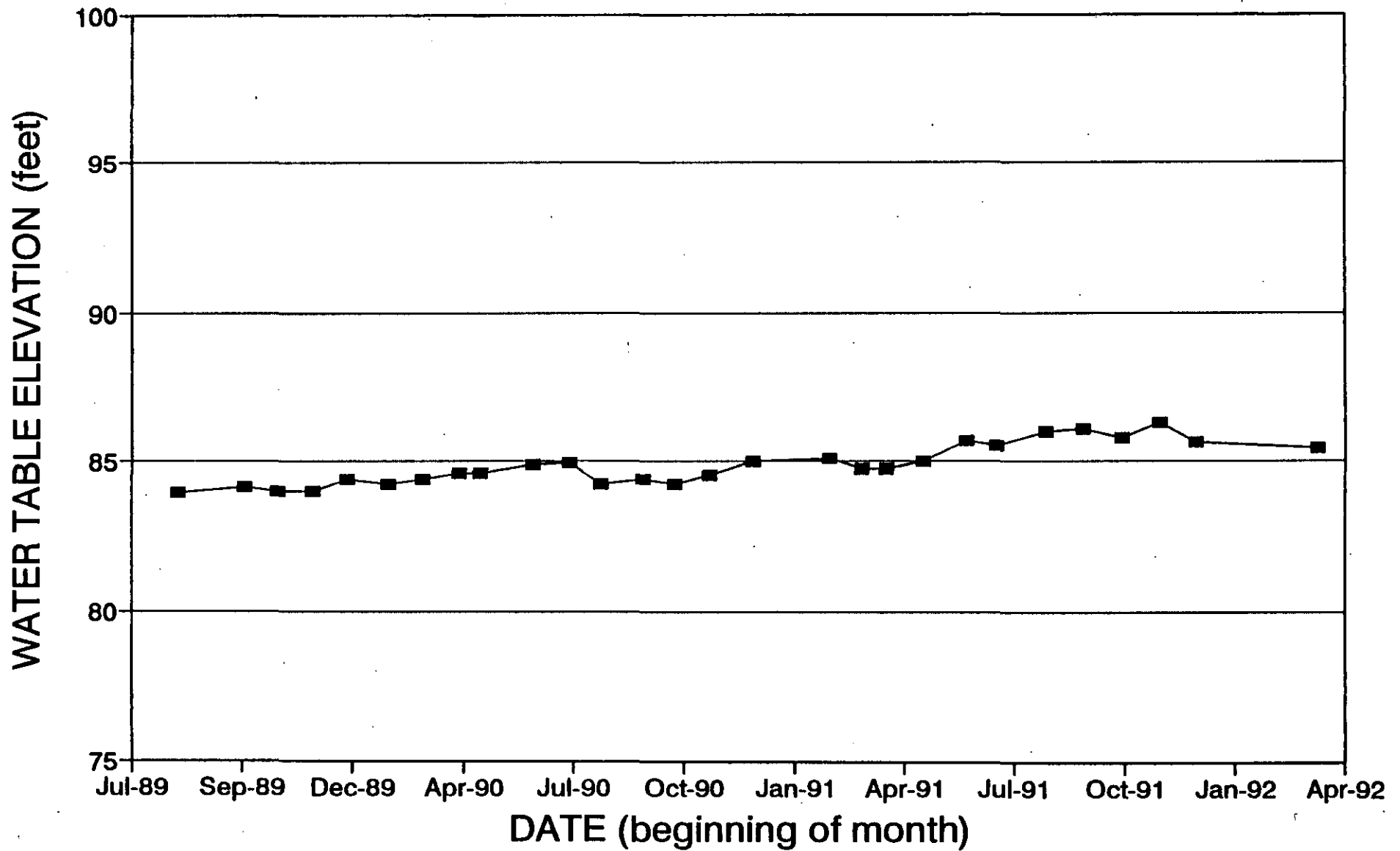
WATER TABLE ELEVATIONS

W-1



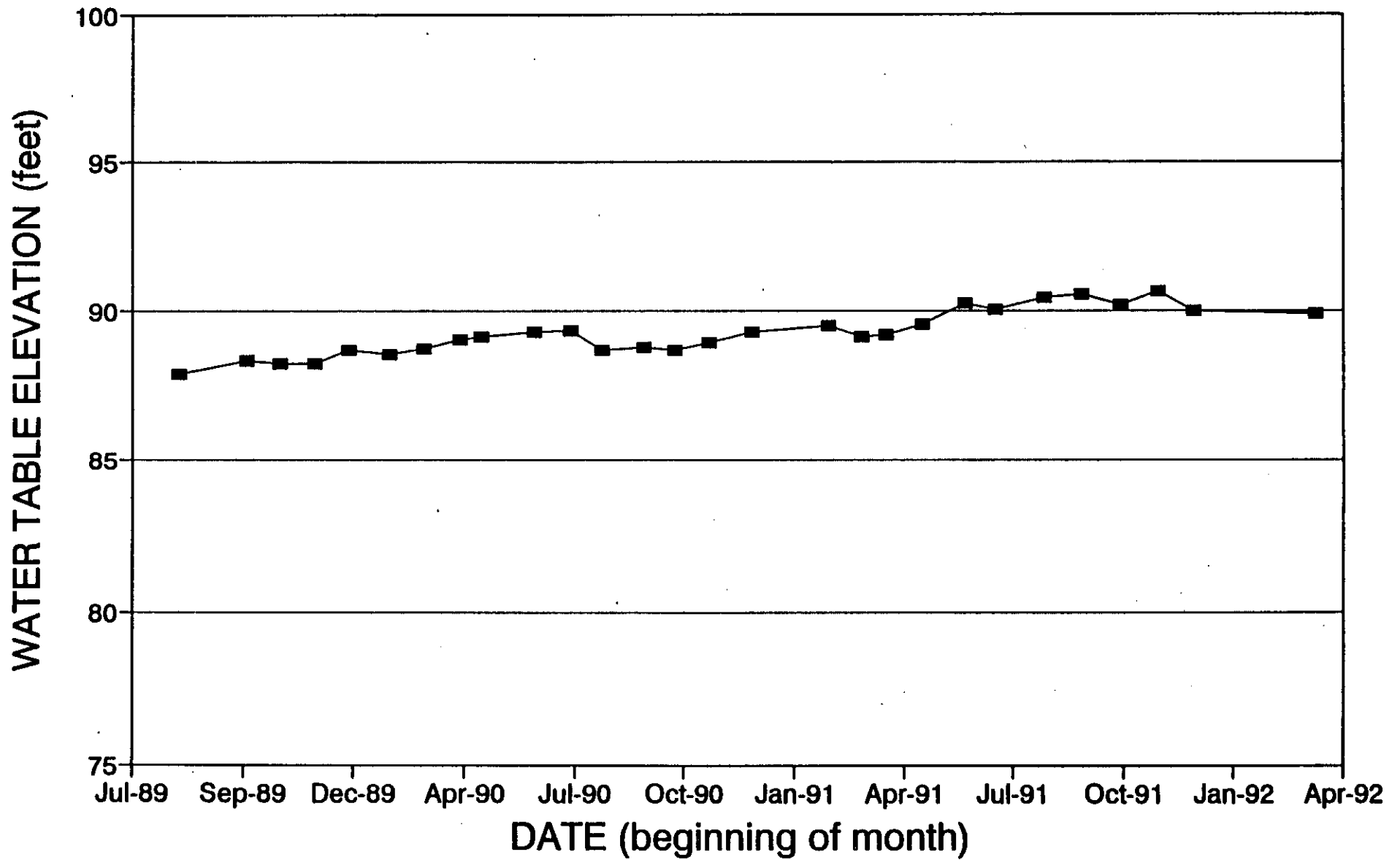
WATER TABLE ELEVATIONS

W-2A



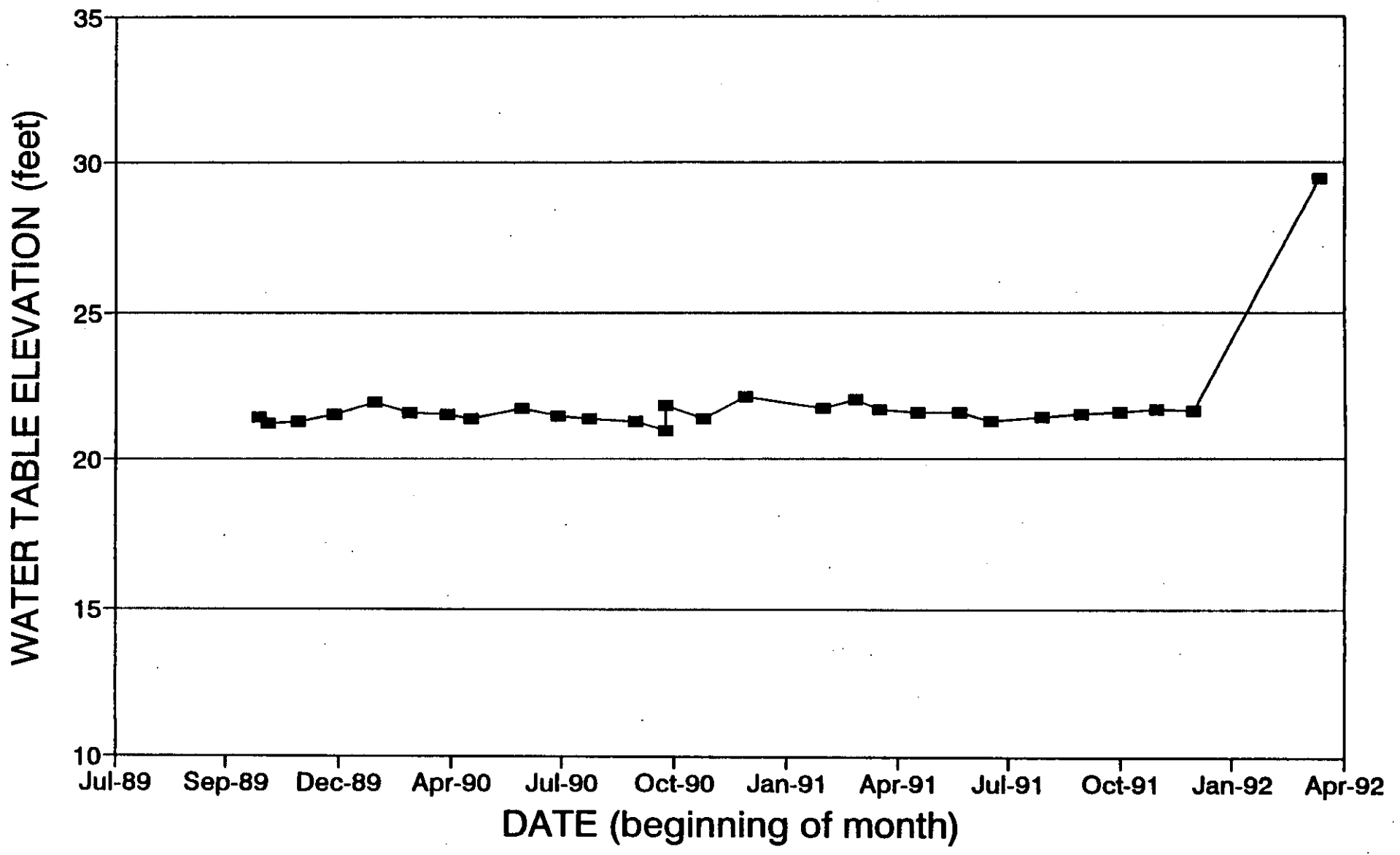
WATER TABLE ELEVATIONS

W-2B



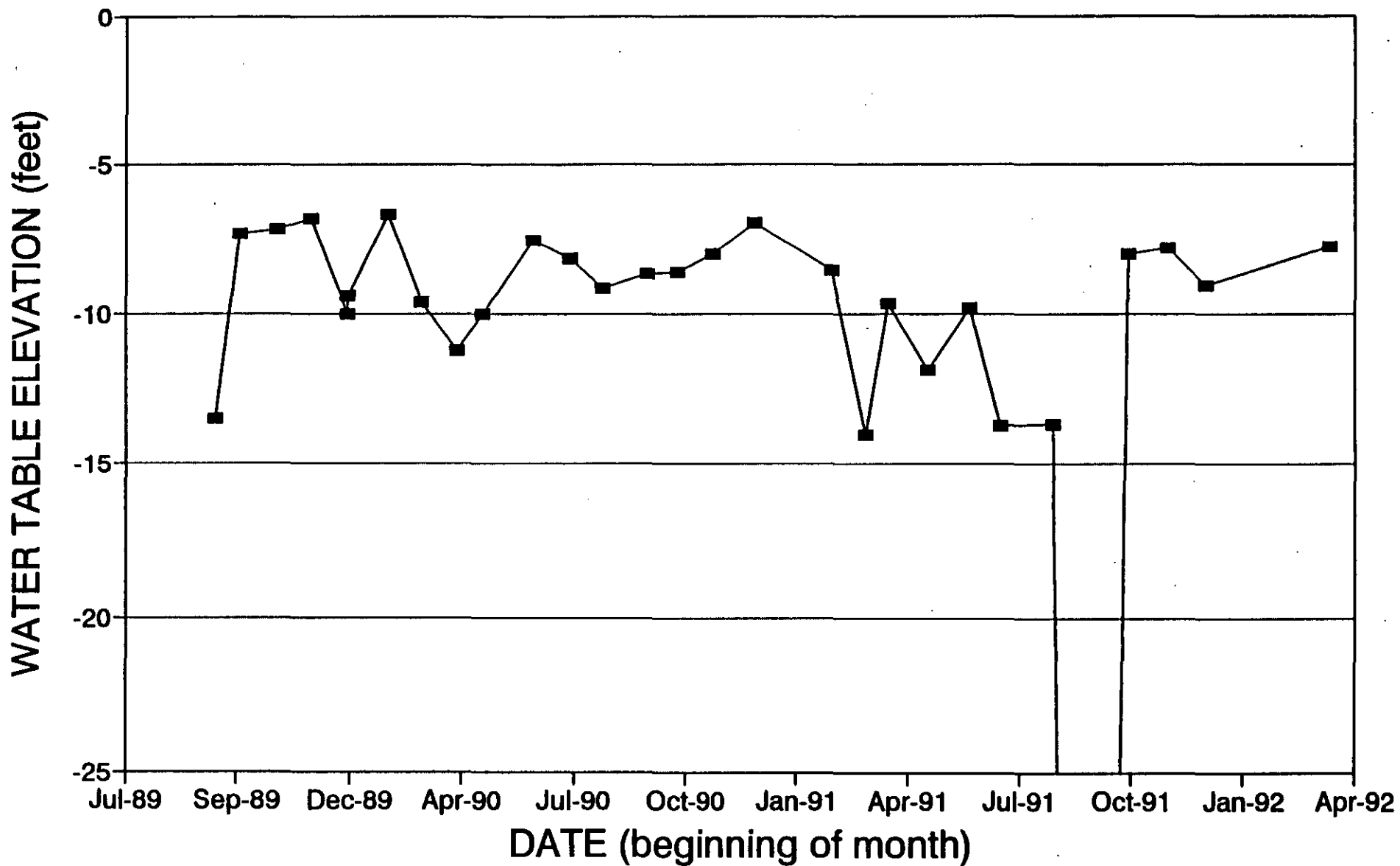
WATER TABLE ELEVATIONS

W-3



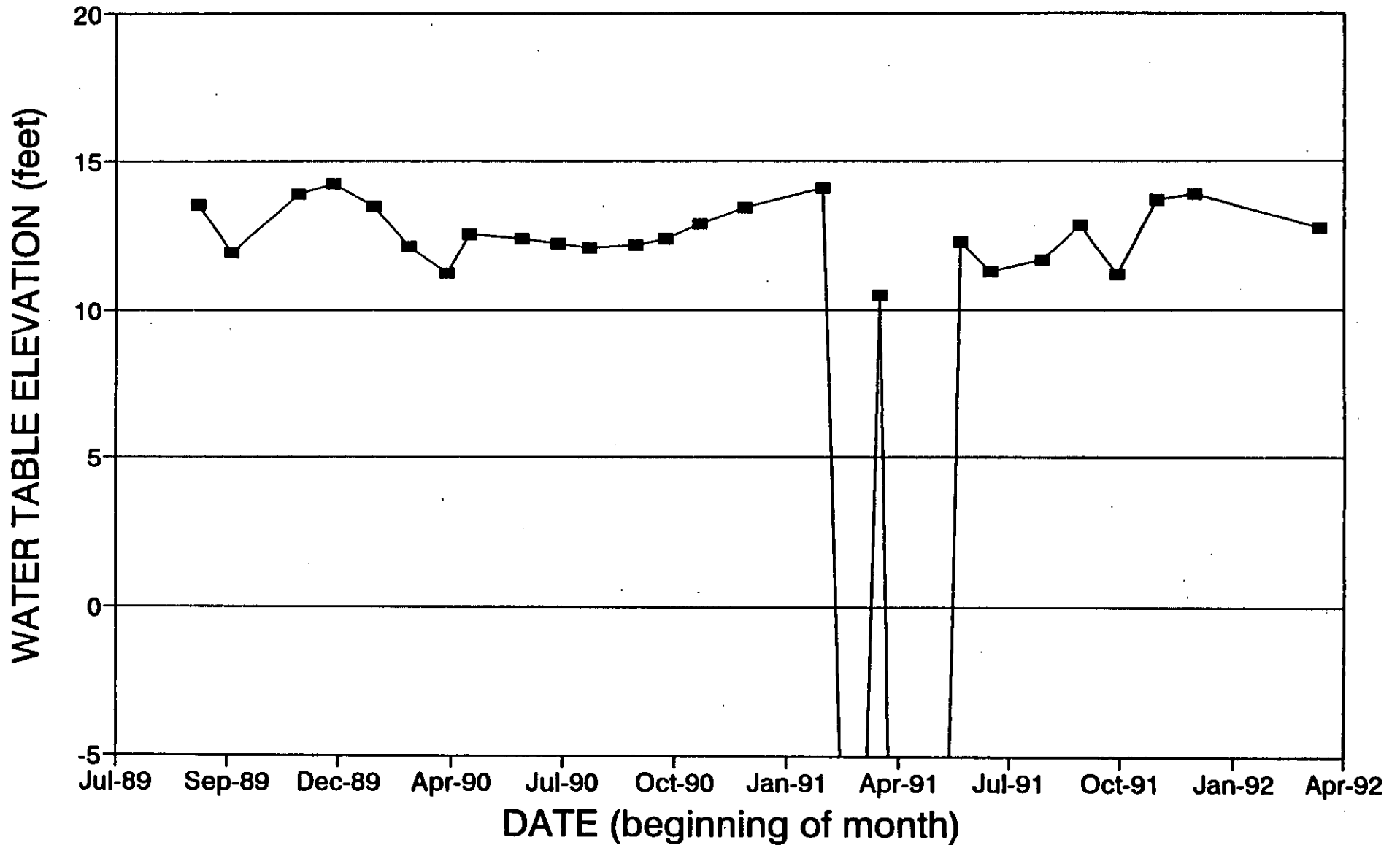
WATER TABLE ELEVATIONS

W-4



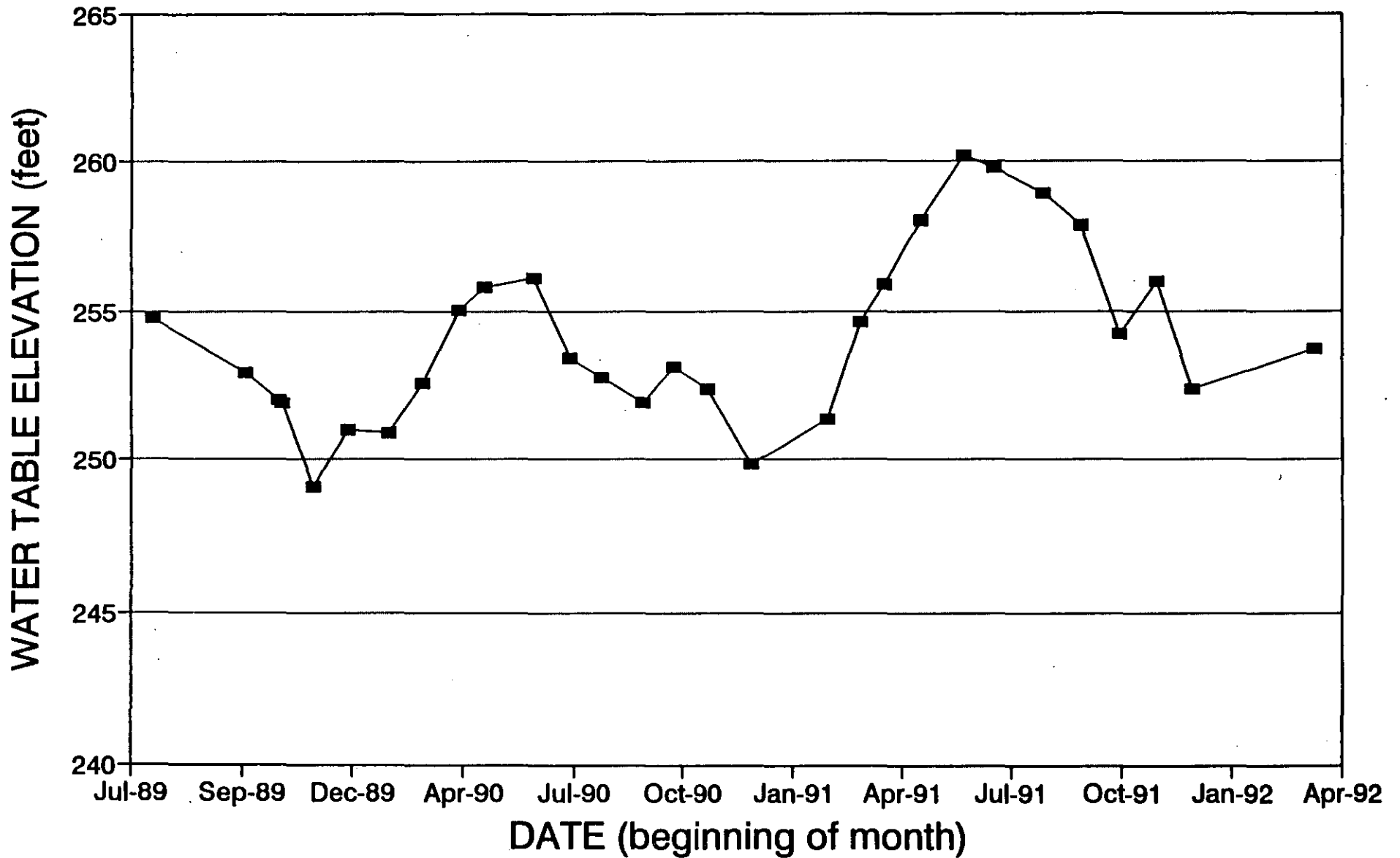
WATER TABLE ELEVATIONS

W-5



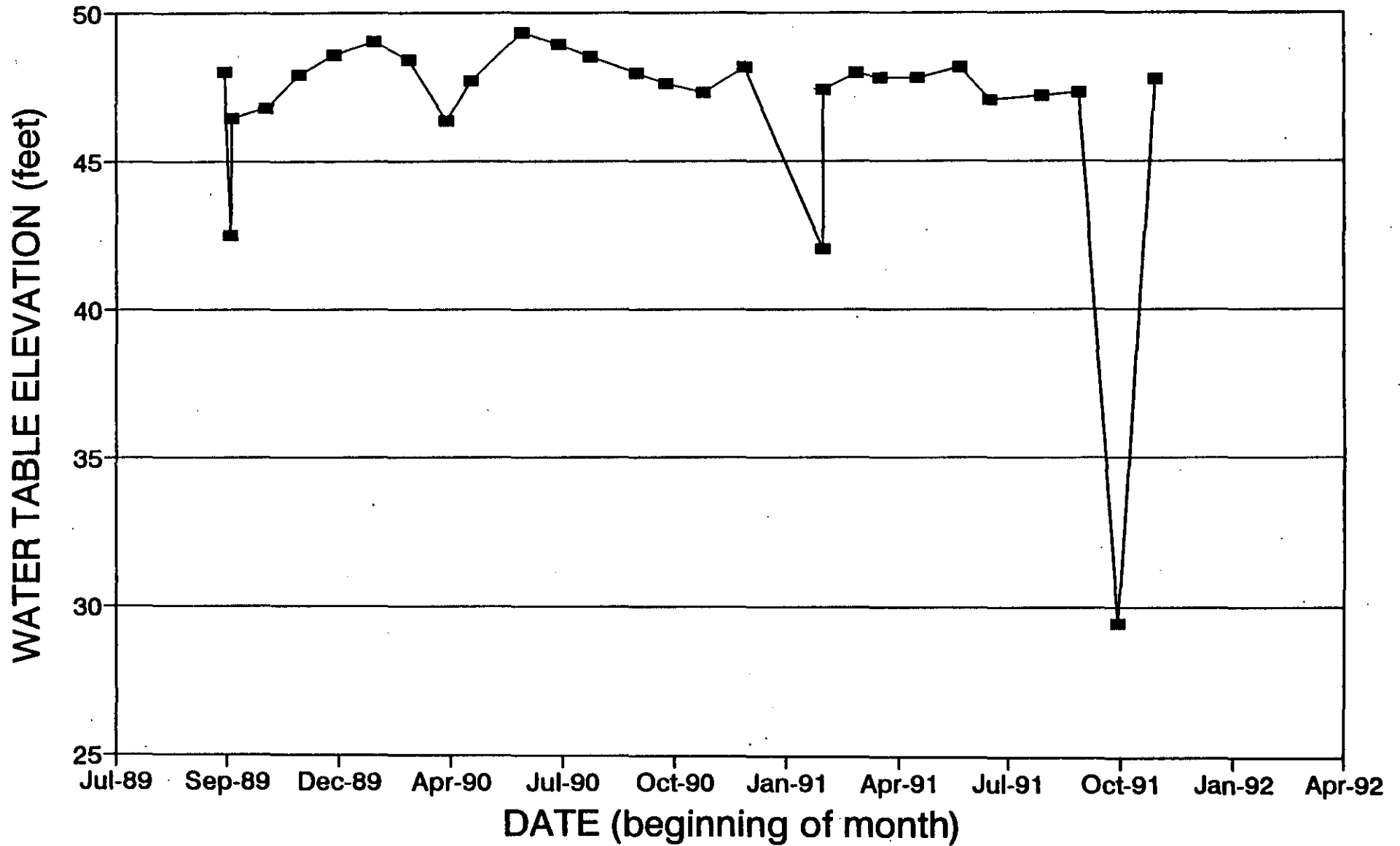
WATER TABLE ELEVATIONS

W-6



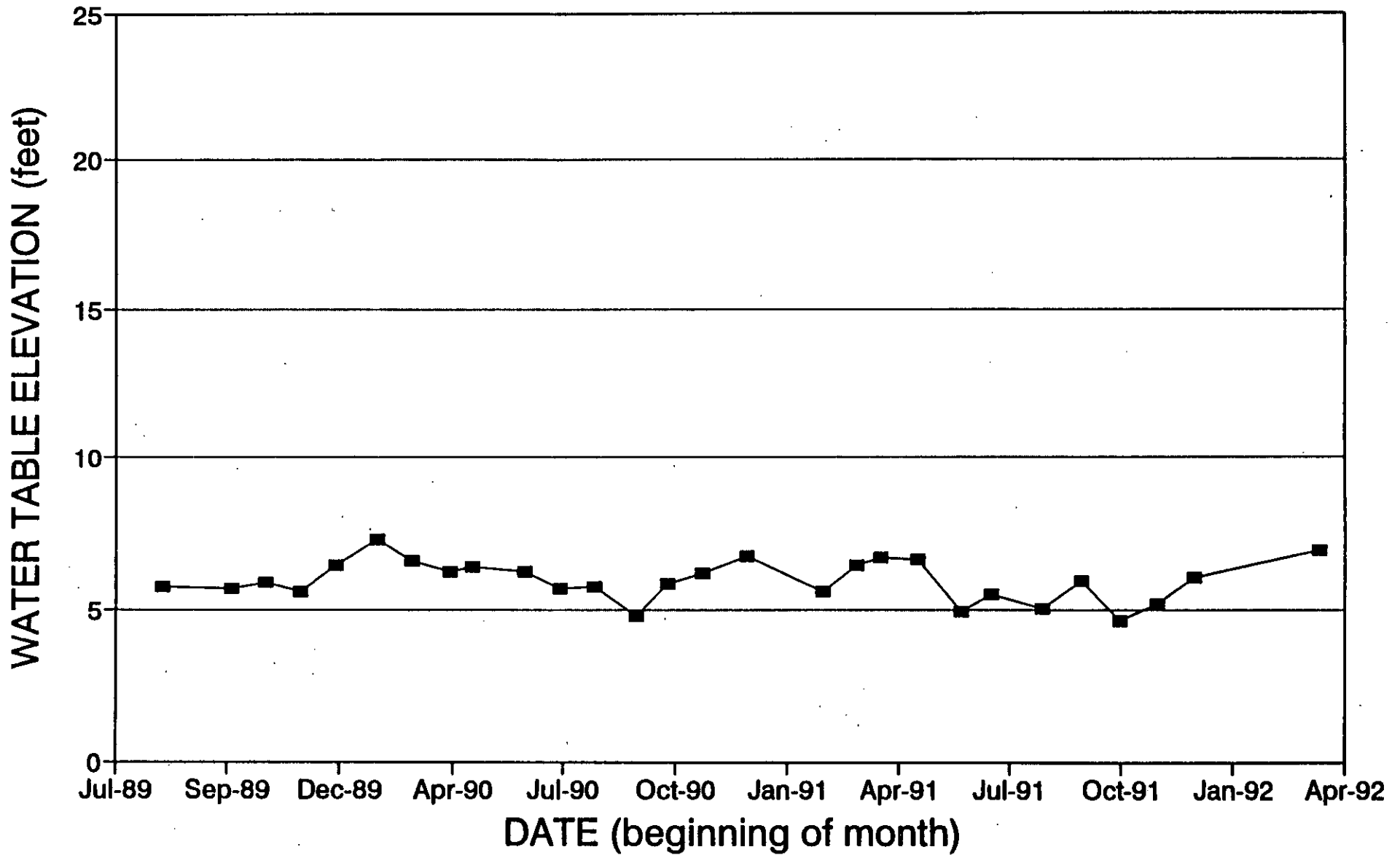
WATER TABLE ELEVATIONS

W-7



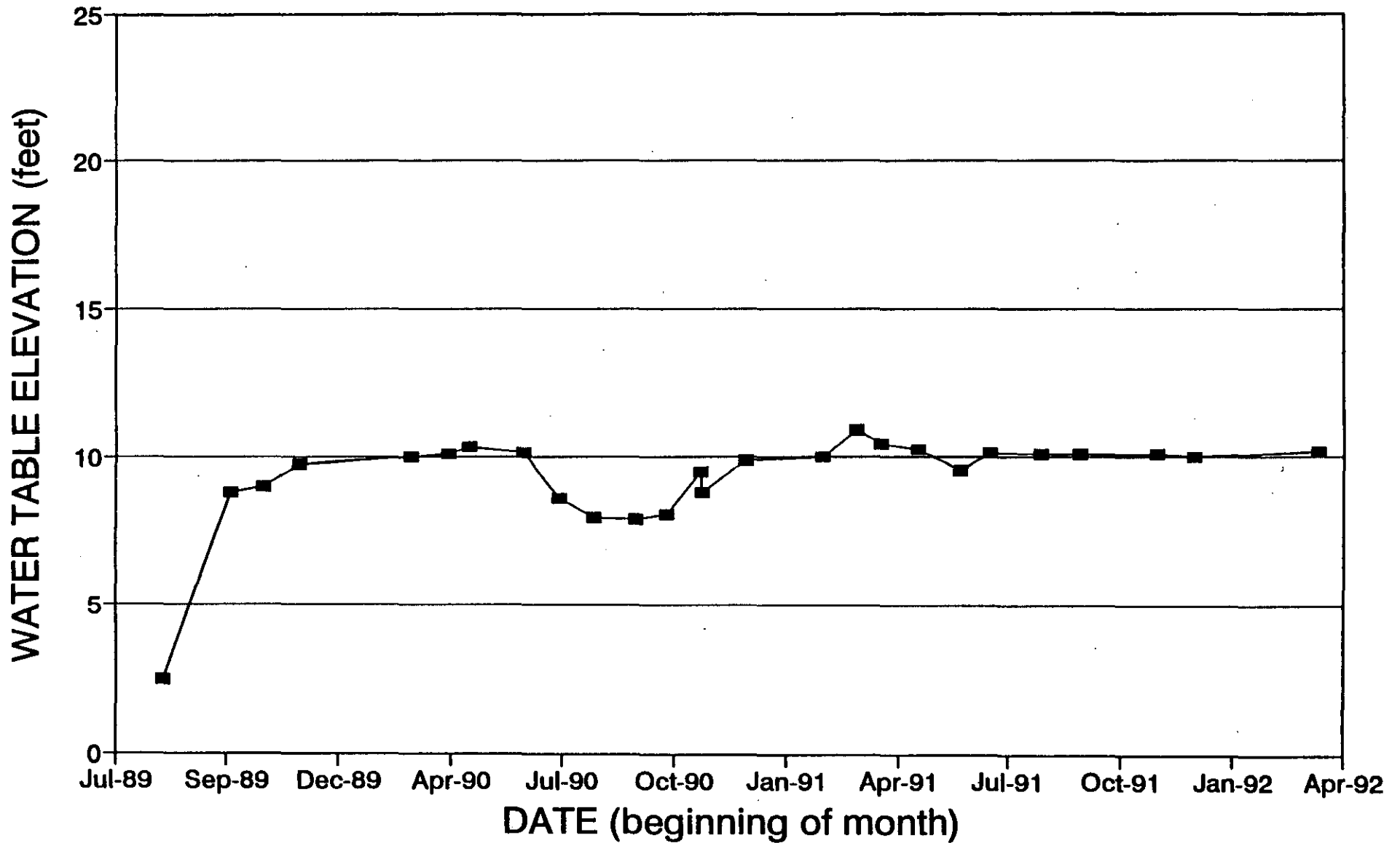
WATER TABLE ELEVATIONS

W-8



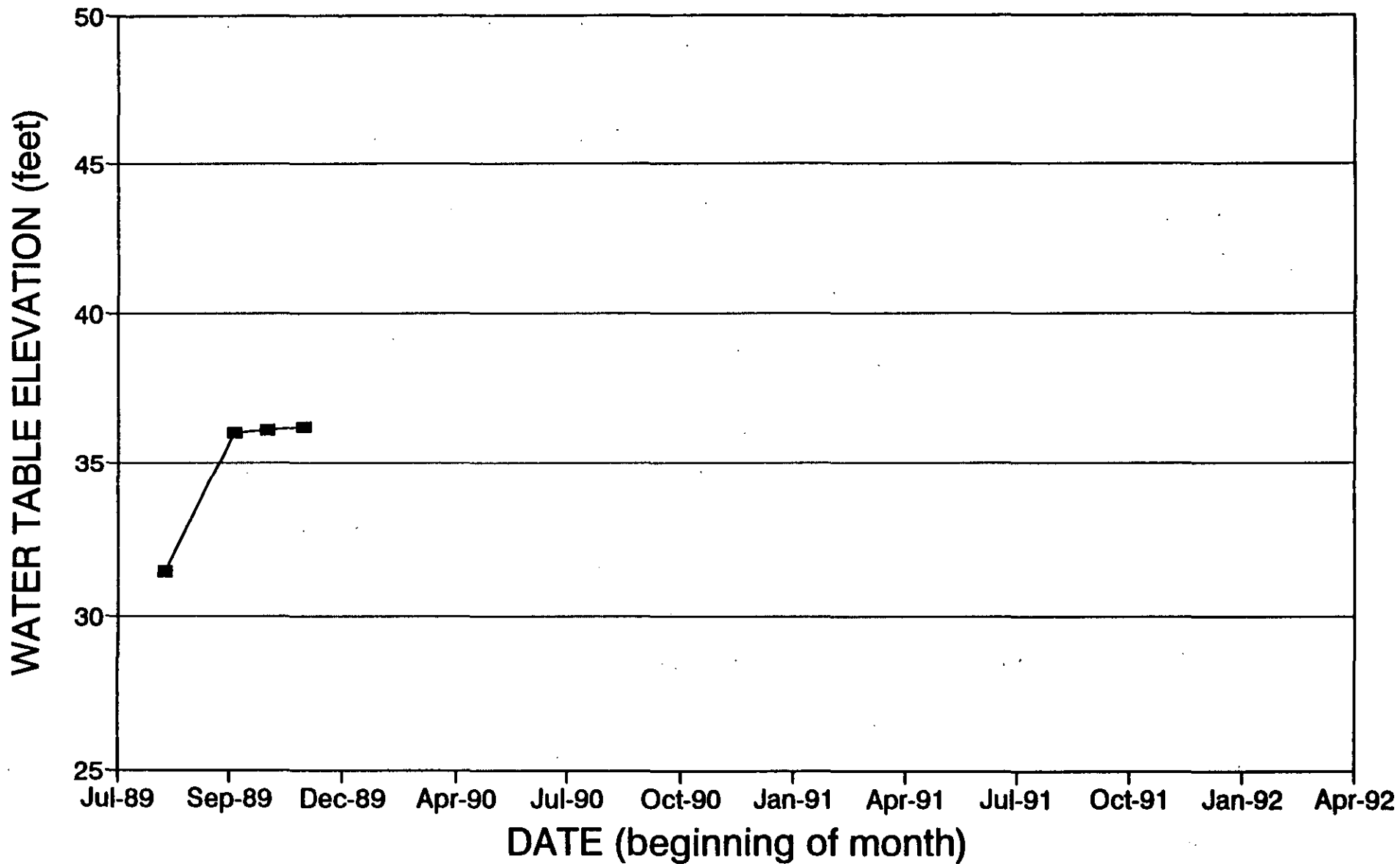
WATER TABLE ELEVATIONS

W-9A



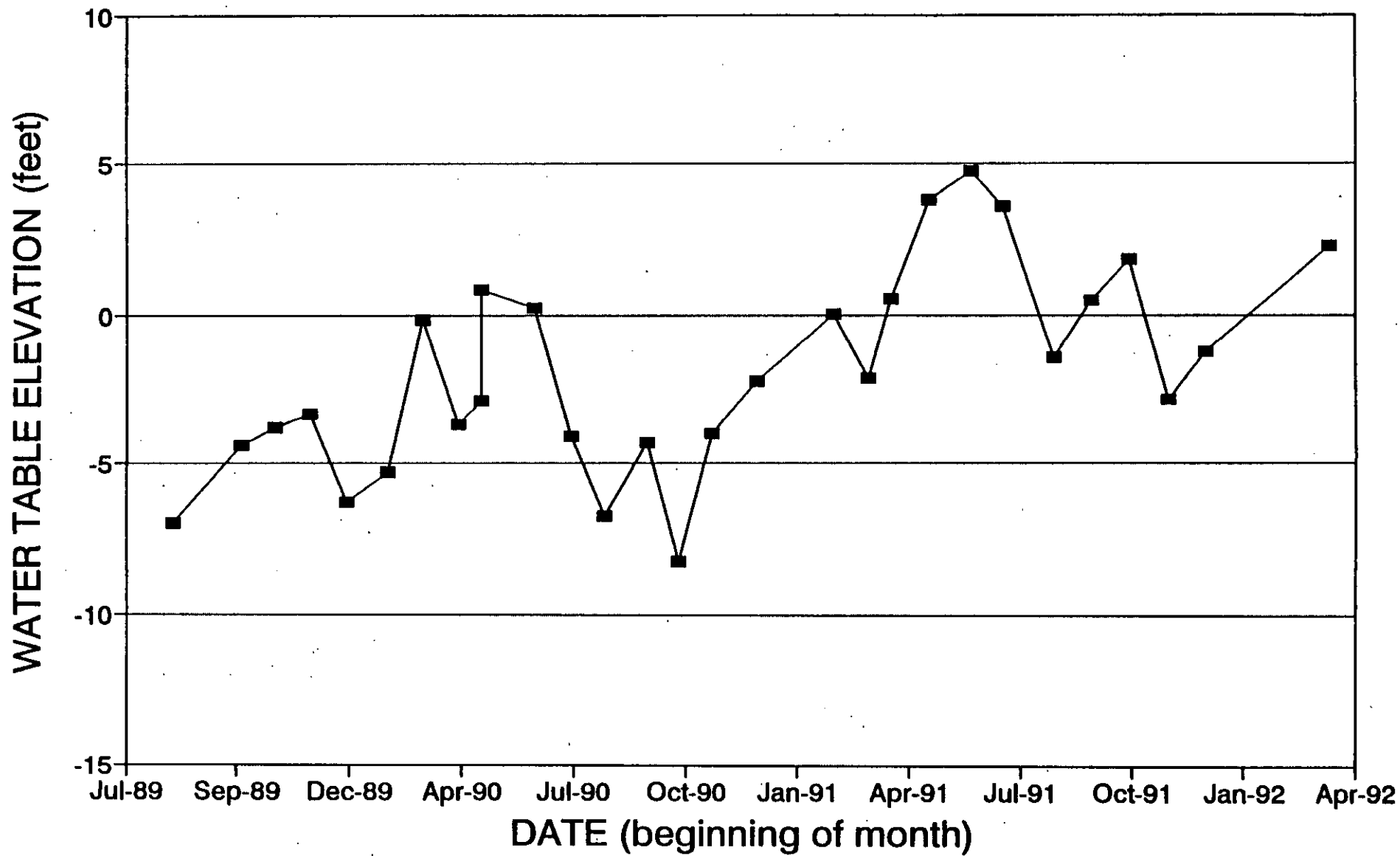
WATER TABLE ELEVATIONS

W-9B



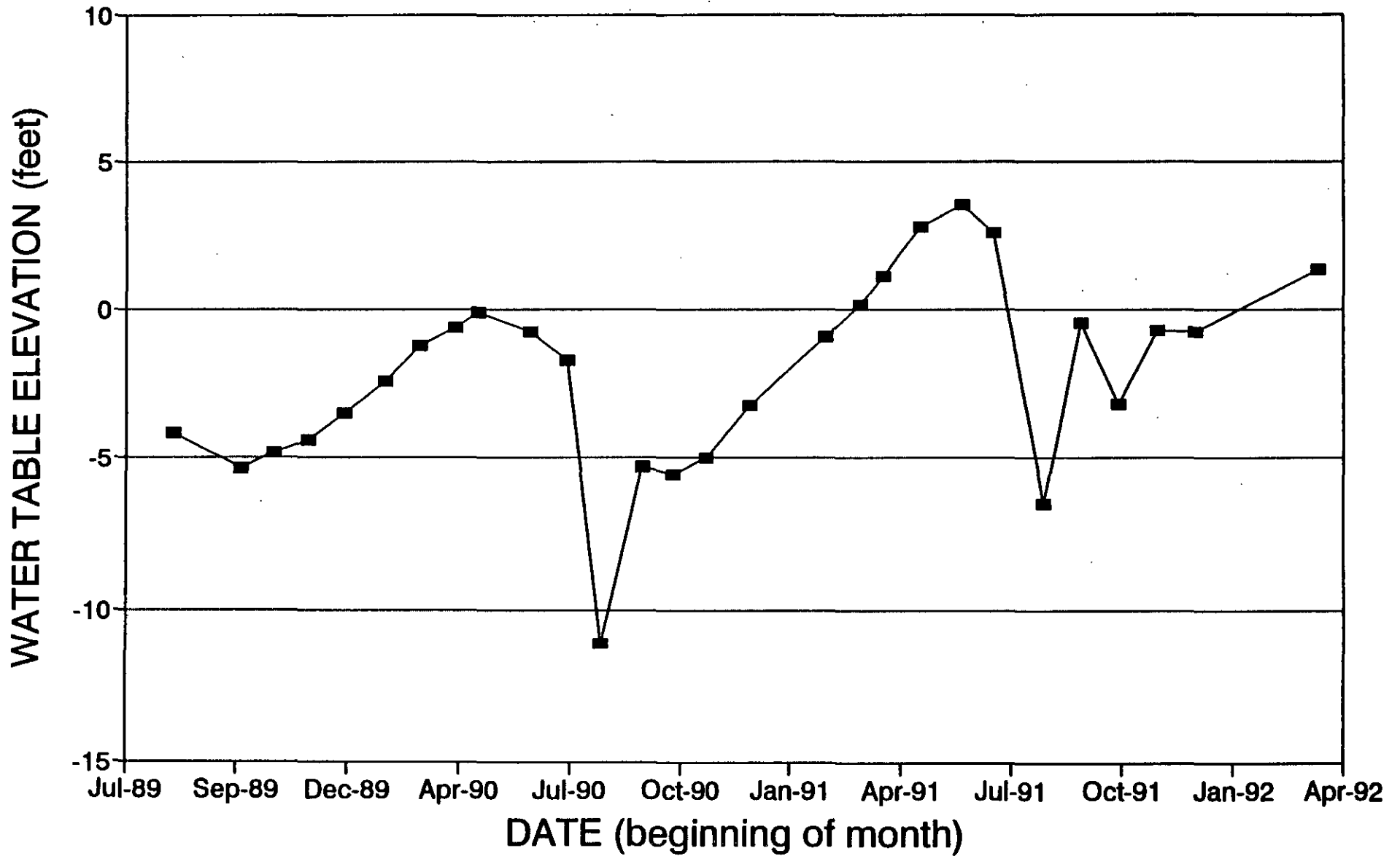
WATER TABLE ELEVATIONS

W-10A



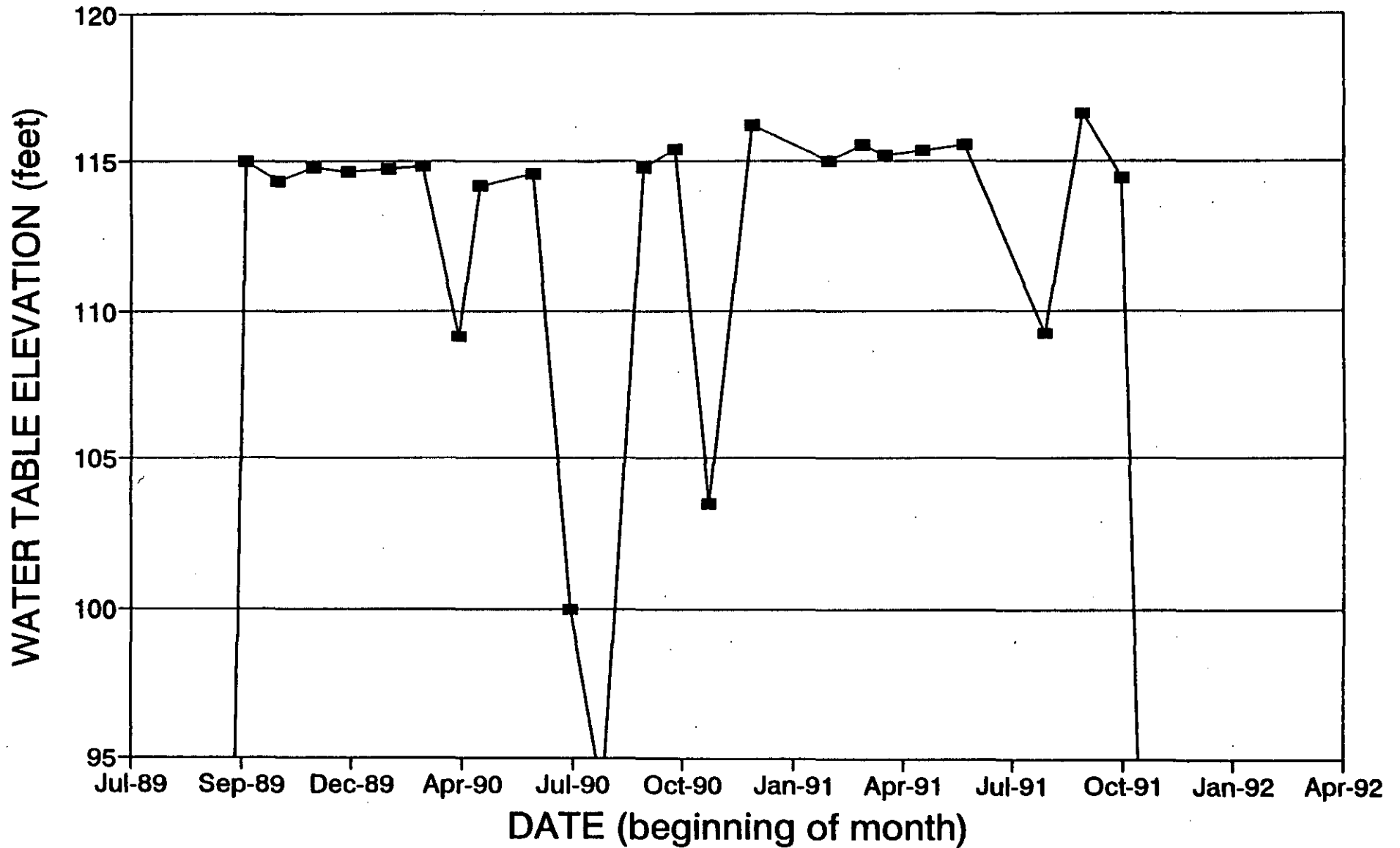
WATER TABLE ELEVATIONS

W-10B



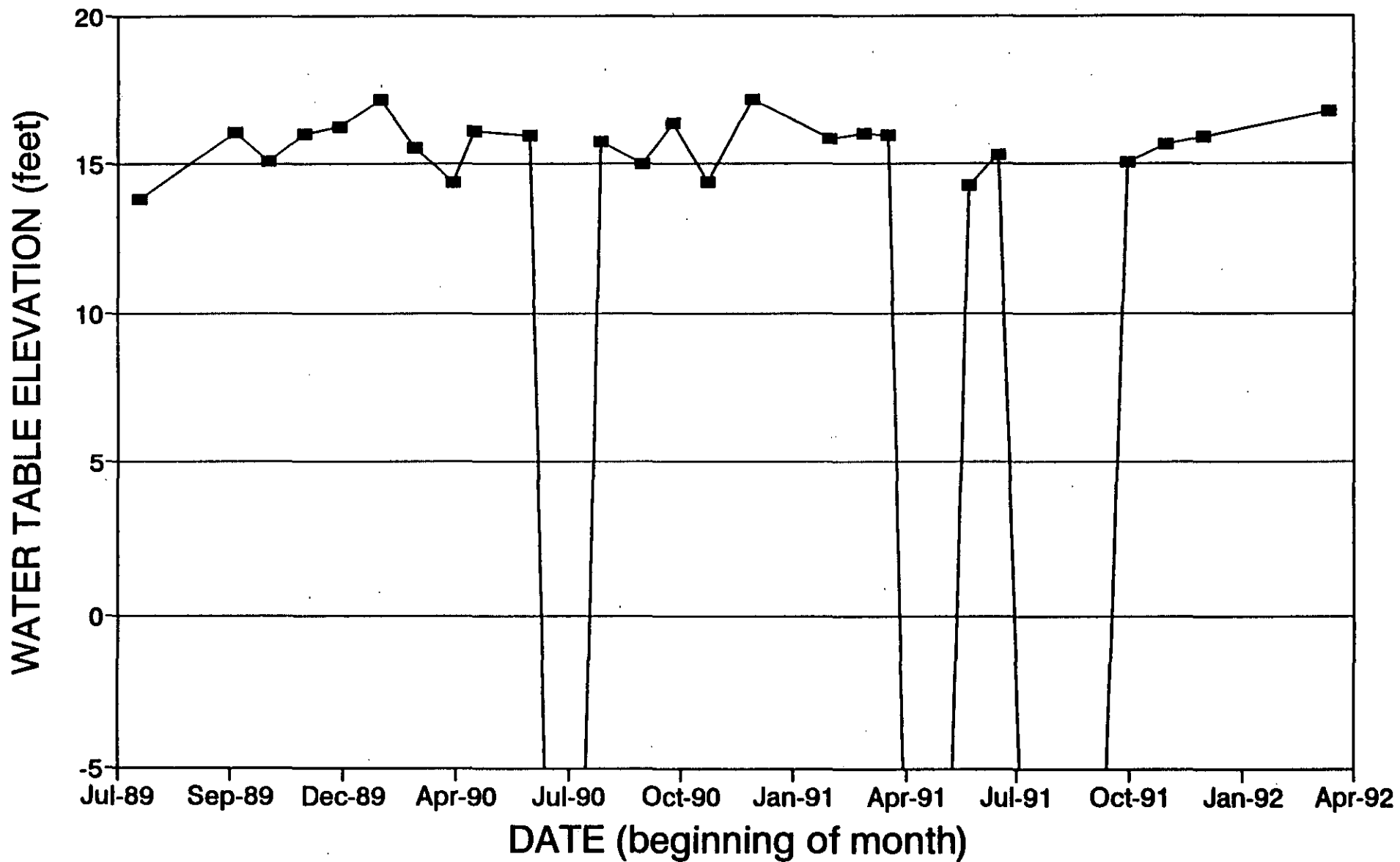
WATER TABLE ELEVATIONS

W-11



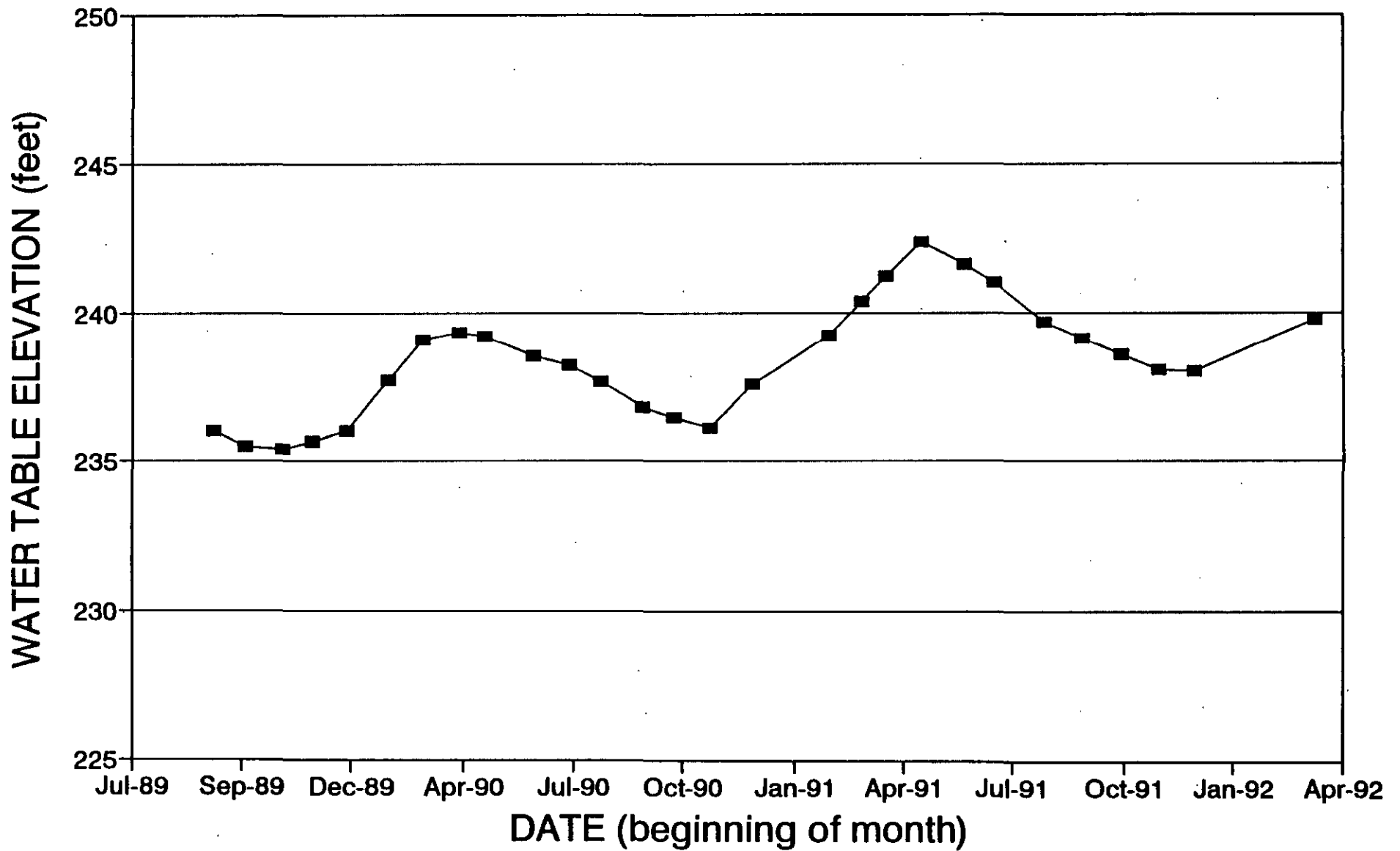
WATER TABLE ELEVATIONS

W-12



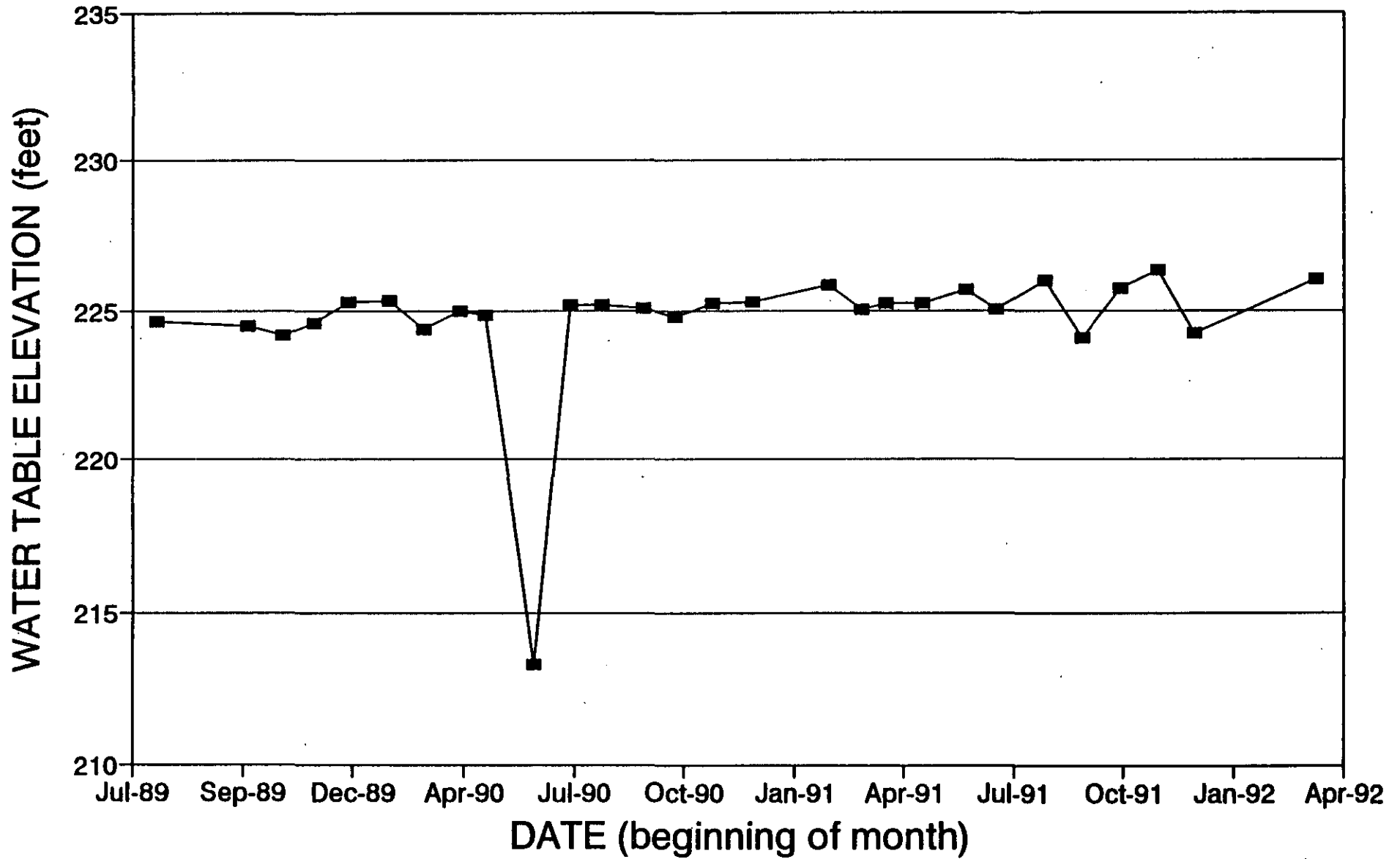
WATER TABLE ELEVATIONS

W-13



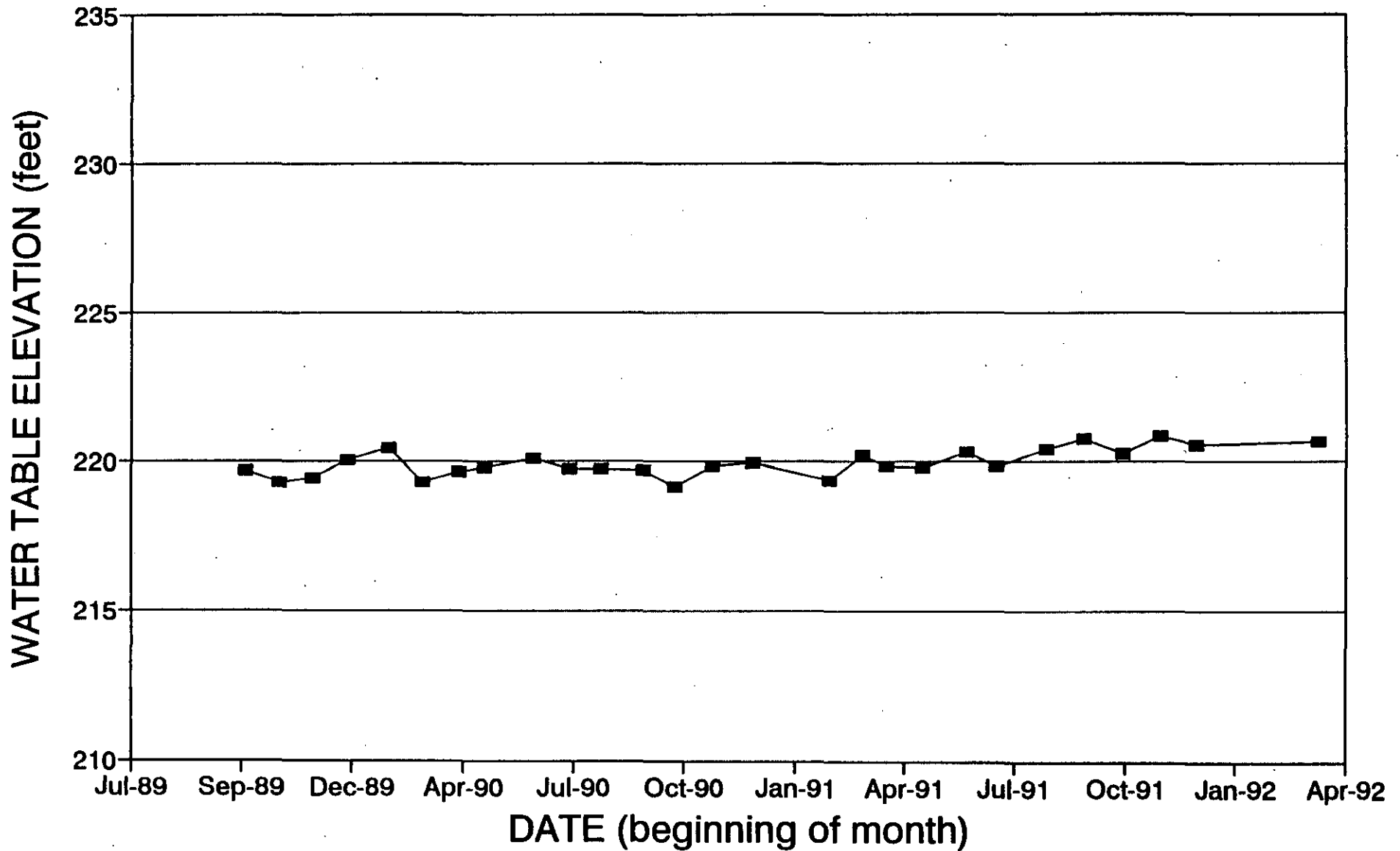
WATER TABLE ELEVATIONS

W-14



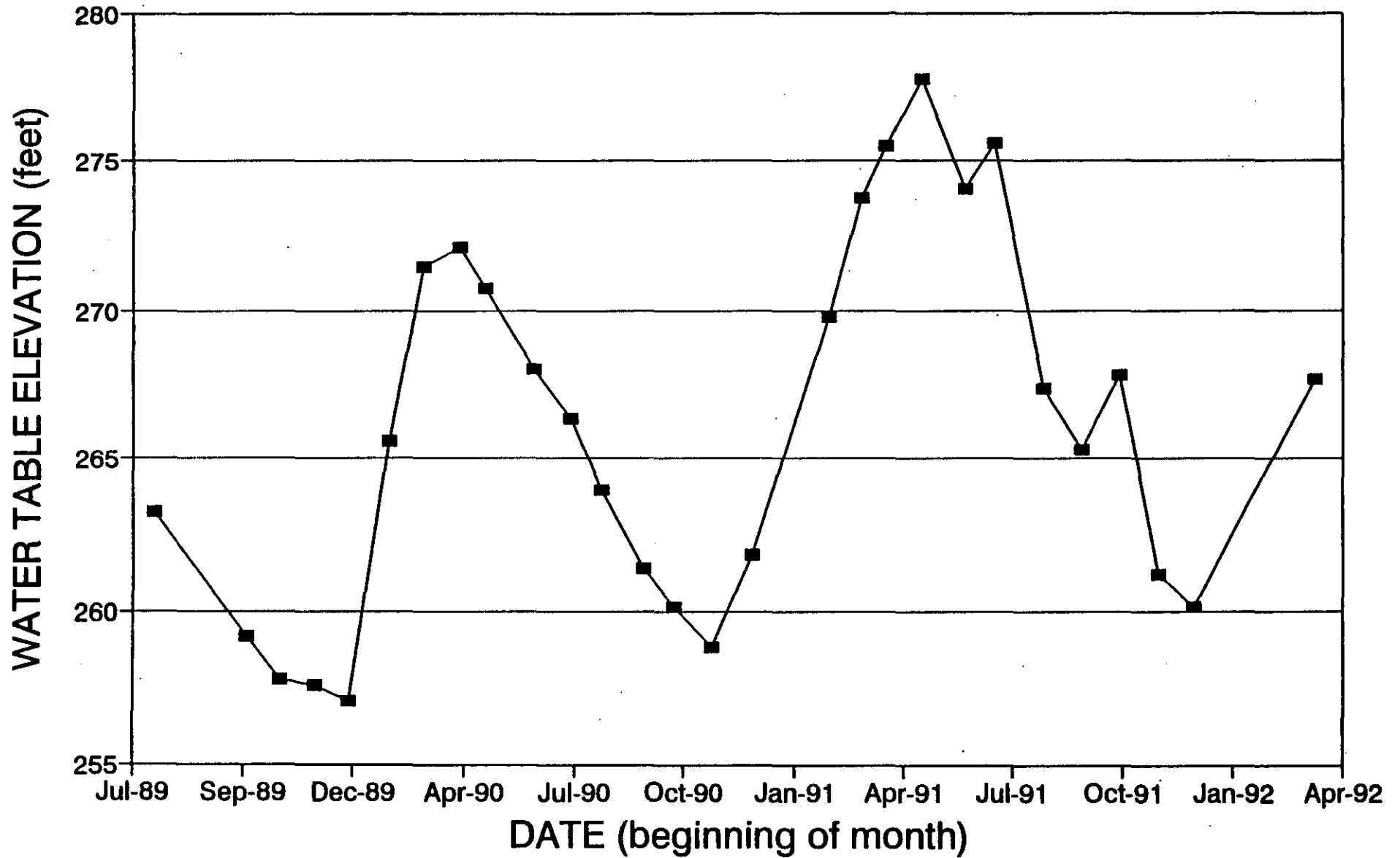
WATER TABLE ELEVATIONS

W-15



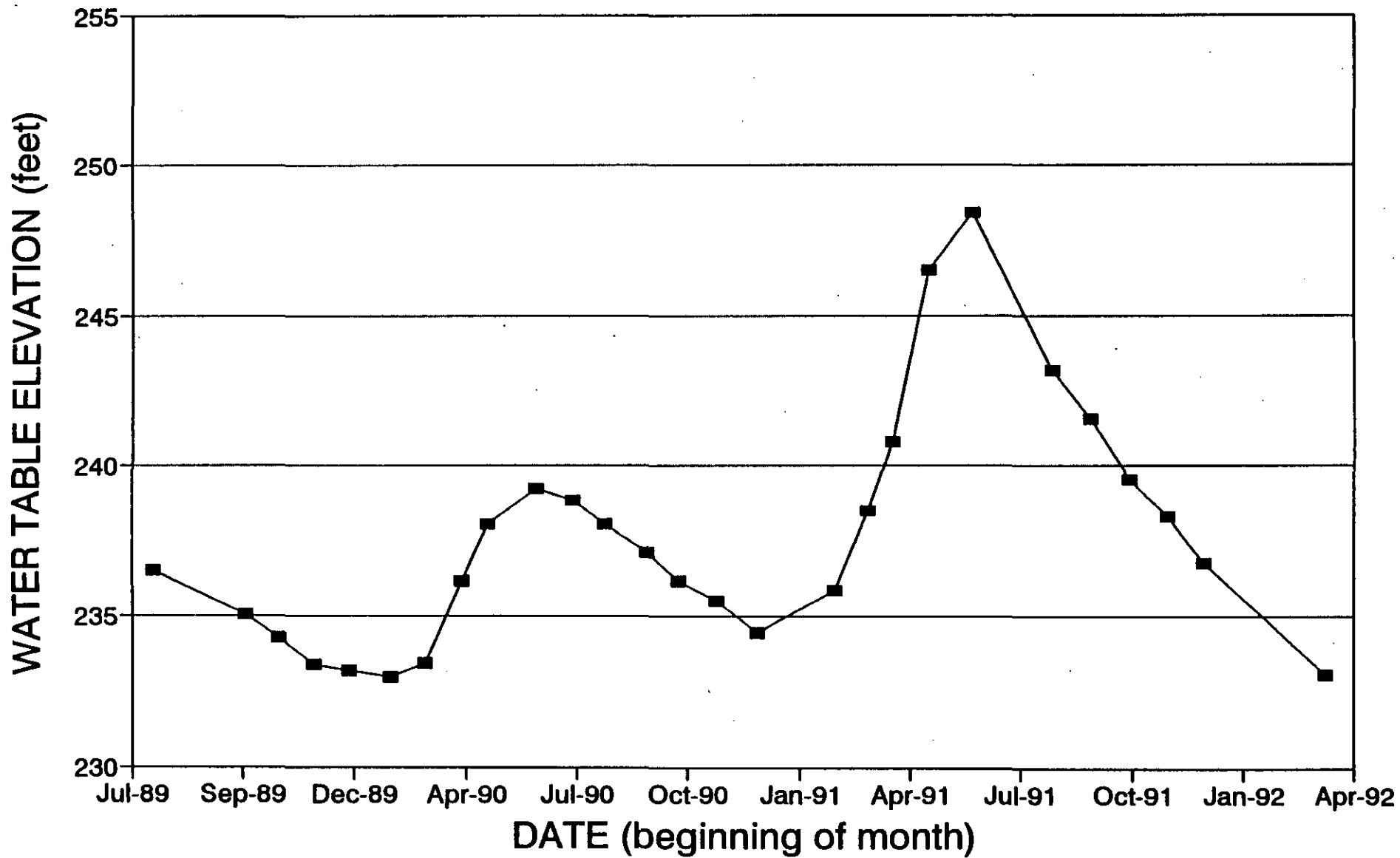
WATER TABLE ELEVATIONS

W-16A



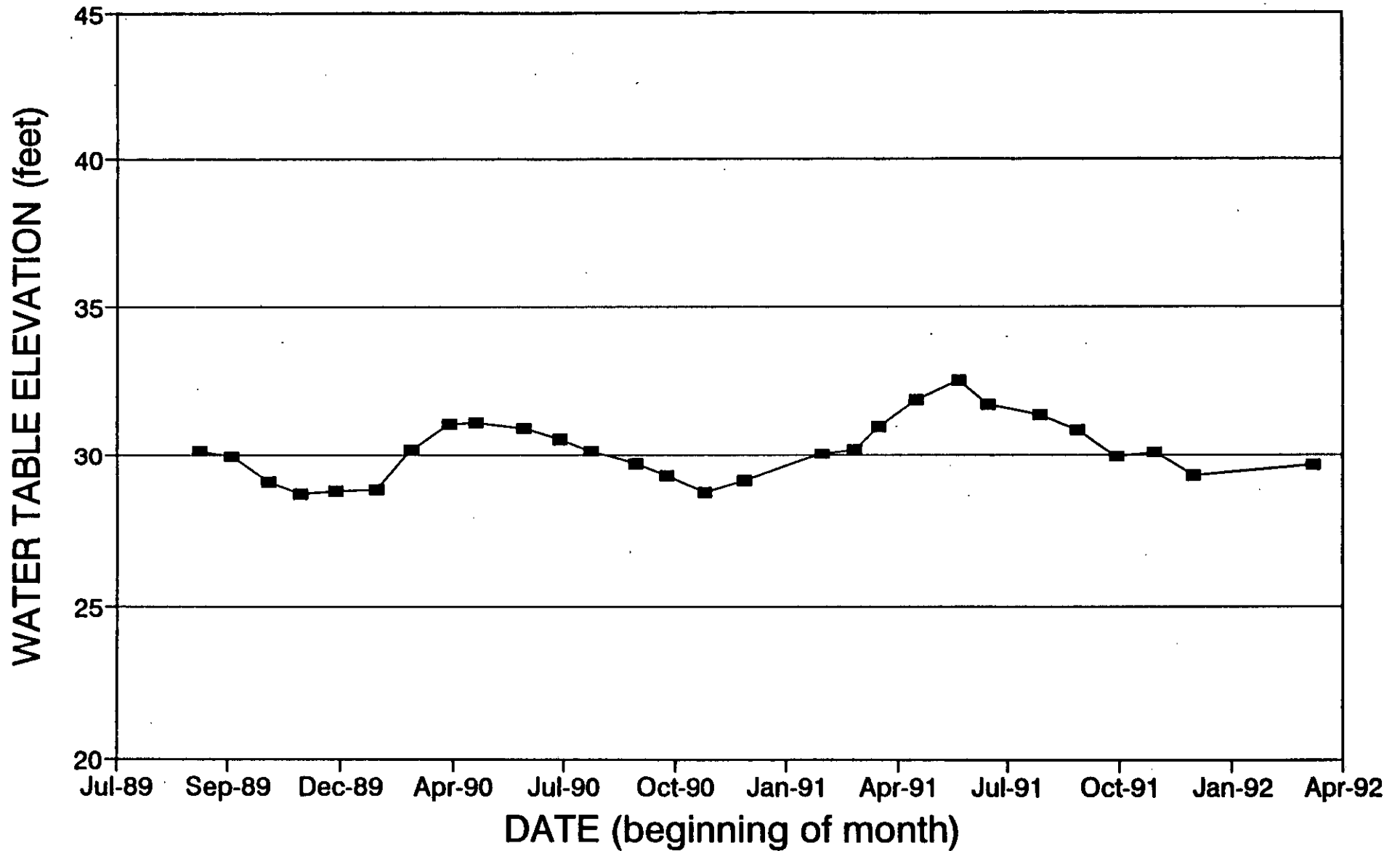
WATER TABLE ELEVATIONS

W-16B



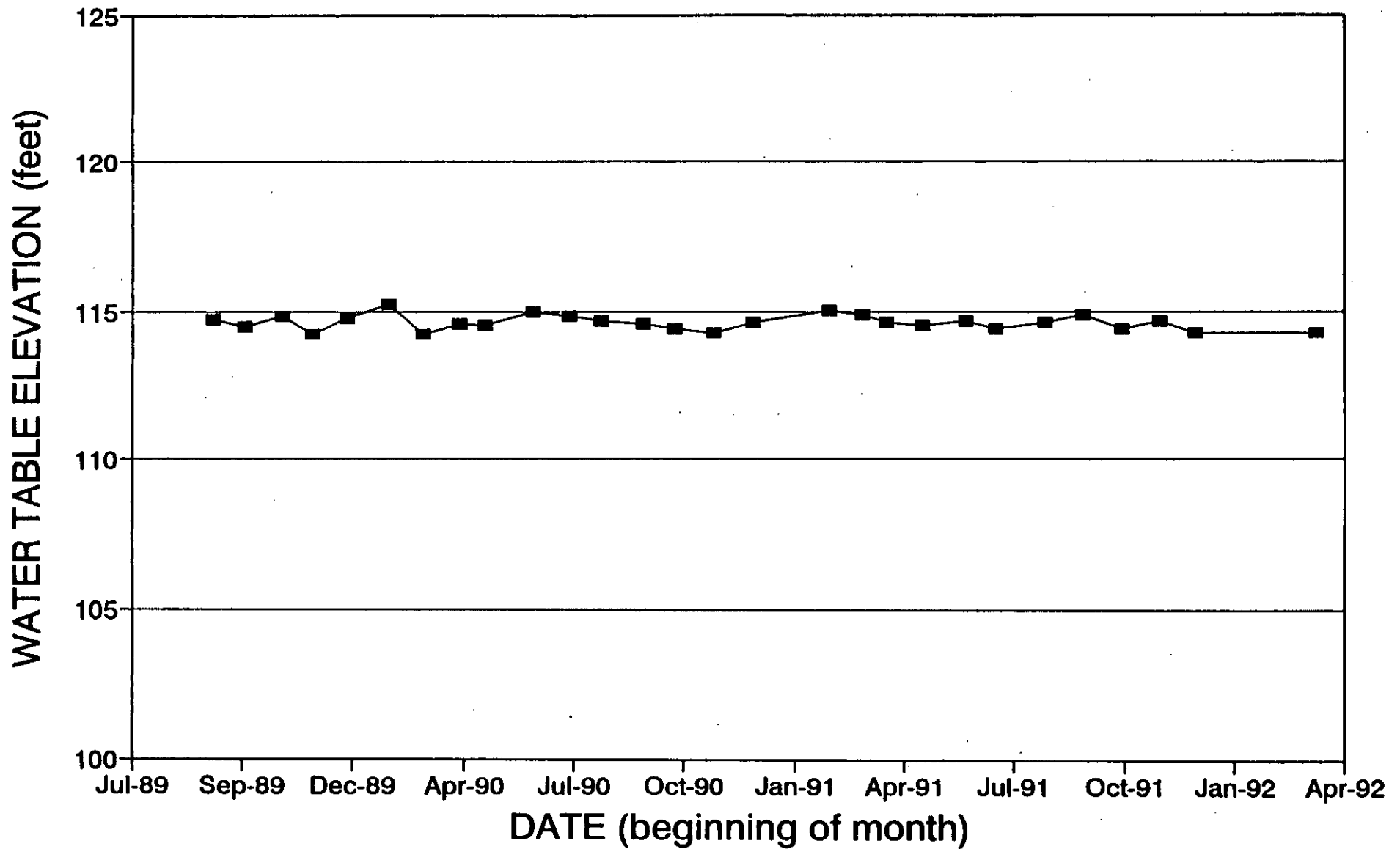
WATER TABLE ELEVATIONS

W-17



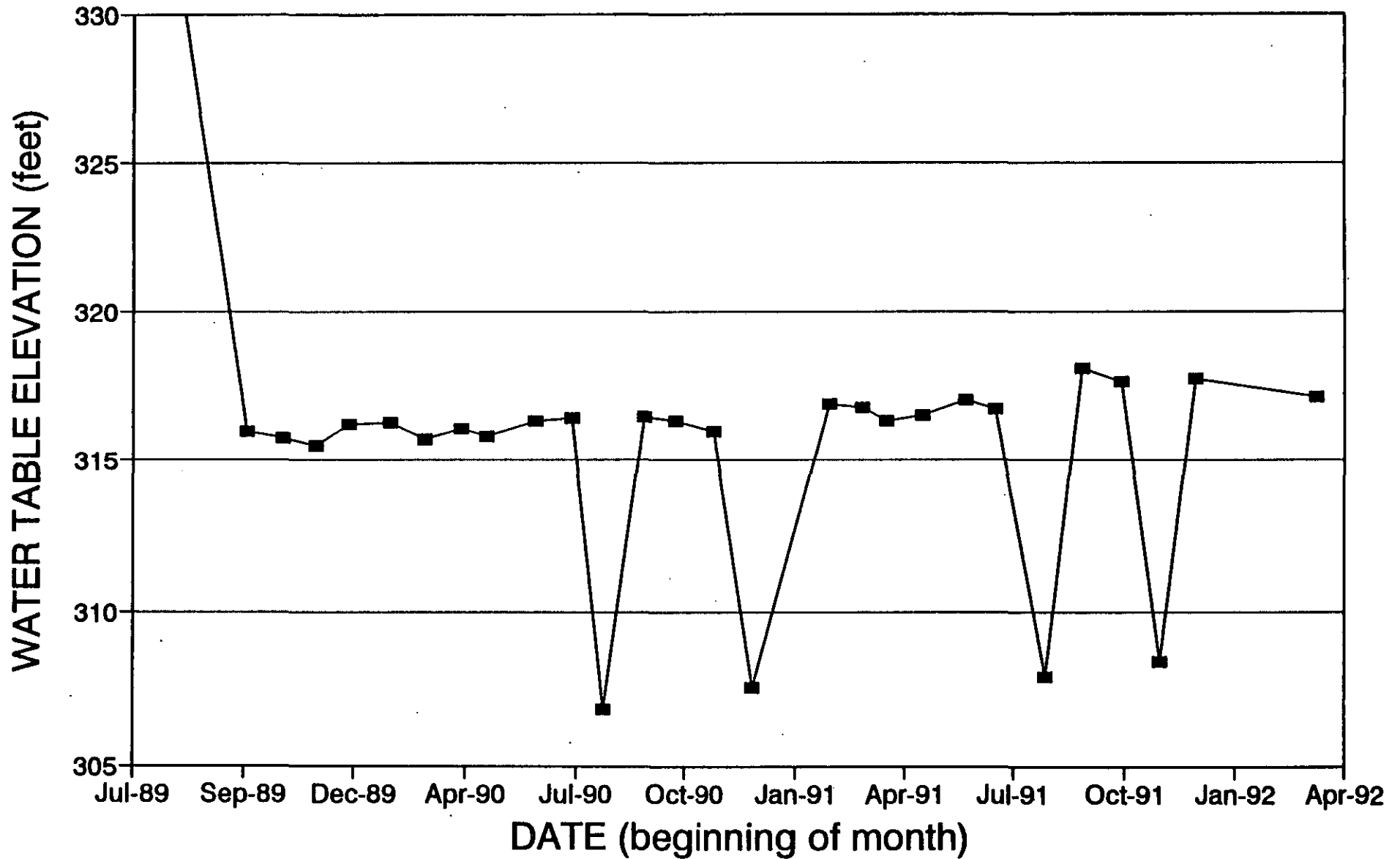
WATER TABLE ELEVATIONS

W-18



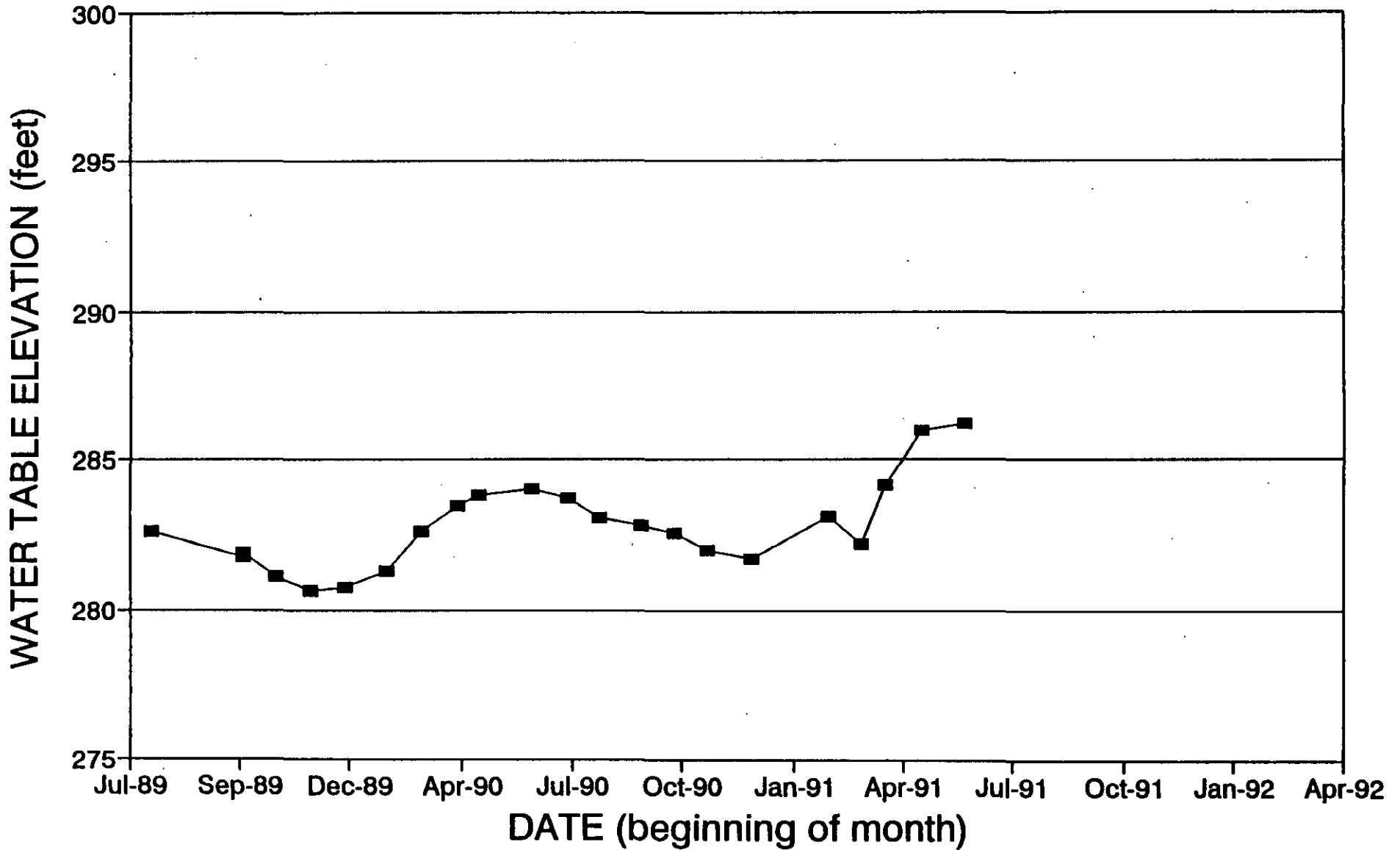
WATER TABLE ELEVATIONS

W-19



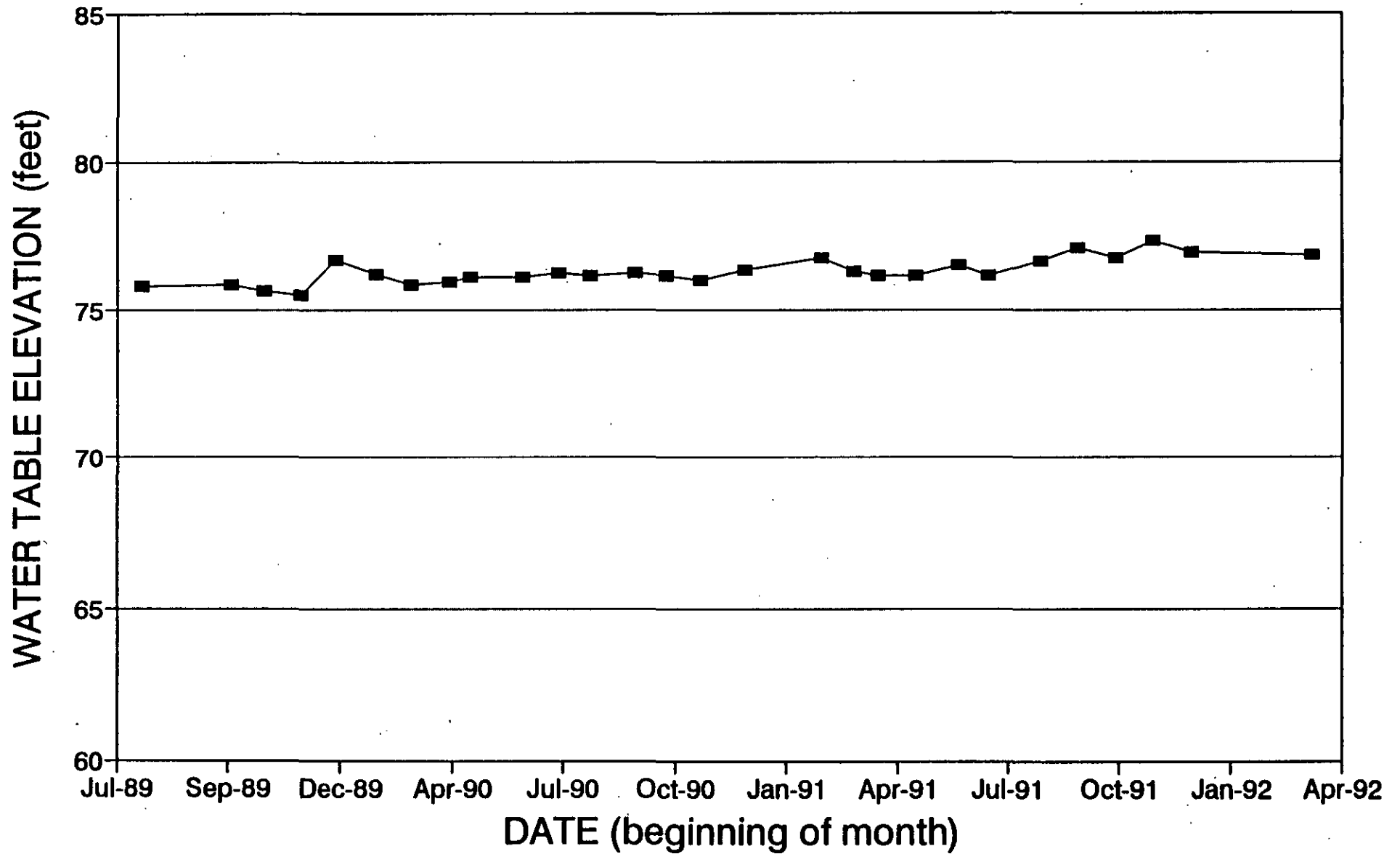
WATER TABLE ELEVATIONS

W-20

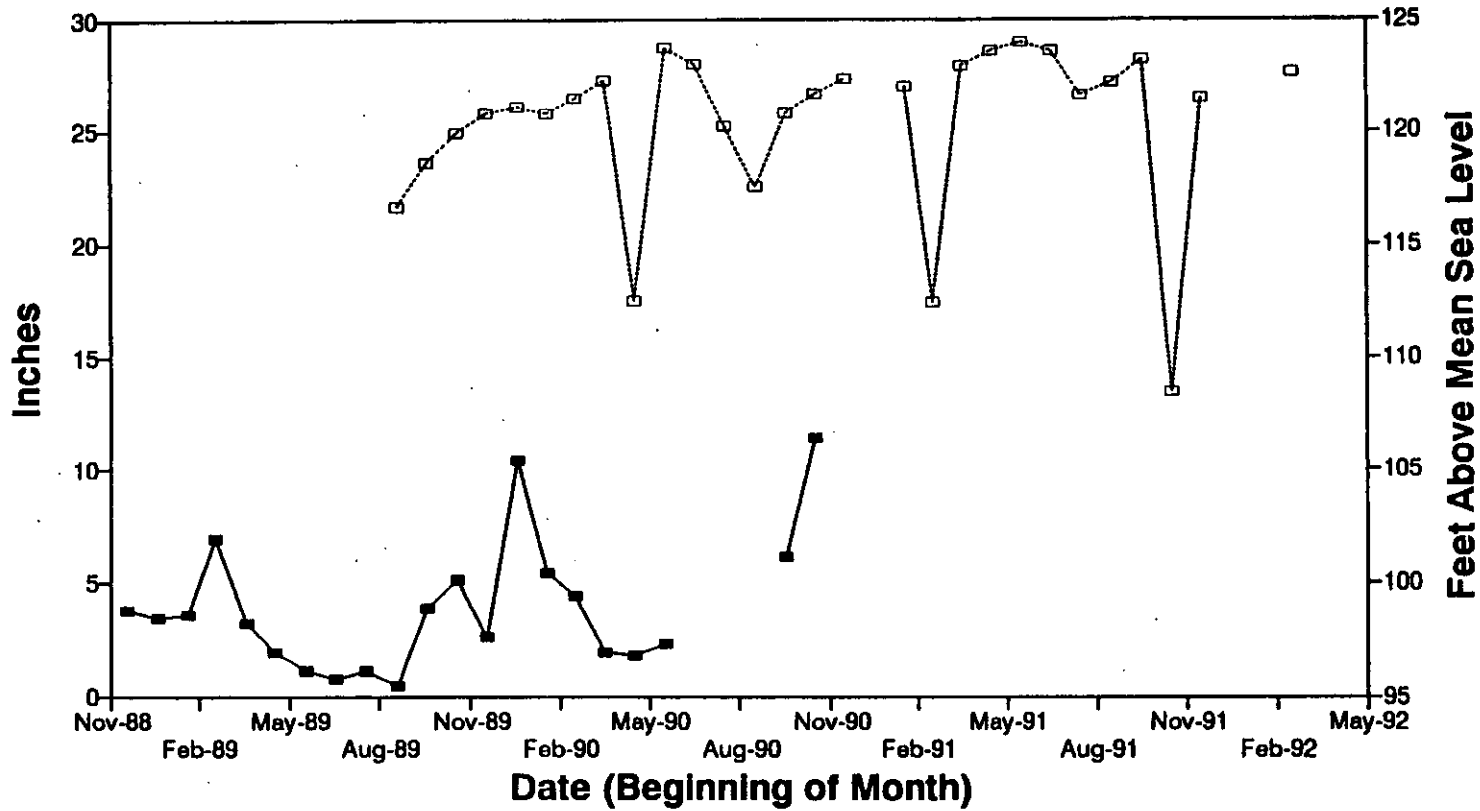


WATER TABLE ELEVATIONS

W-21

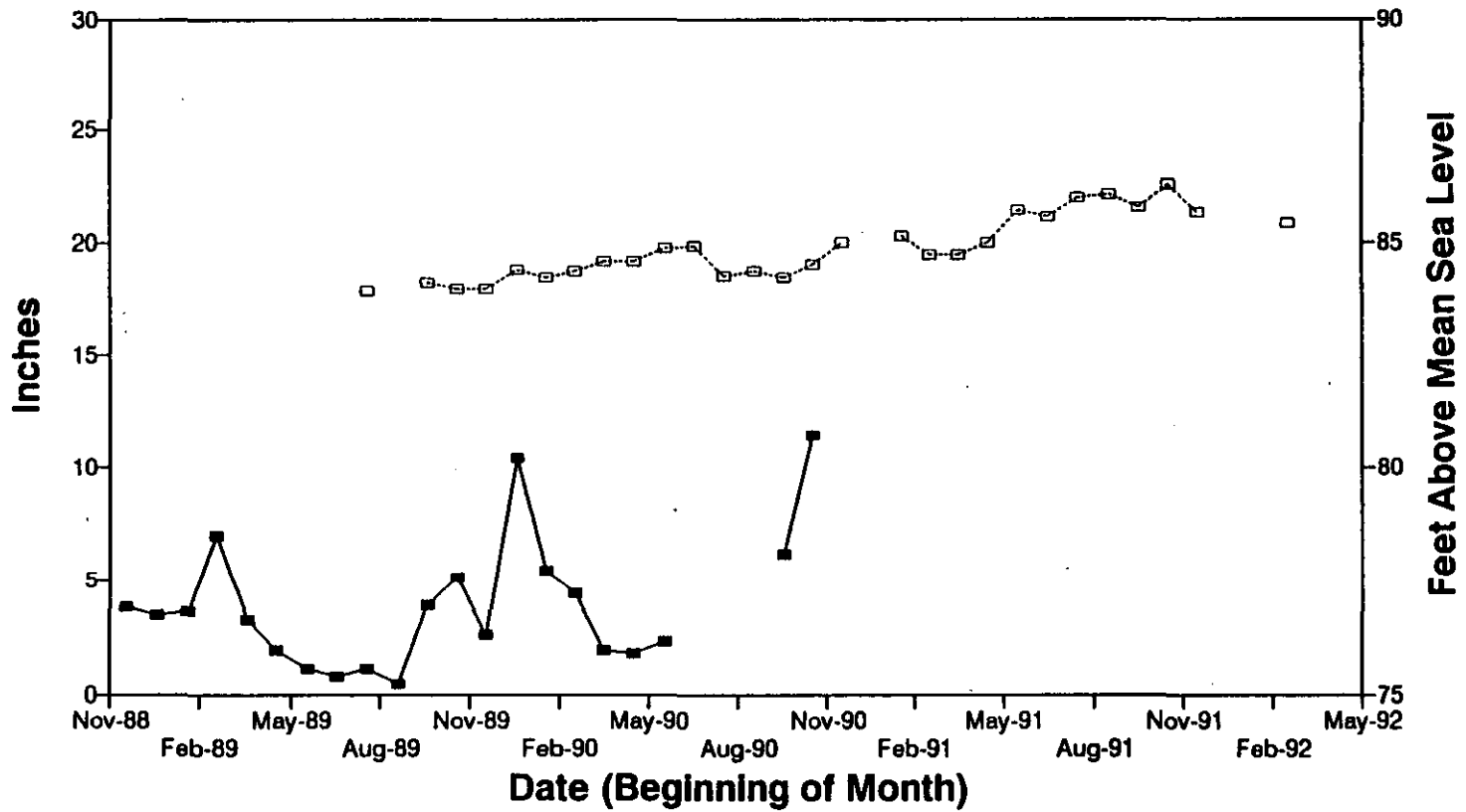


Rainfall vs. Water Table Elevation (Monthly)



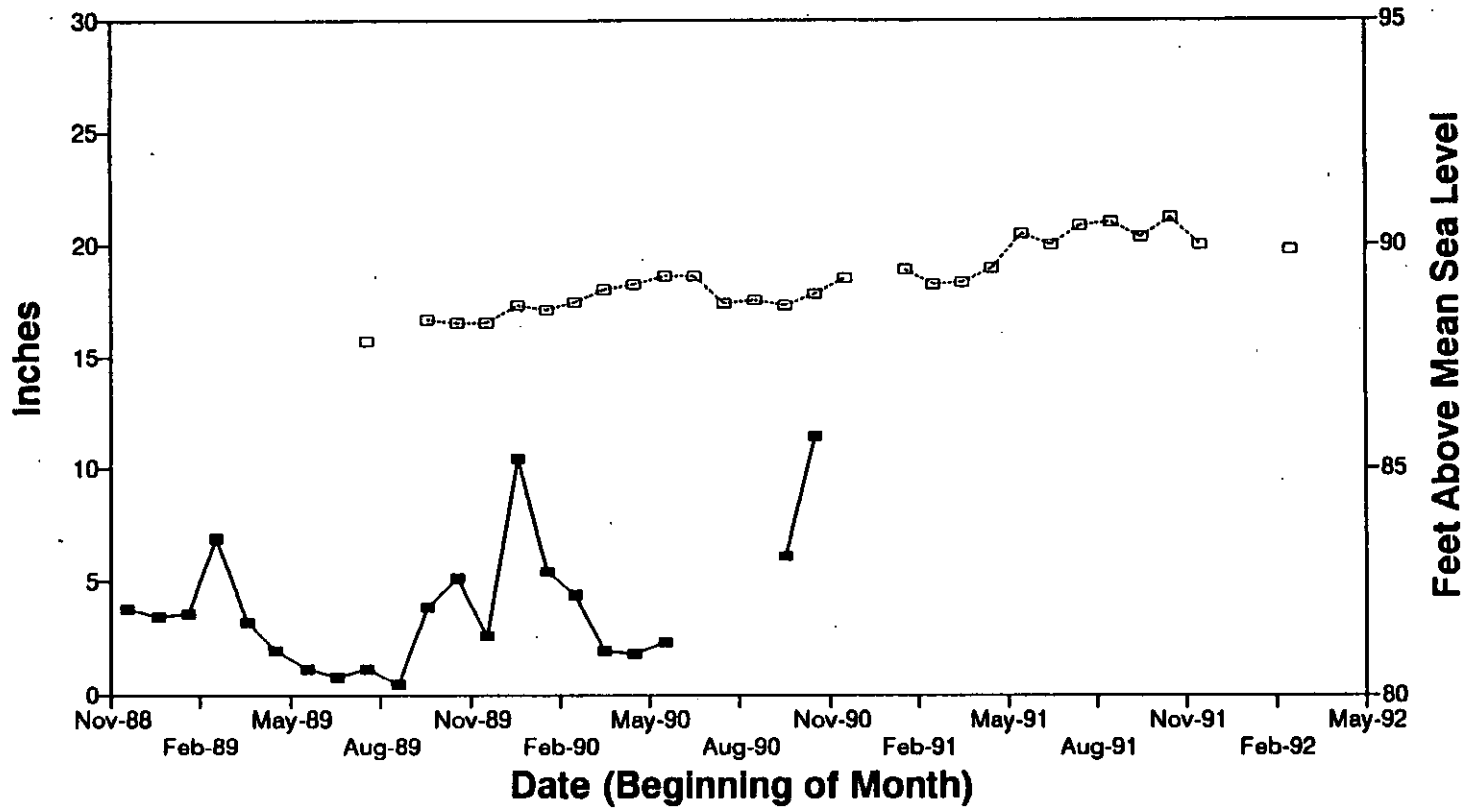
Rain Gage #8
 Well W-1 (Phillips)

Rainfall vs. Water Table Elevation (Monthly)

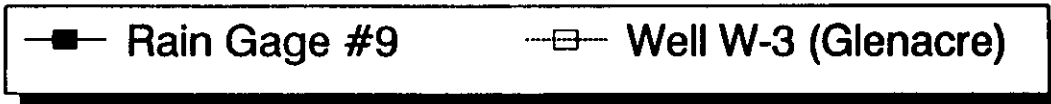
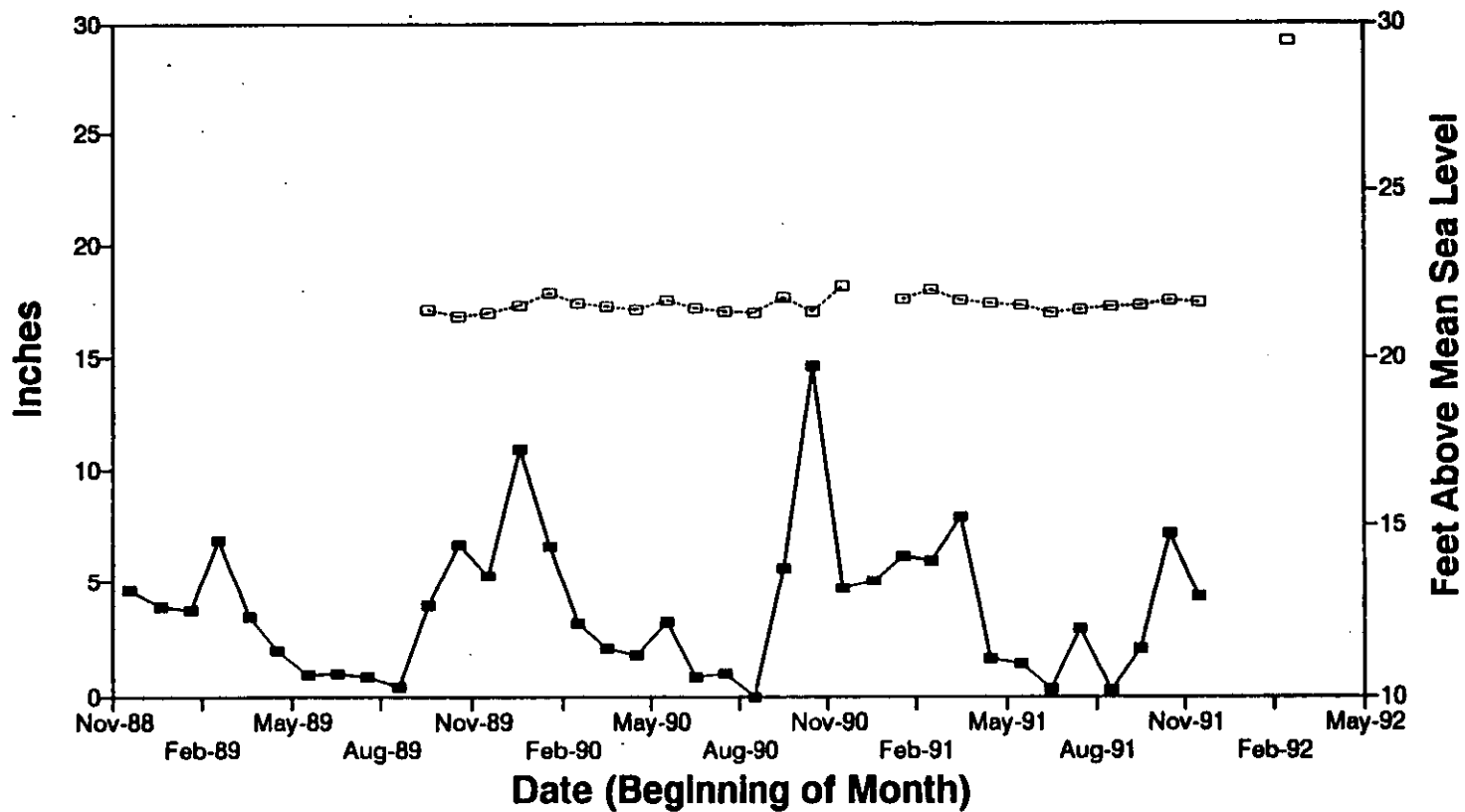


Rain Gage #8
 Well W-2a (Height1)

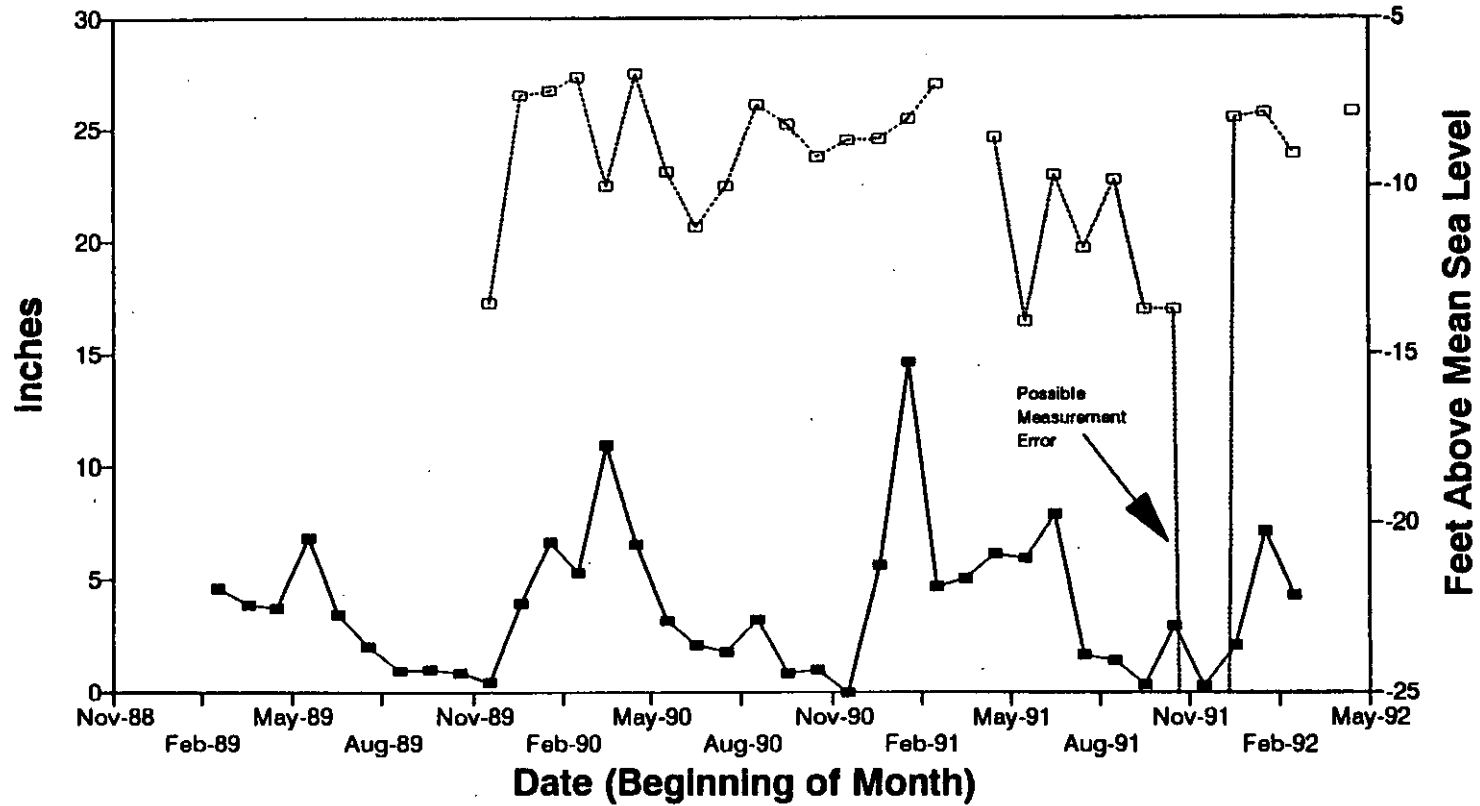
Rainfall vs. Water Table Elevation (Monthly)



Rainfall vs. Water Table Elevation (Monthly)

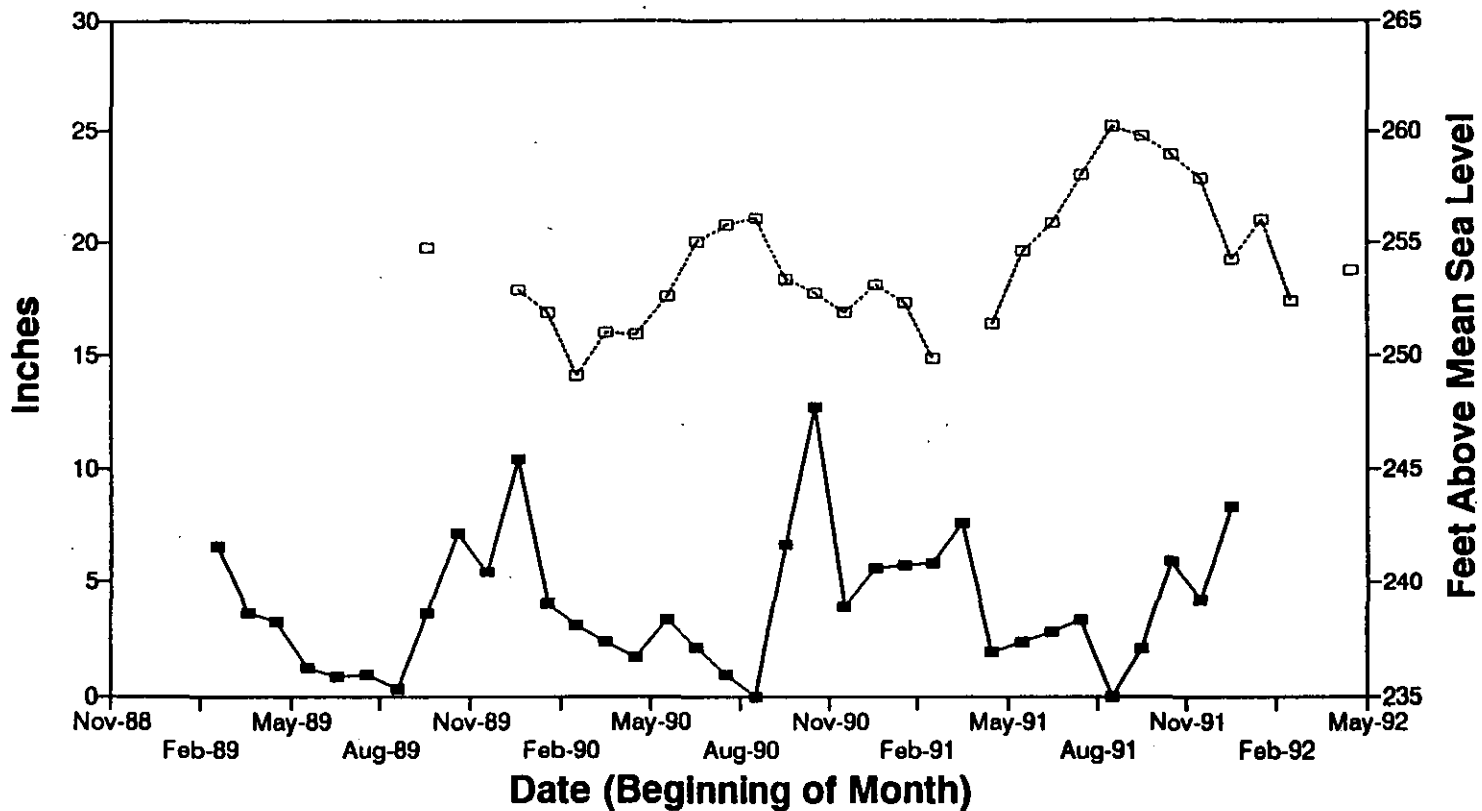


Rainfall vs. Water Table Elevation (Monthly)



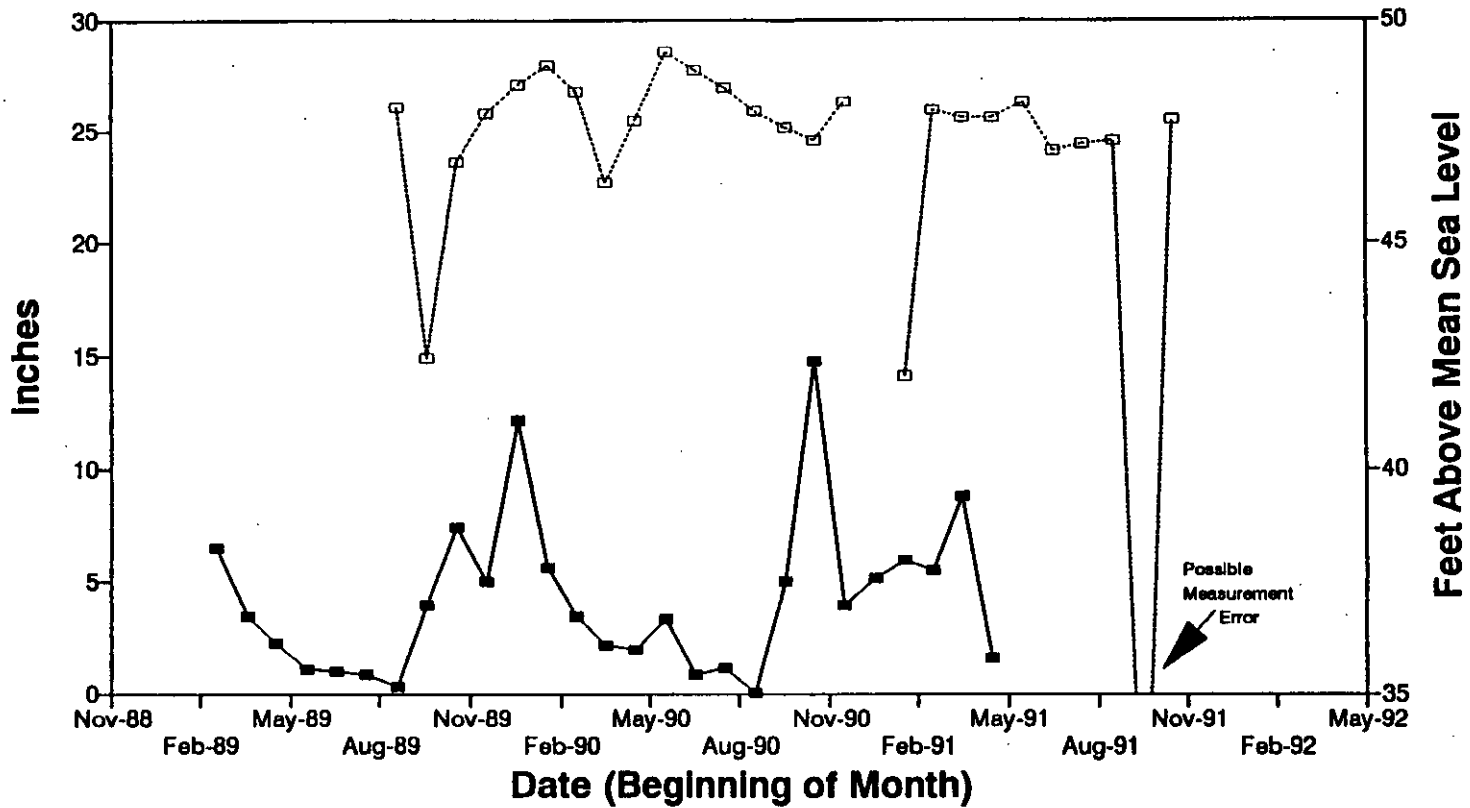
Rain Gage #9
 Well W-4 (Rodrig)

Rainfall vs. Water Table Elevation (Monthly)



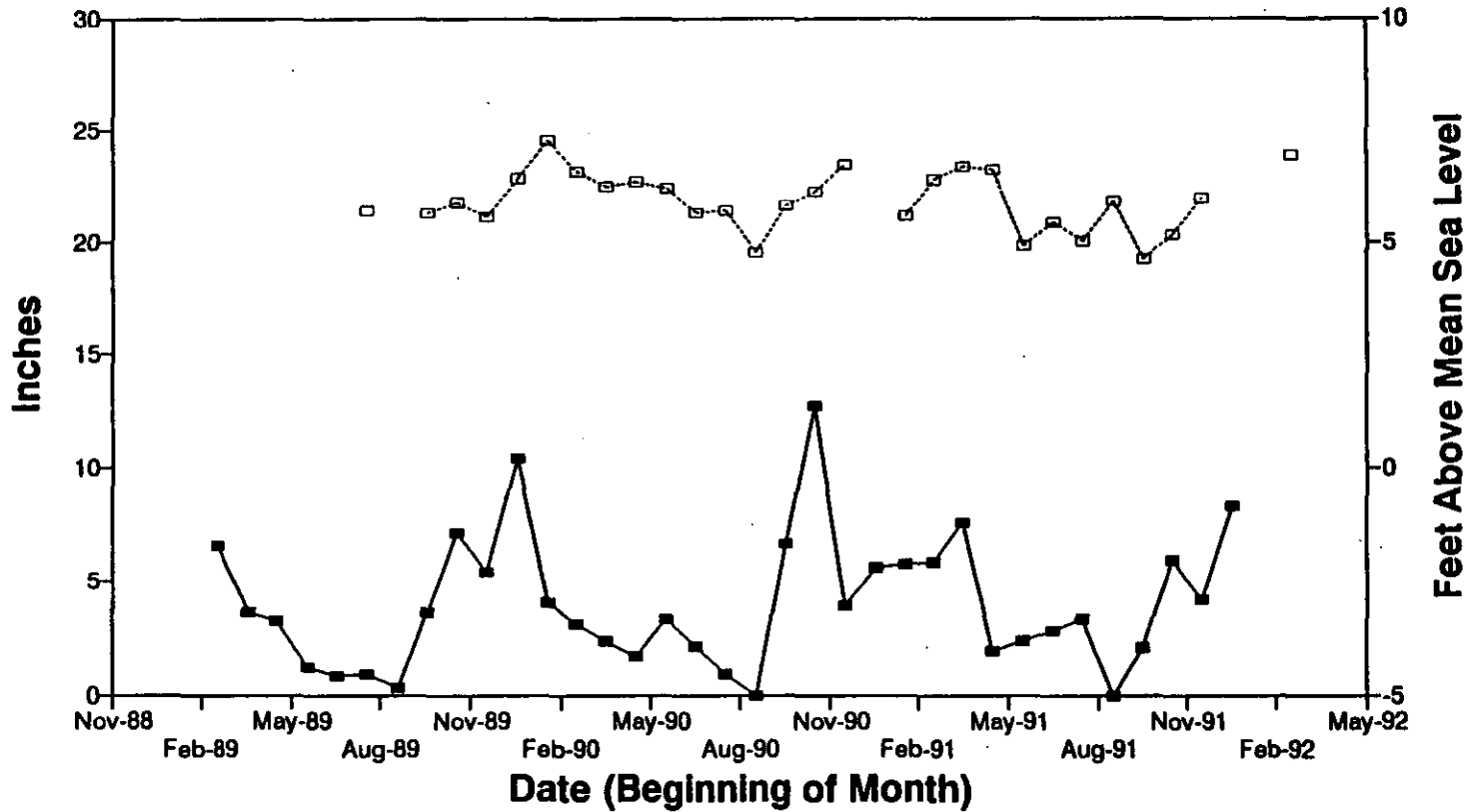
Rain Gage #9
 Well W-6 (Davis)

Rainfall vs. Water Table Elevation (Monthly)



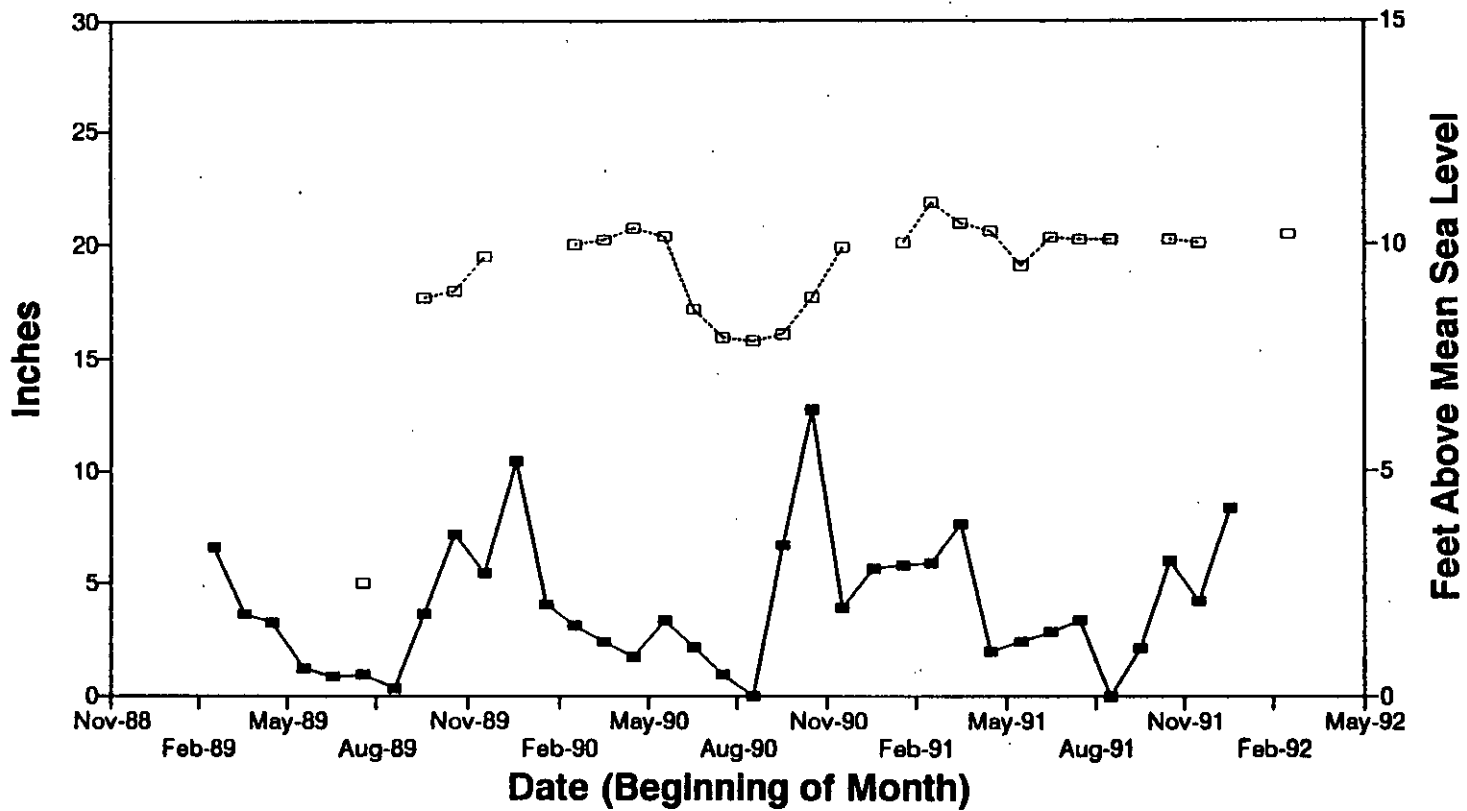
Rain Gage #4
 Well W-7 (Toomey)

Rainfall vs. Water Table Elevation (Monthly)



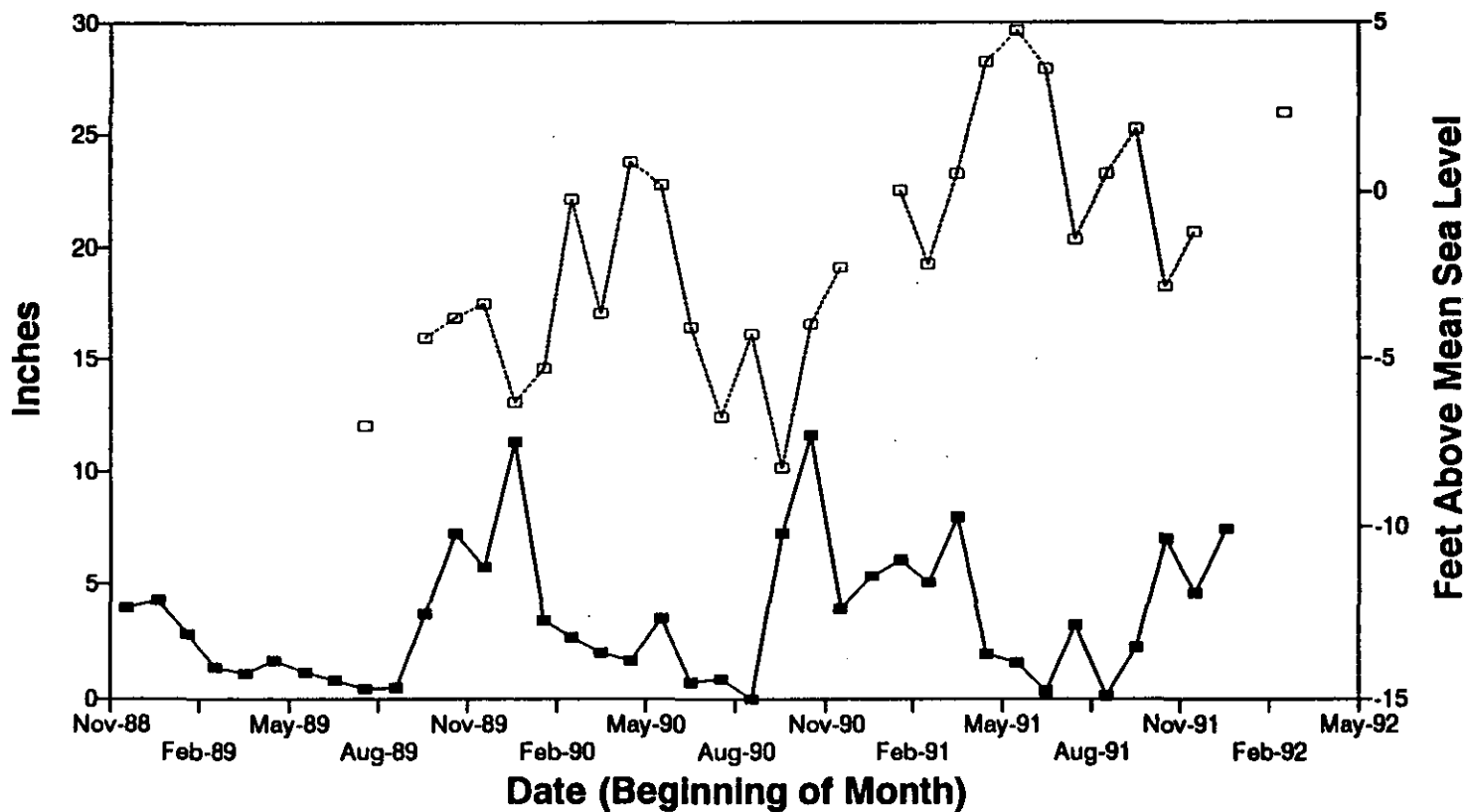
Rain Gage #1
 Well W-8 (KIRO)

Rainfall vs. Water Table Elevation (Monthly)



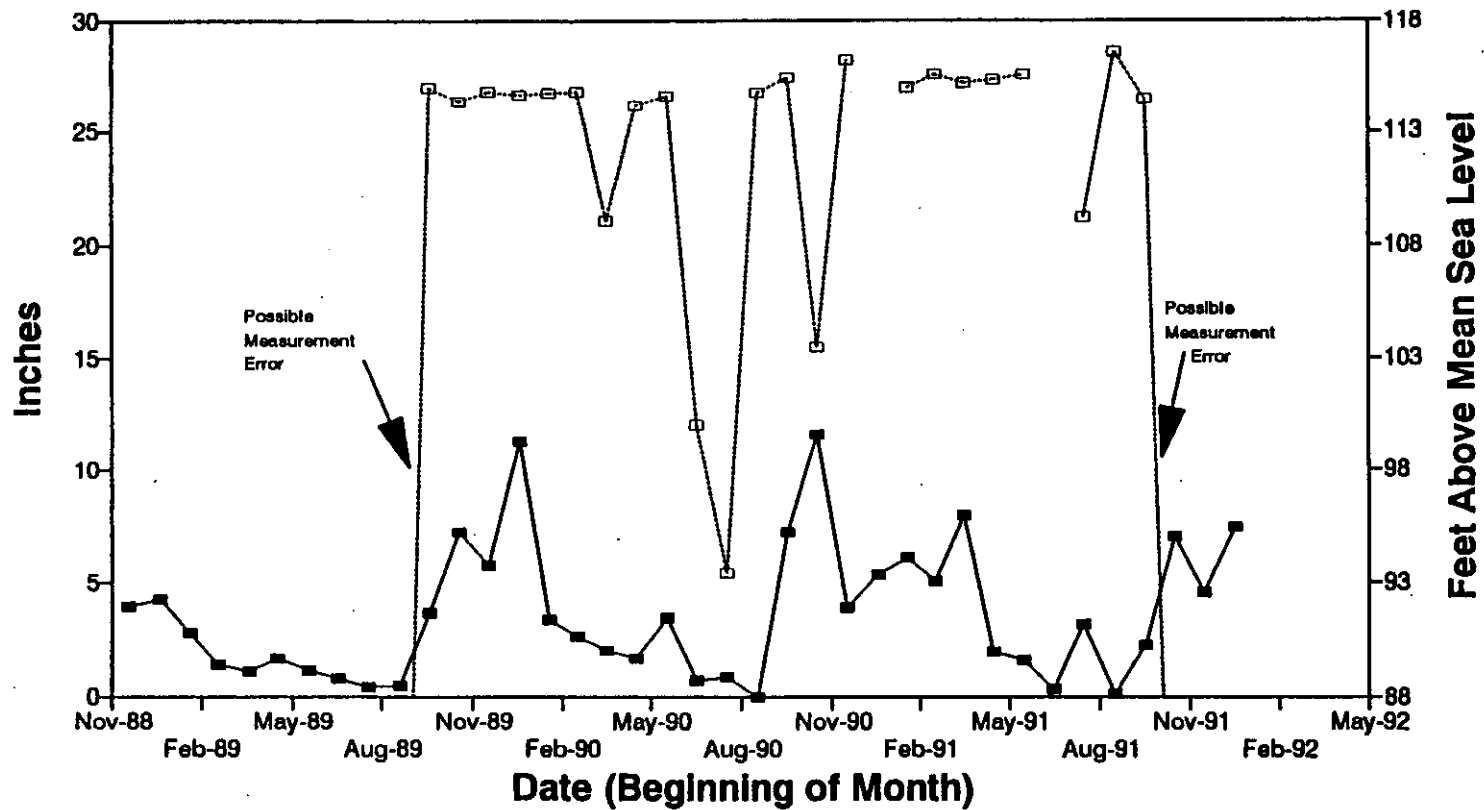
Rain Gage #1
 Well W-9a (White 1)

Rainfall vs. Water Table Elevation (Monthly)



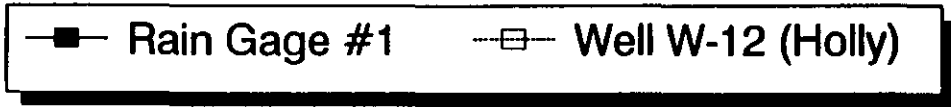
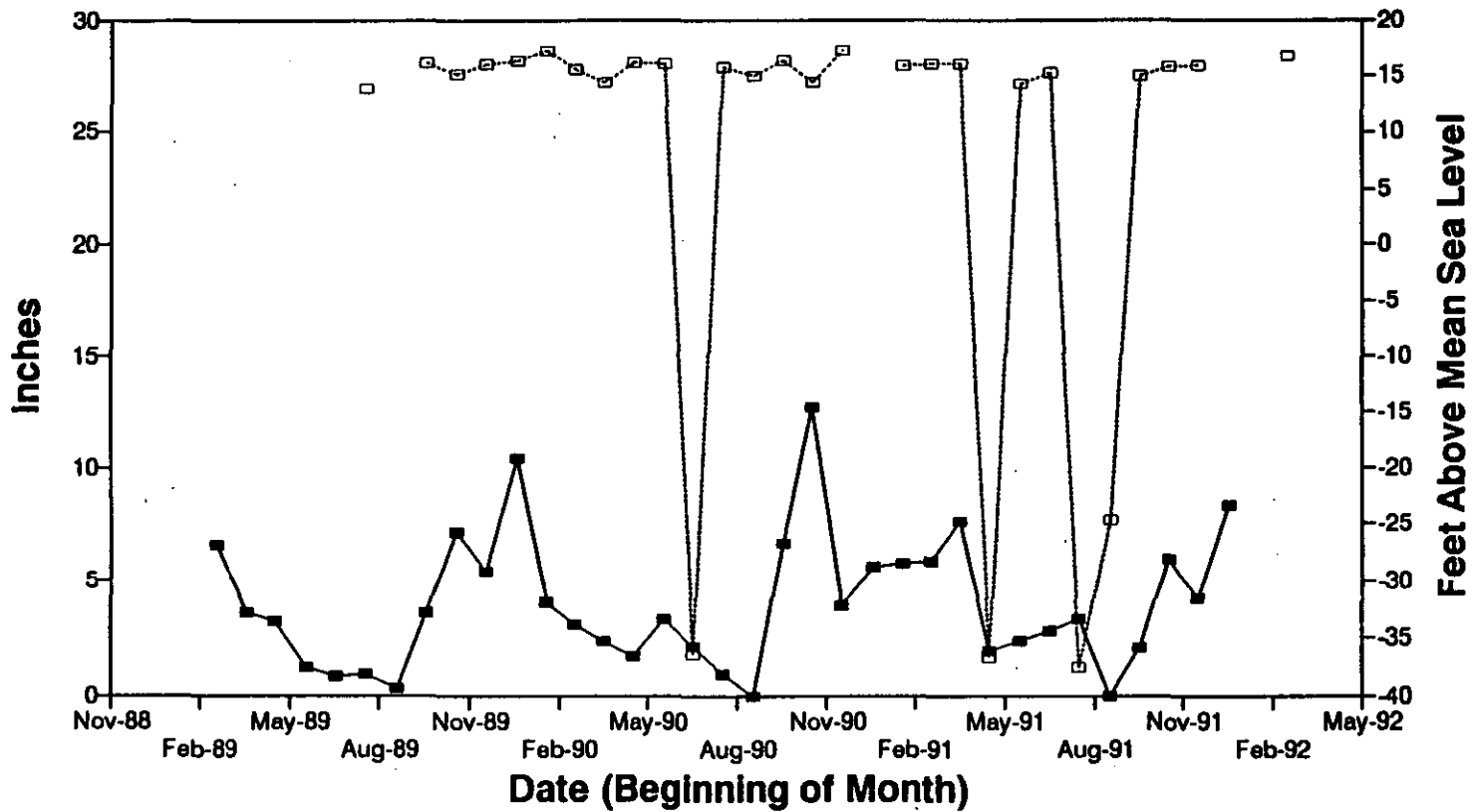
Rain Gage #5
 Well W-10a (Goldb1)

Rainfall vs. Water Table Elevation (Monthly)

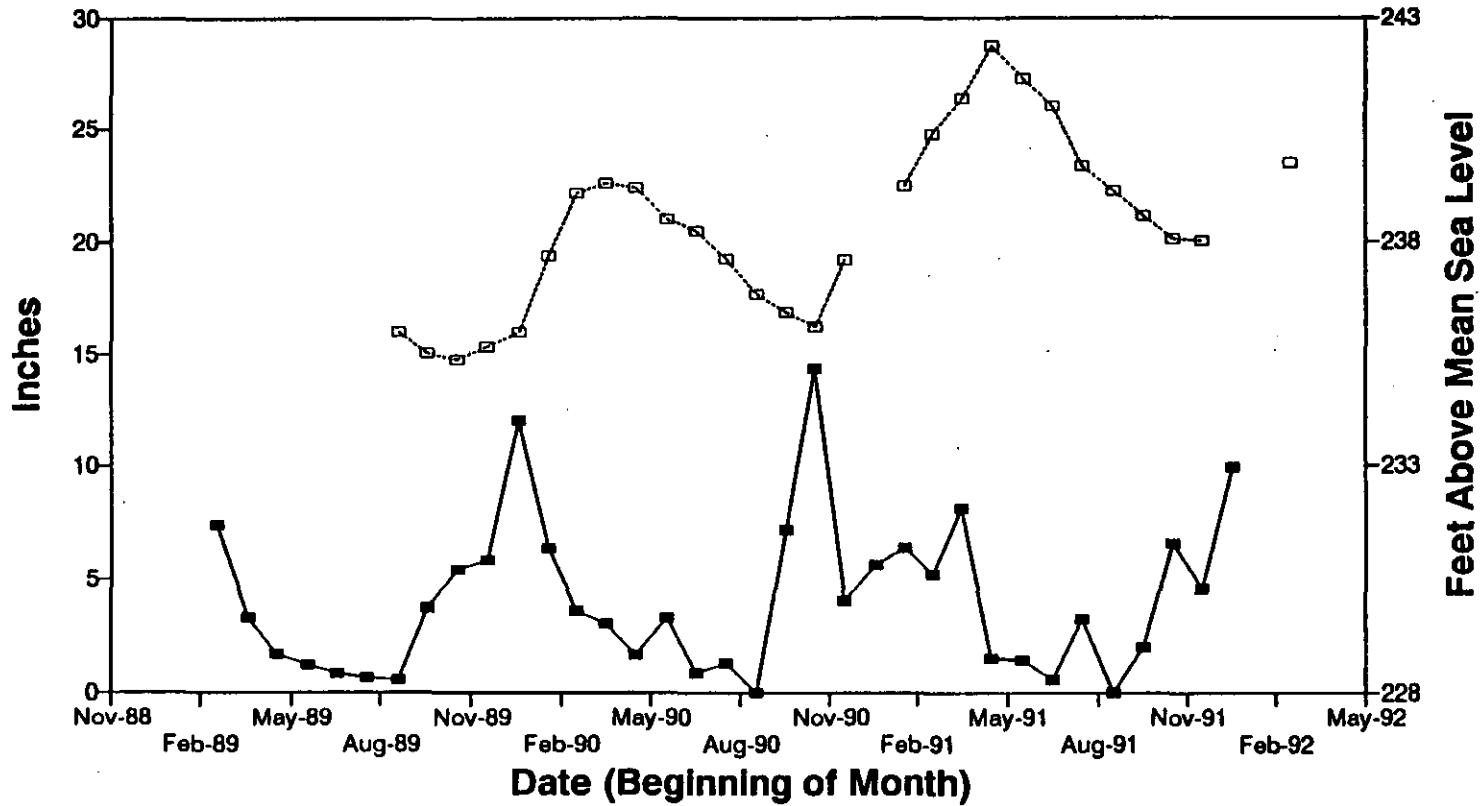


Rain Gage #5
 Well W-11 (Sandys)

Rainfall vs. Water Table Elevation (Monthly)

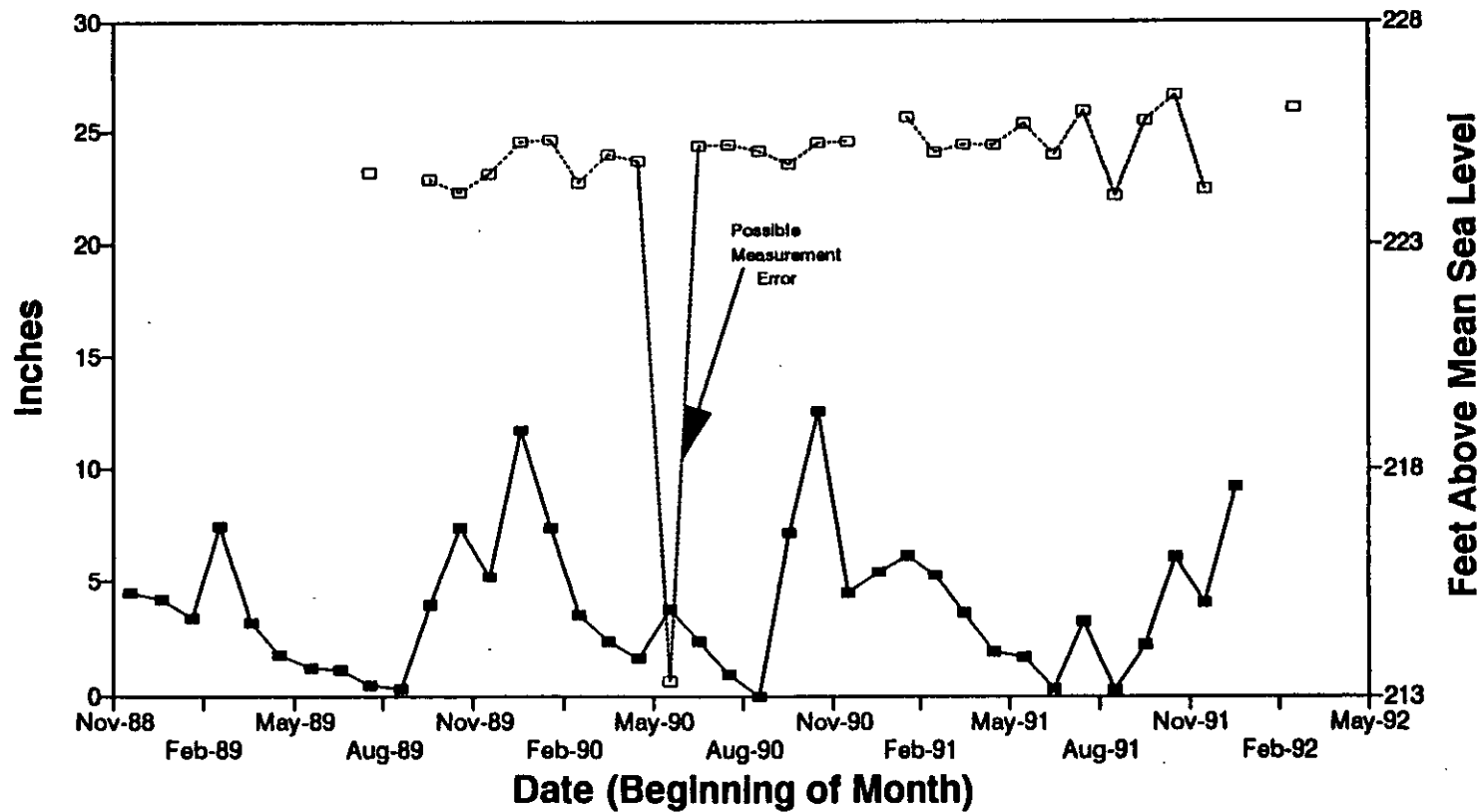


Rainfall vs. Water Table Elevation (Monthly)



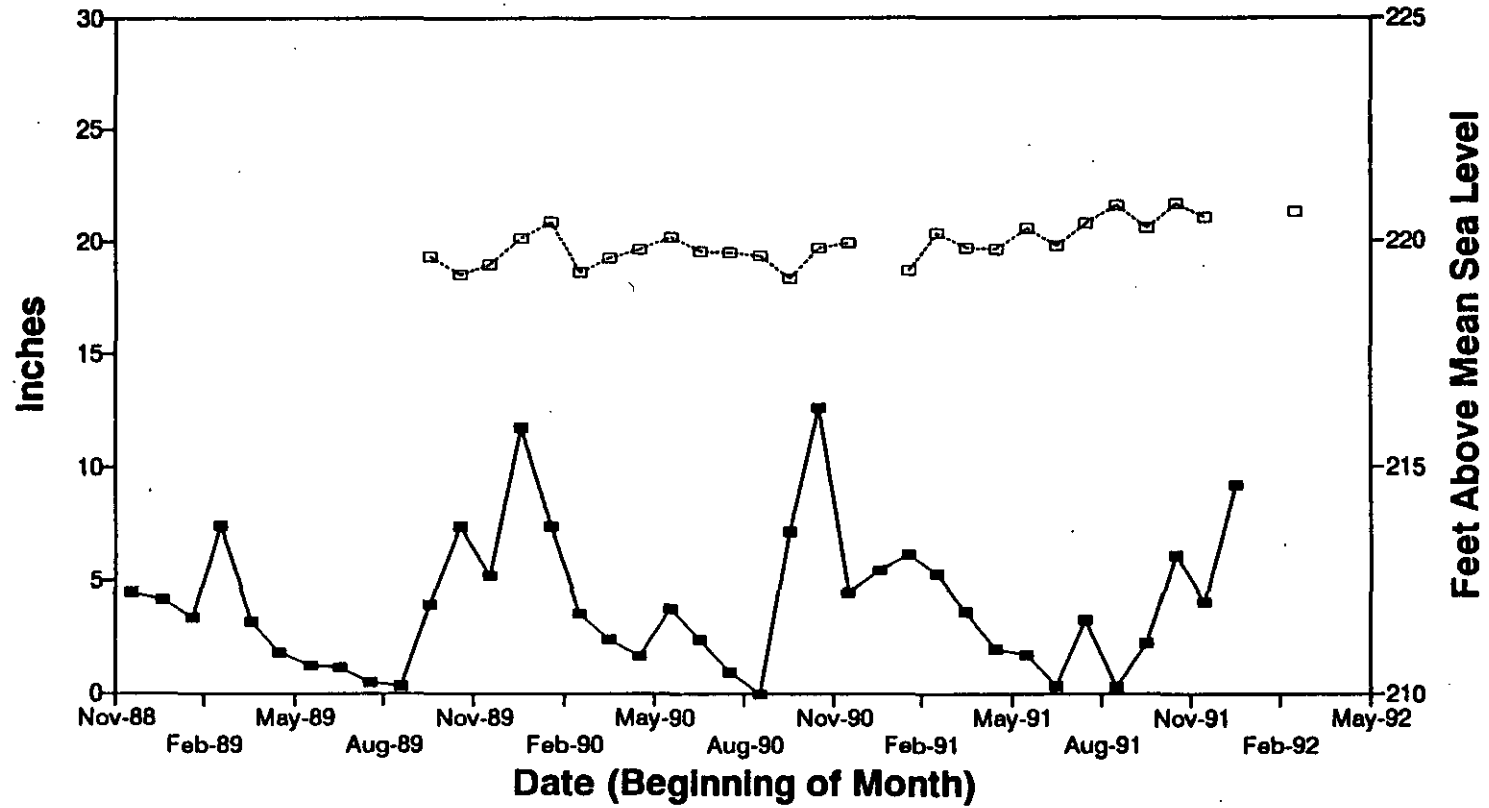
■ Rain Gage #2
□ Well W-13 (Foley)

Rainfall vs. Water Table Elevation (Monthly)



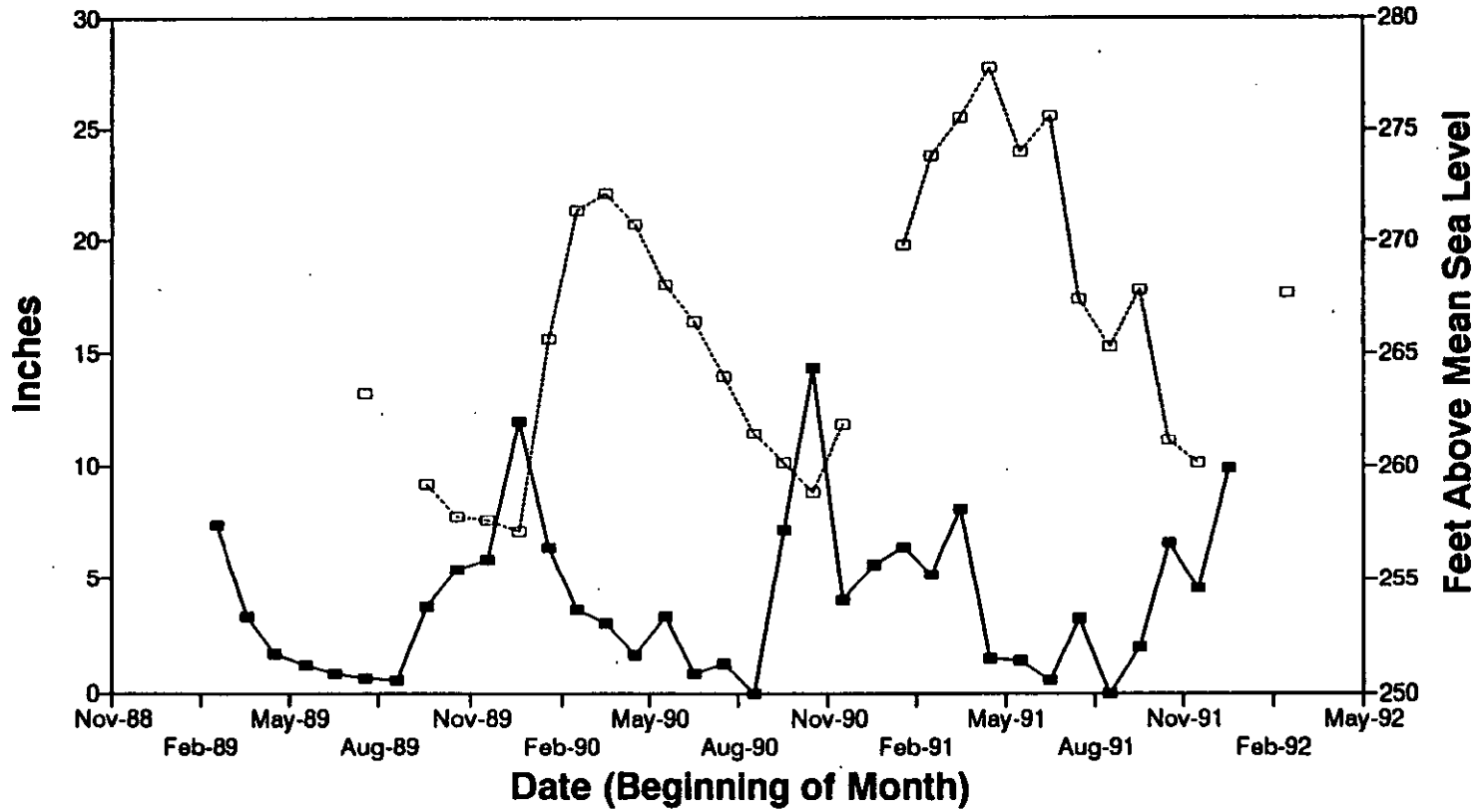
Rain Gage #7
 Well W-14 (Motoyo)

Rainfall vs. Water Table Elevation (Monthly)



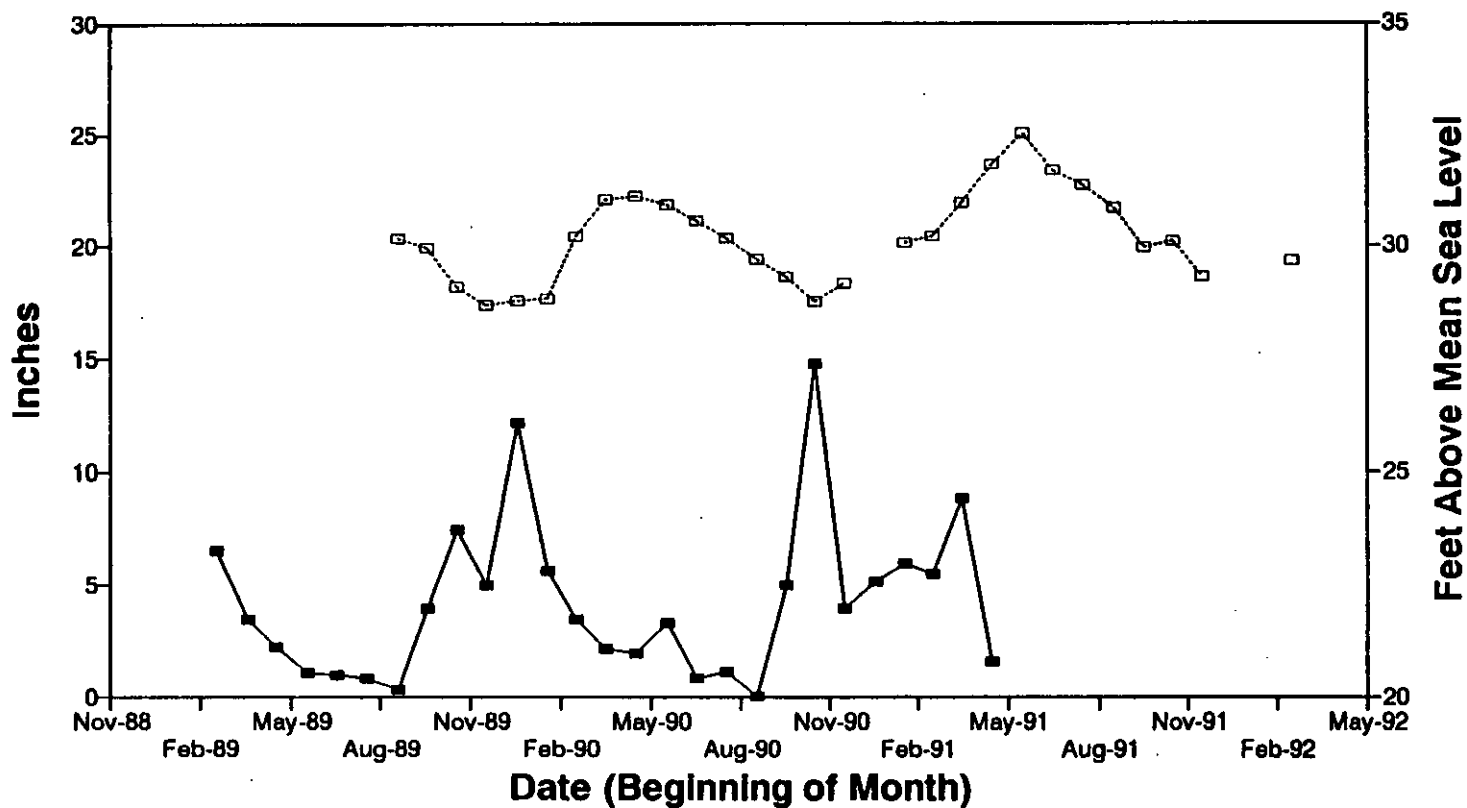
Rain Gage #7
 Well W-15 (Bowen)

Rainfall vs. Water Table Elevation (Monthly)



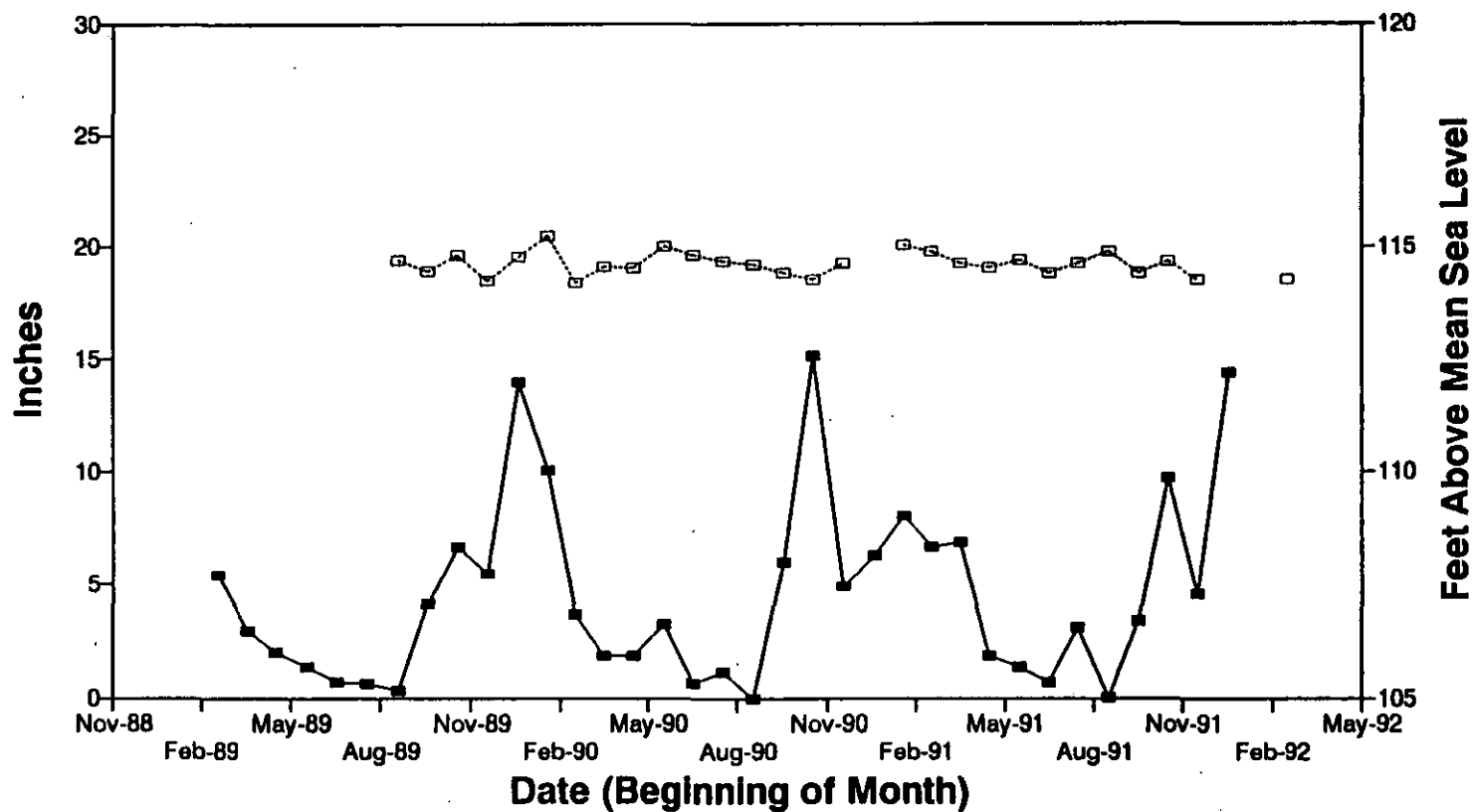
■ Rain Gage #2
□ Well W-16a (Bkr/K1)

Rainfall vs. Water Table Elevation (Monthly)



Rain Gage #4
 Well W-17 (Guido/P)

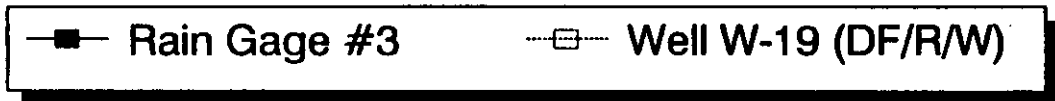
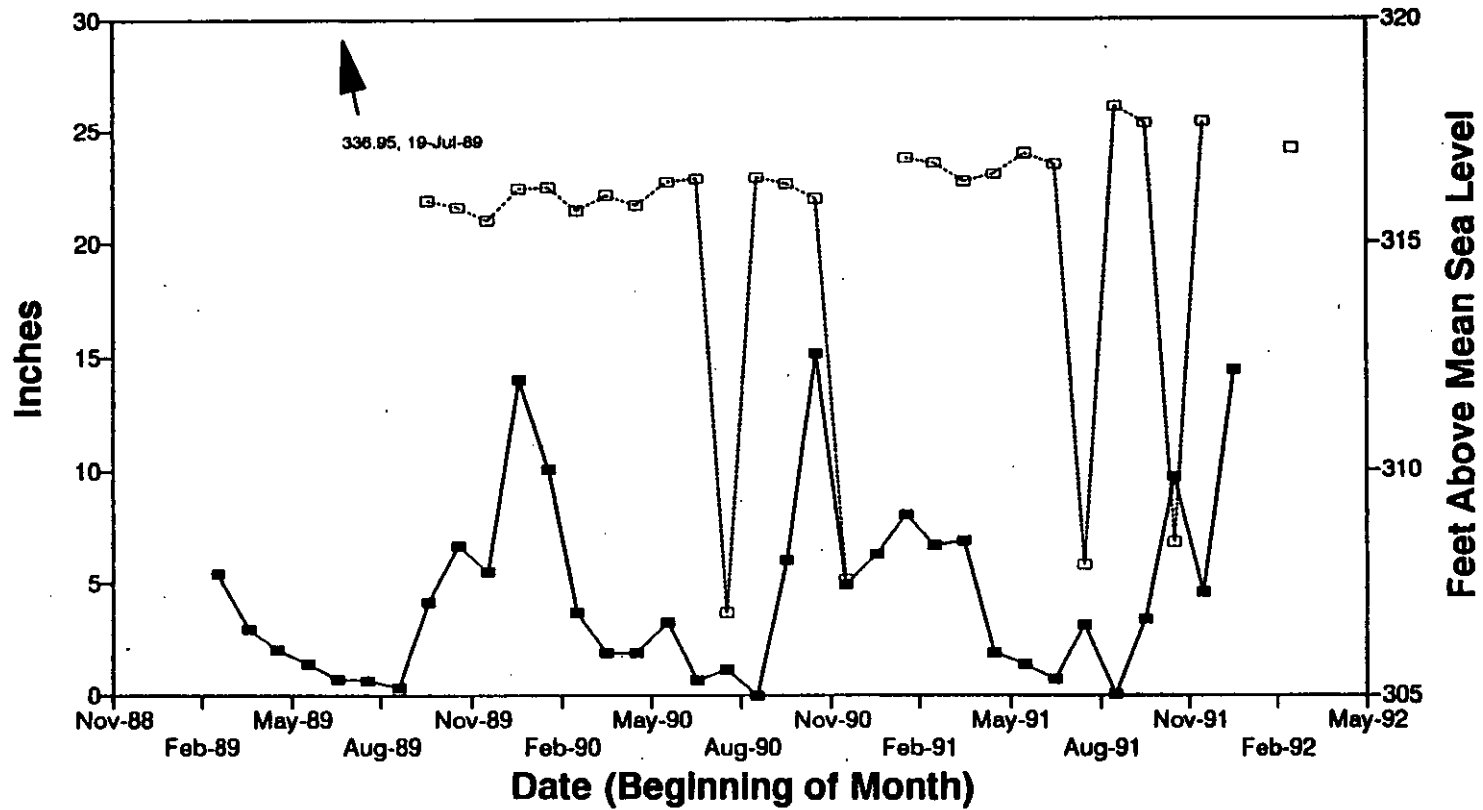
Rainfall vs. Water Table Elevation (Monthly)



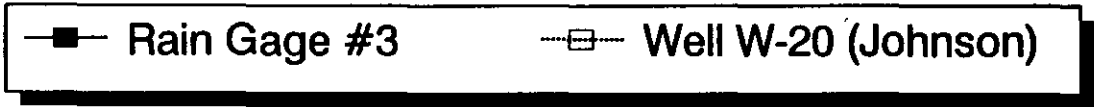
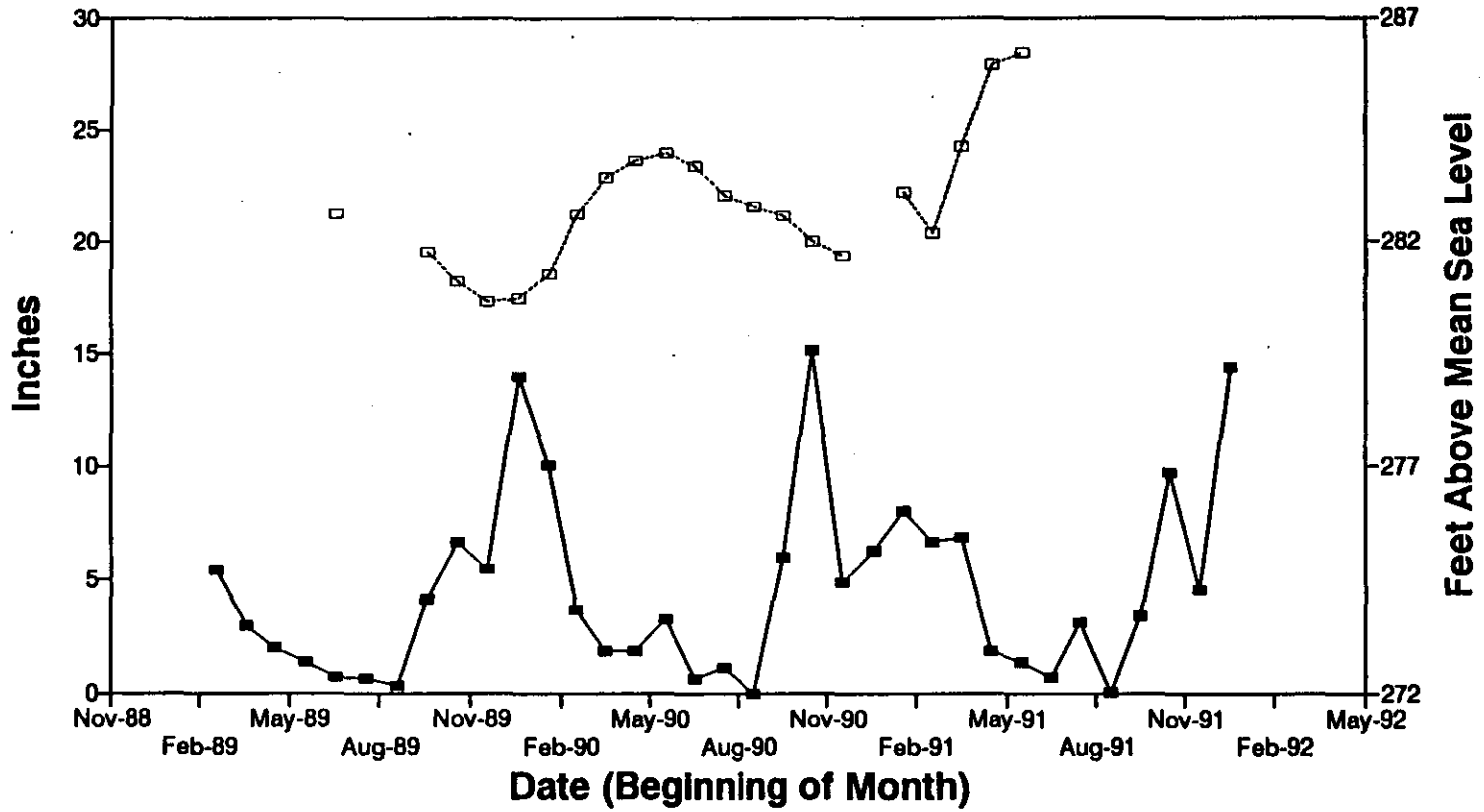
Rain Gage #3

 Well W-18 (Hamiltn)

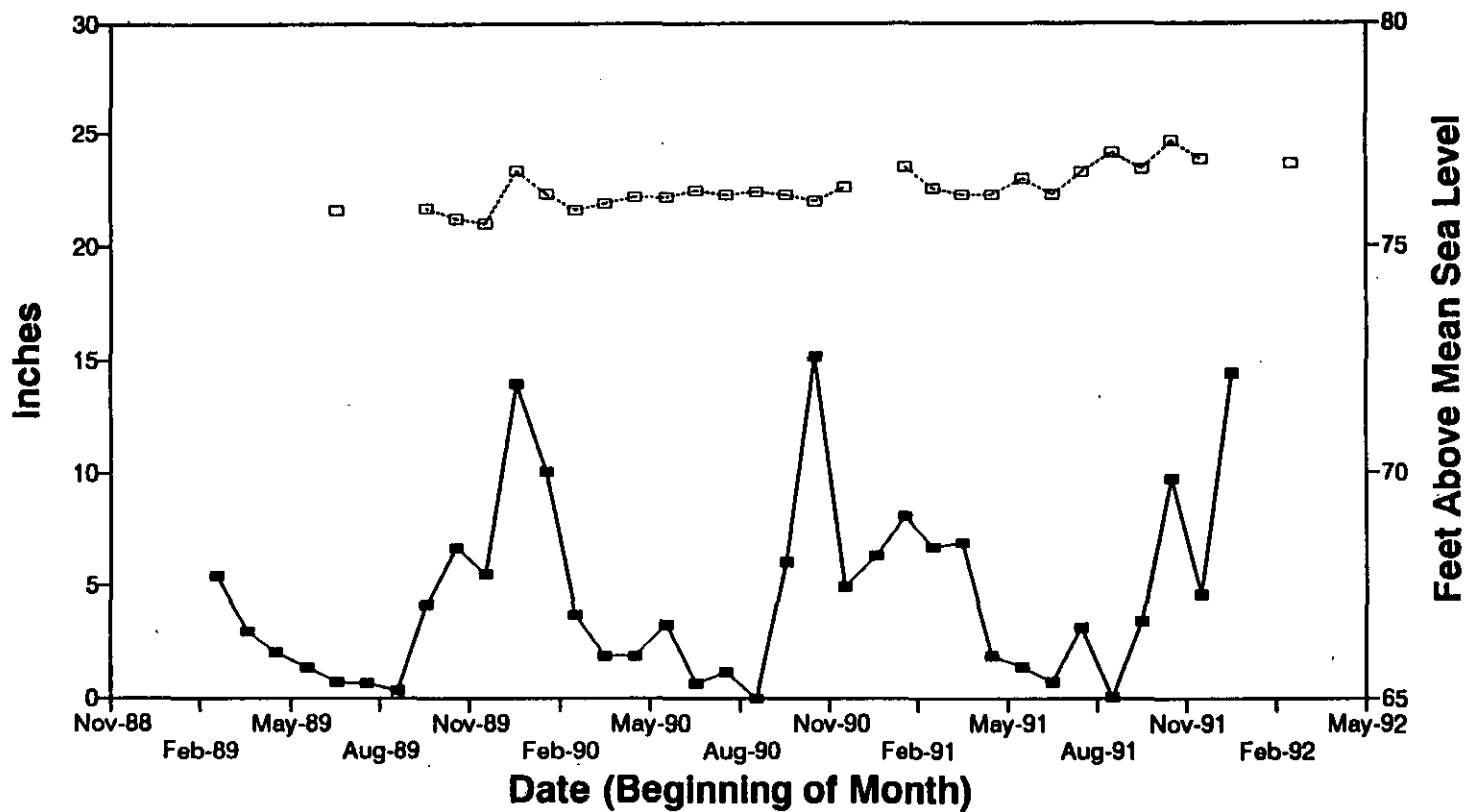
Rainfall vs. Water Table Elevation (Monthly)



Rainfall vs. Water Table Elevation (Monthly)



Rainfall vs. Water Table Elevation (Monthly)



Rain Gage #3
 Well W-21 (Kuperb)

APPENDIX I
**LABORATORY ANALYTICAL DATA FOR FRESHWATER, MARINE
WATER, FRESHWATER SEDIMENT, MARINE-WATER
SEDIMENT, AND MARINE SHELLFISH SAMPLES**

DRAFT

(May 14, 1993 rev.)

BEALL CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6059	8655	10462	13212	14443	789	3185
STATION NUMBER:		B6	B6	B6	B6	B6	B6	B6
PARAMETER:	DETECTION LIMIT	08/07/91	09/18/91	10/17/91	11/20/91	12/10/91	01/16/92	02/12/92
TOTAL COLIFORMS (MPN/100 ml)	1	220	98	10	2	35	5	2
FECAL COLIFORMS (MPN/100 ml)	1	28	18	2	2 U	55	8	2
TOTAL DISSOLVED SOLIDS (mg/l)	1	460	120	160	150	110	130	120
TOTAL HARDNESS (mg/l as CaCO3)	1	230	76	71	84	76	71	64
TOTAL ALKALINITY (mg/l as CaCO3)	1	60	37	59	58	51	60	64
CARBONATE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	60		59	58	51	60	64
HYDROXIDE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	24		12	14	14	12	11
IRON (mg/l)	0.01	0.1 U		0.09	0.07	0.1	0.12	0.17
MANGANESE (mg/l)	0.002	0.02 U		0.023	0.02	0.022	0.029 B	0.025
MAGNESIUM (mg/l)	0.01	42		10	12	10	9.9	8.8
POTASSIUM (mg/l)	1	7.7		1 U	1 U	1.7	2.4	1.5
SODIUM (mg/l)	0.5	260		6.9	26	6.4	6	5.4 B
SILICA (mg/l)	0.1	1 U		13	5.8	13	12	11
ZINC (mg/l)	0.02	0.057 B		0.004	0.002	0.008	0.1 B	0.002 U
SILVER (mg/l)	0.01	0.1 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.001 U		0.001 U	0.002	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.03 U		0.006	0.009	0.012	0.009	0.007
COPPER (mg/l)	0.002	0.02 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.026		0.001 U	0.001 U	0.002	0.002	0.009
CHROMIUM (mg/l)	0.006	0.06 U		0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.003		0.003	0.003	0.003	0.004 B	0.001
CHLORIDE (mg/l)	1	6.1	43	5.6	220	1 U	3.7	4.3 B
SULFATE (mg/l)	1	24	21	18	17	17	18	17
NITRATE (mg/l)	0.2	0.98	0.89	0.94	1.4	1.2	1	1.5
NITRITE (mg/l)	0.2	0.003		0.01 U	0.01 U	0.001 U	0.003	0.003
FLUORIDE (mg/l)	0.2	0.02		0.1 U	0.08	0.18	0.1	0.07

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count
 C:\PLAN\VSW\WQJUDD.FRE

BEALL CREEK ----- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	5361	7492	11270	13521	16163	18618	19953
STATION NUMBER:	B6	B6	B6	B6	B6	B6	B6
PARAMETER:	03/12/92	04/08/92	05/21/91	06/18/92	07/27/92	08/25/92	09/16/92
TOTAL COLIFORMS (MPN/100 ml)	13	2 U	8	23	70	70	46
FECAL COLIFORMS (MPN/100 ml)	13	2 U	8	13	23	13	33
TOTAL DISSOLVED SOLIDS (mg/l)	120	150	110	130	140	120	90
TOTAL HARDNESS (mg/l as CaCO3)	83	74	69	80	80	78	78
TOTAL ALKALINITY (mg/l as CaCO3)	60	56	60	59	60	64	63
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	60	56	60	59	60	64	63
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	15	13	12	14	14	13	13
IRON (mg/l)	0.24	0.1 B	0.08	0.12	0.17	0.11	0.13
MANGANESE (mg/l)	0.029	0.048	0.018 B	0.02	0.02	0.016	0.02
MAGNESIUM (mg/l)	11	10	9.5	11	11	11	11
POTASSIUM (mg/l)	1.2	1.8	1.9	1.9	1.7	1.8	2.5
SODIUM (mg/l)	6.8	6.1	6.4	6.7	7.3	7.8 B	7
SILICA (mg/l)	13	30	28	34	30	32	32
ZINC (mg/l)	0.009 B	0.014 B	0.013 B	0.034	0.044	0.024 B	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025
SELENIUM (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.009	0.008	0.006	0.007	0.008	0.007 B	0.005
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.004	0.002 U	0.002 U	0.021 B
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.006	0.003	0.001 U	0.002 B	0.004	0.003	0.001 B
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.002	0.002	0.001	0.002	0.003	0.001	0.004 B
CHLORIDE (mg/l)	2.3	3.8	4.9	4.3	4.3	5.9	4
SULFATE (mg/l)	16	20	18	28	21	15	15
NITRATE (mg/l)	1.6	1.2	1.2	1.3	1	0.91	1.2
NITRITE (mg/l)	0.001 U	0.001	0.001 U	0.003	0.001 U	0.001 U	0.001 U
FLUORIDE (mg/l)	0.06	0.08	0.06	0.12	0.05	0.08	0.03

QUALIFIER DEFINITIONS:
 B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count
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BEALL CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6056	6057	6058	13208	13209	13210	7489
STATION NUMBER:	DETECTION	B2	B3 SOUTH	B4 NORTH	B2	B3 SOUTH	B4 NORTH	B2
PARAMETER:	LIMIT	08/07/91	08/07/91	08/07/91	11/20/91	11/20/91	11/20/91	04/08/92
TOTAL COLIFORMS (MPN/100 ml)	1	15	15	15	10	45	15	2 U
FECAL COLIFORMS (MPN/100 ml)	1	18	8	14	2 U	2	2 U	2 U
TOTAL DISSOLVED SOLIDS (mg/l)	1	38000	30000	29000	28000	30000	29000	27000
TOTAL HARDNESS (mg/l as CaCO3)	1	370	5800	5800	4600	4000	4800	4900
TOTAL ALKALINITY (mg/l as CaCO3)	1	100	110	100	100	100	100	100
CARBONATE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	100	110	100	100	100	100	100
HYDROXIDE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	130	360	360	290	260	310	310
IRON (mg/l)	0.01	51	1.6	0.1 U	0.01 U	0.4	0.19	0.17
MANGANESE (mg/l)	0.002	2.6	0.11	0.02 U	0.002 U	0.023	0.011	0.011
MAGNESIUM (mg/l)	0.01	11	1200	1200	940	820	970	1000
POTASSIUM (mg/l)	1	1.8	360	370	370	310	390	320
SODIUM (mg/l)	0.5	26 B	8400	8600	3000	3000	3000	8800
SILICA (mg/l)	0.1	1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	4.7
ZINC (mg/l)	0.02	0.29	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.004 B
SILVER (mg/l)	0.01	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U	0.001 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U	0.003 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.089	0.044	0.041	0.017	0.016	0.019	0.003 U
COPPER (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.004 U	0.004 U	0.008	0.003 U	0.003 U	0.003 U	0.001 U
CHROMIUM (mg/l)	0.006	0.06 U	0.06 U	0.006 U	0.006 U	0.006 U	0.006 U	0.009
ARSENIC (mg/l)	0.001	0.007	0.004 U	0.004 U	0.004	0.003 U	0.003	0.007
CHLORIDE (mg/l)	1	13000	14000	15000	4400	17000	18000	15000
SULFATE (mg/l)	1	2500	2400	2500	2300	2400	2300	2200
NITRATE (mg/l)	0.2	0.066	0.061	0.058	0.36	0.35	0.36	0.22
NITRITE (mg/l)	0.2	0.005	0.007	0.007	0.01 U	0.01 U	0.01 U	0.004
FLUORIDE (mg/l)	0.2	0.17	0.16	0.16	0.76	0.74	0.72	0.62

QUALIFIER DEFINITIONS:
 B = Parameter detected in blank
 U = Parameter undetected
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 TNTC = Too numerous to count

BEALL CREEK ----- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	7490	7491	16160	16161	16162	18615	18616
STATION NUMBER:	B3 SOUTH	B4 NORTH	B2	B3 SOUTH	B4 NORTH	B2	B3 SOUTH
PARAMETER:	04/08/92	04/08/92	07/27/92	07/27/92	07/27/92	08/25/92	08/25/92
TOTAL COLIFORMS (MPN/100 ml)	2 U	2 U	8	4	4	4	4
FECAL COLIFORMS (MPN/100 ml)	2 U	2 U	4	2	2	2 U	4
TOTAL DISSOLVED SOLIDS (mg/l)	27000	27000	30000	30000	30000	24000	23000
TOTAL HARDNESS (mg/l as CaCO3)	5400	5400	4500	4600	4700	4900	4800
TOTAL ALKALINITY (mg/l as CaCO3)	110	100	100	97	95	92	100
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	110	100	100	97	95	92	100
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	350	340	270	280	290	320	300
IRON (mg/l)	0.32	0.27	0.1	0.05	0.08	0.05 B	0.05 B
MANGANESE (mg/l)	0.016	0.017	0.007	0.007	0.01	0.006	0.005
MAGNESIUM (mg/l)	1100	1100	930	950	970	1000	980
POTASSIUM (mg/l)	370	350	510	530	550	560	530
SODIUM (mg/l)	10000	9500	8600	9300	9100	9000	8800
SILICA (mg/l)	5.6	6.2	3.4 B	2.4 B	2.8 B	3	2.4 B
ZINC (mg/l)	0.004 B	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.003 U	0.001 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003 U	0.003 U	0.006	0.007	0.007	0.011 B	0.007 B
COPPER (mg/l)	0.002 U	0.002 U	0.027	0.012	0.011	0.002 U	0.002 U
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
CHROMIUM (mg/l)	0.007	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001 U	0.001 U	0.003 U	0.003 U	0.003 U	0.009	0.004
CHLORIDE (mg/l)	15000	16000	15000	15000	12000	18000	17000
SULFATE (mg/l)	2200	2300	2200	2200	2200	2000	2000
NITRATE (mg/l)	0.23	0.22	0.094	0.097	0.1	0.06	0.05
NITRITE (mg/l)	0.005	0.005	0.006	0.006	0.005	0.003	0.003
FLUORIDE (mg/l)	0.62	0.62	0.1	0.24	0.32	0.34	0.34

QUALIFIER DEFINITIONS:

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LABORATORY SAMPLE NUMBER:	18617
STATION NUMBER:	B4 NORTH
PARAMETER:	08/25/92

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TOTAL COLIFORMS (MPN/100 ml)	2
FECAL COLIFORMS (MPN/100 ml)	2
TOTAL DISSOLVED SOLIDS (mg/l)	21000
TOTAL HARDNESS (mg/l as CaCO3)	4700
TOTAL ALKALINITY (mg/l as CaCO3)	100
CARBONATE (mg/l as CaCO3)	1 U
BICARBONATE (mg/l as CaCO3)	100
HYDROXIDE (mg/l as CaCO3)	1 U
CALCIUM (mg/l)	300
IRON (mg/l)	0.04 B
MANGANESE (mg/l)	0.005
MAGNESIUM (mg/l)	950
POTASSIUM (mg/l)	510
SODIUM (mg/l)	9100
SILICA (mg/l)	3
ZINC (mg/l)	0.002 U
SILVER (mg/l)	0.01 U
SELENIUM (mg/l)	0.001 U
MERCURY (mg/l)	0.0002 U
BARIUM (mg/l)	0.011 B
COPPER (mg/l)	0.002 U
CADMIUM (mg/l)	0.002 U
LEAD (mg/l)	0.001 U
CHROMIUM (mg/l)	0.006 U
ARSENIC (mg/l)	0.004
CHLORIDE (mg/l)	16000
SULFATE (mg/l)	2000
NITRATE (mg/l)	0.05
NITRITE (mg/l)	0.003
FLUORIDE (mg/l)	0.35

QUALIFIER DEFINITIONS:

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U = Parameter undetected.
G = Greater than or equal to
TNTC = Too numerous to count

BEALL CREEK ---- MARINE SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6052	13220	7499	16173	18628
STATION NUMBER:	DETECTION	B5	B5	B5	B5	B5
PARAMETER;	LIMIT	08/07/91	11/20/91	04/08/92	07/27/92	08/25/92
TOTAL COLIFORMS (MPN/100 ml)	1	78	180 U	130	130	45
FECAL COLIFORMS (MPN/100 ml)	1	78	180 U	20	20	45
CHLORIDE (ug/g)	1		4300	5000	2400	3500
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	0.06	0.49 U	2.2	0.12	0.2 U
TOTAL SOLIDS (%)		79	80	83	0.84	84
SULFATE (ug/g)	1		150	400	760	630
ARSENIC (ug/g)	0.001	0.13	2	2.4	3.6	1.3
BARIUM (ug/g)	0.003	53	20	43	25	24
CALCIUM (ug/g)	0.01	7300	5200	8900	14000	9200
CADMIUM (ug/g)	0.002	0.28 U	0.22 U	0.22 U	0.2 U	0.15 U
CHROMIUM (ug/g)	0.006	44	28	27	31	29
COPPER (ug/g)	0.002	5.4	7.2	7	5.8	6.2
IRON (ug/g)	0.01	16000	15000	17000	13000	14000
MERCURY (ug/g)	0.0002	0.009	0.011	0.011 U	0.012 U	0.012 U
POTASSIUM (ug/g)	1	1600	880	1200	1000	1000
MAGNESIUM (ug/g)	0.01	6700	5500	6300	5200	5500
MANGANESE (ug/g)	0.002	250	210	250	170	190
SODIUM (ug/g)	0.02	2400	3000	3000	3800	3700
LEAD (ug/g)	0.001	7.6	3.8	1.7	4.3	0.15 U
SELENIUM (mg/l)	0.001	0.54 U	0.34 U	0.11 U	0.12 U	0.07 U
SILICON (ug/g)	0.04	330		120	60	250
SILVER (ug/g)	0.01	1.4 U	1.1 U	1.1 U	1 U	0.7 U
ZINC (ug/g)	0.02	24	26	31	26	27

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

BEALL CREEK ---- MARINE SHELLFISH ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6051	13219	7498	7500	16170	16171	16172
STATION NUMBER:		B1	B1	B1	B7	B1	B7	B7D
PARAMETER:	DETECTION LIMIT	08/07/91	11/20/91	04/08/92	04/08/92	07/27/92	07/27/92	07/27/92
TOTAL COLIFORMS (MPN/100 ml)	1	490	45	78	170	950	1300	3500
FECAL COLIFORMS (MPN/100 ml)	1	230	20	20	130	490	790	1700
TOTAL SOLIDS (%)		14	29	14	19	14	15	17
ARSENIC (ug/g)	0.001	5.9	2.7	2	2.9	2.1	3	1.6
BARIUM (ug/g)	0.003	1	0.23	0.49	0.33	0.19	0.14	0.31
CALCIUM (ug/g)	0.01	3400	2400	680	620	560	490	1100
CADMIUM (ug/g)	0.002	1.6	0.42	0.35	0.07	0.25	0.09 U	0.08 U
CHROMIUM (ug/g)	0.006	1.4	0.07	0.24	0.39	0.25 U	0.55	0.38
COPPER (ug/g)	0.002	6.1	1	1.1	3.6	1.9	2.4	1.7
IRON (ug/g)	0.01	210	24	140	92	58	81	83
MERCURY (ug/g)	0.0002	0.05 U	0.013 U	0.006 U	0.008 U	0.01 U	0.01 U	0.01 U
POTASSIUM (ug/g)	1	10000	2600	1900	2900	2000	2100	2100
MAGNESIUM (ug/g)	0.01	3400	720	720	790	810	810	810
MANGANESE (ug/g)	0.002	6.4	1.6	3.3	3.9	1.9	1.9	2
SODIUM (ug/g)	0.02	27000	23000	4900	7300	5700	5100	4800
LEAD (ug/g)	0.001	0.2 U	0.04	0.36	0.57	1.2	1.1	0.24
SELENIUM (mg/l)	0.001	0.6	0.34	1.2	1.7	0.78	0.68	0.54
SILICON (ug/g)	0.04	7 U	0.76 U	160	150	69	80	110
SILVER (ug/g)	0.01	1 U	0.2	0.2 U	2.7	0.5 U	2.6	2.5
ZINC (ug/g)	0.02	68	12	16	20	14	13	12

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count
- B1 = Littlenecks
- B7 = Butterclams

LABORATORY SAMPLE NUMBER:	18625	18626	18627
STATION NUMBER:	B1	B7	B8
PARAMETER:	08/25/92	08/25/92	08/25/92
TOTAL COLIFORMS (MPN/100 ml)	45	310	78
FECAL COLIFORMS (MPN/100 ml)	20	68	78
TOTAL SOLIDS (%)	13	18	13
ARSENIC (ug/g)	1.9	2.1	1.4
BARIUM (ug/g)	0.53	0.31	0.46
CALCIUM (ug/g)	730	1000	750
CADMIUM (ug/g)	0.41	0.07 U	0.32
CHROMIUM (ug/g)	0.19 U	0.22	0.2 U
COPPER (ug/g)	2.1	2.9	1.8
IRON (ug/g)	88	100	73
MERCURY (ug/g)	0.01 U	0.01 U	0.01 U
POTASSIUM (ug/g)	1800	2300	1700
MAGNESIUM (ug/g)	940	860	830
MANGANESE (ug/g)	2.2	2.3	1.8
SODIUM (ug/g)	7200	5300	6300
LEAD (ug/g)	0.03 U	0.03	0.1
SELENIUM (mg/l)	0.25	0.13	0.37
SILICON (ug/g)	190	130	150
SILVER (ug/g)	0.3 U	2.1	0.3 U
ZINC (ug/g)	14	15	12

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
U = Parameter undetected
G = Greater than or equal to
TNTC = Too numerous to count
B1 = Littlenecks
B7 = Butterclams

FISHER CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		5936	8658	10466	13044	14447	793	3189
STATION NUMBER:		F1	F1	F1	F1	F1	F1	F1
PARAMETER:	DETECTION LIMIT	08/06/91	09/18/91	10/17/91	11/19/91	12/10/91	01/16/92	02/13/92
TOTAL COLIFORMS (MPN/100 ml)	1	730	690	87	540	35	120	64
FECAL COLIFORMS (MPN/100 ml)	1	310	88	50	350	35	102	64
TOTAL DISSOLVED SOLIDS (mg/l)	1	120	100	80	130	110	110	82
TOTAL HARDNESS (mg/l as CaCO3)	1	80	61	58	66	58	51	39
TOTAL ALKALINITY (mg/l as CaCO3)	1	50	50	53	31	40	44	72
CARBONATE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	50		53	31	40	44	72
HYDROXIDE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	16		11	12	12	10	7.9
IRON (mg/l)	0.01	0.21		0.09	1.4	0.22	0.53	0.37
MANGANESE (mg/l)	0.002	0.02 U		0.025	0.16	0.021	0.046 B	0.029
MAGNESIUM (mg/l)	0.01	9.7		7.3	8.7	6.7	6.3	4.6
POTASSIUM (mg/l)	1	10 U		1 U	1 U	1 U	1.4	1 U
SODIUM (mg/l)	0.5	9.6		5.8	25	6.3	6.1	4.5 B
SILICA (mg/l)	0.1	16		14	5.4	12	11	0.1 U
ZINC (mg/l)	0.02	0.17		0.002 U	0.015	0.005	0.009 B	0.041
SILVER (mg/l)	0.01	0.1 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.03 U		0.007	0.024	0.011	0.012	0.009
COPPER (mg/l)	0.002	0.02 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.022		0.001 U	0.003	0.001 U	0.005	0.001
CHROMIUM (mg/l)	0.006	0.06 U		0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.005		0.003	0.004	0.004	0.022	0.001
CHLORIDE (mg/l)	1	8.6	4.1	5.7	4.9	4	3.3	3.2 B
SULFATE (mg/l)	1	6.8 B	16	12	17	1 U	15	9.8
NITRATE (mg/l)	0.2	0.069	0.65	0.6	2	1.2	1	1.3
NITRITE (mg/l)	0.2	0.004		0.01 U	0.012	0.003	0.007	0.006
FLUORIDE (mg/l)	0.2	0.06		0.1 U	0.02 U	0.16	0.1	0.04

QUALIFIER DEFINITIONS:
 B = Parameter detected in blank
 U = Parameter undetected
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 TNTC = Too numerous to count

FISHER CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	5365	7191	11274	13525	16409	18846	19957
STATION NUMBER:	F1	F1	F1	F1	F1	F1	F1
PARAMETER:	03/12/92	04/06/92	05/21/92	06/18/92	07/29/92	08/27/92	09/16/92
TOTAL COLIFORMS (MPN/100 ml)	70	33	33	920	1600	920	540
FECAL COLIFORMS (MPN/100 ml)	7	33	33	920	1600	920	350
TOTAL DISSOLVED SOLIDS (mg/l)	84	150	98	110	98	84	96
TOTAL HARDNESS (mg/l as CaCO3)	60	49	59	61	58	65	65
TOTAL ALKALINITY (mg/l as CaCO3)	40	28	52	52	55	59	57
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	40	28	52	52	55	59	57
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	13	9.7	12	12	12	13	13
IRON (mg/l)	0.38	0.31	0.38	0.42	0.41	0.27	0.2
MANGANESE (mg/l)	0.031	0.028	0.034	0.034	0.031	0.024	0.019
MAGNESIUM (mg/l)	6.6	6.1	7	7.6	6.8	7.9	7.9
POTASSIUM (mg/l)	1 U	1 U	1.2	1.3	1.1	1.2	1.4
SODIUM (mg/l)	6.6	7.8	6.9	6.8	6.9	6.6	7.3
SILICA (mg/l)	12	24	30	34	32	30	32
ZINC (mg/l)	0.018 B	0.027 B	0.026 B	0.032	0.006	0.02 B	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.012	0.007	0.008	0.011	0.012	0.008 B	0.01
COPPER (mg/l)	0.002 U	0.002 U	0.008	0.004	0.002 U	0.002 U	0.012 B
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.002	0.002	0.004	0.002 B	0.001 U	0.001 B	0.004 B
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.003	0.002	0.002	0.002	0.002	0.003 B
CHLORIDE (mg/l)	2.2	3.7	4.2	2.6	4.7	4.9	2.7
SULFATE (mg/l)	10	12	11	20	11	10	9.3
NITRATE (mg/l)	0.97	0.74	0.81	0.69	0.62	0.66	0.64
NITRITE (mg/l)	0.001 U	0.002	0.001 U	0.005	0.003	0.001 U	0.001
FLUORIDE (mg/l)	0.04	0.08	0.05	0.11	0.05	0.06	0.06

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

FISHER CREEK ----- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		5937	5938	5939	13045	13046	13047	7192
STATION NUMBER:		F5	F7 SOUTH	F6 NORTH	F5	F6 NORTH	F7 SOUTH	F5
PARAMETER:	DETECTION LIMIT	08/06/91	08/06/91	08/06/91	11/19/91	11/19/91	11/19/91	04/06/92
TOTAL COLIFORMS (MPN/100 ml)	1	22	60	68	130	79	79	8
FECAL COLIFORMS (MPN/100 ml)	1	28	10	8	49	27	23	2 U
TOTAL DISSOLVED SOLIDS (mg/l)	1	32000	33000	30000	16000	27000		26000
TOTAL HARDNESS (mg/l as CaCO3)	1	6300	5400	5300	4400	4300	4400	4400
TOTAL ALKALINITY (mg/l as CaCO3)	1	110	94	95	100	100		80
CARBONATE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	110	94	95	100	100		80
HYDROXIDE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	390	330	320	280	280	280	260
IRON (mg/l)	0.01	0.01 U	0.1 U	0.1 U	0.01 U	0.01 U	0.06	0.31
MANGANESE (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.01
MAGNESIUM (mg/l)	0.01	1300	1100	1100	910	880	900	900
POTASSIUM (mg/l)	1	420	35	320	350	340	350	400
SODIUM (mg/l)	0.5	9100	7400	7200	3000	3000	3000	7800
SILICA (mg/l)	0.1	1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	6.4
ZINC (mg/l)	0.02	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
SILVER (mg/l)	0.01	0.1 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U	0.003 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.045	0.041	0.039	0.017	0.017	0.017	0.003 U
COPPER (mg/l)	0.002	0.002 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.008	0.004 U	0.004 U	0.003 U	0.003 U	0.003 U	0.002
CHROMIUM (mg/l)	0.006	0.06 U	0.06 U	0.06 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.004 U	0.004 U	0.005	0.003 U	0.003 U	0.003 U	0.001 U
CHLORIDE (mg/l)	1	12000	13000	11000	16000	16000	16000	14000
SULFATE (mg/l)	1	2600	2200	2200	2800	2500	2400	2100
NITRATE (mg/l)	0.2	0.01 U	0.01 U	0.01 U	0.33	0.31		0.087
NITRITE (mg/l)	0.2	0.002	0.002	0.003	0.009	0.008	0.01	0.005
FLUORIDE (mg/l)	0.2	0.15	0.14	0.13	0.74	0.72	0.41	0.52

QUALIFIER DEFINITIONS:

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- TNTC = Too numerous to count

FISHER CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	7193	7194	16410	16411	16412	18847	18848
STATION NUMBER:	F6 NORTH	F7 SOUTH	F5	F6 NORTH	F7 SOUTH	F5	F6 NORTH
PARAMETER:	04/06/92	04/06/92	07/29/92	07/29/92	07/29/92	08/27/92	08/27/92
TOTAL COLIFORMS (MPN/100 ml)	13	2	2	2	23	17	33
FECAL COLIFORMS (MPN/100 ml)	2	2 U	2 U	2	13	17	17
TOTAL DISSOLVED SOLIDS (mg/l)	26000	27000	29000	29000	28000	23000	25000
TOTAL HARDNESS (mg/l as CaCO3)	4900	5400	4900	4500	4700	4900	4600
TOTAL ALKALINITY (mg/l as CaCO3)	84	78	100	100	100	100	110
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	84	78	100	100	100	100	110
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	320	340	310	280	300	320	300
IRON (mg/l)	0.29	0.75	0.22	0.19	0.28	0.1	0.1
MANGANESE (mg/l)	0.01	0.019	0.007	0.007	0.009	0.005	0.005
MAGNESIUM (mg/l)	1000	1100	1000	930	970	1000	940
POTASSIUM (mg/l)	330	360	570	520	500	570	510
SODIUM (mg/l)	8200	8900	9300	8600	9000	8500	8500
SILICA (mg/l)	8.8	12	3.9	3.4	5.1	3.6	3.9
ZINC (mg/l)	0.002 B	0.018 B	0.002 U	0.002 U	0.053	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.009	0.003 U	0.01	0.008	0.015	0.01 B	0.011 B
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
CHROMIUM (mg/l)	0.006 U	0.009	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001 U	0.001 U	0.003 U	0.003 U	0.003 U	0.004 U	0.004 U
CHLORIDE (mg/l)	14000	16000	31000	9500	130	16000	16000
SULFATE (mg/l)	2300	2300	1900	2000	2200	2300	2300
NITRATE (mg/l)	0.079	0.077	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
NITRITE (mg/l)	0.005	0.005	0.001	0.001	0.002	0.001 U	0.001 U
FLUORIDE (mg/l)	0.51	0.49	0.36	0.36	0.23	0.29	0.29

QUALIFIER DEFINITIONS:

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LABORATORY SAMPLE NUMBER:	18849
STATION NUMBER:	F7 SOUTH
PARAMETER:	08/27/92

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TOTAL COLIFORMS (MPN/100 ml)	2
FECAL COLIFORMS (MPN/100 ml)	2
TOTAL DISSOLVED SOLIDS (mg/l)	24000
TOTAL HARDNESS (mg/l as CaCO3)	4900
TOTAL ALKALINITY (mg/l as CaCO3)	110
CARBONATE (mg/l as CaCO3)	1 U
BICARBONATE (mg/l as CaCO3)	110
HYDROXIDE (mg/l as CaCO3)	1 U
CALCIUM (mg/l)	330
IRON (mg/l)	0.05
MANGANESE (mg/l)	0.005
MAGNESIUM (mg/l)	1000
POTASSIUM (mg/l)	580
SODIUM (mg/l)	9600
SILICA (mg/l)	4.1
ZINC (mg/l)	0.002 U
SILVER (mg/l)	0.01 U
SELENIUM (mg/l)	0.002 U
MERCURY (mg/l)	0.0002 U
BARIUM (mg/l)	0.01 B
COPPER (mg/l)	0.002 U
CADMIUM (mg/l)	0.002 U
LEAD (mg/l)	0.001 U
CHROMIUM (mg/l)	0.006 U
ARSENIC (mg/l)	0.004 U
CHLORIDE (mg/l)	16000
SULFATE (mg/l)	2300
NITRATE (mg/l)	0.01 U
NITRITE (mg/l)	0.001 U
FLUORIDE (mg/l)	0.29

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
U = Parameter undetected
G = Greater than or equal to
TNTC = Too numerous to count

FISHER CREEK ---- MARINE SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		5931	13054	7199	16418	18856
STATION NUMBER:		F4	F4	F4	F4	F4
PARAMETER:	DETECTION LIMIT	08/06/91	11/19/91	04/06/92	07/29/92	08/27/92
TOTAL COLIFORMS (MPN/100 ml)	1	20	180 U	130	40	18 U
FECAL COLIFORMS (MPN/100 ml)	1	18 U	180 U	18 U	18	18 U
CHLORIDE (ug/g)	1		3000	1800	1700	3700
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	0.07	0.29 U	0.16	0.16 U	0.2 U
TOTAL SOLIDS (%)		82	90	87	88	83
SULFATE (ug/g)	1		48 U	220	690	510
ARSENIC (ug/g)	0.001	1.7	1.6	0.11 U	2.4	2.2
BARIUM (ug/g)	0.003	17	20	14	18	19
CALCIUM (ug/g)	0.01	18000	39000	14000	28000	24000
CADMIUM (ug/g)	0.002	0.15 U	0.2 U	0.21 U	0.19 U	0.23 U
CHROMIUM (ug/g)	0.006	11	17	20	22	16
COPPER (ug/g)	0.002	3.5	3.4	5.6	5	3
IRON (ug/g)	0.01	6800	9300	13000	12000	10000
MERCURY (ug/g)	0.0002	0.011	0.273	0.016 U	0.011 U	0.012 U
POTASSIUM (ug/g)	1	730	810	840	910	940
MAGNESIUM (ug/g)	0.01	2600	3400	4000	4500	3700
MANGANESE (ug/g)	0.002	110	170	170	180	170
SODIUM (ug/g)	0.02	2900	3200	2800	3200	3700
LEAD (ug/g)	0.001	5.2	6	2.5	6.8	1.2
SELENIUM (mg/l)	0.001	0.29 U	0.29 U	0.1 U	0.11 U	0.12 U
SILICON (ug/g)	0.04	820	9.8 U	330	170	17
SILVER (ug/g)	0.01	0.7 U	1 U	1 U	0.9 U	1.2 U
ZINC (ug/g)	0.02	13	21	25	24	24

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

FISHER CREEK ---- MARINE SHELLFISH ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		5928	5929	13057	13058	7197	7198	16414
STATION NUMBER:	DETECTION	F2	F3	F2	F3	F2	F3	F8
PARAMETER:	LIMIT	08/06/91	08/06/91	11/19/91	11/19/91	04/06/92	04/06/92	07/29/92
TOTAL COLIFORMS (MPN/100 ml)	1	45	78	18 U	1400	220	490	2400
FECAL COLIFORMS (MPN/100 ml)	1	20	45	18 U	110	130	330	78
TOTAL SOLIDS (%)		15	15	22	26	11	14	13
ARSENIC (ug/g)	0.001	15	11	2.9	2	2.8	5.2	1.6
BARIUM (ug/g)	0.003	2.1	0.4	0.25	0.04	0.39	0.23	0.17
CALCIUM (ug/g)	0.01	5700	4500	1100	440	820	730	520
CADMIUM (ug/g)	0.002	1.9	0.3	0.4	0.07	0.28	0.11	0.21
CHROMIUM (ug/g)	0.006	2.5	3.7	0.05 U	0.28	0.57	0.83	0.6
COPPER (ug/g)	0.002	7.3	6.7	0.72	2.5	0.48	0.95	1
IRON (ug/g)	0.01	150	190	13	35	52	92	60
MERCURY (ug/g)	0.0002	0.09	0.11	0.45	0.1	0.02 U	0.022 U	0.01 U
POTASSIUM (ug/g)	1	6500	8000	2000	2400	1600	1900	1700
MAGNESIUM (ug/g)	0.01	2900	3700	760	670	770	770	830
MANGANESE (ug/g)	0.002	3.1	9.3	0.61	1.1	1.1	1.7	0.99
SODIUM (ug/g)	0.02	25000	25000	24000	3600	6700	6300	6200
LEAD (ug/g)	0.001	0.8	3.5	0.03	0.21	0.68	0.68	0.91
SELENIUM (mg/l)	0.001	1.8	1.8	0.24	23	0.21	0.21	0.8
SILICON (ug/g)	0.04	10 U	14 U	0.79	0.93 U	210	160	62
SILVER (ug/g)	0.01	1 U	5	0.1	0.2	0.2 U	1.1	0.4 U
ZINC (ug/g)	0.02	58	46	12	12	10	10	9

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count
- F2 = Littlenecks
- F3 = Butterclams

16415	16416	18851	18852	18853	18854
F2	F3	F2	F3	F8	F9
07/29/92	07/29/92	08/27/92	08/27/92	08/27/92	08/27/92
330	490	78	1300	130	430
110	490	18 U	1300	78	430
12	16	11	17	11	16
1.9	4.5	3.5	3.6	1.8	2.5
0.19	0.27	0.23	0.27	0.21	0.2
590	1100	760	480	590	790
0.11	0.08 U	0.24	0.06 U	0.2	0.05 U
1.2	1.3	0.16 U	0.37	0.14 U	0.18
0.77	1.6	0.87	2.5	0.89	1.9
39	180	31	160	15	48
0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1700	2200	2200	2200	1600	2200
780	790	1100	790	880	790
0.75	2.7	0.7	2	0.53	1.3
5900	5100	9700	5500	7500	5700
0.76	1.9	0.03	0.11	0.02 U	0.07
0.88	0.82	0.39	0.34	0.25	0.26
78	97	40	79	38	56
0.3 U	1.7	0.3 U	1.4	0.2 U	1.1
8.5	12	10	13	8.2	13

GREEN CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6269	8660	10469	13364	14450	796	3192
STATION NUMBER:		G5	G5	G5	G5	G5	G5	G5
PARAMETER:	DETECTION LIMIT	08/09/91	09/18/91	10/17/91	11/22/91	12/10/91	01/16/92	02/13/92
TOTAL COLIFORMS (MPN/100 ml)	1	100	120	33	18	8	10	7
FECAL COLIFORMS (MPN/100 ml)	1	146	22	38	2 U	8	5	7
TOTAL DISSOLVED SOLIDS (mg/l)	1	30000	110	50	220	92	100	80
TOTAL HARDNESS (mg/l as CaCO3)	1	180	63	46	170	59	53	51
TOTAL ALKALINITY (mg/l as CaCO3)	1	47	45	48	50	43	47	48
CARBONATE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	47		48	50	43	47	48
HYDROXIDE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	18		7.8	16	11	9.2	9.1
IRON (mg/l)	0.01	0.9		0.01	0.01 U	0.15	0.25	0.47
MANGANESE (mg/l)	0.002	0.05		0.01	0.002 U	0.008	0.014 B	0.019
MAGNESIUM (mg/l)	0.01	32		6.4	31	7.7	7.3	6.9
POTASSIUM (mg/l)	1	7.6 B		1 U	9.8	1	1.3	1 U
SODIUM (mg/l)	0.5	240		4.7	210	5.2	5.6	5.2 B
SILICA (mg/l)	0.1	8.1		10	9.6	12	11	0.1 U
ZINC (mg/l)	0.02	0.002 U		0.002 U	0.002 U	0.023	0.002 U	0.006
SILVER (mg/l)	0.01	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIIUM (mg/l)	0.003	0.013		0.005	0.008	0.01	0.009	0.009
COPPER (mg/l)	0.002	0.002 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.002 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.004 U		0.001 U	0.001 U	0.001 U	0.002	0.001
CHROMIUM (mg/l)	0.006	0.006 U		0.006 U	0.006 U	0.006 U	0.006 U	0.008
ARSENIC (mg/l)	0.001	0.004 U		0.003	0.001	0.002	0.011	0.001
CHLORIDE (mg/l)	1	4.1	3.4	4.3	6.1	1 U	2.7	2.1 B
SULFATE (mg/l)	1	8.2	17	9.1	17	9.2	12	9.5
NITRATE (mg/l)	0.2	1.1	0.84	0.85	1.2	1.4	1.1	1.4
NITRITE (mg/l)	0.2	0.005		0.01 U	0.001	0.001	0.026	0.011
FLUORIDE (mg/l)	0.2	0.02 U		0.1 U	0.06	0.19	0.11	0.06

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

GREEN CREEK ----- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	5368	7589	11277	13528	16504	18946	19960
STATION NUMBER:	G5	G5	G5	G5	G5	G5	G5
PARAMETER:	03/12/92	04/09/92	05/21/92	06/18/92	07/30/92	08/28/92	09/16/92
TOTAL COLIFORMS (MPN/100 ml)	2 U	170	22	33	170	49	49
FECAL COLIFORMS (MPN/100 ml)	2 U	170	8	33	70	14	17
TOTAL DISSOLVED SOLIDS (mg/l)	86	140	86	110	110 B	90	76
TOTAL HARDNESS (mg/l as CaCO3)	59	58	61	61	58	61	65
TOTAL ALKALINITY (mg/l as CaCO3)	50	52	64	62	53	54	54
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	50	52	64	62	53	54	54
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	11	10	11	11	10	11	11
IRON (mg/l)	0.32	0.56	0.26	0.24	0.24	0.18	0.16
MANGANESE (mg/l)	0.014	0.026	0.016 B	0.015	0.014	0.012	0.013
MAGNESIUM (mg/l)	7.7	7.9	8.1	8.2	7.9	8.2	9
POTASSIUM (mg/l)	1 U	1.5	1.2	1.1	1.2 B	1 U	1.8
SODIUM (mg/l)	6.3	6.1	6.4	5.9	12	8.4	7.1
SILICA (mg/l)	12	28	28	30	28	30	34
ZINC (mg/l)	0.017 B	0.021 B	0.005 B	0.033	0.008 B	0.011 B	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002	0.002
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.066	0.009	0.007	0.006	0.006	0.006 B	0.005
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.003	0.002 U	0.003 B	0.011 B
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.003	0.002 U
LEAD (mg/l)	0.001	0.006	0.003	0.003 B	0.002	0.001 U	0.001 B
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.002	0.001 U	0.002	0.003	0.003	0.001 U	0.003 B
CHLORIDE (mg/l)	2.8	1 U	3.3	3.9	4.3	3.9	1.6
SULFATE (mg/l)	8.6	11	11	17	9.8	9.8	7.9
NITRATE (mg/l)	0.98	0.86	0.81	0.75	0.72	0.78	0.71
NITRITE (mg/l)	0.001 U	0.001 U	0.001 U	0.002	0.001	0.001 U	0.001 U
FLUORIDE (mg/l)	0.05	0.09	0.05	0.12	0.03	0.07	0.02 U

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

GREEN CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6266	6267	6268	13361	13362	13363	7586
STATION NUMBER:	DETECTION	G2	G3 SOUTH	G4 NORTH	G2	G3 SOUTH	G4 NORTH	G2
PARAMETER:	LIMIT	08/09/91	08/09/91	08/09/91	11/22/91	11/22/91	11/22/91	04/09/92
TOTAL COLIFORMS (MPN/100 ml)	1	2 U	10	2	8	2	2	2 U
FECAL COLIFORMS (MPN/100 ml)	1	2 U	2	2 U	2 U	2 U	2 U	2 U
TOTAL DISSOLVED SOLIDS (mg/l)	1	31000	29000	29000	30000	29000	29000	26000
TOTAL HARDNESS (mg/l as CaCO3)	1	6200	6700	5300	4400	4400	4600	4900
TOTAL ALKALINITY (mg/l as CaCO3)	1	100	100	100	100	100	100	100
CARBONATE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	100	100	100	100	100	100	100
HYDROXIDE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	340	360	320	270	280	290	320
IRON (mg/l)	0.01	0.01 U	0.01 U	0.01 U	0.01 U	0.03	0.01 U	0.07 B
MANGANESE (mg/l)	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.014	0.01	0.008
MAGNESIUM (mg/l)	0.01	1300	1400	1100	900	910	930	1000
POTASSIUM (mg/l)	1	560	420	520	320	330	340	340
SODIUM (mg/l)	0.5	7700	8400	6600	3000	3000	3000	9100
SILICA (mg/l)	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	4.1
ZINC (mg/l)	0.02	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.011 B
SILVER (mg/l)	0.01	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U	0.0002 U	0.0002 U	0.002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.017	0.018	0.016	0.014	0.015	0.015	0.003 U
COPPER (mg/l)	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.001 U
CHROMIUM (mg/l)	0.006	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.007
ARSENIC (mg/l)	0.001	0.013	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.001 U
CHLORIDE (mg/l)	1	10000	11000	12000	17000	17000	17000	16000
SULFATE (mg/l)	1	1500	1500	1600	2300	2300	2300	2300
NITRATE (mg/l)	0.2	0.2	0.21	0.2	0.34	0.34	0.34	0.21
NITRITE (mg/l)	0.2	0.002	0.002	0.002	0.003	0.001	0.003	0.001 U
FLUORIDE (mg/l)	0.2	0.15	0.11	0.21	0.77	0.76	0.76	0.51

QUALIFIER DEFINITIONS:
 B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

GREEN CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	7587	7588	16501	16502	16503	18943	18944
STATION NUMBER:	G3 SOUTH	G4 NORTH	G2	G3 SOUTH	G4 NORTH	G2	G3 SOUTH
PARAMETER:	04/09/92	04/09/92	07/30/92	07/30/92	07/30/92	08/28/92	08/28/92
TOTAL COLIFORMS (MPN/100 ml)	2 U	2 U	8	13	2	4	2
FECAL COLIFORMS (MPN/100 ml)	2 U	2 U	4	4	2	2	2
TOTAL DISSOLVED SOLIDS (mg/l)	27000	27000	30000	30000	30000	22000	22000
TOTAL HARDNESS (mg/l as CaCO3)	4900	4900	4800	4900	4900	4900	4800
TOTAL ALKALINITY (mg/l as CaCO3)	97	89	100	100	100	100	110
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	97	89	100	100	100	100	110
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	300	320	300	310	300	330	310
IRON (mg/l)	0.21	0.03 B	0.08 B	0.18	0.14	0.06	0.07
MANGANESE (mg/l)	0.011	0.006	0.014	0.019	0.014	0.014	0.015
MAGNESIUM (mg/l)	1000	1000	980	1000	1000	1000	980
POTASSIUM (mg/l)	300	330	570	590	580	580	540
SODIUM (mg/l)	8300	8800	9500	9100	9300	9200	7900
SILICA (mg/l)	4.9	4.1	2.8	3.2	2.8	4.1	3.2
ZINC (mg/l)	0.023 B	0.011 B	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.003	0.003 U	0.003 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003 U	0.003 U	0.007	0.008	0.007	0.009 B	0.011 B
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001 U	0.001 U	0.003 U	0.001 U	0.003 U	0.004 U	0.004 U
CHLORIDE (mg/l)	16000	16000	16000	16000	16000	17000	16000
SULFATE (mg/l)	2000	2200	1900	1800	1800	2300	2200
NITRATE (mg/l)	0.22	0.23	0.11	0.12	0.092	0.19	0.22
NITRITE (mg/l)	0.001 U	0.001 U	0.004	0.005	0.004	0.004	0.004
FLUORIDE (mg/l)	0.6	0.54	0.36	0.36	0.39	0.34	0.34

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
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 G = Greater than or equal to
 TNTC = Too numerous to count

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LABORATORY SAMPLE NUMBER:	18945
STATION NUMBER:	G4 NORTH
PARAMETER:	08/28/92

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TOTAL COLIFORMS (MPN/100 ml)	8	
FECAL COLIFORMS (MPN/100 ml)	8	
TOTAL DISSOLVED SOLIDS (mg/l)	24000	
TOTAL HARDNESS (mg/l as CaCO3)	4500	
TOTAL ALKALINITY (mg/l as CaCO3)	110	
CARBONATE (mg/l as CaCO3)	1	U
BICARBONATE (mg/l as CaCO3)	110	
HYDROXIDE (mg/l as CaCO3)	1	U
CALCIUM (mg/l)	290	
IRON (mg/l)	0.12	
MANGANESE (mg/l)	0.013	
MAGNESIUM (mg/l)	910	
POTASSIUM (mg/l)	490	
SODIUM (mg/l)	8600	
SILICA (mg/l)	5.1	
ZINC (mg/l)	0.002	U
SILVER (mg/l)	0.01	U
SELENIUM (mg/l)	0.001	U
MERCURY (mg/l)	0.0002	U
BARIUM (mg/l)	0.008	B
COPPER (mg/l)	0.002	U
CADMIUM (mg/l)	0.002	U
LEAD (mg/l)	0.006	B
CHROMIUM (mg/l)	0.006	U
ARSENIC (mg/l)	0.004	U
CHLORIDE (mg/l)	17000	
SULFATE (mg/l)	2200	
NITRATE (mg/l)	0.18	
NITRITE (mg/l)	0.003	
FLUORIDE (mg/l)	0.34	

QUALIFIER DEFINITIONS:

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TNTC = Too numerous to count

GREEN CREEK ----- MARINE SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6273	13368	7595	16510	18952
STATION NUMBER:	DETECTION	G1	G1	G1	G1	G1
PARAMETER:	LIMIT	08/09/91	11/22/91	04/09/92	07/30/92	08/28/92
TOTAL COLIFORMS (MPN/100 ml)	1	45	180 U	20	490	18 U
FECAL COLIFORMS (MPN/100 ml)	1	20	180 U	20	18 U	18 U
CHLORIDE (ug/g)	1		3000	4100	3300	3900
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	0.22	0.1 U	0.26	0.3	0.53
TOTAL SOLIDS (%)		81	78	77	81	80
SULFATE (ug/g)	1		560	370	500	630
ARSENIC (ug/g)	0.001	2.1	1.8	1.3	1	0.31
BARIUM (ug/g)	0.003	21	22		15	16
CALCIUM (ug/g)	0.01	3500	4700	5800	3300	5500
CADMIUM (ug/g)	0.002	0.19 U	0.08 U	0.22 U	0.21 U	0.21 U
CHROMIUM (ug/g)	0.006	19	23	22	26	28
COPPER (ug/g)	0.002	2.5	6.3	5.7	5.2	4.1
IRON (ug/g)	0.01	10000	11000	13000	12000	12000
MERCURY (ug/g)	0.0002	0.007 U	0.019	0.013 U	0.012 U	0.012 U
POTASSIUM (ug/g)	1	700	900	870	740	700
MAGNESIUM (ug/g)	0.01	4000	4500	4900	4400	4400
MANGANESE (ug/g)	0.002	140	170	250	160	190
SODIUM (ug/g)	0.02	3000	3800	3400	3200	3200
LEAD (ug/g)	0.001	3.6	0.95	2.1	2.3	0.1 U
SELENIUM (mg/l)	0.001	0.37 U	0.17	0.1 U	0.12 U	0.68
SILICON (ug/g)	0.04	1600	3.7 U	300	320	560
SILVER (ug/g)	0.01	1 U	0.4 U	1 U	1 U	1 U
ZINC (ug/g)	0.02	17	26	29	26	24

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

JUDD CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		5944	5945	8662	8657	10464	10465	13052
STATION NUMBER:	DETECTION	J7	J7D	J7	J7D	J7	J7D	J7
PARAMETER:	LIMIT	08/06/91	08/06/91	09/18/91	09/18/91	10/17/91	10/17/91	11/19/91
TOTAL COLIFORMS (MPN/100 ml)	1	890	690	3100	2300	82	130	920
FECAL COLIFORMS (MPN/100 ml)	1	92	86	78	80	42	62	350
TOTAL DISSOLVED SOLIDS (mg/l)	1	170	120	120	120	160	12	160
TOTAL HARDNESS (mg/l as CaCO3)	1	200	73	69	68	64	63	61
TOTAL ALKALINITY (mg/l as CaCO3)	1	58	57	53	54	56	57	28
CARBONATE (mg/l as CaCO3)	1	1 U	1 U			1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	58	57			56	57	28
HYDROXIDE (mg/l as CaCO3)	1	1 U	1 U			1 U	1 U	1 U
CALCIUM (mg/l)	0.01	21	11	12		11	11	14
IRON (mg/l)	0.01	0.1	0.1 U	0.18		0.08	0.05	1.6
MANGANESE (mg/l)	0.002	0.02 U	0.02 U	0.007		0.016	0.002 U	0.17
MAGNESIUM (mg/l)	0.01	36	11	9.2		8.9	8.7	6.3
POTASSIUM (mg/l)	1	4.2 B	77	1 U		1 U	1 U	1 U
SODIUM (mg/l)	0.5	200	11	7.9		6.2	5.4	160
SILICA (mg/l)	0.1	10	5	14		14	14	3.5
ZINC (mg/l)	0.02	0.084	0.27	0.005		0.002 U	0.002 U	0.005
SILVER (mg/l)	0.01	0.1 U	0.1 U	0.01 U		0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U	0.004 U	0.001 U		0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U	0.002 U	0.001		0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.03 U	0.093 U	0.008		0.007	0.007	0.028
COPPER (mg/l)	0.002	0.02 U	0.32	0.002 U		0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U	0.02 U	0.0005 U		0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.004 U	0.004 U	0.001		0.001 U	0.001 U	0.005
CHROMIUM (mg/l)	0.006	0.06 U	0.06 U	0.0031		0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.005	0.007	0.003		0.005	0.004	0.006
CHLORIDE (mg/l)	1	6.8	5.4	4	3.9	5.4	5.4	78
SULFATE (mg/l)	1	1 U	11	18	17	13	13	18
NITRATE (mg/l)	0.2	0.96	0.95	0.92	0.92	0.86	0.88	1.2
NITRITE (mg/l)	0.2	0.004	0.004			0.01 U	0.01 U	0.022
FLUORIDE (mg/l)	0.2	0.02 U	0.02 U	0.1 U		0.1 U	0.1 U	0.05

QUALIFIER DEFINITIONS:

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- U = Parameter undetected
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- TNTC = Too numerous to count

JUDD CREEK ----- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	13053	14445	14446	791	792	3187	3188
STATION NUMBER:	J7D	J7	J7D	J7	J7D	J7	J7D
PARAMETER:	11/19/91	12/10/91	12/10/91	01/16/92	01/16/92	02/13/92	02/13/92
TOTAL COLIFORMS (MPN/100 ml)	1600	120	120	350	330	17	46
FECAL COLIFORMS (MPN/100 ml)	920	75	50	320	260	17	33
TOTAL DISSOLVED SOLIDS (mg/l)	140	110	110	100	110	100	100
TOTAL HARDNESS (mg/l as CaCO3)	49	56	57	44	44	47	51
TOTAL ALKALINITY (mg/l as CaCO3)	30	36	30	34	34	36	42
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	30	36	30	34	34	36	42
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	9.3	11	11	8.3	8.5	9.1	9.9
IRON (mg/l)	3.3	0.33	0.38	0.92	0.99	0.47	0.46
MANGANESE (mg/l)	0.18	0.017	0.018	0.059 B	0.059 B	0.025	0.026
MAGNESIUM (mg/l)	6.3	7	7.1	5.7	5.6	6	6.5
POTASSIUM (mg/l)	1.3	1.2	1.1	1.7	1.5	1.2	1 U
SODIUM (mg/l)	9.6	6.1	6.1	5.3	5.4	5.7 B	5.7 B
SILICA (mg/l)	7.6	11	11	9.1	9.7	11	11
ZINC (mg/l)	0.016	0.014	0.008	0.005 B	0.011 B	0.004	0.016
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.04	0.014	0.014	0.016	0.017	0.014	0.016
COPPER (mg/l)	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.008	0.002 U
LEAD (mg/l)	0.005	0.001 U	0.001 U	0.004	0.003	0.004	0.003
CHROMIUM (mg/l)	0.01	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.007	0.005	0.004	0.019	0.024	0.002	0.002
CHLORIDE (mg/l)	17	1 U	1 U	3.3	3.1	3 B	2.9 B
SULFATE (mg/l)	15	12	12	15	13	9.8	9.7
NITRATE (mg/l)	1.2	1.2	1.2	0.78	0.76	1.3	1.3
NITRITE (mg/l)	0.014	0.004	0.004	0.13	0.014	0.007	0.006
FLUORIDE (mg/l)	0.05	0.15	0.16	0.08	0.12	0.04	0.05

QUALIFIER DEFINITIONS:
 B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

JUDD CREEK ---- FRESHWATER ANALYSES RESULTS

JUDD CREEK ---- FRESHWA

LABORATORY SAMPLE NUMBER:	5363	5364	7437	7438	11272	11273	13523
STATION NUMBER:	J7	J7D	J7	J7D	J7	J7D	J7
PARAMETER:	03/12/92	03/12/92	04/07/92	04/07/92	05/21/92	05/21/92	06/18/92
TOTAL COLIFORMS (MPN/100 ml)	49	49	33	13	280	170	350
FECAL COLIFORMS (MPN/100 ml)	23	23	33	13	280	170	170
TOTAL DISSOLVED SOLIDS (mg/l)	86	90	130	92	98	100	120
TOTAL HARDNESS (mg/l as CaCO3)	60	60	56	56	68	68	62
TOTAL ALKALINITY (mg/l as CaCO3)	38	52	48	44	51	54	53
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	38	52	48	44	51	54	53
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	12	12	10	10	12	12	11
IRON (mg/l)	0.37	0.32	0.25	0.26	0.23	0.29	0.21
MANGANESE (mg/l)	0.026	0.024	0.021	0.02	0.023 B	0.024 B	0.02
MAGNESIUM (mg/l)	7.4	7.3	7.5	7.6	9.2	9.3	8.3
POTASSIUM (mg/l)	1 U	1 U	1.2	1.3	1.6	1.8	1.2
SODIUM (mg/l)	6.3	6.1	5.6	5.8	6.8	6.9	5.9
SILICA (mg/l)	12	11	26	26	32	32	32
ZINC (mg/l)	0.011 B	0.015 B	0.028 B	0.025 B	0.018 B	0.02 B	0.031
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.016	0.014	0.008	0.01	0.01	0.01	0.007
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.01
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.005	0.001	0.002	0.002	0.002	0.001 U	0.002 B
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.002	0.002	0.002	0.004	0.002	0.002	0.002
CHLORIDE (mg/l)	2.9	2.2	1 U	1 U	3.7	3.8	2.5
SULFATE (mg/l)	9.9	10	15	14	12	12	20
NITRATE (mg/l)	0.96	0.92	0.7	0.72	0.91	0.92	0.84
NITRITE (mg/l)	0.002	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.004
FLUORIDE (mg/l)	0.05	0.05	0.11	0.11	0.05	0.05	0.11

QUALIFIER DEFINITIONS:

B = Parameter detected in blank

U = Parameter undetected

G = Greater than or equal to

TNTC = Too numerous to count

LABORATORY SAMPLE NUMBER:	13524	16289	16290	18798	18799	19955	19956
STATION NUMBER:	J7D	J7	J7D	J7	J7D	J7	J7D
PARAMETER:	06/18/92	07/28/92	07/28/92	08/26/92	08/26/92	09/16/92	09/16/92
TOTAL COLIFORMS (MPN/100 ml)	220	920	350	1600	1600	920	920
FECAL COLIFORMS (MPN/100 ml)	220	130	240	180	540	130	79
TOTAL DISSOLVED SOLIDS (mg/l)	120	130	130	100	90	110	96
TOTAL HARDNESS (mg/l as CaCO3)	68	69	67	69	69	78	69
TOTAL ALKALINITY (mg/l as CaCO3)	56	57	57	60	61	60	59
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	56	57	57	60	61	60	59
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	12	12	12	12	12	13	12
IRON (mg/l)	0.23	0.22	0.21	0.22	0.22	0.17	0.15
MANGANESE (mg/l)	0.022	0.021	0.02	0.019	0.018	0.016	0.015
MAGNESIUM (mg/l)	9.3	9.4	9	9.5	9.5	11	9.6
POTASSIUM (mg/l)	1.4	1.5	1.6	1.7	1.6	2.2	2.3
SODIUM (mg/l)	6.5	7.2	6.6	6.4	6.1	7.6	7
SILICA (mg/l)	34	36	34	36	34	39	36
ZINC (mg/l)	0.038	0.007 B	0.006 B	0.002 B	0.005 B	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.002	0.003	0.001 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.008	0.008 B	0.008 B	0.01 B	0.008 B	0.008	0.008
COPPER (mg/l)	0.003	0.002 U	0.002 U	0.002 U	0.002 U	0.019 B	0.016 B
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.002 B	0.003	0.002	0.001 U	0.003 B	0.005	0.002 B
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.006	0.003	0.003	0.005	0.003	0.004 B	0.003 B
CHLORIDE (mg/l)	2.5	4.7	3	3	4.8	2.7	2.6
SULFATE (mg/l)	21	12	12	13	11	10	10
NITRATE (mg/l)	0.83	0.76	0.76	0.82	0.76	0.78	0.77
NITRITE (mg/l)	0.005	0.002	0.003	0.001	0.001	0.001	0.001
FLUORIDE (mg/l)	0.12	0.02 U	0.02	0.08	0.06	0.05	0.05

QUALIFIER DEFINITIONS:
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 TNTC = Too numerous to count

JUDD CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		5940	5941	5942	5943	13048	13049	13051
STATION NUMBER:	DETECTION	J3	J3D	J5 SOUTH	J4 NORTH	J3	J3D	J5 SOUTH
PARAMETER:	LIMIT	08/06/91	08/06/91	08/06/91	08/06/91	11/19/91	11/19/91	11/19/91
TOTAL COLIFORMS (MPN/100 ml)	1	20	25	8	8	540	2400 G	1600
FECAL COLIFORMS (MPN/100 ml)	1	2	4	4	2	540	350	920
TOTAL DISSOLVED SOLIDS (mg/l)	1	40000	38000	32000	29000	17000	18000	40000
TOTAL HARDNESS (mg/l as CaCO3)	1	4900	5400	5800	5800	2700	2200	3300
TOTAL ALKALINITY (mg/l as CaCO3)	1	93	100	100	100	76	77	81
CARBONATE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	93	100	100	100	76	77	81
HYDROXIDE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	300	330	350	350	180	150	220
IRON (mg/l)	0.01	0.1 U	0.1 U	0.1 U	0.1 U	0.84	2.2	1.5
MANGANESE (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.02 U	0.031	0.054	0.037
MAGNESIUM (mg/l)	0.01	1000	1100	1200	1200	550	450	670
POTASSIUM (mg/l)	1	310	340	3500	350	200	160	250
SODIUM (mg/l)	0.5	6900	7500	7900	7900	2700	2200	3000
SILICA (mg/l)	0.1	1 U	1 U	1 U	1 U	0.1 U	0.1 U	0.1 U
ZINC (mg/l)	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U
SILVER (mg/l)	0.01	0.1 U	0.1 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.041	0.04	0.037	0.035	0.021	0.031	0.022
COPPER (mg/l)	0.002	0.072	0.02 U	0.038	0.02 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.026	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U	0.003
CHROMIUM (mg/l)	0.006	0.06 U	0.06 U	0.06 U	0.06 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.005	0.004	0.004	0.001 U
CHLORIDE (mg/l)	1	14000	18000	13000	15000	9800	10000	300
SULFATE (mg/l)	1	2200	2100	1500	1500	1400	1700	2000
NITRATE (mg/l)	0.2	0.01 U	0.01 U	0.01 U	0.01 U	0.67	0.62	0.55
NITRITE (mg/l)	0.2	0.004	0.003	0.002	0.003	0.017	0.016	0.015
FLUORIDE (mg/l)	0.2	0.13	0.14	0.14	0.14	0.46	0.58	0.62

QUALIFIER DEFINITIONS:

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- U = Parameter undetected
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- TNTC = Too numerous to count

JUDD CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	13050	7433	7434	7436	7435	16285	16286
STATION NUMBER:	J4 NORTH	J3	J3D	J5 SOUTH	J4 NORTH	J3	J3D
PARAMETER:	11/19/91	04/07/92	04/07/92	04/07/92	04/07/92	07/28/92	07/28/92
TOTAL COLIFORMS (MPN/100 ml)	1600	2 U	2 U	2	2 U	4	4
FECAL COLIFORMS (MPN/100 ml)	170	2 U	2 U	2	2 U	2	2
TOTAL DISSOLVED SOLIDS (mg/l)	16000	26000	26000	27000	26000	30000	29000
TOTAL HARDNESS (mg/l as CaCO3)	2600	4600	4600	4400	4900	4500	4600
TOTAL ALKALINITY (mg/l as CaCO3)	71	100	100	110	100	100	97
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	71	100	100	110	100	100	97
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	180	300	300	280	310	280	290
IRON (mg/l)	2.2	1.1	1.4	0.16	0.33	1	0.97
MANGANESE (mg/l)	0.046	0.023	0.025	0.011	0.015	0.016	0.016
MAGNESIUM (mg/l)	530	940	940	890	1000	920	950
POTASSIUM (mg/l)	190	300	290	270	320	510	540
SODIUM (mg/l)	2600	8300	8300	7700	8600	8300	8800
SILICA (mg/l)	0.1 U	7.5	9.6	3.9	5.6	8.1	7.7
ZINC (mg/l)	0.002 U	0.028 B	0.019 B	0.002 U	0.013 B	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.003 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.003 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.026	0.003 U	0.003 U	0.003 U	0.003 U	0.01 B	0.011 B
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.002	0.003	0.003	0.012	0.001 U	0.003	0.001 U
CHROMIUM (mg/l)	0.006 U	0.008	0.009	0.006	0.006	0.006 U	0.006 U
ARSENIC (mg/l)	0.002	0.001	0.001 U	0.001 U	0.005	0.003 U	0.003 U
CHLORIDE (mg/l)	73	16000	14000	16000	16000	16000	14000
SULFATE (mg/l)	1500	2200	2200	2200	2200	2200	2200
NITRATE (mg/l)	0.73	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
NITRITE (mg/l)	0.02	0.001	0.002	0.001 U	0.001 U	0.002	0.003
FLUORIDE (mg/l)	0.54	0.53	0.54	0.56	0.55	0.38	0.39

QUALIFIER DEFINITIONS:

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LABORATORY SAMPLE NUMBER:	16287	16288	18794	18795	18796	18797
STATION NUMBER:	J4 NORTH	J5 SOUTH	J3	J3D	J4 NORTH	J5 SOUTH
PARAMETER:	07/28/92	07/28/92	08/26/92	08/26/92	8/26/92	8/26/92
TOTAL COLIFORMS (MPN/100 ml)	4	4	4	4	2	7
FECAL COLIFORMS (MPN/100 ml)	4	2	4	2	2 U	7
TOTAL DISSOLVED SOLIDS (mg/l)	29000	2500	16000	20000	18000	21000
TOTAL HARDNESS (mg/l as CaCO3)	4700	4600	4900	4600	4900	4900
TOTAL ALKALINITY (mg/l as CaCO3)	100	100	100	100	100	100
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	100	100	100	100	100	100
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	290	290	330	300	320	320
IRON (mg/l)	1.6	0.91	0.15	0.19	0.25	0.26
MANGANESE (mg/l)	0.022	0.016	0.007	0.006	0.008	0.008
MAGNESIUM (mg/l)	960	950	1000	940	1000	1000
POTASSIUM (mg/l)	540	550	580	500	570	560
SODIUM (mg/l)	8700	8600	9500	8700	9100	9600
SILICA (mg/l)	12	8.1	6	6.2	6.2	6.4
ZINC (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.002	0.002 U	0.002 U	0.002 U	0.002 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.019	0.01 B	0.012 B	0.013 B	0.014 B	0.011 B
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.003 U	0.001	0.004 U	0.004 U	0.004 U	0.004 U
CHLORIDE (mg/l)	16000	15000	16000	17000	16000	16000
SULFATE (mg/l)	2200	1900	2300	2300	2100	2100
NITRATE (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
NITRITE (mg/l)	0.007	0.004	0.001	0.001	0.002	0.002
FLUORIDE (mg/l)	0.39	0.41	0.32	0.33	0.33	0.35

QUALIFIER DEFINITIONS:

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- TNTC = Too numerous to count

JUDD CREEK ---- FRESH SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		5934	5935	8668	8669
STATION NUMBER:	DETECTION	J6	J6D	J6	J6D
PARAMETER:	LIMIT	08/06/91	08/06/91	09/18/91	09/18/91
TOTAL COLIFORMS (MPN/100 ml)	1	1100	3500	13000	7900
FECAL COLIFORMS (MPN/100 ml)	1	490	2400	1100	680
CHLORIDE (ug/g)	1			190	200
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	3	0.95	0.14 U	0.15 U
TOTAL SOLIDS (%)		80	77	63	62
SULFATE (ug/g)	1	3.9		74 U	81
ARSENIC (ug/g)	0.001		0.36 U	5.7	
BARIUM (ug/g)	0.003	64	52	73	
CALCIUM (ug/g)	0.01	5500	4400	7300	
CADMIUM (ug/g)	0.002	0.26 U	0.18 U	0.46 U	
CHROMIUM (ug/g)	0.006	31	23	43	
COPPER (ug/g)	0.002	5	4.3	8.9	
IRON (ug/g)	0.01	14000	11000	17000	
MERCURY (ug/g)	0.0002	0.019	0.01	0.025	
POTASSIUM (ug/g)	1	1500	1100	1900	
MAGNESIUM (ug/g)	0.01	5400	3600	6200	
MANGANESE (ug/g)	0.002	280	210	300	
SODIUM (ug/g)	0.02	680	470	980	
LEAD (ug/g)	0.001	5.5	5.7	3.8	
SELENIUM (mg/l)	0.001	0.52 U	0.36 U	0.92 U	
SILICON (ug/g)	0.04	3400	470	160	
SILVER (ug/g)	0.01	1.4 U	0.9 U	2.2 U	
ZINC (ug/g)	0.02	20	18	32	

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

JUDD CREEK ---- MARINE SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		5932	5933	13055	13056	7443	7444	16292
STATION NUMBER:	DETECTION	J2	J2D	J2	J2D	J2	J2D	J2
PARAMETER:	LIMIT	08/06/91	08/06/91	11/19/91	11/19/91	04/07/92	04/07/92	07/28/92
TOTAL COLIFORMS (MPN/100 ml)	1	18 U	45	180 U	180 U	18 U	1300	18 U
FECAL COLIFORMS (MPN/100 ml)	1	18 U	18 U	180 U	180 U	18 U	78	18 U
CHLORIDE (ug/g)	1			1600	2400	2600	2800	1300
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	0.09	0.36	0.95 U	0.94 U	0.58	0.35	0.19 U
TOTAL SOLIDS (%)		79	82	88	80	82	79	78
SULFATE (ug/g)	1			250	320	310	310	1000
ARSENIC (ug/g)	0.001	5.6	4.4	2.6	2.6	2.8	3.5	4.5
BARIUM (ug/g)	0.003	63	38	24	18	22	18	24
CALCIUM (ug/g)	0.01	8400	5700	25000	14000	7200	6300	9100
CADMIUM (ug/g)	0.002	0.47 U	0.21 U	0.23 U	0.25 U	0.24 U	0.23 U	0.21 U
CHROMIUM (ug/g)	0.006	35	39	110	39	48	46	62
COPPER (ug/g)	0.002	12	17	7.8	11	13	14	14
IRON (ug/g)	0.01	15000	17000	14000	12000	16000	16000	17000
MERCURY (ug/g)	0.0002	0.038	0.055	0.132	0.074	0.05	0.048	0.041
POTASSIUM (ug/g)	1	2000	1200	810	740	1000	1000	1100
MAGNESIUM (ug/g)	0.01	6100	5700	9200	7800	7200	6700	7800
MANGANESE (ug/g)	0.002	240	230	190	160	210	190	210
SODIUM (ug/g)	0.02	4100	2700	3200	3100	3000	4200	3800
LEAD (ug/g)	0.001	19	16	11	11	5.9	4.7	17
SELENIUM (mg/l)	0.001	0.92 U	0.41 U	0.33 U	0.39 U	0.12 U	0.11 U	0.13 U
SILICON (ug/g)	0.04	2500	10 U	11 U	12 U	440	560	120
SILVER (ug/g)	0.01	2.3 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1 U
ZINC (ug/g)	0.02	30	26	27	31	38	39	42

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
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- TNTC = Too numerous to count

LABORATORY SAMPLE NUMBER:	16293	18801	18802
STATION NUMBER:	J2D	J2	J2D
PARAMETER:	07/28/92	08/26/92	08/26/92
TOTAL COLIFORMS (MPN/100 ml)	700	18 U	18 U
FECAL COLIFORMS (MPN/100 ml)	45	18 U	18 U
CHLORIDE (ug/g)	2300	3900	4300
NITRATE & NITRITE-NITROGEN (ug/g)	0.13	0.2 U	0.2 U
TOTAL SOLIDS (%)	82	78	78
SULFATE (ug/g)	440	580	480
ARSENIC (ug/g)	3	3.5	3.5
BARIUM (ug/g)	20	22	19
CALCIUM (ug/g)	27000	8800	22000
CADMIUM (ug/g)	0.22 U	0.26 U	0.23 U
CHROMIUM (ug/g)	35	32	29
COPPER (ug/g)	10	7.8	7.8
IRON (ug/g)	15000	14000	13000
MERCURY (ug/g)	0.039	0.022	0.023
POTASSIUM (ug/g)	1100	990	780
MAGNESIUM (ug/g)	6500	5400	6300
MANGANESE (ug/g)	180	180	180
SODIUM (ug/g)	3500	4900	4100
LEAD (ug/g)	15	0.64	2.6
SELENIUM (mg/l)	0.12 U	0.13 U	0.12 U
SILICON (ug/g)	170	240	45
SILVER (ug/g)	1.1 U	1.3 U	1.2 U
ZINC (ug/g)	35	32	29

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

JUDD CREEK ---- SHELLFISH ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		5930	13059	7442	7445	16296	16297	18805
STATION NUMBER:	DETECTION	J1	J1	J1	J8	J1	J8	J1
PARAMETER:	LIMIT	08/06/91	11/19/91	04/07/92	04/07/92	07/28/92	07/28/92	08/26/92
TOTAL COLIFORMS (MPN/100 ml)	1	78	45	130	1100	330	1300	78
FECAL COLIFORMS (MPN/100 ml)	1	20	20	78	110	78	790	45
TOTAL SOLIDS (%)		12	24	14	15	14	13	8.7
ARSENIC (ug/g)	0.001	1.2	3.8	2.4	1	1.9	1.3 U	2
BARIUM (ug/g)	0.003	1.9	0.28	0.27	0.44	0.19	0.72	0.3
CALCIUM (ug/g)	0.01	9200	2400	720	980	820	700	830
CADMIUM (ug/g)	0.002	2.8	0.49	0.49	0.18	0.42	0.09 U	0.46
CHROMIUM (ug/g)	0.006	2.3	0.04 U	0.13 U	0.59	0.26 U	0.96	0.17 U
COPPER (ug/g)	0.002	6.4	0.59	0.88	3.8	0.86	3.5	1.1
IRON (ug/g)	0.01	180	9.2	45	240	26	320	18
MERCURY (ug/g)	0.0002	0.11	0.035	0.008 U	0.007 U	0.01 U	0.014	0.01 U
POTASSIUM (ug/g)	1	15000	2100	2100	1700	1700	1700	1600
MAGNESIUM (ug/g)	0.01	7700	650	710	740	900	900	110
MANGANESE (ug/g)	0.002	6.4	0.47	1	3.9	0.76	6.3	0.54
SODIUM (ug/g)	0.02	64000	21000	5100	5300	7100	6200	9500
LEAD (ug/g)	0.001	1.7	0.07	0.87	1.8	0.31	0.71	0.08
SELENIUM (ug/l)	0.001	2.3	0.24	0.29	0.8	0.46	0.57	0.06 U
SILICON (ug/g)	0.04	22 U	0.7 U	95	140	58	250	65
SILVER (ug/g)	0.01	2 U	0.1	0.2 U	0.2 U	0.4 U	0.4 U	0.3 U
ZINC (ug/g)	0.02	130	11	14	8.6	15	9	13

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count
- J1 = Littlenecks
- J8 = Butterclams

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LABORATORY SAMPLE NUMBER:	18806
STATION NUMBER:	J8
PARAMETER:	08/26/92

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TOTAL COLIFORMS (MPN/100 ml)	68
FECAL COLIFORMS (MPN/100 ml)	40
TOTAL SOLIDS (‡)	12
ARSENIC (ug/g)	2.8
BARIUM (ug/g)	9.9
CALCIUM (ug/g)	870
CADMIUM (ug/g)	0.43
CHROMIUM (ug/g)	0.13 U
COPPER (ug/g)	0.86
IRON (ug/g)	21
MERCURY (ug/g)	0.01 U
POTASSIUM (ug/g)	1800
MAGNESIUM (ug/g)	930
MANGANESE (ug/g)	0.68
SODIUM (ug/g)	7700
LEAD (ug/g)	0.03
SELENIUM (mg/l)	0.04
SILICON (ug/g)	45
SILVER (ug/g)	0.2 U
ZINC (ug/g)	11

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
U = Parameter undetected
G = Greater than or equal to
TNTC = Too numerous to count
J1 = Littlenecks
J8 = Butterclams

ORGANIC ANALYSES RESULTS

		JUDD	JUDD	JUDD	JUDD	MILETA
		FRESHWATER	FRESHWATER	FRESH	FRESH	FRESH
SAMPLE MATRIX:				SEDIMENT	SEDIMENT	SEDIMENT
LABORATORY SAMPLE NUMBER:		5944	8662	8668	8669	8667
STATION NUMBER:		J7	J7	J6	J6D	M6
PARAMETER:	DETECTION	08/06/91	09/18/91	09/18/91	09/18/91	09/18/91
* IN FRESHWATER ONLY NOT SEDIMENT						

VOLATILE ORGANIC COMPOUNDS

Chloromethane	5	5 U	5 U	27 U
Vinyl Chloride	5	5 U	5 U	27 U
Bromomethane	5	5 U	5 U	27 U
Chloroethane	5	5 U	5 U	27 U
Trichlorofluoromethane	1	1 U	1 U	5 U
1,1-Dichloroethylene	1	1 U	1 U	5 U
Acetone	10	10 U	11	1400
Carbon Disulfide	1	1 U	1 U	5 U
Methylene Chloride	1	8.1	3	42
1,2-Dichloroethylene	1	1 U	1 U	5 U
1,1-Dichloroethane	1	1 U	1 U	5 U
Vinyl Acetate	10	10 U	10 U	54 U
2-Butanone (MEK)	10	10 U	10 U	54 U
Chloroform	1	1 U	1 U	5 U
1,1,1-Trichloroethane	1	1 U	1 U	6
Carbon Tetrachloride	1	1 U	1 U	5 U
Benzene	1	1 U	1 U	5 U
1,2-Dichloroethane	1	1 U	1 U	5 U
1,1,2-Trichloroethene	1	1 U	1 U	5 U
Bromodichloromethane	1	1 U	1 U	5 U
1,2-Dichloropropane	1	1 U	1 U	5 U
4-Methyl-2-Pentanone	10	10 U	10 U	54 U
Toluene	1	1 U	1 U	5 U
Cis-1,3-Dichloropropene	1	1 U	1 U	5 U
1,1,2-Trichloroethane	1	1 U	1 U	5 U
Tetrachloroethylene	1	1 U	1 U	5 U
2-Hexanone	10	10 U	10 U	54 U

ORGANIC ANALYSES RESULTS

SAMPLE MATRIX: LABORATORY SAMPLE NUMBER: STATION NUMBER: PARAMETER: * IN FRESHWATER ONLY NOT SEDIMENT	DETECTION * LIMIT	JUDD	JUDD	JUDD	JUDD	MILETA
		FRESHWATER 5944 J7 08/06/91	FRESHWATER 8662 J7 09/18/91	FRESH SEDIMENT 8668 J6 09/18/91	FRESH SEDIMENT 8669 J6D 09/18/91	FRESH SEDIMENT 8667 M6 09/18/91
Chlorodibromomethane	1	1 U	1 U	5 U		
Chlorobenzene	1	1 U	1 U	5 U		
Ethyl Benzene	1	1 U	1 U	5 U		
Total Xylenes	1	1 U	1 U	5 U		
Styrene	1	1 U	1 U	5 U		
Bromoform	1	1 U	1 U	5 U		
1,1,2,2-Tetrachloroethane	1	1 U	1 U	5 U		
Trans-1,3-Dichloropropene	1	1 U	1 U	5 U		
p-Dichlorobenzene	1	1 U	1 U	5 U		
SEMI-VOLATILE COMPOUNDS						
N-Nitrosodimethylamine	5		5.2 U			
Aniline	2		2.1 U			
Phenol	2		2.1 U			
bis(2-Chloroethyl)ether	2		2.1 U			
2-Chlorophenol	2		2.1 U			
1,3-Dichlorobenzene	2		2.1 U			
1,4-Dichlorobenzene	2		2.1 U			
Benzyl Alcohol	2		2.1 U			
1,2-Dichlorobenzene	2		2.1 U			
2-Methylphenol	2		2.1 U			
bis(2-Chloroisopropyl)ether	2		2.1 U			
4-Methylphenol	2		2.1 U			
N-Nitroso-di-n-propylamine	2		2.1 U			
Hexachloroethane	2		2.1 U			
Nitrobenzene	2		2.1 U			
Isophorone	2		2.1 U			
2-Nitrophenol	5		5.2 U			

ORGANIC ANALYSES RESULTS

	JUDD	JUDD	JUDD	JUDD	MILETA
	FRESHWATER	FRESHWATER	FRESH	FRESH	FRESH
SAMPLE MATRIX:			SEDIMENT	SEDIMENT	SEDIMENT
LABORATORY SAMPLE NUMBER:	5944	8662	8668	8669	8667
STATION NUMBER:	J7	J7	J6	J6D	M6
PARAMETER:	* LIMIT	08/06/91	09/18/91	09/18/91	09/18/91
* IN FRESHWATER ONLY NOT SEDIMENT					

2,4-Dimethylphenol	2	2.1 U
Benzoic Acid	5	5.2 U
bis(2-Chloroethoxy)methane	2	2.1 U
2,4-Dichlorophenol	2	2.1 U
1,2,4-Trichlorobenzene	2	2.1 U
Naphthalene	2	2.1 U
4-Chloroaniline	2	2.1 U
Hexachlorobutadiene	2	2.1 U
4-Chloro-3-methylphenol	2	2.1 U
2-Methylnaphthalene	2	2.1 U
Hexachlorocyclopentadiene	5	5.2 U
2,4,6-Trichlorophenol	2	2.1 U
2,4,5-Trichlorophenol	2	2.1 U
2-Chloronaphthalene	2	2.1 U
2-Nitroaniline	5	5.2 U
Dimethylphthalate	2	2.1 U
Acenaphthylene	2	2.1 U
2,6-Dinitrotoluene	5	5.2 U
3-Nitroaniline	5	5.2 U
Acenaphthene	2	2.1 U
2,4-Dinitrophenol	10	10 U
4-Nitrophenol	5	5.2 U
Dibenzofuran	2	2.1 U
2,4-Dinitrotoluene	5	5.2 U
Diethylphthalate	2	2.1 U
4-Chlorophenyl-phenyl ether	2	2.1 U
Fluorene	2	2.1 U
4-Nitroaniline	5	5.2 U

ORGANIC ANALYSES RESULTS

	JUDD	JUDD	JUDD	JUDD	MILETA
SAMPLE MATRIX:	FRESHWATER	FRESHWATER	FRESH	FRESH	FRESH
LABORATORY SAMPLE NUMBER:	5944	8662	8668	8669	8667
STATION NUMBER:	J7	J7	J6	J6D	M6
PARAMETER:	* LIMIT	08/06/91	09/18/91	09/18/91	09/18/91
* IN FRESHWATER ONLY NOT SEDIMENT					
4,6-Dinitro-2-methylphenol	5		5.2 U		
N-nitrosodiphenylamine	2		2.1 U		
Azobenzene	2		2.1 U		
4-Bromophenyl-phenyl ether	2		2.1 U		
Hexachlorobenzene	2		2.1 U		
Pentachlorophenol	5		5.2 U		
Phenanthrene	2		2.1 U		
Anthracene	2		2.1 U		
Di-n-butylphthalate	2		2.1 U		
Fluoranthene	2		2.1 U		
Benzidine	50		52 U		
Pyrene	2		2.1 U		
Butylbenzylphthalate	2		2.1 U		
3,3-Dichlorobenzidine	3		3.1 U		
Benzo(a)anthracene	2		2.1 U		
Chrysene	2		2.1 U		
bis(2-Ethylhexyl)phthalate	2		2.1 U		
Di-n-octylphthalate	2		2.1 U		
Benzo(b)fluoranthene	2		2.1 U		
Benzo(k)fluoranthene	2		2.1 U		
Benzo(a)pyrene	2		2.1 U		
Indeno(1,2,3-cd)pyrene	4		4.2 U		
Dibenzo(a,h)anthracene	4		4.2 U		
Benzo(g,h,i)perylene	4		4.2 U		
PESTICIDES AND PCB'S					
Alpha BHC	0.03	0.03 U	2.9 U	2.8 U	2.4 U
Lindane	0.03		2.9 U	2.8 U	2.4 U

ORGANIC ANALYSES RESULTS

		JUDD	JUDD	JUDD	JUDD	MILETA
		FRESHWATER	FRESHWATER	FRESH	FRESH	FRESH
SAMPLE MATRIX:				SEDIMENT	SEDIMENT	SEDIMENT
LABORATORY SAMPLE NUMBER:		5944	8662	8668	8669	8667
STATION NUMBER:	DETECTION	J7	J7	J6	J6D	M6
PARAMETER:	* LIMIT	08/06/91	09/18/91	09/18/91	09/18/91	09/18/91
* IN FRESHWATER ONLY NOT SEDIMENT						
Heptachlor	0.02	0.02 U		2 U	1.9 U	1.6 U
Aldrin	0.03	0.03 U		2.9 U	2.8 U	2.4 U
Beta-BHC	0.04	0.04 U		3.9 U	3.7 U	3.2 U
Delta-BHC	0.05	0.05 U		4.9 U	4.7 U	4 U
Heptachlor Epoxide	0.03	0.03 U		2.9 U	2.8 U	2.4 U
Endosulfan I	0.04			3.9 U	3.7 U	3.2 U
pp-DDE	0.04			3.9 U	3.7 U	3.2 U
Dieldrin	0.04			3.9 U	3.7 U	3.2 U
Endrin	0.05			4.9 U	4.7 U	4 U
pp-DDD	0.05			4.9 U	4.7 U	4 U
Endosulfan II	0.05			2.9 U	2.8 U	2.4 U
pp-DDT	0.1			9.8 U	9.4 U	8 U
Endrin Aldehyde	0.1	0.1 U		9.8 U	9.4 U	8 U
Endosulfan Sulfate	0.08			7.8 U	7.5 U	6.4 U
Methoxychlor	0.2	0.2 U		20 U	19 U	16 U
Toxaphene	6	6 U		590 U	560 U	480 U
Chlordane	0.5	0.5 U		49 U	47 U	40 U
Gamma-BHC	0.04	0.03 U				
PCB-1016	0.5	0.5 U				
PCB-1221	0.5	2 U				
PCB-1232	0.5	0.5 U				
PCB-1242	0.5	0.5 U				
PCB-1248	0.5	0.5 U				
PCB-1254	0.5	0.5 U				
PCB-1260	0.5	0.5 U				

PCB's

ORGANIC ANALYSES RESULTS

SAMPLE MATRIX: LABORATORY SAMPLE NUMBER: STATION NUMBER: PARAMETER: * IN FRESHWATER ONLY NOT SEDIMENT	DETECTION * LIMIT	JUDD	JUDD	JUDD	JUDD	MILETA
		FRESHWATER	FRESHWATER	FRESH SEDIMENT	FRESH SEDIMENT	FRESH SEDIMENT
		5944	8662	8668	8669	8667
		J7	J7	J6	J6D	M6
		08/06/91	09/18/91	09/18/91	09/18/91	09/18/91
Arochlor 1016	0.5	0.5 U		49 U	47 U	40 U
Arochlor 1221	2	2 U		200 U	190 U	160 U
Arochlor 1232	0.5	0.5 U		49 U	47 U	40 U
Arochlor 1242	0.5	0.5 U		49 U	47 U	40 U
Arochlor 1248	0.5	0.5 U		49 U	47 U	40 U
Arochlor 1254	0.5	0.5 U		49 U	47 U	40 U
Arochlor 1260	0.5	0.5 U		49 U	47 U	40 U

QUALIFIER DEFINITIONS:

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- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

MILETA CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6147	8656	10463	13347	14444	790	3186
STATION NUMBER:		M7	M7	M7	M7	M7	M7	M7
PARAMETER:	DETECTION LIMIT	08/08/91	09/18/91	10/17/91	11/21/91	12/10/91	01/16/92	02/13/92
TOTAL COLIFORMS (MPN/100 ml)	1	2400 G	540	290	8	12	10	2
FECAL COLIFORMS (MPN/100 ml)	1	2400 G	23	100	2	2	8	2
TOTAL DISSOLVED SOLIDS (mg/l)	1	150	140	100	140	130	130	78
TOTAL HARDNESS (mg/l as CaCO3)	1	140	78	74	68	58	46	39
TOTAL ALKALINITY (mg/l as CaCO3)	1	55	51	55	44	10	14	26
CARBONATE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	55		55	44	10	14	26
HYDROXIDE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	14		13	9.1	13	10	9.4
IRON (mg/l)	0.01	0.1 U		1.2	0.19	0.01 U	0.04	0.16
MANGANESE (mg/l)	0.002	0.021		0.22	0.04	0.002	0.007 B	0.008
MAGNESIUM (mg/l)	0.01	25		10	11	6.1	5.2	3.7
POTASSIUM (mg/l)	1	31		1 U	2.4	1.9	2.6	1.5
SODIUM (mg/l)	0.5	160		8.3	8.2	6.4	5.9	4.4 B
SILICA (mg/l)	0.1	1 U		16	10	9	8.9	8
ZINC (mg/l)	0.02	0.02 U		0.002 U	0.002 U	0.009	0.033	0.009
SILVER (mg/l)	0.01	0.12		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.001 U		0.001 U	0.001 U	0.001 U	0.001	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.05		0.024	0.022	0.031	0.026	0.022
COPPER (mg/l)	0.002	0.076		0.002 U	0.003	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.001 U		0.003	0.001 U	0.001 U	0.002	0.007
CHROMIUM (mg/l)	0.006	0.12		0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.007		0.009	0.004	0.002	0.007 B	0.001
CHLORIDE (mg/l)	1	6.7	6	7.6	10	6.6	6.1	4.3 B
SULFATE (mg/l)	1	13	25	24	28	15	20	13
NITRATE (mg/l)	0.2	1	0.92	0.94	2.5	10	5.3	4.9
NITRITE (mg/l)	0.2	0.006		0.01 U	0.01 U	0.003	0.005	0.006
FLUORIDE (mg/l)	0.2	0.02 U		0.1 U	0.08	0.1	0.06	0.02 U

QUALIFIER DEFINITIONS:
 B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TWTC = Too numerous to count

MILETA CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	5362	7432	11271	13522	16283	18792	19954
STATION NUMBER:	M7	M7	M7	M7	M7	M7	M7
PARAMETER:	03/12/92	04/07/92	05/21/92	06/18/92	07/28/92	08/26/92	09/16/92
TOTAL COLIFORMS (MPN/100 ml)	2 U	70	7	23	170	>= 2400	110
FECAL COLIFORMS (MPN/100 ml)	2 U	70	7	13	33	540	49
TOTAL DISSOLVED SOLIDS (mg/l)	92	200	120	150	160	160	130
TOTAL HARDNESS (mg/l as CaCO3)	52	55	69	80	87	93	87
TOTAL ALKALINITY (mg/l as CaCO3)	32	31	54	58	60	67	66
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	32	31	54	58	60	67	66
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	12	11	13	14	15	16	15
IRON (mg/l)	0.5	0.49	0.84	3.9	3.9	9.2	3.2
MANGANESE (mg/l)	0.022	0.029	0.071	0.17	0.23	0.45	0.2
MAGNESIUM (mg/l)	5.3	6.7	8.9	11	12	13	12
POTASSIUM (mg/l)	1	1.6	1.7	2.2	2	2.3	2.3
SODIUM (mg/l)	6.1	6.1	7.4	8	9.1	8.9	9
SILICA (mg/l)	11	30	34	47	47	58	45
ZINC (mg/l)	0.016 B	0.023 B	0.018 B	0.04	0.009 B	0.035 B	0.01 B
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.033	0.024	0.022	0.042	0.034	0.058	0.029
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.017	0.003 B	0.002 U	0.022 B
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.003 B	0.002 U
LEAD (mg/l)	0.004	0.002	0.003	0.008 B	0.01	0.006	0.01
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.016	0.008	0.015	0.007
ARSENIC (mg/l)	0.003	0.003	0.004	0.012	0.003 U	0.047	0.011
CHLORIDE (mg/l)	4.3	4.5	6.1	3.7	6.1	5.9	4
SULFATE (mg/l)	15	20	20	31	23	18	20
NITRATE (mg/l)	4.2	2.2	1.2	0.06	1.1	0.99	0.98
NITRITE (mg/l)	0.001	0.002	0.001 U	0.015	0.005	0.003	0.004
FLUORIDE (mg/l)	0.05	0.06	0.05	0.13	0.04	0.08	0.04

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

MILETA CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6145	6144	6146	13345	13344	13346	7430
STATION NUMBER:	DETECTION	M4	M3 SOUTH	M5 NORTH	M4	M3 SOUTH	M5 NORTH	M4
PARAMETER:	LIMIT	08/08/91	08/08/91	08/08/91	11/21/91	11/21/91	11/21/91	04/07/92
TOTAL COLIFORMS (MPN/100 ml)	1	2 U	2 U	2 U	2 U	2	5	2 U
FECAL COLIFORMS (MPN/100 ml)	1	2	6	2 U	5	2	5	2 U
TOTAL DISSOLVED SOLIDS (mg/l)	1	29000	25000	28000	28000	28000	27000	27000
TOTAL HARDNESS (mg/l as CaCO3)	1	3700	5400	3700	4200	4300	4200	5400
TOTAL ALKALINITY (mg/l as CaCO3)	1	97	94	96	98	100	100	98
CARBONATE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	97	94	96	98	100	100	98
HYDROXIDE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	220	340	230	280	280	280	340
IRON (mg/l)	0.01	0.1 U	0.1 U	0.1 U	0.38	0.24	0.01 U	0.08
MANGANESE (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.009
MAGNESIUM (mg/l)	0.01	760	1100	750	850	870	850	1100
POTASSIUM (mg/l)	1	250	320	250	340	350	350	360
SODIUM (mg/l)	0.5	5100	7500	7500	3000	3000	3000	9700
SILICA (mg/l)	0.1	1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	4.7
ZINC (mg/l)	0.02	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.027 B
SILVER (mg/l)	0.01	0.12	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U	0.003 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.052	0.038	0.056	0.018	0.018	0.017	0.003 U
COPPER (mg/l)	0.002	0.062	0.02 U	0.08	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.004 U	0.007	0.004 U	0.003 U	0.003 U	0.003 U	0.001 U
CHROMIUM (mg/l)	0.006	0.06 U	0.06 U	0.06 U	0.006 U	0.006 U	0.006 U	0.008
ARSENIC (mg/l)	0.001	0.004 U	0.005	0.005	0.003	0.003 U	0.003 U	0.001 U
CHLORIDE (mg/l)	1	14000	4700	13000	16000	16000	15000	16000
SULFATE (mg/l)	1	1300	1300	1400	2100	2400	2300	2200
NITRATE (mg/l)	0.2	0.01 U	0.01 U	0.01 U	0.29	0.28	0.27	0.03
NITRITE (mg/l)	0.2	0.001 U	0.001 U	0.003	0.01 U	0.01 U	0.01 U	0.002
FLUORIDE (mg/l)	0.2	0.14	0.12	0.12	0.76	0.69	0.76	0.47

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

LABORATORY SAMPLE NUMBER:	7429	7431	16280	16281	16282	18789	18790
STATION NUMBER:	M3 SOUTH	M5 NORTH	M3 SOUTH	M4	M5 NORTH	M3 SOUTH	M4
PARAMETER:	04/07/92	04/07/92	07/28/92	07/28/92	07/28/92	08/26/92	08/26/92
TOTAL COLIFORMS (MPN/100 ml)	2 U	2 U	17	33	13	7	33
FECAL COLIFORMS (MPN/100 ml)	2 U	2 U	11	17	13	4	13
TOTAL DISSOLVED SOLIDS (mg/l)	28000	28000	30000	29000	30000	19000	23000
TOTAL HARDNESS (mg/l as CaCO3)	4800	5400	4600	4700	4600	4800	5400
TOTAL ALKALINITY (mg/l as CaCO3)	86	100	99	99	100	100	100
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	86	100	99	99	100	100	100
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	310	350	290	290	290	310	340
IRON (mg/l)	0.11	0.07	0.68	0.68	0.84	0.51	0.44
MANGANESE (mg/l)	0.009	0.008	0.013	0.014	0.016	0.011	0.012
MAGNESIUM (mg/l)	980	1100	950	970	950	970	1100
POTASSIUM (mg/l)	320	370	530	550	530	530	620
SODIUM (mg/l)	8700	9800	8900	8800	8800	9000	9300
SILICA (mg/l)	4.3	6.2	5.4	6	7.5	7.5	2.1 B
ZINC (mg/l)	0.02 B	0.031 B	0.002 U	0.002 U	0.002 U	0.002 U	0.031 B
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.003 U	0.003 U	0.001 U	0.002 U	0.005
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003 U	0.003 U	0.011 B	0.012 B	0.011 B	0.016	0.012 B
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.001 U	0.001 U	0.018	0.004	0.001 U	0.001 U
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.005	0.014	0.003 U	0.003 U	0.003 U	0.004 U	0.004 U
CHLORIDE (mg/l)	15000	15000	16000	15000	15000	16000	16000
SULFATE (mg/l)	2200	2200	2200	2200	2200	2300	2300
NITRATE (mg/l)	0.028	0.034	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
NITRITE (mg/l)	0.003	0.002	0.004	0.004	0.005	0.001 U	0.001 U
FLUORIDE (mg/l)	0.48	0.5	0.33	0.35	0.36	0.32	0.32

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
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LABORATORY SAMPLE NUMBER:	18791
STATION NUMBER:	M5 NORTH
PARAMETER:	8/26/92

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TOTAL COLIFORMS (MPN/100 ml)	11
FECAL COLIFORMS (MPN/100 ml)	11
TOTAL DISSOLVED SOLIDS (mg/l)	21000
TOTAL HARDNESS (mg/l as CaCO ₃)	4300
TOTAL ALKALINITY (mg/l as CaCO ₃)	100
CARBONATE (mg/l as CaCO ₃)	1 U
BICARBONATE (mg/l as CaCO ₃)	100
HYDROXIDE (mg/l as CaCO ₃)	1 U
CALCIUM (mg/l)	280
IRON (mg/l)	0.2
MANGANESE (mg/l)	0.007
MAGNESIUM (mg/l)	880
POTASSIUM (mg/l)	470
SODIUM (mg/l)	8100
SILICA (mg/l)	4.1 B
ZINC (mg/l)	0.002 U
SILVER (mg/l)	0.01 U
SELENIUM (mg/l)	0.003 U
MERCURY (mg/l)	0.0002 U
BARIUM (mg/l)	0.01 B
COPPER (mg/l)	0.002 U
CADMIUM (mg/l)	0.002 U
LEAD (mg/l)	0.001 U
CHROMIUM (mg/l)	0.006 U
ARSENIC (mg/l)	0.004
CHLORIDE (mg/l)	16000
SULFATE (mg/l)	2200
NITRATE (mg/l)	0.01 U
NITRITE (mg/l)	0.001 U
FLUORIDE (mg/l)	0.32

QUALIFIER DEFINITIONS:

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U = Parameter undetected
G = Greater than or equal to
TNTC = Too numerous to count

MILETA CREEK ---- FRESH SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6139	8667
STATION NUMBER:	DETECTION	M6	M6
PARAMETER:	LIMIT	08/08/91	09/18/91
TOTAL COLIFORMS (MPN/100 ml)	1	9200	54000
FECAL COLIFORMS (MPN/100 ml)	1	330	780
CHLORIDE (ug/g)	1		190
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	0.12	0.15 U
TOTAL SOLIDS (%)		81	81
SULFATE (ug/g)	1		94 U
ARSENIC (ug/g)	0.001	4.7	
BARIUM (ug/g)	0.003	94	
CALCIUM (ug/g)	0.01	6400	
CADMIUM (ug/g)	0.002	0.22 U	
CHROMIUM (ug/g)	0.006	23	
COPPER (ug/g)	0.002	3.6	
IRON (ug/g)	0.01	14000	
MERCURY (ug/g)	0.0002	0.012	
POTASSIUM (ug/g)	1	1400	
MAGNESIUM (ug/g)	0.01	4600	
MANGANESE (ug/g)	0.002	250	
SODIUM (ug/g)	0.02	810	
LEAD (ug/g)	0.001	6.7	
SELENIUM (mg/l)	0.001	0.44 U	
SILICON (ug/g)	0.04	2800	
SILVER (ug/g)	0.01	1.1 U	
ZINC (ug/g)	0.02	20	

QUALIFIER DEFINITIONS:

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- TNTC = Too numerous to count

MILETA CREEK ----- MARINE SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6138	13352	7440	16291	18800
STATION NUMBER:	DETECTION	M1	M1	M1	M1	M1
PARAMETER:	LIMIT	08/08/91	11/21/91	04/07/92	07/28/92	08/26/92
TOTAL COLIFORMS (MPN/100 ml)	1	1400	180 U	18	78	18 U
FECAL COLIFORMS (MPN/100 ml)	1	1400	180 U	18 U	18 U	18 U
CHLORIDE (ug/g)	1		4000	2100	5600	3300
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	0.06	0.41 U	0.53	0.17 U	0.2 U
TOTAL SOLIDS (%)		76	75	82	80	80
SULFATE (ug/g)	1		120	320	1100	530
ARSENIC (ug/g)	0.001	3.7	3.2	0.12 U	2.6	2.6
BARIUM (ug/g)	0.003	38	31	15	15	16
CALCIUM (ug/g)	0.01	6600	6700	13000	6000	8100
CADMIUM (ug/g)	0.002	0.21 U	0.27 U	0.24 U	0.22 U	0.21 U
CHROMIUM (ug/g)	0.006	21	25	21	21	26
COPPER (ug/g)	0.002	3.3	8	6.8	7.6	7.6
IRON (ug/g)	0.01	11000	11000	11000	9000	12000
MERCURY (ug/g)	0.0002	0.049	0.053	0.022	0.036	0.036
POTASSIUM (ug/g)	1	1300	1200	8000	890	840
MAGNESIUM (ug/g)	0.01	4100	4400	4100	3900	4200
MANGANESE (ug/g)	0.002	170	190	130	110	150
SODIUM (ug/g)	0.02	3700	4700	3400	3600	3600
LEAD (ug/g)	0.001	10	12	2.3	12	0.1 U
SELENIUM (mg/l)	0.001	0.42 U	0.4 U	0.12 U	0.12 U	0.1 U
SILICON (ug/g)	0.04	1300		450	400	450
SILVER (ug/g)	0.01	1.1 U	1.3 U	1.2 U	1.1 U	1 U
ZINC (ug/g)	0.02	16	24	24	21	25

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

MILETA CREEK ---- MARINE SHELLFISH ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6136	13350	7441	7439	16294	16295	18803
STATION NUMBER:	DETECTION	M2	M2	M2	M8	M2	M8	M2
PARAMETER:	LIMIT	08/08/91	11/21/91	04/07/92	04/07/92	07/28/92	07/28/92	08/26/92
TOTAL COLIFORMS (MPN/100 ml)	1	20		20	45	45		130
FECAL COLIFORMS (MPN/100 ml)	1	18 U		18 U	18 U	45		78
TOTAL SOLIDS (‡)		9.7	14	15	13	12	7.6	15
ARSENIC (ug/g)	0.001	5.3	1.2	1.5	1.2	1.4 U	1.9	0.87 U
BARIUM (ug/g)	0.003	1.3	0.24	0.63	0.33	0.34	0.16	0.39
CALCIUM (ug/g)	0.01	6400	910	980	790	630	410	460
CADMIUM (ug/g)	0.002	1.3	0.14	0.1	0.2	0.09 U	0.05	0.2
CHROMIUM (ug/g)	0.006	2.6	0.04 U	0.34	0.46	0.33	0.5	0.17 U
COPPER (ug/g)	0.002	18	1.3	2.8	1.1	1.7	0.57	2.7
IRON (ug/g)	0.01	220	15	330	51	71	35	58
MERCURY (ug/g)	0.0002	0.12	0.018	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
POTASSIUM (ug/g)	1	13000	1600	1900	1900	1900	1100	1900
MAGNESIUM (ug/g)	0.01	6700	740	910	830	750	870	780
MANGANESE (ug/g)	0.002	4.3	0.56	3.6	1.1	1.1	0.54	1.1
SODIUM (ug/g)	0.02	42000	22000	4900	5800	6100	7500	5900
LEAD (ug/g)	0.001	6	0.22	1.3	0.93	2.1	0.82	0.08
SELENIUM (mg/l)	0.001	2.2	0.2	0.13	0.6	0.36	1.2	0.17
SILICON (ug/g)	0.04	18 U	0.75 U	210	92	130	44	120
SILVER (ug/g)	0.01	2 U	0.1	0.5	0.2 U	0.4 U	0.2 U	0.3 U
ZINC (ug/g)	0.02	54	6.7	8.9	16	7.3	4.3	12

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

M2 = Butterclams
 M8 = Littlenecks

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LABORATORY SAMPLE NUMBER:	18804
STATION NUMBER:	M8
PARAMETER:	08/26/92

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TOTAL COLIFORMS (MPN/100 ml)	68
FECAL COLIFORMS (MPN/100 ml)	68
TOTAL SOLIDS (%)	15
ARSENIC (ug/g)	0.75 U
BARIUM (ug/g)	0.78
CALCIUM (ug/g)	1200
CADMIUM (ug/g)	0.07
CHROMIUM (ug/g)	0.34
COPPER (ug/g)	3.9
IRON (ug/g)	220
MERCURY (ug/g)	0.01 U
POTASSIUM (ug/g)	1900
MAGNESIUM (ug/g)	870
MANGANESE (ug/g)	2.5
SODIUM (ug/g)	6700
LEAD (ug/g)	0.06
SELENIUM (mg/l)	0.15
SILICON (ug/g)	280
SILVER (ug/g)	0.2 U
ZINC (ug/g)	8.8

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
U = Parameter undetected
G = Greater than or equal to
TNTC = Too numerous to count

M2 = Butterclams
M8 = Littlenecks

PARADISE COVE CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6262	8659	10468	13357	14449	795	3191
STATION NUMBER:	DETECTION	PC1	PC1	PC1	PC1	PC1	PC1	PC1
PARAMETER:	LIMIT	08/09/91	09/18/91	10/17/91	11/22/91	12/10/91	01/16/92	02/13/92
TOTAL COLIFORMS (MPN/100 ml)	1	2400	150	28	18	2 U	2 U	2
FECAL COLIFORMS (MPN/100 ml)	1	TNTC	82	10	5	2 U	2	2
TOTAL DISSOLVED SOLIDS (mg/l)	1	170	120	84	82	100	110	100
TOTAL HARDNESS (mg/l as CaCO3)	1	73	74	66	66	65	62	47
TOTAL ALKALINITY (mg/l as CaCO3)	1	46	55	59	52	46	49	48
CARBONATE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	46		59	52	46	49	48
HYDROXIDE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	11		9.8	9.9	10	9.4	7.3
IRON (mg/l)	0.01	0.2		0.02	0.18	0.14	0.2	0.26
MANGANESE (mg/l)	0.002	0.004		0.031	0.019	0.017	0.023 B	0.021
MAGNESIUM (mg/l)	0.01	11		10	10	9.6	9.3	7
POTASSIUM (mg/l)	1	1.5 B		1 U	2	1.2	1.3	1 U
SODIUM (mg/l)	0.5	6.5		6.2	10	5.7	6.1	4.6 B
SILICA (mg/l)	0.1	8.8		13	11	11	11	9.7
ZINC (mg/l)	0.02	0.002 U		0.002 U	0.004	0.021	0.003 B	0.002
SILVER (mg/l)	0.01	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.012		0.008	0.011	0.01	0.011	0.008
COPPER (mg/l)	0.002	0.003 B		0.002 U	0.002 U	0.002 U	0.003	0.002 U
CADMIUM (mg/l)	0.002	0.002 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.004 U		0.001	0.001 U	0.001 U	0.002	0.006
CHROMIUM (mg/l)	0.006	0.006 U		0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.005		0.003	0.002	0.003	0.002 B	0.001
CHLORIDE (mg/l)	1	4.6	3.8	4.9	1 U	1 U	3.5	2.6 B
SULFATE (mg/l)	1	10	19	12	12	14	14	13
NITRATE (mg/l)	0.2	1.1	0.61	0.64	0.99	1.2	1	1.3
NITRITE (mg/l)	0.2	0.005		0.01 U	0.003	0.002	0.005	0.004
FLUORIDE (mg/l)	0.2	0.02 U		0.1 U	0.03	0.2	0.12	0.05

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

PARADISE COVE CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	5367	7582	11276	13527	16506	18948	19959
STATION NUMBER:	PC1	PC1	PC1	PC1	PC1	PC1	PC1
PARAMETER:	03/12/92	04/09/92	05/21/92	06/18/92	07/30/92	08/28/92	09/16/92
TOTAL COLIFORMS (MPN/100 ml)	17	4	11	64	350	350	130
FECAL COLIFORMS (MPN/100 ml)	17	4	13	46	79	350	11
TOTAL DISSOLVED SOLIDS (mg/l)	90	98	94	120	110 B	100	82
TOTAL HARDNESS (mg/l as CaCO3)	67	64	73	73	66	66	77
TOTAL ALKALINITY (mg/l as CaCO3)	50	49	58	54	59	63	63
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	50	49	58	54	59	63	63
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	11	9.5	11	11	10	10	11
IRON (mg/l)	0.44	0.58	0.87	0.42	0.42	0.28	0.27
MANGANESE (mg/l)	0.035	0.052	0.078	0.043	0.04	0.035	0.042
MAGNESIUM (mg/l)	9.7	9.7	11	11	10	10	12
POTASSIUM (mg/l)	1 U	1.2	1.2	1.5	1.2 B	1	1.8
SODIUM (mg/l)	6.7	6.2	7.3	6.7	6.9	7	7.1
SILICA (mg/l)	12	26	32	32	30	28	32
ZINC (mg/l)	0.15	0.023 B	0.007 B	0.019	0.055	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.011	0.011	0.016	0.01	0.009	0.009 B	0.007
COPPER (mg/l)	0.002 U	0.002 U	0.003	0.003	0.002 U	0.002 U	0.013 B
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.002	0.003	0.004 U	0.002 B	0.001	0.001 B	0.004 B
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.002	0.002	0.003 U	0.002	0.003	0.004 U	0.003 B
CHLORIDE (mg/l)	3.2	4.2	2.8	3.5	6.9	2.7	2.2
SULFATE (mg/l)	13	17	13	23	15	15	12
NITRATE (mg/l)	0.92	0.64	0.076	0.71	0.71	0.74	0.7
NITRITE (mg/l)	0.001 U	0.001 U	0.001 U	0.006	0.004	0.001 U	0.001
FLUORIDE (mg/l)	0.05	0.1	0.05	0.11	0.06	0.05	0.04

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

PARADISE COVE ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6263	6264	6265	13358	13359	13360	7583
STATION NUMBER:		PC5	PC6 SOUTH	PC7 NORTH	PC5	PC6 SOUTH	PC7 NORTH	PC5
PARAMETER:	DETECTION LIMIT	08/09/91	08/09/91	08/09/91	11/22/91	11/22/91	11/22/91	04/09/92
TOTAL COLIFORMS (MPN/100 ml)	1	70	220	52	78	48	18	2 U
FECAL COLIFORMS (MPN/100 ml)	1	36	12	32	32	10	15	2 U
TOTAL DISSOLVED SOLIDS (mg/l)	1	33000	32000	30000	29000	30000	31000	27000
TOTAL HARDNESS (mg/l as CaCO3)	1	5700	5700	4900	4700	4800	4800	4900
TOTAL ALKALINITY (mg/l as CaCO3)	1	100	100	100	100	100	100	96
CARBONATE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	100	100	100	100	100	100	96
HYDROXIDE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	320	320	300	290	300	300	320
IRON (mg/l)	0.01	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.08 B
MANGANESE (mg/l)	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.01
MAGNESIUM (mg/l)	0.01	1200	1200	1000	960	990	980	1000
POTASSIUM (mg/l)	1	510	520	470	350	360	360	320
SODIUM (mg/l)	0.5	7300	7000	6000	3000	3000	3000	9000
SILICA (mg/l)	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	4.3
ZINC (mg/l)	0.02	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.018 B
SILVER (mg/l)	0.01	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U	0.0002 U	0.002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.016	0.017	0.017	0.016	0.015	0.015	0.003 U
COPPER (mg/l)	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.004 U	0.026	0.004 U	0.001 U
CHROMIUM (mg/l)	0.006	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.008
ARSENIC (mg/l)	0.001	0.004 U	0.004 U	0.004	0.004 U	0.004 U	0.004 U	0.001
CHLORIDE (mg/l)	1	16000	11000	12000	17000	13000	17000	16000
SULFATE (mg/l)	1	1500	1500	1500	2300	2300	2300	2100
NITRATE (mg/l)	0.2	0.1	0.093	0.071	0.32	0.32	0.34	0.19
NITRITE (mg/l)	0.2	0.001	0.002	0.001	0.003	0.003	0.001	0.001 U
FLUORIDE (mg/l)	0.2	0.16	0.13	0.16	0.74	0.71	0.71	0.63

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

PARADISE COVE ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	7584	7585	16507	16508	16509	18949	18950
STATION NUMBER:	PC6 SOUTH	PC7 NORTH	PC5	PC6 SOUTH	PC7 NORTH	PC5	PC6 SOUTH
PARAMETER:	04/09/92	04/09/92	07/30/92	07/30/92	07/30/92	08/28/92	08/28/92
TOTAL COLIFORMS (MPN/100 ml)	2 U	2 U	7	4	11	21	8
FECAL COLIFORMS (MPN/100 ml)	2 U	2 U	2	2	4	9	2
TOTAL DISSOLVED SOLIDS (mg/l)	27000	26000	30000	30000	30000	23000	24000
TOTAL HARDNESS (mg/l as CaCO3)	5400	5400	4600	4700	4600	4500	4700
TOTAL ALKALINITY (mg/l as CaCO3)	95	99	100	100	100	100	110
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	95	99	100	100	100	100	110
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	350	340	290	300	290	290	310
IRON (mg/l)	0.09 B	0.04 B	0.15	0.2	0.2	0.07	0.08
MANGANESE (mg/l)	0.009	0.008	0.018	0.021	0.022	0.01	0.013
MAGNESIUM (mg/l)	1100	1100	940	970	940	920	960
POTASSIUM (mg/l)	370	360	530	560	530	490	520
SODIUM (mg/l)	9700	9500	9300	9300	8800	8400	9800
SILICA (mg/l)	5.1	4.1	3.4	4.1	3.4	4.1	3
ZINC (mg/l)	0.007 B	0.015 B	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.003 U	0.001 U	0.003 U	0.002 U	0.008
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003 U	0.003 U	0.007	0.008	0.007	0.008 B	0.009 B
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.002	0.001	0.001 U	0.001 U	0.001 U	0.004 B	0.001 U
CHROMIUM (mg/l)	0.006	0.007	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001 U	0.001 U	0.003 U	0.003 U	0.003 U	0.004 U	0.004 B
CHLORIDE (mg/l)	16000	16000	17000	15000	16000	15000	15000
SULFATE (mg/l)	2200	2200	2100	2200	2200	2100	2100
NITRATE (mg/l)	0.21	0.2	0.032	0.033	0.03	0.03	0.05
NITRITE (mg/l)	0.001 U	0.001 U	0.005	0.005	0.006	0.002	0.002
FLUORIDE (mg/l)	0.62	0.59	0.39	0.4	0.4	0.36	0.36

QUALIFIER DEFINITIONS:

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 TNTC = Too numerous to count

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LABORATORY SAMPLE NUMBER:	18951
STATION NUMBER:	PC7 NORTH
PARAMETER:	08/28/92

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TOTAL COLIFORMS (MPN/100 ml)	23
FECAL COLIFORMS (MPN/100 ml)	8
TOTAL DISSOLVED SOLIDS (mg/l)	24000
TOTAL HARDNESS (mg/l as CaCO3)	4400
TOTAL ALKALINITY (mg/l as CaCO3)	100
CARBONATE (mg/l as CaCO3)	1 U
BICARBONATE (mg/l as CaCO3)	100
HYDROXIDE (mg/l as CaCO3)	1 U
CALCIUM (mg/l)	290
IRON (mg/l)	0.07
MANGANESE (mg/l)	0.012
MAGNESIUM (mg/l)	890
POTASSIUM (mg/l)	470
SODIUM (mg/l)	8500
SILICA (mg/l)	2.6 B
ZINC (mg/l)	0.002 U
SILVER (mg/l)	0.01 U
SELENIUM (mg/l)	0.002 U
MERCURY (mg/l)	0.0002 U
BARIUM (mg/l)	0.007 B
COPPER (mg/l)	0.002 U
CADMIUM (mg/l)	0.002 U
LEAD (mg/l)	0.001 B
CHROMIUM (mg/l)	0.006 U
ARSENIC (mg/l)	0.004 U
CHLORIDE (mg/l)	16000
SULFATE (mg/l)	2100
NITRATE (mg/l)	0.04
NITRITE (mg/l)	0.002
FLUORIDE (mg/l)	0.36

QUALIFIER DEFINITIONS:

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TNTC = Too numerous to count

PARADISE CREEK ---- MARINE SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6272	13367	7592	16511	18953
STATION NUMBER:	DETECTION	PC4	PC4	PC4	PC4	PC4
PARAMETER:	LIMIT	08/09/91	11/22/91	04/09/92	07/30/92	08/28/92
TOTAL COLIFORMS (MPN/100 ml)	1	18 U	180 U	20	20	18 U
FECAL COLIFORMS (MPN/100 ml)	1	18 U	180 U	18 U	18 U	18 U
CHLORIDE (ug/g)	1		3400	3100	1200	3000
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	0.12	0.08 U	0.09	0.18 U	0.2 U
TOTAL SOLIDS (%)		83	88	82	83	82
SULFATE (ug/g)	1		380	360	300	390
ARSENIC (ug/g)	0.001	2.5	1.5	0.96	1.4	3.2
BARIUM (ug/g)	0.003	18	22	22	19	15
CALCIUM (ug/g)	0.01	8200	42000	21000	9000	8400
CADMIUM (ug/g)	0.002	0.17 U	1 U	0.23 U	0.24 U	0.2 U
CHROMIUM (ug/g)	0.006	24	23	35	40	27
COPPER (ug/g)	0.002	4	310	3.3	4.8	4.3
IRON (ug/g)	0.01	12000	1000	11000	14000	11000
MERCURY (ug/g)	0.0002	0.02	0.02	0.01 U	0.012 U	0.012 U
POTASSIUM (ug/g)	1	810	1200	980	930	840
MAGNESIUM (ug/g)	0.01	4900	5100	4500	5900	4500
MANGANESE (ug/g)	0.002	190	180	170	190	170
SODIUM (ug/g)	0.02	2500	5700	3000	3000	3000
LEAD (ug/g)	0.001	7.5	2	2.7	5.4	0.1
SELENIUM (mg/l)	0.001	0.34 U	0.15 U	0.12 U	0.12 U	0.1 U
SILICON (ug/g)	0.04	420	48 U	26	290	280
SILVER (ug/g)	0.01	0.8 U	4.8 U	1.2 U	1.2 U	1 U
ZINC (ug/g)	0.02	17	250	26	27	24

QUALIFIER DEFINITIONS:

- = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC : Too numerous to count

PARADISE COVE ---- MARINE SHELLFISH ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6270	6271	13365	13366	7590	7591	16512
STATION NUMBER:	DETECTION	PC2	PC3	PC2	PC3	PC2	PC3	PC3
PARAMETER:	LIMIT	08/09/91	08/09/91	11/22/91	11/22/91	04/09/92	04/09/92	07/30/92
TOTAL COLIFORMS (MPN/100 ml)	1	16000	16000	330	18 U	330	230	700
FECAL COLIFORMS (MPN/100 ml)	1	5400	460	40	18 U	230	45	78
TOTAL SOLIDS (%)		18	15	24	18	14	12	16
ARSENIC (ug/g)	0.001	11	2.8	4.1	2.2	3.5	2.3	1.8
BARIUM (ug/g)	0.003	0.07	1.1	0.09	0.16	0.34	0.31	0.35
CALCIUM (ug/g)	0.01	5000	5900	500	1000	530	860	540
CADMIUM (ug/g)	0.002	0.6	1.1	0.05	0.26	0.09	0.36	0.09
CHROMIUM (ug/g)	0.006	2.7	1.9	0.37	0.06 U	0.4	0.14 U	0.28
COPPER (ug/g)	0.002	12	5.3	2	0.87	2.9	1.4	1.3
IRON (ug/g)	0.01	410	290	27	11	61	45	58
MERCURY (ug/g)	0.0002	0.06 U	0.08	0.011 U	0.02	0.008 U	0.008 U	0.01 U
POTASSIUM (ug/g)	1	12000	8700	2200	2000	1900	1900	2200
MAGNESIUM (ug/g)	0.01	3900	3200	740	760	910	810	740
MANGANESE (ug/g)	0.002	13	16	1.6	0.96	3.6	4.1	3.7
SODIUM (ug/g)	0.02	22000	24000	3900	27000	5200	5800	5100
LEAD (ug/g)	0.001	0.7	0.4	0.12	0.04	0.45	0.61	1.2
SELENIUM (mg/l)	0.001	1.5	2.8	0.38	0.47	2.2	2.6	0.81
SILICON (ug/g)	0.04	5.1 U	11 U	9.7	0.91 U	130	130	130
SILVER (ug/g)	0.01	13	1 U	0.2	0.3	4.1	0.4	0.3
ZINC (ug/g)	0.02	78	54	12	11	14	13	13

QUALIFIER DEFINITIONS:

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- TNTC = Too numerous to count
- PC2 = Butterclams
- PC3 = Japanese Clams

LABORATORY SAMPLE NUMBER:	16513	16514	18954	18955	18956
STATION NUMBER:	PC2	PC8	PC4	PC3	PC8
PARAMETER:	07/30/92	07/30/92	08/28/92	08/28/92	08/28/92
TOTAL COLIFORMS (MPN/100 ml)	9200	330	2400		5400
FECAL COLIFORMS (MPN/100 ml)	170	45	490		3500
TOTAL SOLIDS (%)	15	17	18	16	21
ARSENIC (ug/g)	3.6	3	3.3	0.72 U	3.7
BARIUM (ug/g)	0.16	0.16	0.27	0.36	0.31
CALCIUM (ug/g)	600	480	410	950	520
CADMIUM (ug/g)	0.05 U	0.08 U	0.05 U	0.16	0.06 U
CHROMIUM (ug/g)	0.56	0.57	0.23	0.14 U	0.34
COPPER (ug/g)	2.7	2.1	2.8	1.2	2.4
IRON (ug/g)	56	45	71	64	90
MERCURY (ug/g)	0.01 U	0.01 U	0.003 U	0.003 U	0.003 U
POTASSIUM (ug/g)	2200	2400	2500	2400	2700
MAGNESIUM (ug/g)	790	820	850	840	850
MANGANESE (ug/g)	2.4	2.1	4.1	4.8	5.1
SODIUM (ug/g)	4800	5000	5500	6100	5000
LEAD (ug/g)	1.8	1.6	0.05	0.04 U	0.06 U
SELENIUM (mg/l)	0.74	0.88	0.35	0.35	0.17
SILICON (ug/g)	110	110	130	120	180
SILVER (ug/g)	4.3	3.6	3.3	0.2 U	2.6
ZINC (ug/g)	14	17	16	16	16

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
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TNTC = Too numerous to count
PC2 = Butterclams
PC3 = Japanese Clams

SHINGLEMILL CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6065	8654	10461	13218	14442	788	3184
STATION NUMBER:	DETECTION	S7	S7	S7	S7	S7	S7	S7
PARAMETER:	LIMIT	08/07/91	09/18/91	10/17/91	11/20/91	12/10/91	01/16/92	02/13/92
TOTAL COLIFORMS (MPN/100 ml)	1	220	130	20	48	22	360	79
FECAL COLIFORMS (MPN/100 ml)	1	54	15	5	10	8	340	79
TOTAL DISSOLVED SOLIDS (mg/l)	1	320	130	120	150	94	94	88
TOTAL HARDNESS (mg/l as CaCO3)	1	320	83	71	47	58	48	43
TOTAL ALKALINITY (mg/l as CaCO3)	1	92	62	69	51	35	37	48
CARBONATE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	92		69	51	35	37	48
HYDROXIDE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	30		12	5.9	11	8.8	8
IRON (mg/l)	0.01	0.16		0.13	0.15	0.18	0.83	0.21
MANGANESE (mg/l)	0.002	0.021		0.024	0.024	0.017	0.04 B	0.012
MAGNESIUM (mg/l)	0.01	60		10	7.8	7.3	6.2	5.6
POTASSIUM (mg/l)	1	19		1 U	1 U	1.4	2	1.1
SODIUM (mg/l)	0.5	430		6.1	2.9	5.5	5.3	4.1 B
SILICA (mg/l)	0.1	1 U		13	3.8	9.5	8.4	8.5
ZINC (mg/l)	0.02	0.23		0.011	0.011	0.014	0.019	0.014
SILVER (mg/l)	0.01	0.1 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.001 U		0.001 U	0.003 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002	0.002 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.036		0.008	0.012	0.013	0.017	0.012
COPPER (mg/l)	0.002	0.008 B		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.004 U		0.001	0.003 U	0.001 U	0.005	0.001 U
CHROMIUM (mg/l)	0.006	0.06 U		0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.003		0.003	0.002	0.003	0.002 B	0.001 U
CHLORIDE (mg/l)	1	5.1	3.6	5	180	1 U	3.1	3.4 B
SULFATE (mg/l)	1	1 U	19	16	12	12	13	9.5
NITRATE (mg/l)	0.2	0.96	0.93	0.93	1.5	1.6	0.96	1.4
NITRITE (mg/l)	0.2	0.001 U		0.01 U	0.01 U	0.002	0.014	0.002
FLUORIDE (mg/l)	0.2	0.02		0.1 U	0.67	0.14	0.1	0.04

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

SHINGLEMILL CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	5360	7497	11269	13520	16169	18624	19952
STATION NUMBER:	S7	S7	S7	S7	S7	S7	S7
PARAMETER:	03/12/92	04/08/92	05/21/92	06/18/92	07/27/92	08/25/92	09/16/92
TOTAL COLIFORMS (MPN/100 ml)	9	2	8	110	70	180	140
FECAL COLIFORMS (MPN/100 ml)	2	2	8	110	23	7	8
TOTAL DISSOLVED SOLIDS (mg/l)	110	130	110	74	140	100	100
TOTAL HARDNESS (mg/l as CaCO3)	72	70	80	80	78	78	80
TOTAL ALKALINITY (mg/l as CaCO3)	54	70	76	64	69	69	68
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	54	70	76	64	69	69	68
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	14	12	14	14	13	13	14
IRON (mg/l)	0.13	0.13 B	0.11	0.16	0.17	0.11	0.14
MANGANESE (mg/l)	0.014	0.014	0.018 B	0.02	0.019	0.017	0.017
MAGNESIUM (mg/l)	9.1	9.7	11	11	11	11	11
POTASSIUM (mg/l)	1 U	2.1	2.2	2.1	2	1.9	2
SODIUM (mg/l)	6.2	6	6.7	6.8	6.8	5.7 B	7.1
SILICA (mg/l)	12	28	30	34	32	30	32
ZINC (mg/l)	0.009 B	0.014 B	0.022 B	0.031	0.006	0.023 B	0.004 B
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.004	0.001 U	0.001 U	0.001 U	0.002	0.003	0.001 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.012	0.009	0.011	0.01	0.01	0.01 B	0.007
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.004	0.002 U	0.002 U	0.03
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.005	0.002	0.001 U	0.001 B	0.003	0.004	0.004 B
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.056	0.002	0.002	0.002	0.002	0.006	0.004 B
CHLORIDE (mg/l)	3	6.4	3.7	3.5	8.2	3.5	3.3
SULFATE (mg/l)	12	14	14	22	15	13	13
NITRATE (mg/l)	1.2	0.91	0.9	0.87	0.86	0.91	0.84
NITRITE (mg/l)	0.001 U	0.003	0.001 U	0.004	0.001	0.001 U	0.001 U
FLUORIDE (mg/l)	0.04	0.08	0.08	0.12	0.05	0.09	0.04

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

SHINGLEMILL CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6061	6062	6063	6064	13214	13215	13216
STATION NUMBER:		S2	S3 SOUTH	S4 NORTH	S4D NORTH	S2	S3 SOUTH	S4 NORTH
PARAMETER:	DETECTION LIMIT	08/07/91	08/07/91	08/07/91	08/07/91	11/20/91	11/20/91	11/20/91
TOTAL COLIFORMS (MPN/100 ml)	1	2 U	12	2 U	2 U	32	18	18
FECAL COLIFORMS (MPN/100 ml)	1	2 U	2	2 U	2 U	10	5	5
TOTAL DISSOLVED SOLIDS (mg/l)	1	29000	30000	29000	20000	30000	31000	30000
TOTAL HARDNESS (mg/l as CaCO3)	1	5800	5900	6300	5800	4500	4700	4500
TOTAL ALKALINITY (mg/l as CaCO3)	1	97	110	100	110	100	100	100
CARBONATE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	97	110	100	110	100	100	100
HYDROXIDE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	360	370	370	360	290	300	290
IRON (mg/l)	0.01	0.1 U	0.1 U	0.1 U	0.1 U	0.55	0.21	0.35
MANGANESE (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.02 U	0.069	0.046	0.036
MAGNESIUM (mg/l)	0.01	1200	1200	1300	1200	910	960	910
POTASSIUM (mg/l)	1	360	370	370	360	360	380	360
SODIUM (mg/l)	0.5	8400	8700	8700	8400	3000	3000	3000
SILICA (mg/l)	0.1	1 U	1 U	1 U	1 U	0.1 U	0.1 U	0.1 U
ZINC (mg/l)	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U
SILVER (mg/l)	0.01	0.1 U	0.1 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U	0.003 U
MERCURY (mg/l)	0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.041	0.041	0.04	0.044	0.019	0.018	0.019
COPPER (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.035	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U	0.003 U
CHROMIUM (mg/l)	0.006	0.06 U	0.06 U	0.06 U	0.06 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.004 U	0.004	0.003 U	0.003 U
CHLORIDE (mg/l)	1	14000	12000	14000	14000	17000	17000	1700
SULFATE (mg/l)	1	1500	1500	1500	1600	2300	2300	2200
NITRATE (mg/l)	0.2	0.073	0.086	0.12	0.12	0.37	0.36	0.37
NITRITE (mg/l)	0.2	0.016	0.009	0.01	0.011	0.01 U	0.01 U	0.01 U
FLUORIDE (mg/l)	0.2	0.17	0.17	0.16	0.17	0.74	0.76	0.74

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
U = Parameter undetected
G = Greater than or equal to
TNTC = Too numerous to count

SHINGLEMILL CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	13217	7493	7494	7495	7496	16165	16166
STATION NUMBER:	S4D NORTH	S2	S3 SOUTH	S4 NORTH	S4D NORTH	S2	S3 SOUTH
PARAMETER:	11/20/91	04/08/92	04/08/92	04/08/92	04/08/92	07/27/92	07/27/92
TOTAL COLIFORMS (MPN/100 ml)	32	2	2 U	4	2 U	33	21
FECAL COLIFORMS (MPN/100 ml)	10	2 U	2 U	2	2 U	11	21
TOTAL DISSOLVED SOLIDS (mg/l)	31000	26000	25000	25000	26000	30000	29000
TOTAL HARDNESS (mg/l as CaCO3)	4600	4700	4900	4500	4800	4700	4600
TOTAL ALKALINITY (mg/l as CaCO3)	100	96	140	120	120	99	99
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	100	96	140	120	120	99	99
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	290	300	310	290	300	290	280
IRON (mg/l)	0.15	0.13 B	0.2	0.11 B	0.17	0.28	0.19
MANGANESE (mg/l)	0.007	0.015	0.017	0.013	0.014	0.019	0.02
MAGNESIUM (mg/l)	930	970	1000	920	990	970	950
POTASSIUM (mg/l)	370	290	320	280	290	550	550
SODIUM (mg/l)	3000	8000	8700	7900	8300	8900	9100
SILICA (mg/l)	0.1 U	5.3	5.3	7.1	6.2	4.1	3.6
ZINC (mg/l)	0.002 U	0.016 B	0.002 U	0.002 U	0.007 B	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.003 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.001 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.019	0.003 U	0.003 U	0.003 U	0.003 U	0.008	0.008
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.008	0.007
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.003 U	0.001 U	0.002	0.01	0.001 U	0.001 U	0.001 U
CHROMIUM (mg/l)	0.006 U	0.007	0.006 U	0.01	0.006	0.006 U	0.006 U
ARSENIC (mg/l)	0.005	0.003	0.001 U	0.001 U	0.001 U	0.003 U	0.003 U
CHLORIDE (mg/l)	17000	14000	15000	15000	14000	15000	15000
SULFATE (mg/l)	2500	2300	2200	2100	2000	2200	2200
NITRATE (mg/l)	0.36	0.22	0.24	0.24	0.23	0.031	0.032
NITRITE (mg/l)	0.01 U	0.008	0.007	0.005	0.006	0.004	0.004
FLUORIDE (mg/l)	0.67	0.61	0.59	0.59	0.54	0.35	0.29

QUALIFIER DEFINITIONS:

B = Parameter detected in blank

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TNTC = Too numerous to count

LABORATORY SAMPLE NUMBER:	16167	16168	18620	18621	18622	18623
STATION NUMBER:	S4 NORTH	S4D NORTH	S2	S3 SOUTH	S4 NORTH	S4D NORTH
PARAMETER:	07/27/92	07/27/92	08/25/92	08/25/92	08/25/92	08/25/92
TOTAL COLIFORMS (MPN/100 ml)	14	23	22	9	4	2
FECAL COLIFORMS (MPN/100 ml)	7	13	14	2	2	2 U
TOTAL DISSOLVED SOLIDS (mg/l)	30000	30000	21000	20000	18000	20000
TOTAL HARDNESS (mg/l as CaCO3)	4700	4700	4700	4600	4900	4600
TOTAL ALKALINITY (mg/l as CaCO3)	99	99	100	100	100	100
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	99	99	100	100	100	100
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	290	290	300	290	320	290
IRON (mg/l)	0.32	0.18	0.05 B	0.04 B	0.08 B	0.03 B
MANGANESE (mg/l)	0.017	0.011	0.009	0.01	0.01	0.009
MAGNESIUM (mg/l)	970	960	970	930	1000	940
POTASSIUM (mg/l)	550	550	520	490	570	500
SODIUM (mg/l)	8600	9300	8800	8700	9500	8400
SILICA (mg/l)	4.5	3.6	3	3	2.6 B	2.6 B
ZINC (mg/l)	0.002 U	0.002 U	0.039 B	0.002 U	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.003 U	0.001 U	0.003 U	0.001 U	0.001 U	0.002
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.008	0.01	0.008 B	0.01 B	0.01 B	0.01 B
COPPER (mg/l)	0.003	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.006	0.001 U
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.003 U	0.003 U	0.005	0.005	0.009	0.004
CHLORIDE (mg/l)	15000	16000	17000	17000	17000	17000
SULFATE (mg/l)	2300	2300	2000	2000	2000	2400
NITRATE (mg/l)	0.019	0.023	0.11	0.1	0.1	0.095
NITRITE (mg/l)	0.004	0.004	0.003	0.004	0.003	0.003
FLUORIDE (mg/l)	0.31	0.31	0.33	0.33	0.33	0.32

QUALIFIER DEFINITIONS:

B = Parameter detected in blank

U = Parameter undetected

G = Greater than or equal to

TNTC = Too numerous to count

SHINGLEMILL CREEK ---- FRESH SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6054	8666
STATION NUMBER:	DETECTION	S6	S6
PARAMETER:	LIMIT	08/07/91	09/18/91
TOTAL COLIFORMS (MPN/100 ml)	1	>=24000	7900
FECAL COLIFORMS (MPN/100 ml)	1	2200	780
CHLORIDE (ug/g)	1		240
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	0.06	0.14 U
TOTAL SOLIDS (%)		80	77
SULFATE (ug/g)	1		83 U
ARSENIC (ug/g)	0.001	3	1.8
BARIUM (ug/g)	0.003	64	44
CALCIUM (ug/g)	0.01	8000	5200
CADMIUM (ug/g)	0.002	0.26 U	0.05
CHROMIUM (ug/g)	0.006	28	26
COPPER (ug/g)	0.002	6.5	5.8
IRON (ug/g)	0.01	16000	12000
MERCURY (ug/g)	0.0002	0.01	0.014
POTASSIUM (ug/g)	1	1500	790
MAGNESIUM (ug/g)	0.01	6000	5200
MANGANESE (ug/g)	0.002	310	190
SODIUM (ug/g)	0.02	620	610
LEAD (ug/g)	0.001	2.9	1.2
SELENIUM (mg/l)	0.001	0.51 U	0.32 U
SILICON (ug/g)	0.04	1200	45
SILVER (ug/g)	0.01	1.2 U	0.8 U
ZINC (ug/g)	0.02	22	19

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

SHINGLEMILL CREEK ---- MARINE SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6053	13221	7501	16174	18629
STATION NUMBER:	DETECTION	S1	S1	S1	S1	S1
PARAMETER:	LIMIT	08/07/91	11/20/91	04/08/92	07/27/92	08/25/92
TOTAL COLIFORMS (MPN/100 ml)	1	230	180 U	20	110	20
FECAL COLIFORMS (MPN/100 ml)	1	78	180 U	18 U	45	20
CHLORIDE (ug/g)	1		3800	16000	3900	3900
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	0.04	0.4 U	0.08 U	1.4	0.2 U
TOTAL SOLIDS (%)		76	79	73	82	80
SULFATE (ug/g)	1		650	380	400	450
ARSENIC (ug/g)	0.001	4.1	2	1.1	2.2	1.9
BARIUM (ug/g)	0.003	55	29	25	17	24
CALCIUM (ug/g)	0.01	6300	15000	4900	4100	4500
CADMIUM (ug/g)	0.002	0.38 U	0.24 U	0.18 U	0.23 U	0.21 U
CHROMIUM (ug/g)	0.006	39	34	23	20	31
COPPER (ug/g)	0.002	6.1	8	5.6	6	5.2
IRON (ug/g)	0.01	14000	15000	13000	13000	15000
MERCURY (ug/g)	0.0002	0.012	0.027	0.567	0.012 U	0.012 U
POTASSIUM (ug/g)	1	1800	1000	1000	610	960 U
MAGNESIUM (ug/g)	0.01	5400	5400	5900	5100	5900
MANGANESE (ug/g)	0.002	180	200	210	240	200
SODIUM (ug/g)	0.02	5000	4100	3300	2300	3600
LEAD (ug/g)	0.001	7.4	5.2	1.9	2.6	0.11 U
SELENIUM (mg/l)	0.001	0.76 U	0.37 U	0.08 U	0.12 U	0.11 U
SILICON (ug/g)	0.04	1800		52	290	380
SILVER (ug/g)	0.01	1.8 U	1.3 U	0.8 U	1.2 U	1.1 U
ZINC (ug/g)	0.02	24	32	32	27	31

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

SHINGLEMILL CREEK ---- MARINE SHELLFISH ANALYSES RESULTS

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LABORATORY SAMPLE NUMBER:		6055
STATION NUMBER:	DETECTION	S5
PARAMETER:	LIMIT	08/07/91

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TOTAL COLIFORMS (MPN/100 ml)	1	78
FECAL COLIFORMS (MPN/100 ml)	1	78
TOTAL SOLIDS (%)		
ARSENIC (ug/g)	0.001	
BARIUM (ug/g)	0.003	
CALCIUM (ug/g)	0.01	
CADMIUM (ug/g)	0.002	
CHROMIUM (ug/g)	0.006	
COPPER (ug/g)	0.002	
IRON (ug/g)	0.01	
MERCURY (ug/g)	0.0002	
POTASSIUM (ug/g)	1	
MAGNESIUM (ug/g)	0.01	
MANGANESE (ug/g)	0.002	
SODIUM (ug/g)	0.02	
LEAD (ug/g)	0.001	
SELENIUM (mg/l)	0.001	
SILICON (ug/g)	0.04	
SILVER (ug/g)	0.01	
ZINC (ug/g)	0.02	

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count
- S5 = Unknown type

TALEQUAH CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6140	8661	10467	13340	14448	794	3190
STATION NUMBER:	DETECTION	T1	T1	T1	T1	T1	T1	T1
PARAMETER:	LIMIT	08/08/91	09/18/91	10/17/91	11/21/91	12/10/91	01/16/92	02/13/92
TOTAL COLIFORMS (MPN/100 ml)	1	760	160	32	10	2 U	20	7
FECAL COLIFORMS (MPN/100 ml)	1	88	5	10	2 U	2 U	8	4
TOTAL DISSOLVED SOLIDS (mg/l)	1	110	110	130	120	110	100	96
TOTAL HARDNESS (mg/l as CaCO3)	1	71	55	53	37	52	46	37
TOTAL ALKALINITY (mg/l as CaCO3)	1	44	40	44	38	31	36	50
CARBONATE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	44		44	38	31	36	50
HYDROXIDE (mg/l as CaCO3)	1	1 U		1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	12		9.6	4.4	10	8.7	7.2
IRON (mg/l)	0.01	0.1 U		0.26	0.45	0.31	0.35	0.33
MANGANESE (mg/l)	0.002	0.02 U		0.013	0.11	0.021	0.022 B	0.018
MAGNESIUM (mg/l)	0.01	9.9		7	6.4	6.6	6	4.6
POTASSIUM (mg/l)	1	10 U		1 U	1 U	1 U	1	1 U
SODIUM (mg/l)	0.5	21		6.9	4	6.5	6.5	5.1 B
SILICA (mg/l)	0.1	1 U		13	5.2	12	11	8.9
ZINC (mg/l)	0.02	0.02 U		0.002 U	0.006	0.01	0.012 B	0.002 U
SILVER (mg/l)	0.01	0.1 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.03 U		0.007	0.013	0.014	0.012	0.01
COPPER (mg/l)	0.002	0.02 U		0.002 U	0.002 U	0.004	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.002		0.001	0.001 U	0.003	0.003	0.004
CHROMIUM (mg/l)	0.006	0.06 U		0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001	0.005		0.026	0.005	0.005	0.005 B	0.003
CHLORIDE (mg/l)	1	5	4.1	5.5	50	4.8	4.8	3.4 B
SULFATE (mg/l)	1	7 B	20	13	14	14	13	12
NITRATE (mg/l)	0.2	1.1	1	0.94	1.8	1.8	1.4	1.8
NITRITE (mg/l)	0.2	0.004		0.01 U	0.01 U	0.003	0.006	0.005
FLUORIDE (mg/l)	0.2	0.02		0.1 U	0.03	0.16	0.11	0.04

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

TALEQUAH CREEK ---- FRESHWATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	5366	7187	11275	13526	16404	18841	19958
STATION NUMBER:	T1	T1	T1	T1	T1	T1	T1
PARAMETER:	03/12/92	04/06/92	05/21/92	06/18/92	07/28/92	08/27/92	09/16/92
TOTAL COLIFORMS (MPN/100 ml)	8	46	13	23	920	920	540
FECAL COLIFORMS (MPN/100 ml)	8	31	4	23	110	110	8
TOTAL DISSOLVED SOLIDS (mg/l)	82	82	94	110	120	86	110
TOTAL HARDNESS (mg/l as CaCO3)	46	42	54	57	53	57	66
TOTAL ALKALINITY (mg/l as CaCO3)	36	24	42	45	45	46	46
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	36	24	42	45	45	46	46
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	9.5 B	7.9	10	11	9.9	11	12
IRON (mg/l)	0.31	0.37	0.36	0.45	0.46	0.84	0.29
MANGANESE (mg/l)	0.02	0.021	0.02 B	0.021	0.02	0.042	0.015
MAGNESIUM (mg/l)	5.3	5.5	7.1	7.2	6.8	7.2	8.8
POTASSIUM (mg/l)	1 U	1 U	1 U	1 U	1 U	1 U	1.7
SODIUM (mg/l)	6.1	5.5	7.8	7.4	7.4	7.1	9.2
SILICA (mg/l)	9.5	24	30	32	30	32	39
ZINC (mg/l)	0.025 B	0.039 B	0.023 B	0.031	0.028	0.017 B	0.003 B
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001	0.001
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.011	0.007	0.009	0.012	0.009	0.012 B	0.009
COPPER (mg/l)	0.002 U	0.002 U	0.008	0.004	0.002 U	0.002 U	0.026 B
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 B	0.002 U
LEAD (mg/l)	0.01	0.003	0.003	0.004 B	0.002	0.005	0.002 B
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.003	0.003	0.002	0.003	0.004	0.006	0.004 B
CHLORIDE (mg/l)	3.7	3.4	4.1	4	3.4	3.6	2.4
SULFATE (mg/l)	12	5.8	15	22	14	12	11
NITRATE (mg/l)	1.3	0.91	1.1	0.98	0.96	1	0.96
NITRITE (mg/l)	0.001 U	0.002	0.001 U	0.003	0.003	0.001	0.002
FLUORIDE (mg/l)	0.04	0.11	0.05	0.11	0.05	0.07	0.06

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

TALEQUAH CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6141	6142	6143	13341	13342	13343	7188
STATION NUMBER:	DETECTION	T4	T5 EAST	T6 WEST	T4	T5 EAST	T6 WEST	T4
PARAMETER:	LIMIT	08/08/91	08/08/91	08/08/91	11/21/91	11/21/91	11/21/91	04/06/92
TOTAL COLIFORMS (MPN/100 ml)	1	10	15	8	42	32	28	23
FECAL COLIFORMS (MPN/100 ml)	1	100	26	10	28	15	10	23
TOTAL DISSOLVED SOLIDS (mg/l)	1	29000	32000	31000	31000	31000	28000	26000
TOTAL HARDNESS (mg/l as CaCO3)	1	5800	5800	5900	4600	4500	4500	4600
TOTAL ALKALINITY (mg/l as CaCO3)	1	100	100	100	100	100	100	58
CARBONATE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	1	100	100	100	100	100	100	58
HYDROXIDE (mg/l as CaCO3)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	0.01	360	360	370	290	290	290	310
IRON (mg/l)	0.01	0.1 U	0.1 U	0.1 U	0.23	0.24	0.04	0.56
MANGANESE (mg/l)	0.002	0.021 U	0.02 U	0.02 U	0.016	0.012	0.002 U	0.017
MAGNESIUM (mg/l)	0.01	1200	1200	1200	930	920	910	930
POTASSIUM (mg/l)	1	360	370	370	370	370	370	310
SODIUM (mg/l)	0.5	8300	8300	8300	3000	3000	3000	7600
SILICA (mg/l)	0.1	1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	6
ZINC (mg/l)	0.02	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.015 B
SILVER (mg/l)	0.01	0.1 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U	0.003 U	0.001 U
MERCURY (mg/l)	0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003	0.041	0.056	0.04	0.018	0.018	0.018	0.003 U
COPPER (mg/l)	0.002	0.02 U	0.014	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002	0.02 U	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.001	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U	0.003 U	0.006
CHROMIUM (mg/l)	0.006	0.06 U	0.06 U	0.06 U	0.006 U	0.006 U	0.006	0.007
ARSENIC (mg/l)	0.001	0.004 U	0.008	0.004 U	0.003 U	0.003 U	0.004	0.001 U
CHLORIDE (mg/l)	1	13000	15000	16000	14000	17000	17000	14000
SULFATE (mg/l)	1	1600	1500	1400	2400	2900	2900	2300
NITRATE (mg/l)	0.2	0.056	0.038	0.066	0.33	0.33	0.34	0.25
NITRITE (mg/l)	0.2	0.001 U	0.001 U	0.001 U	0.01 U	0.01 U	0.01 U	0.004
FLUORIDE (mg/l)	0.2	0.16	0.14	0.14	0.74	0.72	0.71	0.54

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count

TALEQUAH CREEK ---- MARINE WATER ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:	7189	7190	16405	16406	16407	18842	18843
STATION NUMBER:	T5 EAST	T6 WEST	T4	T5 EAST	T6 WEST	T4	T5 EAST
PARAMETER:	04/06/92	04/06/92	07/29/92	07/29/92	07/29/92	08/27/92	08/27/92
TOTAL COLIFORMS (MPN/100 ml)	17	23	46	13	8	33	33
FECAL COLIFORMS (MPN/100 ml)	13	23	33	4	4	23	33
TOTAL DISSOLVED SOLIDS (mg/l)	26000	25000	28000	30000	30000	18000	20000
TOTAL HARDNESS (mg/l as CaCO3)	4900	4900	4500	4600	4600	4700	4900
TOTAL ALKALINITY (mg/l as CaCO3)	80	86	100	100	100	110	110
CARBONATE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BICARBONATE (mg/l as CaCO3)	80	86	100	100	100	110	110
HYDROXIDE (mg/l as CaCO3)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM (mg/l)	330	320	280	290	290	310	320
IRON (mg/l)	0.13	0.34	0.14	0.17	0.07	0.05	0.14
MANGANESE (mg/l)	0.012	0.021	0.012	0.013	0.011	0.004	0.005
MAGNESIUM (mg/l)	1000	1000	920	940	940	960	1000
POTASSIUM (mg/l)	340	330	520	530	530	520	560
SODIUM (mg/l)	9100	8100	10000	8600	8400	8500	8600
SILICA (mg/l)	5.3	7.5	3.6	3.9	2.8	3.6	4.3
ZINC (mg/l)	0.024 B	0.028 B	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
SILVER (mg/l)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SELENIUM (mg/l)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002	0.002 U
MERCURY (mg/l)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
BARIUM (mg/l)	0.003 U	0.003 U	0.007	0.012	0.007	0.012 B	0.017
COPPER (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
CADMIUM (mg/l)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
LEAD (mg/l)	0.002	0.002	0.001 U	0.001 U	0.001 U	0.001 B	0.001 U
CHROMIUM (mg/l)	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
ARSENIC (mg/l)	0.001 U	0.004	0.003 U	0.003 U	0.003 U	0.004 U	0.004 U
CHLORIDE (mg/l)	13000	13000	16000	17000	13000	17000	16000
SULFATE (mg/l)	2400	2300	1900	1800	1900	2100	2200
NITRATE (mg/l)	0.23	0.23	0.08	0.062	0.096	0.05	0.035
NITRITE (mg/l)	0.004	0.004	0.004	0.004	0.004	0.002	0.002
FLUORIDE (mg/l)	0.54	0.54	0.44	0.35	0.35	0.32	0.31

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

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LABORATORY SAMPLE NUMBER:	18844
STATION NUMBER:	T6 WEST
PARAMETER:	08/27/92

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TOTAL COLIFORMS (MPN/100 ml)	79
FECAL COLIFORMS (MPN/100 ml)	79
TOTAL DISSOLVED SOLIDS (mg/l)	23000
TOTAL HARDNESS (mg/l as CaCO3)	4700
TOTAL ALKALINITY (mg/l as CaCO3)	110
CARBONATE (mg/l as CaCO3)	1 U
BICARBONATE (mg/l as CaCO3)	110
HYDROXIDE (mg/l as CaCO3)	1 U
CALCIUM (mg/l)	310
IRON (mg/l)	0.14
MANGANESE (mg/l)	0.008
MAGNESIUM (mg/l)	960
POTASSIUM (mg/l)	520
SODIUM (mg/l)	8400
SILICA (mg/l)	4.3
ZINC (mg/l)	0.003 B
SILVER (mg/l)	0.01 U
SELENIUM (mg/l)	0.004
MERCURY (mg/l)	0.0002 U
BARIUM (mg/l)	0.01 B
COPPER (mg/l)	0.002 U
CADMIUM (mg/l)	0.002 U
LEAD (mg/l)	0.001 U
CHROMIUM (mg/l)	0.006 U
ARSENIC (mg/l)	0.004 U
CHLORIDE (mg/l)	17000
SULFATE (mg/l)	2100
NITRATE (mg/l)	0.038
NITRITE (mg/l)	0.002
FLUORIDE (mg/l)	0.32

QUALIFIER DEFINITIONS:

B = Parameter detected in blank
U = Parameter undetected
G = Greater than or equal to
TNTC = Too numerous to count

TALEQUAH CREEK ---- MARINE SEDIMENT ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6137	13351	7196	16417	18855
STATION NUMBER:	DETECTION	T7	T7	T7	T7	T7
PARAMETER:	LIMIT	08/08/91	11/21/91	04/06/92	07/29/92	08/27/92
TOTAL COLIFORMS (MPN/100 ml)	1	20	450	18 U	5400	18 U
FECAL COLIFORMS (MPN/100 ml)	1	20	200	18 U	20	18 U
CHLORIDE (ug/g)	1		4800	2700	3400	3200
NITRATE & NITRITE-NITROGEN (ug/g)	0.2	0.17	0.4 U	0.51	0.49	0.2 U
TOTAL SOLIDS (%)		79	73	82	82	87
SULFATE (ug/g)	1		260	400	710	480
ARSENIC (ug/g)	0.001	1.3	3.2	1.8	1.6	3.3
BARIUM (ug/g)	0.003	24	23	11	17	17
CALCIUM (ug/g)	0.01	2200	3600	22000	33000	20000
CADMIUM (ug/g)	0.002	0.16 U	0.25 U	0.2 U	0.23 U	0.23 U
CHROMIUM (ug/g)	0.006	13	22	15	23	17
COPPER (ug/g)	0.002	3.5	9.5	10	8.5	6.6
IRON (ug/g)	0.01	5800	12000	13000	13000	13000
MERCURY (ug/g)	0.0002	0.024	0.018	0.02 U	0.012 U	0.011 U
POTASSIUM (ug/g)	1	1000	1400	880	1100	1000
MAGNESIUM (ug/g)	0.01	2200	3800	3900	4800	3700
MANGANESE (ug/g)	0.002	90	160	180	170	160
SODIUM (ug/g)	0.02	2000	5500	2600	3300	3100
LEAD (ug/g)	0.001	9.2	14	4.3	12	3
SELENIUM (mg/l)	0.001	0.32 U	0.38 U	0.1 U	0.12 U	0.23
SILICON (ug/g)	0.04	2.4 U		350	130	37
SILVER (ug/g)	0.01	0.8 U	1.2	1 U	1.1 U	1.1 U
ZINC (ug/g)	0.02	14	33	32	40	30

QUALIFIER DEFINITIONS:
 B = Parameter detected in blank
 U = Parameter undetected
 G = Greater than or equal to
 TNTC = Too numerous to count

TALEQUAH CREEK ---- MARINE SHELLFISH ANALYSES RESULTS

LABORATORY SAMPLE NUMBER:		6148	6135	13349	7195	16413	18850
STATION NUMBER:	DETECTION	T2	T3	T2	T2	T2	T2
PARAMETER:	LIMIT	08/08/91	08/08/91	11/21/91	04/06/92	07/29/92	08/27/92
TOTAL COLIFORMS (MPN/100 ml)	1	5400	1300	790	330	>= 24000	16000
FECAL COLIFORMS (MPN/100 ml)	1	2200	790	330	170	>= 24000	1700
TOTAL SOLIDS (%)		14	13	17	14	14	21
ARSENIC (ug/g)	0.001	4.1	4.2	2	2.3	1.7	3.4
BARIUM (ug/g)	0.003	0.9	2.8	0.16	0.26	0.19	0.38
CALCIUM (ug/g)	0.01	4400	5700	860	560	510	520
CADMIUM (ug/g)	0.002	1.6	0.8	0.18	0.24	0.32	0.04 U
CHROMIUM (ug/g)	0.006	1.3	3.2	0.05 U	0.26	0.23	0.39
COPPER (ug/g)	0.002	5.9	31	2.7	1	1.2	2.2
IRON (ug/g)	0.01	260	1400	20	49	56	86
MERCURY (ug/g)	0.0002	0.06 U	0.08 U	0.01 U	0.018 U	0.01 U	0.01 U
POTASSIUM (ug/g)	1	10000	10000	1800	1800	2400	2800
MAGNESIUM (ug/g)	0.01	4100	3000	790	790	790	800
MANGANESE (ug/g)	0.002	7.1	35	1.3	1.9	1.9	2.3
SODIUM (ug/g)	0.02	31000	33000	24000	6500	5400	4800
LEAD (ug/g)	0.001	0.6	1.6	0.11	0.76	0.66	0.1
SELENIUM (mg/l)	0.001	2.1	2.1	0.26	0.29	0.91	0.06
SILICON (ug/g)	0.04	9.3 U	9.2 U	0.79 U	110	140	110
SILVER (ug/g)	0.01	1 U	1 U	0.1	0.2 U	0.4 U	1.4
ZINC (ug/g)	0.02	86	69	13	14	15	16

QUALIFIER DEFINITIONS:

- B = Parameter detected in blank
- U = Parameter undetected
- G = Greater than or equal to
- TNTC = Too numerous to count
- T2 = Japanese Clams
- T3 = Other (unknown type)

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APPENDIX K

**LABORATORY ANALYTICAL DATA FOR SPRING-
AND GROUND-WATER SAMPLES**

(May 14, 1993 rev.)

Cross-Reference of Well and Spring Designations
 Vashon Ground-Water Management Plan
 Project No. WA028.02

Map Designation	Lab Data Designation	Carr (1983) Designation	Location	Well Depth	USGS Designation
W-1	V-19, V-19R	136	T23N-R3E-S8	94	473023122274101
W-2a	V-1	140	T23N-R3E-S1	177	472920122274201
W-2b		141?	T23N-R3E-S1	148	472920122274202
W-3	V-18	143	T23N-R3E-S2	142	472826122264802
W-4	V-9, V-9D		T23N-R3E-S2	305	472736122264401
W-5			T23N-R3E-S2	320	472729122263301
W-6	V-16	18	T23N-R3E-S3	169	472633122284001
W-7	V-12	76?	T22N-R3E-S6	297	472512122280101
W-8	V-10, V-10R	88	T22N-R3E-S1	462	
	V-11				
W-9a	V-6	106	T22N-R3E-S2	450	472302122232901
W-9b		107?	T22N-R3E-S2	375	472302122232902
W-10a	V-5	108	T22N-R3E-S2	114	472224122252301
W-10b		109	T22N-R3E-S2	109	472225122252101
W-11	V-8	116	T22N-R3E-S2	423	
W-12	V-7	97	T22N-R3E-S2	473	472301122261001
W-13	V-21	93?	T22N-R3E-S1	80	472354122284001
W-14	V-17		T22N-R2E-S3	183	472116122305601
W-15	V-13		T22N-R2E-S3	188	472130122301801
W-16a	V-4	46	T22N-R2E-S1	67	472339122304901
W-16b		48	T23N-R2E-S1	62	472327122305702
W-17	V-15	297	T22N-R2E-S1	220	472447122303601
W-18	V-20	126	T23N-R2E-S3	116	472643122303601
W-19	V-14, V-31	132	T23N-R2E-S3	173	472643122295802
W-20	V-3, V-3R	120	T23N-R2E-S2	122	472737122291102
W-21	V-2	118?	T23N-R2E-S2	133	472805122281901
S-6	V-22				
S-2	V-23, V-23R1, V-23R2, V-30				
S-3	V-24				
S-3	V-24D				
	V-25	58			
S-4	V-26, V-27				
S-5	V-28				
S-1	V-29	86?			

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ANALYSIS REPORT

CLIENT: Seattle - King County Health
 Department, c/o Laboratory

REPORT TO: Steve Fischnaller
 13th Floor, Public Safety Building
 Seattle, WA 98104

DATE REPORTED: 11/30/89
 DATE REVISED: 2/9/90
 P.O. NO.: B 39021 B
 REQ. NO.: V 85703

FINAL REPORT

Laboratory Sample Nos.	919895	919896	919897	DETECTION LIMIT
Client Identification	V-1	V-2	V-3	
Total Coliforms (MPN/100 ml)	2.	<2.	<2.	2.
Fecal Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Total Dissolved Solids (mg/l)	152.	137.	94.	1.0
Total Hardness (mg/l as CaCO ₃)	88.	84.	46.	1.0
Total Alkalinity (mg/l as CaCO ₃)	76.	90.	33.	1.0
Carbonate (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Bicarbonate (mg/l as CaCO ₃)	76.	90.	33.	1.0
Hydroxide (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Total Organic Halides (ug/l TOX)	<10.	<10.	<10.	10.
Calcium (mg/l)	17.	19.	9.0	0.01
Iron (mg/l)	0.40	0.22	0.09	0.01
Manganese (mg/l)	0.018	0.027	0.005	0.002
Magnesium (mg/l)	11.	8.8	5.7	0.01
Potassium (mg/l)	2.5	2.6	<1.0	1.0
Sodium (mg/l)	7.6	7.4	5.6	0.02
Silica (mg/l)	62.	66.	51.	0.04

CLIENT: Seattle - King County Health
Department, c/o Laboratory

DATE REPORTED: 11/30/89
DATE REVISED: 2/9/90
P.O. NO.: B 39021 B
REQ. NO.: V 85703

REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	919895	919896	919897	DETECTION LIMIT
Client Identification	V-1	V-2	V-3	
Zinc (mg/l)	0.106	0.017	0.061	0.02
Silver (mg/l)	<0.01	<0.01	<0.01	0.01
Selenium (mg/l)	<0.001	<0.001	<0.001	0.001
Mercury (mg/l)	<0.0002	<0.0002	<0.0002	<0.0002
Barium (mg/l)	0.006	0.012	0.005	0.003
Copper (mg/l)	0.030	<0.002	<0.002	0.002
Cadmium (mg/l)	<0.002	<0.002	<0.002	0.002
Lead (mg/l)	0.002	0.002	0.001	0.001
Chromium (mg/l)	<0.006	0.006	<0.006	0.006
Arsenic (mg/l)	0.004	0.004	<0.001	0.001
Chloride (mg/l)	5.4	5.6	5.3	0.50
Nitrite (mg/l)	<0.50	<0.50	<0.50	0.50
Sulfate (mg/l)	23.	11.	9.4	0.50
Nitrate (mg/l)	1.3	0.53	2.5	0.20
Fluoride (mg/l)	<0.20	<0.20	<0.20	0.20

CLIENT: Seattle - King County Health
Department, c/o Laboratory

DATE REPORTED: 11/30/89
DATE REVISED: 2/9/90
P.O. NO.: B 39021 B
REQ. NO.: V 85703

REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	919898	919984	919985	DETECTION LIMIT
Client Identification	V-4	V-5	V-6	
Total Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Fecal Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Total Dissolved Solids (mg/l)	103.	176.	108.	1.0
Total Hardness (mg/l as CaCO ₃)	53.	130.	84.	1.0
Total Alkalinity (mg/l as CaCO ₃)	42.	1.4	60.	1.0
Carbonate (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Bicarbonate (mg/l as CaCO ₃)	42.	114.	60.	1.0
Hydroxide (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Total Organic Halides (ug/l TOX)	<10.	<10.	<10.	10.
Calcium (mg/l)	9.2	22.	14.	0.01
Iron (mg/l)	0.23	0.38	1.5	0.01
Manganese (mg/l)	0.007	0.004	0.105	0.002
Magnesium (mg/l)	7.2	18.	12.	0.01
Potassium (mg/l)	<1.0	2.4	2.2	1.0
Sodium (mg/l)	7.5	10.	8.0	0.02
Silica (mg/l)	56.	73.	47.	0.04

CLIENT: Seattle - King County Health
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REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	919898	919984	919985	DETECTION LIMIT
Client Identification	V-4	V-5	V-6	
Zinc (mg/l)	0.074	0.058	0.131	0.02
Silver (mg/l)	<0.01	<0.01	<0.01	0.01
Selenium (mg/l)	<0.001	<0.001	<0.001	0.001
Mercury (mg/l)	<0.0002	<0.0002	<0.0002	0.0002
Barium (mg/l)	0.005	0.009	0.004	0.003
Copper (mg/l)	0.004	0.005	0.026	0.002
Cadmium (mg/l)	<0.002	<0.002	<0.002	0.002
Lead (mg/l)	0.002	0.006	0.002	0.001
Chromium (mg/l)	<0.006	0.009	<0.006	0.006
Arsenic (mg/l)	<0.001	0.001	0.001	0.001
Chloride (mg/l)	6.1	1.6	1.6	0.50
Nitrite (mg/l)	<0.50	<0.50	<0.50	0.50
Sulfate (mg/l)	11.	23.	32.	0.50
Nitrate (mg/l)	2.1	1.5	<0.20	0.20
Fluoride (mg/l)	<0.20	<0.20	<0.20	0.20

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REPORT TO: Steve Fischaller

Laboratory Sample Nos.	919986	919987	920071	DETECTION LIMIT
Client Identification	V-7	V-8	V-9	
Total Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Fecal Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Total Dissolved Solids (mg/l)	182.	198.	267.	1.0
Total Hardness (mg/l as CaCO ₃)	88.	94.	86	1.0
Total Alkalinity (mg/l as CaCO ₃)	141.	96.	212.	1.0
Carbonate (mg/l as CaCO ₃)	4.0	<1.0	<1.0	1.0
Bicarbonate (mg/l as CaCO ₃)	137.	96.	212.	1.0
Hydroxide (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Total Organic Halides (ug/l TOX)	<10.	41.	97.	10.
Calcium (mg/l)	24.	22.	22.	0.01
Iron (mg/l)	0.19	0.22	0.07	0.01
Manganese (mg/l)	0.085	0.144	0.058	0.002
Magnesium (mg/l)	6.8	9.4	7.6	0.01
Potassium (mg/l)	3.0	3.1	7.1	1.0
Sodium (mg/l)	28.	12.	62.	0.02
Silica (mg/l)	53.	81.	36.	0.04

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REPORT TO: Steve Fischaller

Laboratory Sample Nos.	919986	919987	920071	DETECTION LIMIT
Client Identification	V-7	V-8	V-9	
Zinc (mg/l)	0.067	0.030	0.021	0.02
Silver (mg/l)	<0.01	<0.01	<0.01	0.01
Selenium (mg/l)	<0.001	<0.001	<0.001	0.001
Mercury (mg/l)	<0.0002	<0.0002	<0.0002	0.0002
Barium (mg/l)	0.012	0.014	0.028	0.003
Copper (mg/l)	0.028	<0.002	0.004	0.002
Cadmium (mg/l)	<0.002	<0.002	<0.002	0.002
Lead (mg/l)	0.013	0.022	<0.001	0.001
Chromium (mg/l)	<0.006	<0.006	<0.006	0.006
Arsenic (mg/l)	0.006	0.002	0.017	0.001
Chloride (mg/l)	6.7	7.7	6.9	0.50
Nitrite (mg/l)	<0.50	<0.50	<0.50	0.50
Sulfate (mg/l)	4.1	41.	<0.50	0.50
Nitrate (mg/l)	<0.20	0.51	<0.20	0.20
Fluoride (mg/l)	<0.20	<0.20	<0.20	0.20

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REPORT TO: Steve Fischaller

Laboratory Sample Nos.	920072	920073	920074	DETECTION LIMIT
Client Identification	V-10	V-11	V-12	
Total Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Fecal Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Total Dissolved Solids (mg/l)	303.	301.	136.	1.0
Total Hardness (mg/l as CaCO ₃)	170.	170.	100.	1.0
Total Alkalinity (mg/l as CaCO ₃)	274.	269.	144.	1.0
Carbonate (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Bicarbonate (mg/l as CaCO ₃)	274.	269.	144.	1.0
Hydroxide (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Total Organic Halides (ug/l TOX)	28.	<10.	<10.	10.
Calcium (mg/l)	40.	39.	21.	0.01
Iron (mg/l)	0.32	0.30	0.73	0.01
Manganese (mg/l)	0.208	0.198	0.087	0.002
Magnesium (mg/l)	18.	18.	11.	0.01
Potassium (mg/l)	7.8	7.6	6.0	1.0
Sodium (mg/l)	39.	39.	43.	0.02
Silica (mg/l)	34.	34.	30.	0.04

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REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	920075	920240	920241	DETECTION LIMIT
Client Identification	V-13	V-14	V-15	
Total Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Fecal Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Total Dissolved Solids (mg/l)	84.	94.	111.	1.0
Total Hardness (mg/l as CaCO ₃)	67.	63.	50.	1.0
Total Alkalinity (mg/l as CaCO ₃)	51.	54.	54.	1.0
Carbonate (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Bicarbonate (mg/l as CaCO ₃)	51.	54.	54.	1.0
Hydroxide (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Total Organic Halides (ug/l TOX)	<10.	22.	<10.	10.
Calcium (mg/l)	12.	8.7	9.7	0.01
Iron (mg/l)	0.08	0.42	0.04	0.01
Manganese (mg/l)	0.184	0.107	0.004	0.002
Magnesium (mg/l)	8.9	10.	6.3	0.01
Potassium (mg/l)	2.0	2.0	1.1	1.0
Sodium (mg/l)	21.	5.0	6.4	0.02
Silica (mg/l)	26.	28.	28.	0.04

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REPORT TO: Steve Fischaller

Laboratory Sample Nos.	920075	920240	920241	DETECTION LIMIT
Client Identification	V-13	V-14	V-15	
Zinc (mg/l)	0.104	0.074	0.211	0.02
Silver (mg/l)	<0.01	<0.01	<0.01	0.01
Selenium (mg/l)	<0.001	<0.001	<0.001	0.001
Mercury (mg/l)	<0.0002	<0.0002	<0.0002	<0.0002
Barium (mg/l)	0.006	0.008	0.004	0.003
Copper (mg/l)	<0.002	<0.002	<0.002	0.002
Cadmium (mg/l)	<0.002	<0.002	<0.002	0.002
Lead (mg/l)	0.006	0.001	0.003	0.001
Chromium (mg/l)	<0.006	<0.006	<0.006	0.006
Arsenic (mg/l)	0.001	0.003	<0.001	0.001
Chloride (mg/l)	5.7	4.7	4.7	0.50
Nitrite (mg/l)	<0.50	<0.50	<0.50	0.50
Sulfate (mg/l)	9.2	12.	7.3	0.50
Nitrate (mg/l)	<0.20	0.73	0.47	0.20
Fluoride (mg/l)	<0.20	<0.20	<0.20	0.20

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REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	920242	920243	920244	DETECTION LIMIT
Client Identification	V-16	V-17	Trip Blank	
Total Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Fecal Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Total Dissolved Solids (mg/l)	89.	99.	4.0	1.0
Total Hardness (mg/l as CaCO ₃)	56.	61.	<1.0	1.0
Total Alkalinity (mg/l as CaCO ₃)	52.	58.	2.0	1.0
Carbonate (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Bicarbonate (mg/l as CaCO ₃)	52.	58.	2.0	1.0
Hydroxide (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Total Organic Halides (ug/l TOX)	27.	<10.	<10.	10.
Calcium (mg/l)	9.8	11.	0.06	0.01
Iron (mg/l)	0.04	1.7	<0.01	0.01
Manganese (mg/l)	0.005	0.012	<0.002	0.002
Magnesium (mg/l)	7.6	8.1	<0.01	0.01
Potassium (mg/l)	1.3	1.4	<1.0	1.0
Sodium (mg/l)	5.2	6.1	0.40	0.02
Silica (mg/l)	24.	28.	5.3	0.04

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REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	920242	920243	920244	DETECTION LIMIT
Client Identification	V-16	V-17	Trip Blank	
Zinc (mg/l)	0.103	0.321	0.011	0.02
Silver (mg/l)	<0.01	<0.01	<0.01	0.01
Selenium (mg/l)	<0.001	<0.001	<0.001	0.001
Mercury (mg/l)	<0.0002	<0.0002	<0.0002	0.0002
Barium (mg/l)	0.004	0.006	<0.003	0.003
Copper (mg/l)	<0.002	0.009	<0.002	0.002
Cadmium (mg/l)	<0.002	<0.002	<0.002	0.002
Lead (mg/l)	0.013	0.019	<0.001	0.001
Chromium (mg/l)	<0.006	<0.006	<0.006	0.006
Arsenic (mg/l)	0.001	0.002	<0.001	0.001
Chloride (mg/l)	4.5	5.2	<0.50	0.50
Nitrite (mg/l)	<0.50	<0.50	<0.50	0.50
Sulfate (mg/l)	8.6	8.7	<0.50	0.50
Nitrate (mg/l)	1.1	<0.20	<0.20	0.20
Fluoride (mg/l)	<0.20	<0.20	<0.20	0.20

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REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	920312	920313	920314	DETECTION LIMIT
Client Identification	V-18	V-19	V-20	
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Total Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Fecal Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Total Dissolved Solids (mg/l)	224.	178.	223.	1.0
Total Hardness (mg/l as CaCO ₃)	140.	130.	130.	1.0
Total Alkalinity (mg/l as CaCO ₃)	182.	122.	136.	1.0
Carbonate (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Bicarbonate (mg/l as CaCO ₃)	182.	122.	136.	1.0
Hydroxide (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Total Organic Halides (ug/l TOX)	<10.	<10.	<10.	10.
Calcium (mg/l)	21.	23.	34.	0.01
Iron (mg/l)	0.08	0.40	10.	0.01
Manganese (mg/l)	0.005	0.083	0.960	0.002
Magnesium (mg/l)	21.	17.	11.	0.01
Potassium (mg/l)	6.3	3.1	1.7	1.0
Sodium (mg/l)	39.	11.	15.	0.02
Silica (mg/l)	26.	30.	43.	0.04

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REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	920312	920313	920314	DETECTION LIMIT
Client Identification	V-18	V-19	V-20	
Zinc (mg/l)	0.056	0.125	0.275	0.02
Silver (mg/l)	<0.01	<0.01	<0.01	0.01
Selenium (mg/l)	<0.001	<0.001	<0.001	0.001
Mercury (mg/l)	<0.0002	<0.0002	<0.0002	0.0002
Barium (mg/l)	0.019	0.015	0.015	0.003
Copper (mg/l)	0.032	<0.002	<0.002	0.002
Cadmium (mg/l)	<0.002	0.002	<0.002	0.002
Lead (mg/l)	0.012	0.003	<0.001	0.001
Chromium (mg/l)	0.009	0.009	0.015	0.006
Arsenic (mg/l)	0.001	0.001	0.002	0.001
Chloride (mg/l)	14.	5.6	8.6	0.50
Nitrite (mg/l)	<0.50	<0.50	<0.50	0.50
Sulfate (mg/l)	13.	23.	<0.50	0.50
Nitrate (mg/l)	<0.20	<0.20	<0.20	0.20
Fluoride (mg/l)	<0.10	<0.10	<0.10	0.20

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REPORT TO: Steve Fischaller

Laboratory Sample Nos.	920315	920316	920742	DETECTION LIMIT
Client Identification	V-21	V-22	V-23	
Total Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Fecal Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Total Dissolved Solids (mg/l)	106.	266.	148.	1.0
Total Hardness (mg/l as CaCO ₃)	64.	200.	93.	1.0
Total Alkalinity (mg/l as CaCO ₃)	48.	164.	88.	1.0
Carbonate (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Bicarbonate (mg/l as CaCO ₃)	48.	164.	88.	1.0
Hydroxide (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Total Organic Halides (ug/l TOX)	<10.	<10.	<10.	10.
Calcium (mg/l)	9.6	47.	16.	0.01
Iron (mg/l)	0.52	0.04	0.22	0.01
Manganese (mg/l)	0.028	0.005	0.023	0.002
Magnesium (mg/l)	9.7	21.	13.	0.01
Potassium (mg/l)	2.1	4.5	<1.0	1.0
Sodium (mg/l)	27.	8.9	9.4	0.02
Silica (mg/l)	26.	30.	14.	0.04

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REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	920315	920316	920742	DETECTION LIMIT
Client Identification	V-21	V-22	V-23	
Zinc (mg/l)	0.012	0.005	0.026	0.02
Silver (mg/l)	<0.01	<0.01	<0.01	0.01
Selenium (mg/l)	<0.001	<0.001	<0.001	0.001
Mercury (mg/l)	<0.0002	<0.0002	<0.0002	0.0002
Barium (mg/l)	0.010	0.021	0.008	0.003
Copper (mg/l)	0.012	<0.002	<0.002	0.002
Cadmium (mg/l)	<0.002	<0.002	<0.002	0.002
Lead (mg/l)	0.063	0.001	<0.001	0.001
Chromium (mg/l)	<0.006	0.019	0.008	0.006
Arsenic (mg/l)	0.002	0.005	0.001	0.001
Chloride (mg/l)	5.1	11.	7.6	0.50
Nitrite (mg/l)	<0.50	<0.50	<0.50	0.50
Sulfate (mg/l)	8.5	48.	12.	0.50
Nitrate (mg/l)	<0.20	2.7	<0.20	0.20
Fluoride (mg/l)	<0.20	<0.20	<0.20	0.20

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REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	920743	920744	920745	DETECTION LIMIT
Client Identification	V-24	V-25	V-26	
Total Coliforms (MPN/100 ml)	<2.	22.	2.	2.
Fecal Coliforms (MPN/100 ml)	<2.	<2.	<2.	2.
Total Dissolved Solids (mg/l)	123.	155.	170.	1.0
Total Hardness (mg/l as CaCO ₃)	81.	82.	95.	1.0
Total Alkalinity (mg/l as CaCO ₃)	68.	64.	72.	1.0
Carbonate (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Bicarbonate (mg/l as CaCO ₃)	68.	64.	72.	1.0
Hydroxide (mg/l as CaCO ₃)	<1.0	<1.0	<1.0	1.0
Total Organic Halides (ug/l TOX)	<10.	<10.	<10.	10.
Calcium (mg/l)	11.	13.	15.	0.01
Iron (mg/l)	0.15	0.41	0.21	0.01
Manganese (mg/l)	0.022	0.029	0.050	0.002
Magnesium (mg/l)	13.	12.	14.	0.01
Potassium (mg/l)	2.3	1.9	<1.0	1.0
Sodium (mg/l)	8.8	8.4	7.3	0.02
Silica (mg/l)	20.	18.	13.	0.04

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REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	920743	920744	920745	DETECTION LIMIT
Client Identification	V-24	V-25	V-26	
Zinc (mg/l)	0.036	0.028	0.061	0.02
Silver (mg/l)	<0.01	<0.01	<0.01	0.01
Selenium (mg/l)	<0.001	<0.001	<0.001	0.001
Mercury (mg/l)	<0.0002	<0.0002	<0.0002	0.0002
Barium (mg/l)	0.009	0.013	0.008	0.003
Copper (mg/l)	0.004	<0.002	<0.002	0.002
Cadmium (mg/l)	<0.002	<0.002	<0.002	0.002
Lead (mg/l)	0.002	0.002	0.001	0.001
Chromium (mg/l)	0.009	0.010	0.008	0.006
Arsenic (mg/l)	0.003	0.002	0.001	0.001
Chloride (mg/l)	8.3	15.	15.	<0.50
Nitrite (mg/l)	<0.50	<0.50	<0.50	0.50
Sulfate (mg/l)	20.	17.	16.	0.50
Nitrate (mg/l)	<0.20	12.	4.4	0.20
Fluoride (mg/l)	<0.20	<0.20	<0.20	0.20

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REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	920746	920747	DETECTION LIMIT
Client Identification	V-27	V-28	
Total Coliforms (MPN/100 ml)	<2.	47.	2.
Fecal Coliforms (MPN/100 ml)	<2.	<2.	2.
Total Dissolved Solids (mg/l)	114.	155.	1.0
Total Hardness (mg/l as CaCO ₃)	95.	75.	1.0
Total Alkalinity (mg/l as CaCO ₃)	68.	44.	1.0
Carbonate (mg/l as CaCO ₃)	<1.0	<1.0	1.0
Bicarbonate (mg/l as CaCO ₃)	68.	44.	1.0
Hydroxide (mg/l as CaCO ₃)	<1.0	<1.0	1.0
Total Organic Halides (ug/l TOX)	<10.	-	
	10.		
Calcium (mg/l)	15.	-	0.01
Iron (mg/l)	0.027	-	0.01
Manganese (mg/l)	0.065	-	0.002
Magnesium (mg/l)	14.	-	0.01
Potassium (mg/l)	1.2	-	1.0
Sodium (mg/l)	7.2	-	0.02
Silica (mg/l)	13.	-	0.04

CLIENT: Seattle - King County Health
Department, c/o Laboratory

DATE REPORTED: 11/30/89
DATE REVISED: 2/9/90
P.O. NO.: B 39021 B
REQ. NO.: V 85703

REPORT TO: Steve Fischnaller

Laboratory Sample Nos.	920746	920747	DETECTION LIMIT
Client Identification	V-27	V-28	
<hr/>			
Zinc (mg/l)	0.066	-	0.02
Silver (mg/l)	<0.01	-	0.01
Selenium (mg/l)	<0.001	-	0.001
Mercury (mg/l)	<0.0002	-	0.0002
Barium (mg/l)	0.008	-	0.003
Copper (mg/l)	<0.002	-	0.002
Cadmium (mg/l)	<0.002	-	0.002
Lead (mg/l)	<0.001	-	0.001
Chromium (mg/l)	0.010	-	0.006
Arsenic (mg/l)	0.001	-	0.001
Chloride (mg/l)	19.	18.	0.50
Nitrite (mg/l)	<0.50	<0.50	0.50
Sulfate (mg/l)	19.	25.	0.50
Nitrate (mg/l)	11.	6.4	0.20
Fluoride (mg/l)	<0.20	<0.20	0.20

ANALYSIS REPORT **AMTEST**

AmTest Inc.

Professional
Analytical
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14603 N.E. 87th St.
Redmond, WA
98052

Fax: 206 883 3495

Tel: 206 885 1664

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller
 13th Floor, Public Safety Building
 Seattle, WA 98104

VASHON ISLAND GWMP

Laboratory Sample No.	007460	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-1, 4/16/90		
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Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	140.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	94.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	78.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	78.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 18.	0.01	
Iron	mg/l 0.13	0.01	0.3
Manganese	mg/l 0.010	0.002	0.05
Magnesium	mg/l 12.	0.01	
Potassium	mg/l 2.7	1.0	
Sodium	mg/l 6.9	0.02	
Silica	mg/l 28.	0.04	
Zinc	mg/l 0.20	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.005	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.003	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.007	0.001	0.05
Chloride	mg/l 2.8	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 19.	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischaller

VASHON ISLAND GWMP

Laboratory Sample No.	007461	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-2, 4/16/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	115.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	84.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	92.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	92.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 19.	0.01	
Iron	mg/l 0.42	0.01	0.3
Manganese	mg/l 0.025	0.002	0.05
Magnesium	mg/l 8.8	0.01	
Potassium	mg/l 2.5	1.0	
Sodium	mg/l 7.1	0.02	
Silica	mg/l 32.	0.04	
Zinc	mg/l 0.05	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.011	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.011	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.004	0.001	0.05
Chloride	mg/l 2.6	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 11.	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	007462	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-3, 4/16/90		

Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	55.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	50.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	32.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	32.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 9.5	0.01	
Iron	mg/l <0.01	0.01	0.3
Manganese	mg/l 0.006	0.002	0.05
Magnesium	mg/l 6.4	0.01	
Potassium	mg/l 1.2	1.0	
Sodium	mg/l 5.6	0.02	
Silica	mg/l 21.	0.04	
Zinc	mg/l 0.08	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.005	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l <0.002	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l <0.001	0.001	0.05
Chloride	mg/l 3.1	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 10.	0.5	250.
Nitrate	mg/l 2.7	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	007463	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-19, 751 4/16/90		
<hr/>			
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	180.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	127.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	126.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	126.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 23.	0.01	
Iron	mg/l 0.57	0.01	0.3
Manganese	mg/l 0.12	0.002	0.05
Magnesium	mg/l 17.	0.01	
Potassium	mg/l 2.6	1.0	
Sodium	mg/l 8.8	0.02	
Silica	mg/l 28.	0.04	
Zinc	mg/l 0.08	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.013	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.005	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l <0.001	0.001	0.05
Chloride	mg/l 2.8	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 23.	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	007464	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-23, 4/16/90		
Total Coliforms (MPN/100 ml)	2.0	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	140.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	98.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	92.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	92.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 16.	0.01	
Iron	mg/l <0.01	0.01	0.3
Manganese	mg/l <0.002	0.002	0.05
Magnesium	mg/l 14.	0.01	
Potassium	mg/l 0.96	1.0	
Sodium	mg/l 8.6	0.02	
Silica	mg/l 30.	0.04	
Zinc	mg/l 0.05	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l 0.0009	0.0002	0.002
Barium	mg/l 0.008	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.002	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l <0.001	0.001	0.05
Chloride	mg/l 4.3	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 13.	0.5	250.
Nitrate	mg/l 1.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	007465	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-26, 4/16/90		
<hr/>			
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	145.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	91.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	64.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	64.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 15.	0.01	
Iron	mg/l 0.01	0.01	0.3
Manganese	mg/l 0.005	0.002	0.05
Magnesium	mg/l 13.	0.01	
Potassium	mg/l 1.0	1.0	
Sodium	mg/l 7.2	0.02	
Silica	mg/l 36.	0.04	
Zinc	mg/l 0.05	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.007	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.003	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l <0.001	0.001	0.05
Chloride	mg/l 5.8	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 18.	0.5	250.
Nitrate	mg/l 4.4	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischaller

VASHON ISLAND GWMP

Laboratory Sample No.	007466	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-29,		
	4/16/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	145.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	94.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	84.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	84.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	7.0	5.0	
Calcium	mg/l 13.	0.01	
Iron	mg/l <0.01	0.01	0.3
Manganese	mg/l 0.002	0.002	0.05
Magnesium	mg/l 15.	0.01	
Potassium	mg/l 1.9	1.0	
Sodium	mg/l 8.1	0.02	
Silica	mg/l 21.	0.04	
Zinc	mg/l 0.02	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.010	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.001	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l <0.001	0.001	0.05
Chloride	mg/l 9.5	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 19.	0.5	250.
Nitrate	mg/l 2.5	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health
Department, c/o Laboratory

DATE REPORTED: 4/19/90
DATE REVISED: 6/1/90
P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	007907	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-5, 4/17/90		
<hr/>			
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	165.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	120.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	114.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	114.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 20.	0.01	
Iron	mg/l 0.48	0.01	0.3
Manganese	mg/l 0.003	0.002	0.05
Magnesium	mg/l 17.	0.01	
Potassium	mg/l 1.7	1.0	
Sodium	mg/l 8.8	0.02	
Silica	mg/l 29.	0.04	
Zinc	mg/l 0.11	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.009	0.003	1.
Copper	mg/l 0.035	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.018	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.001	0.001	0.05
Chloride	mg/l 8.4	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 19.	0.5	250.
Nitrate	mg/l 1.1	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	007908	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-6, 4/17/90		
<hr/>			
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	50.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	79.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	88.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	88.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 15.	0.01	
Iron	mg/l 0.55	0.01	0.3
Manganese	mg/l 0.14	0.002	0.05
Magnesium	mg/l 10.	0.01	
Potassium	mg/l 1.3	1.0	
Sodium	mg/l 7.5	0.02	
Silica	mg/l 26.	0.04	
Zinc	mg/l 0.20	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.010	0.003	1.
Copper	mg/l 0.012	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.002	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.016	0.001	0.05
Chloride	mg/l 4.0	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 11.	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	007909	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-7, - 4/17/90		
<hr/>			
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	185.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	82.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	140.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	140.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 22.	0.01	
Iron	mg/l 0.09	0.01	0.3
Manganese	mg/l 0.078	0.002	0.05
Magnesium	mg/l 6.5	0.01	
Potassium	mg/l 2.1	1.0	
Sodium	mg/l 25.	0.02	
Silica	mg/l 21.	0.04	
Zinc	mg/l 0.04	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.009	0.003	1.
Copper	mg/l 0.021	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.010	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.005	0.001	0.05
Chloride	mg/l 3.2	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 3.8	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
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REPORT TO: Steve Fischaller

VASHON ISLAND GWMP

Laboratory Sample No.	007910	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-8, 4/17/90		
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Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	155.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	91.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	98.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	98.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 21.	0.01	
Iron	mg/l 0.12	0.01	0.3
Manganese	mg/l 0.13	0.002	0.05
Magnesium	mg/l 9.3	0.01	
Potassium	mg/l 2.2	1.0	
Sodium	mg/l 10.	0.02	
Silica	mg/l 34.	0.04	
Zinc	mg/l 0.04	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.011	0.003	1.
Copper	mg/l 0.004	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.001	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.002	0.001	0.05
Chloride	mg/l 4.1	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 17.	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

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REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	007911	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-22, 4/17/90		
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Total Coliforms (MPN/100 ml)	9.0	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	265.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	183.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	162.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	162.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 42.	0.01	
Iron	mg/l 0.02	0.01	0.3
Manganese	mg/l 0.003	0.002	0.05
Magnesium	mg/l 19.	0.01	
Potassium	mg/l 3.4	1.0	
Sodium	mg/l 7.1	0.02	
Silica	mg/l 26.	0.04	
Zinc	mg/l <0.02	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.017	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.002	0.001	0.05
Chromium	mg/l 0.009	0.006	0.05
Arsenic	mg/l 0.006	0.001	0.05
Chloride	mg/l 5.6	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 41.	0.5	250.
Nitrate	mg/l 2.7	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

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REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	008006	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-9, 4/18/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	265.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	80.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	234.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	234.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	12.	5.0	
Calcium	mg/l 20.	0.01	
Iron	mg/l 0.03	0.01	0.3
Manganese	mg/l 0.051	0.002	0.05
Magnesium	mg/l 7.2	0.01	
Potassium	mg/l 6.4	1.0	
Sodium	mg/l 56.	0.02	
Silica	mg/l 33.	0.04	
Zinc	mg/l 0.04	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.024	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.001	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.019	0.001	0.05
Chloride	mg/l 3.5	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l <0.5	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

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REPORT TO: Steve Fischaller

VASHON ISLAND GWMP

Laboratory Sample No.	008007	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-9D, K 4/18/90		
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Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	270.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	79.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	210.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	210.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	8.8	5.0	
Calcium	mg/l 20.	0.01	
Iron	mg/l 0.03	0.01	0.3
Manganese	mg/l 0.05	0.002	0.05
Magnesium	mg/l 7.0	0.01	
Potassium	mg/l 6.2	1.0	
Sodium	mg/l 55.	0.02	
Silica	mg/l 32.	0.04	
Zinc	mg/l 0.04	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.024	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.002	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.019	0.001	0.05
Chloride	mg/l 3.4	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l <0.5	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

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REPORT TO: Steve Fischaller

VASHON ISLAND GWMP

Laboratory Sample No.	008008	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-10, 4/18/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	365.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	180.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	296.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	296.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 41.	0.01	
Iron	mg/l 0.34	0.01	0.3
Manganese	mg/l 0.20	0.002	0.05
Magnesium	mg/l 19.	0.01	
Potassium	mg/l 6.3	1.0	
Sodium	mg/l 45.	0.02	
Silica	mg/l 32.	0.04	
Zinc	mg/l 0.07	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.031	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.002	0.001	0.05
Chromium	mg/l 0.009	0.006	0.05
Arsenic	mg/l 0.005	0.001	0.05
Chloride	mg/l 8.1	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l <0.5	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

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REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	008009	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-12, 4/18/90		
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Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	160.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	76.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	188.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	188.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	7.8	5.0	
Calcium	mg/l 18.	0.01	
Iron	mg/l 0.15	0.01	0.3
Manganese	mg/l 0.06	0.002	0.05
Magnesium	mg/l 7.5	0.01	
Potassium	mg/l 3.7	1.0	
Sodium	mg/l 25.	0.02	
Silica	mg/l 28.	0.04	
Zinc	mg/l 0.11	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.015	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.005	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.013	0.001	0.05
Chloride	mg/l 2.6	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 3.3	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

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REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	008010	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-18, 4/18/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	365.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	121.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	178.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	178.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 19.	0.01	
Iron	mg/l <0.01	0.01	0.3
Manganese	mg/l <0.002	0.002	0.05
Magnesium	mg/l 18.	0.01	
Potassium	mg/l 4.5	1.0	
Sodium	mg/l 28.	0.02	
Silica	mg/l 20.	0.04	
Zinc	mg/l 0.03	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.013	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.003	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.001	0.001	0.05
Chloride	mg/l 6.4	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 14.	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

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VASHON ISLAND GWMP

Laboratory Sample No.	008011	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-24.		
	4/18/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	170.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	79.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	66.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	66.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 10.	0.01	
Iron	mg/l <0.01	0.01	0.3
Manganese	mg/l <0.002	0.002	0.05
Magnesium	mg/l 13.	0.01	
Potassium	mg/l 1.5	1.0	
Sodium	mg/l 6.4	0.02	
Silica	mg/l 32.	0.04	
Zinc	mg/l 0.04	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.007	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l <0.001	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.002	0.001	0.05
Chloride	mg/l 5.4	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 20.	0.5	250.
Nitrate	mg/l 2.9	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

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REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	008247	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-4, in. 4/19/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	80.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	48.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	44.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	44.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 8.7	0.01	
Iron	mg/l 0.02	0.01	0.3
Manganese	mg/l <0.002	0.002	0.05
Magnesium	mg/l 6.5	0.01	
Potassium	mg/l 0.60	1.0	
Sodium	mg/l 6.5	0.02	
Silica	mg/l 21.	0.04	
Zinc	mg/l 0.06	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.004	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l <0.001	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l <0.001	0.001	0.05
Chloride	mg/l 3.2	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 9.7	0.5	250.
Nitrate	mg/l 1.4	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

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REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	008248	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-13, : 4/19/90		
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Total Coliforms (MPN/100 ml)	4.0	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	74.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	51.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	53.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	53.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 9.7	0.01	
Iron	mg/l 0.02	0.01	0.3
Manganese	mg/l 0.160	0.002	0.05
Magnesium	mg/l 6.5	0.01	
Potassium	mg/l 0.90	1.0	
Sodium	mg/l 5.5	0.02	
Silica	mg/l 24.	0.04	
Zinc	mg/l 0.10	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l <0.003	0.003	1.
Copper	mg/l 0.013	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.081	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.001	0.001	0.05
Chloride	mg/l 3.3	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 8.8	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

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REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	008249	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-17, ... 4/19/90		
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Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	116.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	53.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	59.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	59.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 9.7	0.01	
Iron	mg/l 0.56	0.01	0.3
Manganese	mg/l 0.002	0.002	0.05
Magnesium	mg/l 7.0	0.01	
Potassium	mg/l 0.88	1.0	
Sodium	mg/l 5.1	0.02	
Silica	mg/l 22.	0.04	
Zinc	mg/l 0.19	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.004	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.018	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.001	0.001	0.05
Chloride	mg/l 2.9	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 7.9	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	008250	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-21, 4/19/90		
<hr/>			
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	50.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	49.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	52.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	52.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 8.3	0.01	
Iron	mg/l 0.25	0.01	0.3
Manganese	mg/l 0.014	0.002	0.05
Magnesium	mg/l 6.9	0.01	
Potassium	mg/l 1.2	1.0	
Sodium	mg/l 4.5	0.02	
Silica	mg/l 22.	0.04	
Zinc	mg/l 0.04	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.005	0.003	1.
Copper	mg/l 0.017	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.073	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.002	0.001	0.05
Chloride	mg/l 2.9	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 7.9	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischaller

VASHON ISLAND GWMP

Laboratory Sample No.	008251	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-28,		
	4/19/90		
Total Coliforms (MPN/100 ml)	125.	1.	1.
Fecal Coliforms (MPN/100 ml)	54.	1.	1.
Total Dissolved Solids (mg/l)	100.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	52.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	50.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	50.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 9.2	0.01	
Iron	mg/l 0.13	0.01	0.3
Manganese	mg/l 0.010	0.002	0.05
Magnesium	mg/l 7.1	0.01	
Potassium	mg/l 1.3	1.0	
Sodium	mg/l 6.2	0.02	
Silica	mg/l 26.	0.04	
Zinc	mg/l 0.01	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.005	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.001	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.015	0.001	0.05
Chloride	mg/l 4.0	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 9.3	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischaller

VASHON ISLAND GWMP

Laboratory Sample No.	008336	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-14, 4/20/90		
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Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	110.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	53.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	54.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	54.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 7.8	0.01	
Iron	mg/l 0.34	0.01	0.3
Manganese	mg/l 0.092	0.002	0.05
Magnesium	mg/l 8.2	0.01	
Potassium	mg/l 1.1	1.0	
Sodium	mg/l 5.2	0.02	
Silica	mg/l 22.	0.04	
Zinc	mg/l 0.09	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.006	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.001	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.004	0.001	0.05
Chloride	mg/l 2.6	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 10.	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischaller

VASHON ISLAND GWMP

Laboratory Sample No.	008337	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-15, 4/20/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	80.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	45.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	50.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	50.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 8.6	0.01	
Iron	mg/l 0.04	0.01	0.3
Manganese	mg/l <0.002	0.002	0.05
Magnesium	mg/l 5.6	0.01	
Potassium	mg/l 0.57	0.01	
Sodium	mg/l 6.4	0.02	
Silica	mg/l 23.	0.04	
Zinc	mg/l 0.23	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l <0.003	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.003	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.001	0.001	0.05
Chloride	mg/l 2.7	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 6.5	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON ISLAND GWMP

Laboratory Sample No.	008338	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-16, 4/20/90		
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Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	110.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	44.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	48.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	48.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 7.8	0.01	
Iron	mg/l 0.02	0.01	0.3
Manganese	mg/l <0.002	0.002	0.05
Magnesium	mg/l 6.0	0.01	
Potassium	mg/l 0.82	0.01	
Sodium	mg/l 4.9	0.02	
Silica	mg/l 20.	0.04	
Zinc	mg/l 0.11	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.003	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.003	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.001	0.001	0.05
Chloride	mg/l 2.3	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 7.7	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

CLIENT: Seattle - King County Health DATE REPORTED: 4/19/90
 Department, c/o Laboratory DATE REVISED: 6/1/90
 P.O. NO.: B 39021 B

REPORT TO: Steve Fischaller

VASHON ISLAND GWMP

Laboratory Sample No.	008339	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-20, 4/20/90		
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Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	245.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	113.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	136.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	136.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Total Organic Halides (ug/l TOX)	<5.	5.0	
Calcium	mg/l 30.	0.01	
Iron	mg/l 8.8	0.01	0.3
Manganese	mg/l 0.817	0.002	0.05
Magnesium	mg/l 9.2	0.01	
Potassium	mg/l 1.2	0.01	
Sodium	mg/l 7.1	0.02	
Silica	mg/l 43.	0.04	
Zinc	mg/l 0.27	0.02	5.
Silver	mg/l <0.01	0.01	0.05
Selenium	mg/l <0.001	0.001	0.01
Mercury	mg/l <0.0002	0.0002	0.002
Barium	mg/l 0.010	0.003	1.
Copper	mg/l <0.002	0.002	1.
Cadmium	mg/l <0.002	0.002	0.01
Lead	mg/l 0.001	0.001	0.05
Chromium	mg/l <0.006	0.006	0.05
Arsenic	mg/l 0.003	0.001	0.05
Chloride	mg/l 4.3	0.5	250.
Nitrite	mg/l <0.5	0.5	
Sulfate	mg/l 0.57	0.5	250.
Nitrate	mg/l <0.2	0.2	10.
Fluoride	mg/l <0.2	0.2	4.

< = less than

ANALYSIS REPORT

oct/90

 CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/22/90

DATE REPORTED: 11/30/90

DATE REVISED: 03/21/91

P.O. NO.: B 39021 B

 REPORT TO: Steve Fischaller
Smith Tower, Room 201
Seattle, WA 98104

VASHON GWMP

Laboratory Sample No.	024537	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-1, 10/22/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	220.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	88.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	78.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	78.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	17.	0.01	
Iron (mg/l)	0.14	0.01	0.30
Manganese (mg/l)	0.008	0.002	0.05
Magnesium (mg/l)	11.	0.01	
Potassium (mg/l)	2.0	1.0	
Sodium (mg/l)	6.9	0.02	
Silica (mg/l)	24.	0.04	
Zinc (mg/l)	0.07	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0011	0.0002	0.002
Barium (mg/l)	0.004	0.003	1.0
Copper (mg/l)	0.007	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.002	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.007	0.001	0.05
Chloride (mg/l)	2.3	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	21.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/22/90
DATE REPORTED: 11/30/90
DATE REVISED: 03/21/91
P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024538	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-2, 10/22/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	210.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	83.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	88.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	88.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	19.	0.01	
Iron (mg/l)	0.32	0.01	0.30
Manganese (mg/l)	0.024	0.002	0.05
Magnesium (mg/l)	8.7	0.01	
Potassium (mg/l)	2.1	1.0	
Sodium (mg/l)	7.0	0.02	
Silica (mg/l)	26.	0.04	
Zinc (mg/l)	<0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0004	0.0002	0.002
Barium (mg/l)	0.009	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.003	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.005	0.001	0.05
Chloride (mg/l)	<0.5	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	11.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/22/90
DATE REPORTED: 11/30/90
DATE REVISED: 03/21/91
P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024539	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-3, 10/22/90		
Total Coliforms (MPN/100 ml)	2.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	120.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	44.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	34.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	34.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	8.6	0.01	
Iron (mg/l)	0.10	0.01	0.30
Manganese (mg/l)	0.004	0.002	0.05
Magnesium (mg/l)	5.5	0.01	
Potassium (mg/l)	0.69	1.0	
Sodium (mg/l)	5.1	0.02	
Silica (mg/l)	18.	0.04	
Zinc (mg/l)	0.10	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0009	0.0002	0.002
Barium (mg/l)	<0.003	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.001	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.001	0.001	0.05
Chloride (mg/l)	2.9	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	11.	0.5	250.
Nitrate (mg/l)	2.5	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/22/90
DATE REPORTED: 11/30/90
DATE REVISED: 03/21/91
P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024541	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-19, 10/22/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	230.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	130.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	130.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	130.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	24.	0.01	
Iron (mg/l)	0.35	0.01	0.30
Manganese (mg/l)	0.054	0.002	0.05
Magnesium (mg/l)	17.	0.01	
Potassium (mg/l)	2.4	1.0	
Sodium (mg/l)	8.7	0.02	
Silica (mg/l)	26.	0.04	
Zinc (mg/l)	0.04	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	0.011	0.003	1.0
Copper (mg/l)	0.015	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.003	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.002	0.001	0.05
Chloride (mg/l)	<0.5	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	23.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/22/90
DATE REPORTED: 11/30/90
DATE REVISED: 03/21/91
P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024542	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-23, 10/22/90		
Total Coliforms (MPN/100 ml)	45.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	280.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	91.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	90.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	90.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	15.	0.01	
Iron (mg/l)	0.04	0.01	0.30
Manganese (mg/l)	<0.002	0.002	0.05
Magnesium (mg/l)	13.	0.01	
Potassium (mg/l)	0.63	1.0	
Sodium (mg/l)	8.7	0.02	
Silica (mg/l)	24.	0.04	
Zinc (mg/l)	<0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0010	0.0002	0.002
Barium (mg/l)	0.007	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.002	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.001	0.001	0.05
Chloride (mg/l)	3.1	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	14.	0.5	250.
Nitrate (mg/l)	1.4	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

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REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024543	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-29,		
	10/22/90		
Total Coliforms (MPN/100 ml)	88.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	210.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	92.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	82.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	82.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	12.	0.01	
Iron (mg/l)	0.06	0.01	0.30
Manganese (mg/l)	0.002	0.002	0.05
Magnesium (mg/l)	15.	0.01	
Potassium (mg/l)	1.6	1.0	
Sodium (mg/l)	8.3	0.02	
Silica (mg/l)	30.	0.04	
Zinc (mg/l)	0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0022	0.0002	0.002
Barium (mg/l)	0.010	0.003	1.0
Copper (mg/l)	0.007	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.001	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.002	0.001	0.05
Chloride (mg/l)	4.8	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	20.	0.5	250.
Nitrate (mg/l)	2.5	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
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REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024544	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-30, 10/22/90		
Total Coliforms (MPN/100 ml)	13.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	290.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	76.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	86.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	86.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	14.	0.01	
Iron (mg/l)	0.06	0.01	0.30
Manganese (mg/l)	<0.002	0.002	0.05
Magnesium (mg/l)	10.	0.01	
Potassium (mg/l)	1.2	1.0	
Sodium (mg/l)	6.5	0.02	
Silica (mg/l)	18.	0.04	
Zinc (mg/l)	0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0005	0.0002	0.002
Barium (mg/l)	0.008	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.001	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.001	0.001	0.05
Chloride (mg/l)	2.7	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	12.	0.5	250.
Nitrate (mg/l)	1.1	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

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CLIENT: Seattle - King County
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REPORT TO: Steve Fischaller

VASHON GWMP

Laboratory Sample No.	024624	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-5, 10/23/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	360.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	180.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	200.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	200.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	29.	0.01	
Iron (mg/l)	0.76	0.01	0.30
Manganese (mg/l)	0.004	0.002	0.05
Magnesium (mg/l)	26.	0.01	
Potassium (mg/l)	2.1	1.0	
Sodium (mg/l)	44.	0.02	
Silica (mg/l)	29.	0.04	
Zinc (mg/l)	0.18	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	0.011	0.003	1.0
Copper (mg/l)	0.006	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.011	0.001	0.05
Chromium (mg/l)	0.007	0.006	0.05
Arsenic (mg/l)	0.002	0.001	0.05
Chloride (mg/l)	19.	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	25.	0.5	250.
Nitrate (mg/l)	3.4	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

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VASHON GWMP

Laboratory Sample No.	024625	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-7, , 10/23/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	200.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	96.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	140.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	140.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	26.	0.01	
Iron (mg/l)	0.29	0.01	0.30
Manganese (mg/l)	0.093	0.002	0.05
Magnesium (mg/l)	7.5	0.01	
Potassium (mg/l)	2.7	1.0	
Sodium (mg/l)	28.	0.02	
Silica (mg/l)	20.	0.04	
Zinc (mg/l)	0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	0.010	0.003	1.0
Copper (mg/l)	0.004	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.003	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.005	0.001	0.05
Chloride (mg/l)	3.1	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	5.4	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

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VASHON GWMP

Laboratory Sample No.	024626	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-8, 10/23/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	180.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	100.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	94.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	94.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	24.	0.01	
Iron (mg/l)	0.33	0.01	0.30
Manganese (mg/l)	0.173	0.002	0.05
Magnesium (mg/l)	10.	0.01	
Potassium (mg/l)	2.2	1.0	
Sodium (mg/l)	11.	0.02	
Silica (mg/l)	36.	0.04	
Zinc (mg/l)	0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	0.014	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.018	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.002	0.001	0.05
Chloride (mg/l)	3.5	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	23.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

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VASHON GWMP

Laboratory Sample No.	024627	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-22, 10/23/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	440.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	190.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	300.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	300.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	44.	0.01	
Iron (mg/l)	2.3	0.01	0.30
Manganese (mg/l)	0.241	0.002	0.05
Magnesium (mg/l)	20.	0.01	
Potassium (mg/l)	6.6	1.0	
Sodium (mg/l)	46.	0.02	
Silica (mg/l)	31.	0.04	
Zinc (mg/l)	0.21	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	0.035	0.003	1.0
Copper (mg/l)	0.017	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.044	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.005	0.001	0.05
Chloride (mg/l)	5.6	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	<0.5	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

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VASHON GWMP

Laboratory Sample No.	024628	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-10, 10/23/90		
Total Coliforms (MPN/100 ml)	14.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	260.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	220.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	160.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	160.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	50.	0.01	
Iron (mg/l)	0.14	0.01	0.30
Manganese (mg/l)	<0.002	0.002	0.05
Magnesium (mg/l)	23.	0.01	
Potassium (mg/l)	3.7	1.0	
Sodium (mg/l)	8.2	0.02	
Silica (mg/l)	25.	0.04	
Zinc (mg/l)	<0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	0.018	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.004	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.006	0.001	0.05
Chloride (mg/l)	4.0	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	49.	0.5	250.
Nitrate (mg/l)	2.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

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CLIENT: Seattle - King County
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VASHON GWMP

Laboratory Sample No.	024629	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	BLANK 10/23/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	12.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	<1.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	2.0	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	2.0	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	<0.01	0.01	
Iron (mg/l)	0.06	0.01	0.30
Manganese (mg/l)	<0.002	0.002	0.05
Magnesium (mg/l)	<0.01	0.01	
Potassium (mg/l)	<0.10	1.0	
Sodium (mg/l)	<0.02	0.02	
Silica (mg/l)	0.46	0.04	
Zinc (mg/l)	<0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	<0.003	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.001	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	<0.001	0.001	0.05
Chloride (mg/l)	<0.5	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	<0.5	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

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VASHON GWMP

Laboratory Sample No.	024778	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-18, 10/24/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	170.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	85.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	88.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	88.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	16.	0.01	
Iron (mg/l)	1.0	0.01	0.30
Manganese (mg/l)	0.157	0.002	0.05
Magnesium (mg/l)	11.	0.01	
Potassium (mg/l)	1.5	1.0	
Sodium (mg/l)	7.7	0.02	
Silica (mg/l)	24.	0.04	
Zinc (mg/l)	0.07	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	0.010	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.002	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.010	0.001	0.05
Chloride (mg/l)	2.9	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	11.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

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VASHON GWMP

Laboratory Sample No.	024779	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-9, 10/24/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	350.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	89.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	210.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	210.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	22.	0.01	
Iron (mg/l)	0.12	0.01	0.30
Manganese (mg/l)	0.061	0.002	0.05
Magnesium (mg/l)	8.2	0.01	
Potassium (mg/l)	7.4	1.0	
Sodium (mg/l)	60.	0.02	
Silica (mg/l)	32.	0.04	
Zinc (mg/l)	0.05	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0003	0.0002	0.002
Barium (mg/l)	0.026	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.001	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.020	0.001	0.05
Chloride (mg/l)	2.9	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	<0.5	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

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VASHON GWMP

Laboratory Sample No.	024780	DETECTION LIMIT LEVEL	MAXIMUM CONTAMINANT
Client Identification	V-24, 10/24/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	250.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	93.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	150.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	150.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	22.	0.01	
Iron (mg/l)	0.16	0.01	0.30
Manganese (mg/l)	0.082	0.002	0.05
Magnesium (mg/l)	9.2	0.01	
Potassium (mg/l)	5.0	1.0	
Sodium (mg/l)	30.	0.02	
Silica (mg/l)	28.	0.04	
Zinc (mg/l)	0.83	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	0.017	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.001	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.014	0.001	0.05
Chloride (mg/l)	2.5	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	3.8	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/24/90
DATE REPORTED: 11/30/90
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P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024781	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-6, 10/24/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	350.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	150.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	180.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	180.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	23.	0.01	
Iron (mg/l)	0.06	0.01	0.30
Manganese (mg/l)	0.002	0.002	0.05
Magnesium (mg/l)	22.	0.01	
Potassium (mg/l)	5.6	1.0	
Sodium (mg/l)	32.	0.02	
Silica (mg/l)	21.	0.04	
Zinc (mg/l)	0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0005	0.0002	0.002
Barium (mg/l)	0.015	0.003	1.0
Copper (mg/l)	0.003	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.006	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.001	0.001	0.05
Chloride (mg/l)	4.7	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	12.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

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REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024782	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-21, 10/24/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	110.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	57.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	50.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	50.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	9.6	0.01	
Iron (mg/l)	0.23	0.01	0.30
Manganese (mg/l)	0.008	0.002	0.05
Magnesium (mg/l)	0.1	0.01	
Potassium (mg/l)	1.0	1.0	
Sodium (mg/l)	5.1	0.02	
Silica (mg/l)	21.	0.04	
Zinc (mg/l)	0.01	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0004	0.0002	0.002
Barium (mg/l)	0.003	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.004	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.002	0.001	0.05
Chloride (mg/l)	2.9	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	9.4	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

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REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024783	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-12, 10/24/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	150.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	88.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	66.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	66.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	12.	0.01	
Iron (mg/l)	0.07	0.01	0.30
Manganese (mg/l)	0.003	0.002	0.05
Magnesium (mg/l)	14.	0.01	
Potassium (mg/l)	1.8	1.0	
Sodium (mg/l)	7.0	0.02	
Silica (mg/l)	30.	0.04	
Zinc (mg/l)	0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0005	0.0002	0.002
Barium (mg/l)	0.007	0.003	1.0
Copper (mg/l)	0.006	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.001	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.002	0.001	0.05
Chloride (mg/l)	3.4	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	18.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
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REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024839	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-4, 10/25/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	120.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	52.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	44.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	44.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	9.1	0.01	
Iron (mg/l)	0.06	0.01	0.30
Manganese (mg/l)	0.002	0.002	0.05
Magnesium (mg/l)	7.2	0.01	
Potassium (mg/l)	0.45	1.0	
Sodium (mg/l)	7.0	0.02	
Silica (mg/l)	18.	0.04	
Zinc (mg/l)	0.07	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0009	0.0002	0.002
Barium (mg/l)	0.004	0.003	1.0
Copper (mg/l)	0.004	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.001	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	<0.001	0.001	0.05
Chloride (mg/l)	2.3	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	12.	0.5	250.
Nitrate (mg/l)	1.7	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

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REPORT TO: Steve Fischaller

VASHON GWMP

Laboratory Sample No.	024840	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-13, 10/25/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	95.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	54.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	50.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	50.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	10.	0.01	
Iron (mg/l)	0.06	0.01	0.30
Manganese (mg/l)	0.158	0.002	0.05
Magnesium (mg/l)	7.0	0.01	
Potassium (mg/l)	0.68	1.0	
Sodium (mg/l)	5.6	0.02	
Silica (mg/l)	21.	0.04	
Zinc (mg/l)	0.13	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0003	0.0002	0.002
Barium (mg/l)	<0.003	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.009	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.001	0.001	0.05
Chloride (mg/l)	2.7	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	11.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

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REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024841	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-17, 10/25/90		

Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	150.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	57.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	60.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	60.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	9.9	0.01	
Iron (mg/l)	0.95	0.01	0.30
Manganese (mg/l)	0.008	0.002	0.05
Magnesium (mg/l)	7.9	0.01	
Potassium (mg/l)	0.85	1.0	
Sodium (mg/l)	7.4	0.02	
Silica (mg/l)	19.	0.04	
Zinc (mg/l)	0.18	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0012	0.0002	0.002
Barium (mg/l)	0.004	0.003	1.0
Copper (mg/l)	0.006	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.003	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.001	0.001	0.05
Chloride (mg/l)	1.5	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	8.4	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

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VASHON GWMP

Laboratory Sample No.	024842	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-28, 10/25/90		
Total Coliforms (MPN/100 ml)	TNTC	1.	1.
Fecal Coliforms (MPN/100 ml)	TNTC	1.	1.
Total Dissolved Solids (mg/l)	140.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	56.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	48.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	48.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	9.6	0.01	
Iron (mg/l)	0.46	0.01	0.30
Manganese (mg/l)	0.031	0.002	0.05
Magnesium (mg/l)	7.8	0.01	
Potassium (mg/l)	1.3	1.0	
Sodium (mg/l)	6.5	0.02	
Silica (mg/l)	28.	0.04	
Zinc (mg/l)	<0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0020	0.0002	0.002
Barium (mg/l)	0.008	0.003	1.0
Copper (mg/l)	0.004	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.003	0.001	0.05
Chromium (mg/l)	0.007	0.006	0.05
Arsenic (mg/l)	0.023	0.001	0.05
Chloride (mg/l)	3.1	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	19.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

TNTC = Too Numerous To Count

CLIENT: Seattle - King County
Health Department

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VASHON GWMP

Laboratory Sample No.	024843	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-10R, --- 10/25/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.

< = less than

CLIENT: Seattle - King County
Health Department

REPORT TO: Steve Fischaller

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VASHON GWMP

Laboratory Sample No.	024844	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-19R, 10/25/90		
Total Coliforms (MPN/100 ml)	9.0	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.

< = less than

CLIENT: Seattle - King County
Health Department

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REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024936	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-14, 10/26/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	110.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	64.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	52.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	52.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	9.8	0.01	
Iron (mg/l)	0.42	0.01	0.30
Manganese (mg/l)	0.104	0.002	0.05
Magnesium (mg/l)	9.7	0.01	
Potassium (mg/l)	0.85	1.0	
Sodium (mg/l)	5.4	0.02	
Silica (mg/l)	21.	0.04	
Zinc (mg/l)	0.07	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0006	0.0002	0.002
Barium (mg/l)	0.006	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.005	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.003	0.001	0.05
Chloride (mg/l)	2.1	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	12.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

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REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024937	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-15, 10/26/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	100.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	52.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	52.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	52.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	10.	0.01	
Iron (mg/l)	0.17	0.01	0.30
Manganese (mg/l)	0.006	0.002	0.05
Magnesium (mg/l)	6.6	0.01	
Potassium (mg/l)	0.47	1.0	
Sodium (mg/l)	7.1	0.02	
Silica (mg/l)	21.	0.04	
Zinc (mg/l)	0.39	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0006	0.0002	0.002
Barium (mg/l)	0.003	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.005	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.001	0.001	0.05
Chloride (mg/l)	2.1	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	8.7	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

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VASHON GWMP

Laboratory Sample No.	024938	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-20, 10/26/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	210.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	130.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	140.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	140.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	34.	0.01	
Iron (mg/l)	11.	0.01	0.30
Manganese (mg/l)	0.944	0.002	0.05
Magnesium (mg/l)	11.	0.01	
Potassium (mg/l)	0.80	1.0	
Sodium (mg/l)	7.6	0.02	
Silica (mg/l)	41.	0.04	
Zinc (mg/l)	0.22	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	0.011	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.001	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.003	0.001	0.05
Chloride (mg/l)	3.8	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	<0.5	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/26/90
DATE REPORTED: 11/30/90
DATE REVISED: 03/21/91
P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024939	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-31, 10/26/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	110.	1.0	500.
Total Hardness (mg/l as CaCO ₃)	65.	1.0	
Total Alkalinity (mg/l as CaCO ₃)	50.	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	50.	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	10.	0.01	
Iron (mg/l)	0.46	0.01	0.30
Manganese (mg/l)	0.105	0.002	0.05
Magnesium (mg/l)	9.6	0.01	
Potassium (mg/l)	0.86	1.0	
Sodium (mg/l)	5.6	0.02	
Silica (mg/l)	21.	0.04	
Zinc (mg/l)	0.07	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	0.0003	0.0002	0.002
Barium (mg/l)	0.006	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	<0.002	0.002	0.01
Lead (mg/l)	0.004	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	0.003	0.001	0.05
Chloride (mg/l)	1.6	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	12.	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/26/90
DATE REPORTED: 11/30/90
DATE REVISED: 03/28/91
P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024940	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	BLANK 10/26/90		
Total Coliforms (MPN/100 ml)	<1.	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.
Total Dissolved Solids (mg/l)	8.0	1.0	500.
Total Hardness (mg/l as CaCO ₃)	1.2	1.0	
Total Alkalinity (mg/l as CaCO ₃)	2.0	1.0	
Carbonate (mg/l as CaCO ₃)	<1.	1.0	
Bicarbonate (mg/l as CaCO ₃)	2.0	1.0	
Hydroxide (mg/l as CaCO ₃)	<1.	1.0	
Calcium (mg/l)	0.32	0.01	
Iron (mg/l)	0.03	0.01	0.30
Manganese (mg/l)	<0.002	0.002	0.05
Magnesium (mg/l)	<0.01	0.01	
Potassium (mg/l)	<0.10	1.0	
Sodium (mg/l)	0.49	0.02	
Silica (mg/l)	0.21	0.04	
Zinc (mg/l)	<0.02	0.02	5.0
Silver (mg/l)	<0.01	0.01	0.05
Selenium (mg/l)	<0.001	0.001	0.01
Mercury (mg/l)	<0.0002	0.0002	0.002
Barium (mg/l)	<0.003	0.003	1.0
Copper (mg/l)	<0.002	0.002	1.0
Cadmium (mg/l)	0.002	0.002	0.01
Lead (mg/l)	<0.001	0.001	0.05
Chromium (mg/l)	<0.006	0.006	0.05
Arsenic (mg/l)	<0.001	0.001	0.05
Chloride (mg/l)	<0.5	0.5	250.
Nitrite (mg/l)	<0.5	0.5	
Sulfate (mg/l)	<0.5	0.5	250.
Nitrate (mg/l)	<0.2	0.2	10.
Fluoride (mg/l)	<0.2	0.2	4.

< = less than

CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/26/90
DATE REPORTED: 11/30/90
DATE REVISED: 03/21/91
P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024941	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-3R, 10/26/90		
Total Coliforms (MPN/100 ml)	1.0	1.	1.
Fecal Coliforms (MPN/100 ml)	<1.	1.	1.

< = less than

CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/26/90
DATE REPORTED: 11/30/90
DATE REVISED: 03/21/91
P.O. NO.: B 39021 B

REPORT TO: Steve Fischnaller

VASHON GWMP

Laboratory Sample No.	024942	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-23R1, 10/26/90		
Total Coliforms (MPN/100 ml)	15.	1.	1.
Fecal Coliforms (MPN/100 ml)	1.0	1.	1.

< = less than

CLIENT: Seattle - King County
Health Department

DATE RECEIVED: 10/26/90

DATE REPORTED: 11/30/90

DATE REVISED: 03/21/91

P.O. NO.: B 39021 B

REPORT TO: Steve Fischaller

VASHON GWMP

Laboratory Sample No.	024943	DETECTION LIMIT	MAXIMUM CONTAMINANT LEVEL
Client Identification	V-23R2, 10/26/90		
Total Coliforms (MPN/100 ml)	21.	1.	1.
Fecal Coliforms (MPN/100 ml)	2.0	1.	1.

< = less than

EcoChem, Inc.

February 19, 1991

Mr. Bill Lasby
SKCHD
Environmental Health Division
201 Smith Tower
Seattle, Washington 98104

Dear Mr. Lasby:

I have reviewed the sample data package submitted by AM Test, Inc. for the water samples taken between October 22 and October 26, 1990. Attached is the Data Validation Report summarizing our findings. Data qualifiers were assigned to the data based on EPA Contract Laboratory Program definitions. The use of data qualifiers is the easiest and most direct method of flagging questionable data. Overall the data submitted are acceptable and met the 95% completeness goals for the project, as stated in the QAPP. (Geraghty and Miller, 1989).

If you have any questions, please feel free to give me a call. I am currently working out of our Spokane office, and you can reach me at (509) 747-1878.

Sincerely,



for Ann Reinhart, Chemist
EcoChem, Inc.

DATA VALIDATION REPORT

DATE: February 15, 1991

TO: Bill Lasby, Seattle-King County Department of Public Health

FROM: Ann Reinhart, EcoChem, Inc.

Subject: Vashon Ground Water Management Area - Water Sampling Results
October 1990
AM Test Laboratory, Inc.

The above referenced data package has been reviewed by EcoChem, Inc. Data validation packets for the inorganic and conventional analyses, which detail items reviewed, are on file at EcoChem, Inc. The quality assurance evaluations performed and recommended data qualifications from the review are summarized below.

Even though full EPA Contract Laboratory Program (CLP) protocols (EPA, 1987, 1988) were not required, data qualifiers, based on EPA CLP data validation guidelines, were assigned to aid in evaluating the data. These guidelines require that the data reviewer use professional judgment as to necessary data qualifications. EcoChem, Inc.'s goal in assigning data qualifiers is to assist in proper data interpretation. If values are assigned a "J" or "JB" data can be used for site evaluation purposes, but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an "R", the data are to be rejected and should not be used for any site evaluation purposes. If values are assigned an "A", then the data meet all data quality goals as outlined in the project quality assurance project plan.

The data packages submitted met the Vashon Ground Water Management Area Quality Assurance Project Plan (QAPP) quality assurance objective for completeness of 95% valid data. All required field quality control samples (blanks, blind duplicates) were submitted and analyzed. Analytical results were reported and associated laboratory quality control analyses (blanks, duplicates, spikes) were performed for all samples. Based on the review, no data results were rejected. Therefore, overall completeness for the data set is 100%.

INORGANIC AND CONVENTIONAL ANALYSES

The inorganic and conventional data package from Am Test Laboratory, Inc. has been reviewed and the quality assurance evaluated. This evaluation of 25 water samples, 2 field trip blanks (FTB), and 2 field duplicates for metals, Total Dissolved Solids (TDS), hardness, alkalinity, chloride, sulfate, fluoride, nitrite, nitrate, total and fecal coliforms, considered the following parameters:

- Data Completeness
- Holding Times
- Laboratory and Field Blank Analysis
- Matrix Spike Duplicate Results
- Matrix Spike Results
- Field Duplicate Sample Results
- Detection Limits

The data package contained all deliverables for evaluating accuracy, precision, and completeness requested under the QAPP (Geraghty and Miller, 1989), except results of Standard Reference Materials analyzed, data calculations, raw data, instrument calibrations used in determining matrix spike results, and background correction information for graphite furnace atomic absorption analyses.

Upon reviewing the chain-of-custody forms and the case narrative, it is evident that samples were received in good condition and contractual holding times were met for all analyses, except 21 samples for nitrite and 25 samples for TDS. The nitrite samples were analyzed by Ion Chromatography from 1-5 days after sampling. The holding time specified in the QAPP is 48 hours. The nitrite results, for samples analyzed outside the recommended holding time, should be considered an estimate and assigned a "J" qualifier. All samples are to be qualified for nitrite, except V-4, V-13, V-17, and V-28.

TDS analyses were performed 8 to 14 days after sampling and the recommended holding time is 7 days. The samples analyzed within 8 days of sampling would not be compromised but the samples analyzed after 10 days should be considered an estimate and assigned a "J" qualifier. The samples to be qualified for TDS are V-5, V-7, V-8, V-22, V-10, V-18, V-9, V-24, V-6, V-21, V-12, V-14, V-20, V-15, and V-31.

Review of the initial and continuing calibration (except for matrix spike analyses), ICP Interference Check Sample (ICS), ICP Serial Dilution sample, and graphite furnace results were not required under the QAPP.

October 1990

Vashon Ground Water Monitoring
Data Validation

Laboratory method blanks were analyzed for all parameters and were less than the method detection limit (MDL) for all parameters, except TDS, alkalinity, calcium, iron, manganese, magnesium, copper, sodium, silica, and zinc. Under EPA CLP protocols, an action limit is determined and samples with concentrations less than the action limit are qualified because of blank contamination. The action limit is determined by multiplying the highest blank concentration by five. Only iron, copper, manganese and zinc had samples with concentrations less than the action limit. The following samples should be qualified as estimated and assigned a "JB" qualifier:

Affected Samples

Fe V-1, V-2, V-3, V-16, V-19, V-23, V-29, V-30, V-7, V-8, V-10, Blank 10/23, V-9, V-24, V-6, V-21, V-12, V-4, Blank 10/26, V-13, V-14, V-31, V-15

Mn V-1, V-2, V-3, V-16, V-29, V-5, V-6, V-21, V-12, V-4, V-17

Zn V-1, V-19, V-29, V-30, V-7, V-8, V-18, V-9, V-6, V-21, V-12, V-4, V-14, V-31

Cu V-1, V-19, V-29, V-5, V-7, V-22, V-6, V-12, V-4, V-17, V-28

Two trip blanks, 10/23 and 10/26, were analyzed. Alkalinity, iron, silica, lead and TDS were found in the 10/23 trip blank. Alkalinity, iron, silica, TDS, hardness, calcium, sodium, mercury and cadmium were found in the 10/26 trip blank. Blank results are shown below. Data are not qualified on field blank results.

Also, the sample results were reviewed and, with the exception of iron, when detected in the samples, the concentrations were way below the maximum concentration in the blank.

Field Blanks

	10/23	10/26
Alk	2.0	2.0
Fe	0.06	0.03
SiO ₂	0.46	.21
Pb	0.001	--
TDS	12	8.0
Hard	--	1.2
Ca	--	0.32
Na	--	0.49
Hg	--	0.0048
Cd	--	0.002

Vashon Ground Water Monitoring
Data Validation

Two matrix spikes (MS) and matrix spike duplicates (MSDS), V-28 and Blank 10/26; and two laboratory duplicates, V-1 and V-10, were analyzed for metals. The relative percent differences (RPDs) between MS/MSDs and laboratory duplicates results met the QAPP criteria (<20% RPD) for all samples, indicating acceptable laboratory precision for metals analyses.

Laboratory duplicate analyses were performed for TDS, hardness, alkalinity, chloride, sulfate, nitrate, nitrite, and fluoride. The RPD between laboratory duplicate results met the QAPP criteria (<10% RPD) for all samples except one sample for chloride (16% RPD), indicating acceptable laboratory precision for the conventional analyses.

Spike recoveries were within the QAPP control limits (80-120%) for all metals analyzed, (except lead on the MS analyzed sample 10/23 blank), indicating acceptable laboratory accuracy. Matrix spike analyses were performed on both the 10/23 and 10/26 trip blanks. Under CLP protocols, field blanks are not to be used for quality control samples. Even though these samples are not analyzed following strict CLP protocols, it is recommended in the future that the laboratory not use the field blank as a quality control sample.

The laboratory did analyze two field samples as MS samples, therefore, no data qualifiers are recommended for metals and good laboratory accuracy was indicated. The lab analyzed MSs for chloride, nitrite, nitrate, sulfate, and fluoride. All MS recoveries were within the control limits, indicating good laboratory accuracy for the conventional analyses.

Two field duplicates were submitted to the laboratory for all parameters. Results from field duplicate analyses are summarized in Table 1. TDS (1.0 mg/L and 110. mg/L) and mercury (0.0006 mg/L and 0.0053 mg/L) field duplicate results varied greatly, which may be the result of a laboratory typing error. These results should be verified by the laboratory. Without the back up raw data, sample results reported can not be verified.

Laboratory Standard Reference Materials (SRM) were not reported by the laboratory. SRMs are used as another measure of laboratory accuracy.

Instrument Detection Limits (IDLs) were reviewed and found to be less than the Contract Required Detection Limits. Potassium IDL was reported as 1.0 mg/L. Eleven samples (including field blanks) had reported detected concentrations less than 1.0 mg/L. It is recommended that these results, and the actual IDL, be verified by the laboratory.

Recommendations based on the above review for data qualifications are summarized on Table 2. It is recommended the remaining data be labelled as acceptable (A).

Vashon Ground Water Monitoring
Data Validation

TABLE 1
Field Duplicate Results
for
Metals and Conventionals

Analyte	Duplicate V-14	Duplicate V-14D	RPD (%)	Duplicate V-23	Duplicate V-23D	RPD (%)
T-Coliforms (MPN/100ml)	ND	ND	NC	45	13	110 ²
F-Coliforms (MPN/100ml)	ND	ND	NC	ND	ND	NC
TDS(mg/L)	1.0	110	- ³	280	290	3.5
Hardness (mg/L)	64	65	1.6	91	76	17.9
Total Alkalinity (mg/L)	52	50	3.9	90	86	4.5
Calcium (mg/L)	9.8	10.	2.0	15	14	6.9
Iron (mg/L)	0.42	0.46	9.1	0.04	0.06	+/-CRDL ⁴
Manganese (mg/L)	0.104	0.105	1.0	ND	ND	NC
Magnesium (mg/L)	9.7	9.6	1.0	13	10	26.0
Potassium (mg/L)	ND	ND	NC	ND	1.2	NC
Sodium (mg/L)	5.4	5.6	3.6	8.7	6.5	28.9
Silica (mg/L)	21.	21.	0.0	24.	18.	28.6
Zinc (mg/L)	0.07	0.07	0.0	ND	0.02	NC
Silver (mg/L)	ND	ND	NC	ND	ND	NC

Selenium (mg/L)	ND	ND	NC ¹	ND	ND	NC
Mercury (mg/L)	0.0006 ²	0.0053	+/-CRDL ^{3,4}	0.0010	0.0005	+/-CRDL ⁴
Barium (mg/L)	0.006	0.006	0.0	0.0007	0.008	13.3
Copper (mg/L)	ND	ND	NC	ND	ND	NC
Cadmium (mg/L)	ND	ND	NC	ND	ND	NC
Lead (mg/L)	0.005	0.004	+/-CRDL ⁴	0.002	0.001	+/-CRDL ⁴
Chromium (mg/L)	ND	ND	NC	ND	ND	NC
Arsenic (mg/L)	0.003	0.003	0.0	0.001	0.001	0.0
Chloride (mg/L)	2.1	1.6	+/-CRDL ⁴	3.1	2.7	13.8
Nitrite (mg/L)	ND	ND	NC	ND	ND	NC
Sulfate (mg/L)	12	12	0.0	14	12	15.4
Nitrate (mg/L)	ND	ND	NC	1.4	1.1	24.0
Fluoride (mg/L)	ND	ND	NC	ND	ND	NC

¹ RPD = Relative Percent Difference. Control limit for data acceptability is +/-20% for metals, +/-10% for conventionals.

² Sample resubmitted for analysis. Relative standard deviation of all samples equals 62%.

³ The RPD outside the control limits. May be due to a data reporting error (typo) by the laboratory.

⁴ CDRL = Contract Required Detection Limit. Acceptability for sample concentration within 5 times.

D = Field Duplicate Sample.

ND = Undetected <IDL.

NC = Cannot be calculated due to undetected values.

TABLE 2

Recommendations for Qualification
of
Metals and Conventional Data

Analyte	Qualifier	Sample Number	Reason
		-Conventionals-	
Nitrite	J	All samples, except V-4, V-13, V-17, V-28	Samples analyzed outside recommended holding time
Total Dissolved Solids	J	V-5, V-7, V-8, V-22, V-10, V-18, V-9, V-24, V-6, V-21, V-12, V-14, V-20, V-15, V-31	Samples analyzed outside recommended holding time
		-Metals-	
Iron	JB	V-1, V-2, V-3, V-16, V-19, V-23, V-29, V-30, V-7, V-8, V-10, Blank 10/23, V-9, V-24, V-6, V-21, V-12, V-4 Blank 10/26, V-13, V-14, V-31, V-15	Sample concentration within 5 times the blank concentration
Copper	JB	V-1, V-19, V-29, V-5, V-7, V-22, V-6, V-12, V-4, V-17, V-28	Sample concentration within 5 times the blank concentration
Manganese	JB	V-1, V-2, V-3, V-16, V-29, V-5, V-6, V-21, V-12, V-4, V-17	Sample concentration within 5 times the blank concentration
Zinc	JB	V-1, V-19, V-29, V-30, V-7, V-8, V-18, V-9, V-6, V-21, V-12, V-4, V-14, V-31	Sample concentration within 5 times the blank concentration

JB = Sample data estimated because of blank contamination

J = Sample data estimated

References

Geraghty and Miller, Inc., 1989. Vashon Ground Water Management Area Quality Assurance Project Plan prepared for Seattle-King County Health Department.

U. S. Environmental Protection Agency. 1987. Statement of Work for Inorganic Analysis, Multi-media, Multi-concentration, USEPA Contract Laboratory Program.

U. S. Environmental Protection Agency. 1988. Laboratory Data Validation, Functional Guidelines for Evaluating Inorganics Analysis, Hazardous Site Evaluation.

EcoChem, Inc.

July 18, 1990

Mr. Bill Lasby
SKCHD
Environmental Health Division
Room 201
Smith Tower
Seattle, WA 98104

Dear Mr. Lasby:

I have reviewed the sample data package submitted by AM Test, Inc. for the water samples taken between April 16 and April 20, 1990. Attached is the Data Validation Report summarizing our findings. Data qualifiers were assigned to the data based on EPA Contract Laboratory Program definitions. The use of data qualifiers is the easiest and most direct method of flagging questionable data. Overall the data submitted are acceptable and met the 95% completeness goals for the project, as stated in the QAPP.

The review of the data did not reveal any problems that could result in the differences noted between the 1989 and 1990 sample results. In my experience, these parameters (iron, manganese, and total coliforms) are particularly influenced by suspended particulates in the water. The sampling techniques involved can cause disturbances in the well column that could alter the suspended solids concentration in the water. The difference between 1989 and 1990 samplings could be influenced by the amount of rainfall, drainage, etc. between the two years. However, I can not say this with any certainty because I am not a hydrogeologist. Analysis of a filtered water sample will give you the amount of iron and manganese "in solution", as opposed to the total amount in the sample, which may be influenced by particulates introduced by the sampling procedures. The TOX values can be influenced by residual chlorine in the samples. Residual chlorine in the samples can cause positive interferences from continued chlorination reactions with organic compounds. Chlorination of well water may have resulted in the different results for the two years.

I hope this information will be helpful to you. If you have any questions, please feel free to give me a call. I am currently working out of our Spokane office, and you can reach me at (509) 747-1878. I will be in Seattle the first two weeks of August if I can be of any assistance to you then.

Sincerely,


Ann Reinhart, Chemist
ECO-CHEM, INC.

RECEIVED 7/23/90

DATA VALIDATION REPORT

DATE: July 18, 1990

TO: Bill Lasby, Seattle-King County Department of Public Health

FROM: Ann Reinhart, EcoChem, Inc.

SUBJECT: Vashon Ground Water Management Area - Water Sampling
Results - April 1990
AM Test Laboratory, Inc.

The above referenced data package has been reviewed by EcoChem, Inc. Data validation packets for the inorganic and conventional analyses, which detail items reviewed, are on file at EcoChem, Inc. The quality assurance evaluations performed and recommended data qualifications from the review are summarized below.

Even though full EPA Contract Laboratory Program (CLP) protocols (EPA, 1987, 1988) were not required, data qualifiers, based on EPA CLP data validation guidelines, were assigned to aid in evaluating the data. These guidelines require that the data reviewer use professional judgment as to necessary data qualifications. EcoChem, Inc.'s goal in assigning data qualifiers is to assist in proper data interpretation. If values are assigned a "J", "JB", or "UJ", data can be used for site evaluation purposes, but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an "R", the data are to be rejected and should not be used for any site evaluation purposes. If values are assigned an "A", then the data meet all data quality goals as outlined in the project quality assurance project plan.

The data packages submitted met the Vashon Ground Water Management Area Quality Assurance Project Plan (QAPP) quality assurance objective for completeness of 95% valid data. All required field quality control samples (blanks, blind duplicates) were submitted and analyzed. Analytical results were reported and associated laboratory quality control analyses (blanks, duplicates, spikes) were performed for all samples. Based on the review, 30 results were rejected out of over 800 data points reported. Therefore, overall completeness for the data set is 96%.

INORGANIC AND CONVENTIONAL ANALYSES

The inorganic and conventional data package from AM Test Laboratory, Inc. has been reviewed and the quality assurance evaluated. This evaluation of 26 water samples, 2 field trip blanks (FTB), and 2 field duplicates for metals, Total Dissolved Solids (TDS), hardness, alkalinity, Total Organic Halides (TOX), chloride, sulfate, fluoride, nitrite, nitrate, total and fecal coliforms, considered the following parameters:

- o Data Completeness
- o Holding Times
- o Laboratory and Field Blank Analysis
- o Matrix Spike Duplicate Results
- o Matrix Spike Results
- o Field Duplicate Sample Results
- o Detection Limits

The data package contained all deliverables for evaluating accuracy, precision, and completeness requested under the QAPP (Geraghty and Miller, 1989), except results of Standard Reference Materials analyzed, data calculations, raw data, instrument calibrations used in determining matrix spike results, and background correction information for graphite furnace atomic absorption analyses.

Upon reviewing the chain-of-custody forms and the case narrative, it is evident that samples were received in good condition and contractual holding times were met for all analyses, except nitrite, 13 samples for TDS, and 13 samples for TOX. The nitrite samples were analyzed by Ion Chromatography from 11 -23 days after sampling. The holding time specified in the QAPP is 48 hours. The nitrite results should be rejected and assigned an "R" qualifier. TDS analyses were performed 8 and 21 days after sampling and the recommended holding time is 7 days. The samples analyzed within 8 days of sampling would not be compromised but the samples analyzed at 21 days should be considered an estimate and assigned a "J" qualifier. The samples to be qualified for TDS are V-4, V-13, V-17, V-21, V-28. The samples analyzed for TOX were analyzed at 8 and 9 days after sampling, and the recommended holding time is 7 days. No data qualifiers are required because the analyses were performed only one and two days past the holding time.

Review of the initial and continuing calibration (except for matrix spike analyses), ICP Interference Check Sample (ICS), ICP Serial Dilution sample, and graphite furnace results were not required under the QAPP.

Laboratory method blanks were analyzed for all parameters and were less than the method detection limit (MDL) for all parameters, except TDS, calcium, iron, sodium, silica, and zinc. Under EPA CLP protocols an action limit is determined and samples with concentrations less than the action limit are qualified because of blank contamination. The action limit is determined by multiplying the highest blank concentration by five. Only iron and zinc had samples with concentrations less than the action limit. The following samples should be qualified as estimated and assigned a "JB" qualifier:

Iron: V-4, V-9, V-9D, V-13, V-15, V-16, V-22, V-26.

Zinc: V-3, V-4, V-7, V-8, V-9, V-9D, V-10, V-14,
V-18, V-19, V-21, V-23, V-24, V-24D, V-26, V-28, V-29.

Two trip blanks (4/17 and 4/19) were analyzed. Calcium (0.22 mg/L), lead (0.001 mg/L), silica (0.77 mg/L), zinc (0.03 mg/L), and TDS (30 mg/L) were found in the 4/17 trip blank. Alkalinity (3 mg/L), calcium (0.22 mg/L), lead (0.003 mg/L), and zinc (0.04 mg/L) were found in the 4/19 trip blank. Data are not qualified on field blank results.

Two laboratory spikes and spike duplicates (V-2, 4/17 Trip Blank) were analyzed for metals. The Relative Percent Difference (RPD) between laboratory spike duplicate results met the QAPP criteria (<20% RPD) for all samples, indicating acceptable laboratory precision for metals analyses. Duplicate analyses were performed for TDS, alkalinity, chloride, sulfate, nitrate, nitrite, fluoride, and TOX. The RPD between laboratory duplicate results met the QAPP criteria (<10% RPD) for all samples, indicating acceptable laboratory precision for the conventionals analyses.

Spike recoveries were within the QAPP control limits (80-120%) for all metals analyzed, except selenium on the MS and MSD analyzed on sample V-2, indicating acceptable laboratory accuracy. The spike recoveries for the 4/17 trip blank were within the control limits. However, under CLP, field blanks are not to be used for quality control samples. Even though these samples are not analyzed following strict CLP protocols, it is recommended in the future the laboratory not use the field blank as a quality control sample. Because no laboratory SRM results are available, the sample results for selenium should be considered an estimate (they may be biased low because of the low spike recovery) and assigned a "J" qualifier.

Two field duplicates were submitted to the laboratory for all

parameters. Results from field duplicate analyses are summarized in Table 1.

Laboratory Standard Reference Materials (SRM) were not reported by the laboratory. SRMs are used as another measure of laboratory accuracy.

Instrument Detection Limits (IDLs) were reviewed and found to be less than the Contract Required Detection Limit.

Recommendations based on the above review for data qualifications are summarized in Table 2. It is recommended the remaining data be labelled as acceptable (A).

TABLE 1. Field Duplicate Results For Metals
and Conventionals

Analyte	-Duplicate-		RPD ¹ (%)	-Duplicate-		RPD (%)
	V-9	V-9D		V-24	V-24D	
T-Coliforms(MPN/100ml)	ND	ND	NC	ND	ND	NC
F-Coliforms(MPN/100ml)	ND	ND	NC	ND	ND	NC
IDS (mg/L)	265	270	1.9	170	140	19.4
Hardness (mg/L)	80	79	1.3	79	79	0.0
Total Alkalinity(mg/L)	234	210	10.8	66	82	21.6
IOX (mg/L)	12	8.8	30.8	ND	ND	NC
Calcium (mg/L)	20	20	0.0	10	10	0.0
Iron (mg/L)	0.03	0.03	0.0	ND	ND	NC
Manganese (mg/)	0.05	0.05	0.0	ND	ND	NC
Magnesium (mg/L)	7.2	7.0	2.8	13	13	0.0
Potassium (mg/L)	6.4	6.2	3.2	1.5	1.5	0.0
Sodium (mg/L)	56	55	1.8	6.4	6.6	3.1
Silica (mg/L)	33	32	3.1	32	32	0.0
Zinc (mg/L)	0.04	0.04	0.0	0.04	0.04	0.0
Silver (mg/L)	ND	ND	NC	ND	ND	NC
Selenium (mg/L)	ND	ND	NC	ND	ND	NC
Mercury (mg/L)	ND	ND	NC	ND	ND	NC
Barium (mg/L)	0.024	0.024	0.0	0.007	0.007	0.0
Copper (mg/L)	ND	ND	NC	ND	ND	NC
Cadmium (mg/L)	ND	ND	NC	ND	ND	NC
Lead (mg/L)	0.001	0.002	\pm CRDL ²	ND	ND	NC
Chromium (mg/L)	ND	ND	NC	ND	ND	NC
Arsenic (mg/L)	0.019	0.019	0.0	0.002	0.002	0.0
Chloride (mg/L)	3.5	3.4	2.9	5.4	5.3	1.9
Nitrite (mg/L)	ND	ND	NC	ND	ND	NC
Sulfate (mg/L)	ND	ND	NC	20	19	5.1
Nitrate (mg/L)	ND	ND	NC	2.9	2.8	3.5
Fluoride (mg/L)	ND	ND	NC	ND	ND	NC

¹RPD = Relative Percent difference. Control limit for data acceptability is \pm 20% for metals, \pm 10% for conventionals.

²CRDL = Contract Required Detection Limit. Acceptability for samples detected at the CRDL.

D = Field Duplicate Sample.

ND = Undetected, <IDL.

NC = Cannot be calculated due to undetected values.

TABLE 2. Recommendations For Qualification of
 Metals and Conventional Data

<u>Analyte</u>	<u>Qualifier</u>	<u>Sample Number</u>	<u>Reason</u>
- Conventionals -			
Nitrite	R	All samples	-Samples analyzed outside recommended holding time.
Total Dissolved Solids	J	V-4, V-13, V-17, V-21, V-28.	-Samples analyzed outside recommended holding time.
- Metals -			
Iron	JB	V-4, V-9, V-9D, V-13, V-15, V-16, V-22, V-26.	-Sample concentration within 5 times the blank concentration.
Zinc	JB	V-3, V-4, V-7, V-8, V-9, V-9D, V-10, V-14, V-18, V-19, V-21, V-23, V-24, V-24D, V-26, V-28, V-29.	-Sample concentration within 5 times the blank concentration.
Selenium	J	All samples.	-Poor MS/MSD recovery. Sample concentrations may be biased low.

R = Sample data rejected.
 JB = Sample data estimated because of blank contamination.
 J = Sample data estimated.

REFERENCES

- Geraghty and Miller, Inc., 1989. Vashon Ground Water Management Area Quality Assurance Project Plan prepared for Seattle-King County Health Department.
- U.S. Environmental Protection Agency. 1987. Statement of Work for Inorganic Analysis, Multi-media, Multi-concentration, USEPA Contract Laboratory Program.
- U.S. Environmental Protection Agency. 1988. Laboratory Data Validation, Functional Guidelines for Evaluating Inorganics Analysis, Hazardous Site Evaluation.

VASHON-MAURY ISLAND GROUNDWATER MANAGEMENT PROGRAM -- WQ DATA

NOV 89

TABLE 4: PARAMETERS DETECTED IN METHOD BLANKS AND TRIP BLANKS

PARAMETERS	DETECTION LIMIT mg/L	METHOD BLANK #1 11/02/89 9895-9898 9984-9987 071-072	METHOD BLANK #2 11/07/89 073-075 240-244 312-313	METHOD BLANK #3 11/13/89 314-316 742-747	TRIP BLANK 11/02/89
TOTAL DISSOLVED SOLIDS	1.0				20 4.0
TOTAL ALKALINITY	1.0				10 2
BICARBONATE	1.0				10 2
CALCIUM	0.1	.2 0.04	1.0 0.2	.45 0.09	.3 0.06
IRON	0.01	.35 0.07	.55 0.11	.6 0.12	<0.01
MANGANESE	0.002	.125 0.005	.04 0.008	.025 0.005	<0.002
MAGNESIUM	0.1	<0.01	.55 0.11	.1 0.02	<0.01
SODIUM	0.5	2.5 0.5	4.5 0.9	2.0 0.4	2.0 0.4
SILICON	0.04	10 2.0	27.5 5.5	16.5 3.3	26.5 5.3
ZINC	0.002	.015 0.003	.05 0.01	.12 0.024	.055 0.011
COPPER	0.002	<0.002	<0.002	.035 0.007	<0.002
LEAD	0.001	<0.001	<0.001	0.001 *	<0.001

* = Parameter value at or below the detection limit

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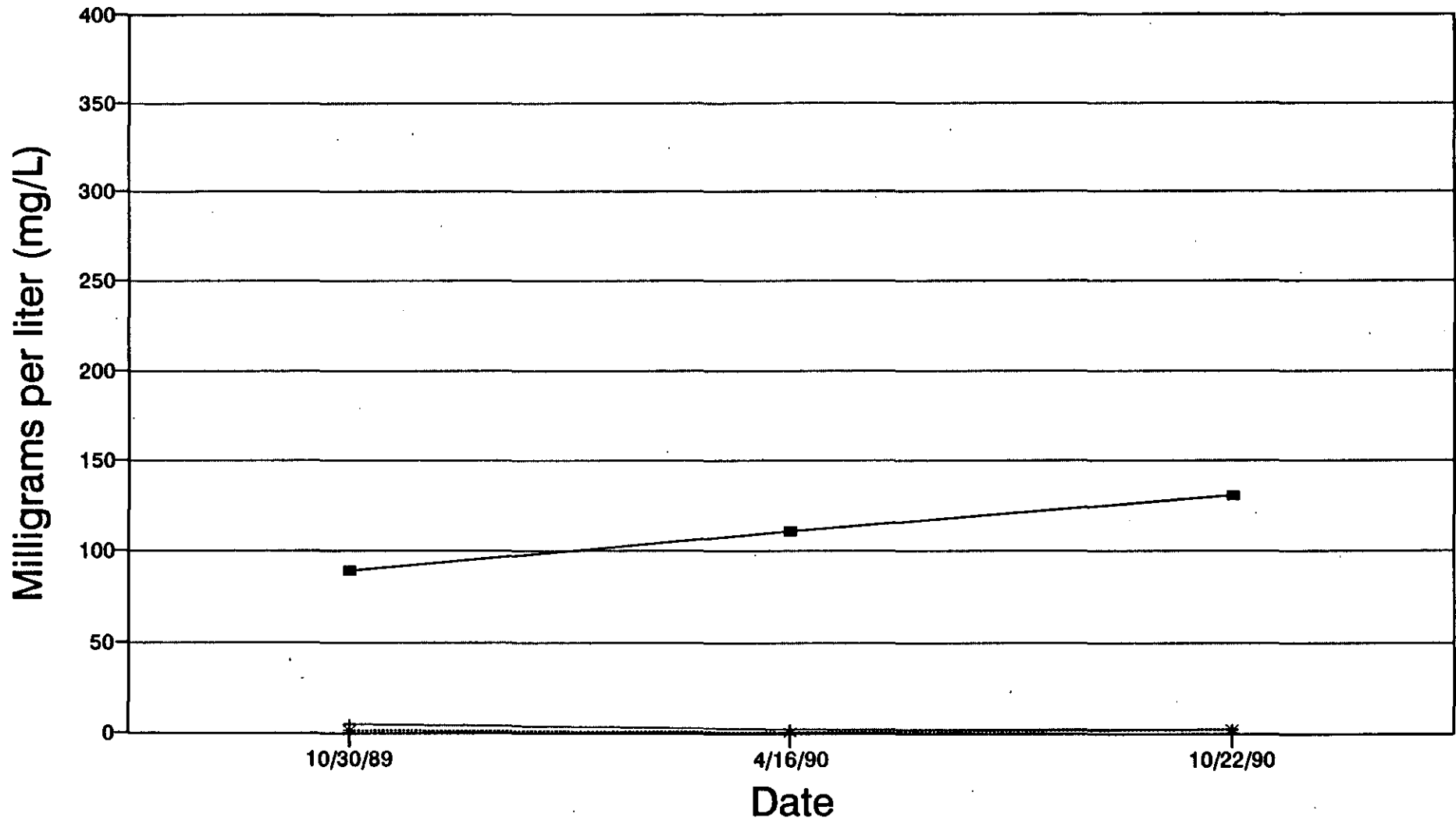
APPENDIX I

GROUND-WATER QUALITY GRAPHS

(May 14, 1993 rev.)

WATER QUALITY DATA

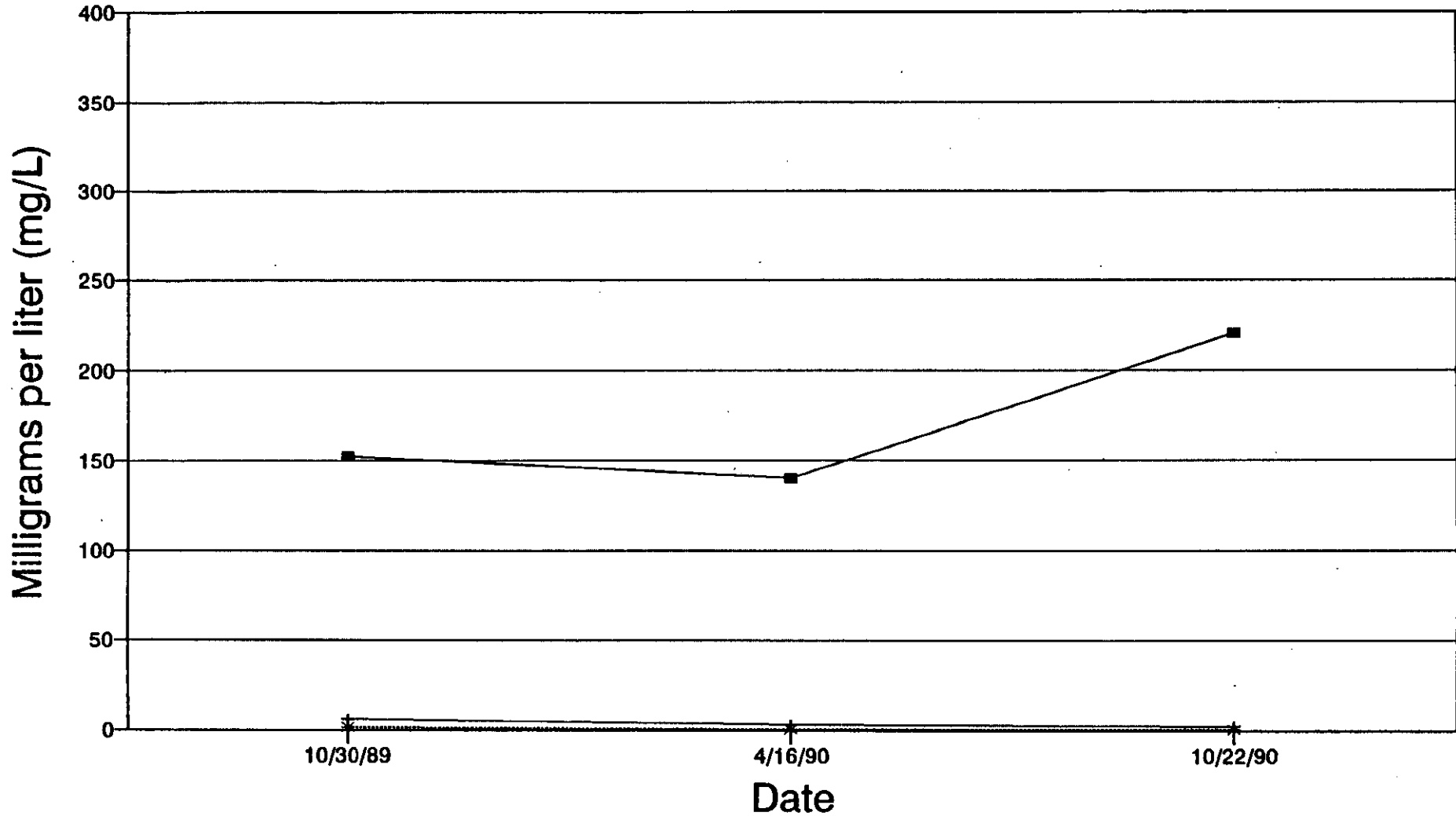
W-1



—■— TDS -+- Chloride ...*... Nitrate

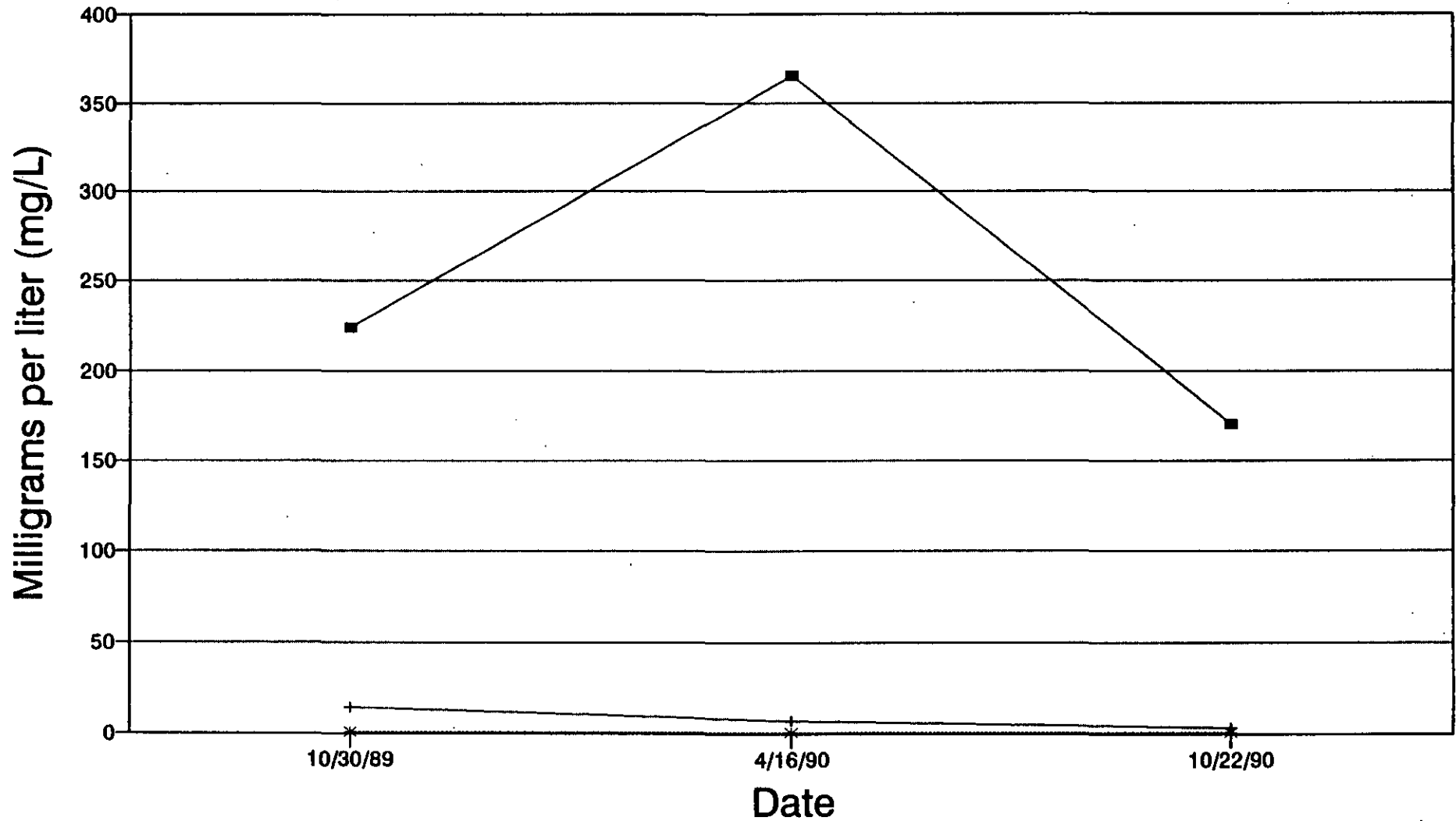
WATER QUALITY DATA

W-2A



WATER QUALITY DATA

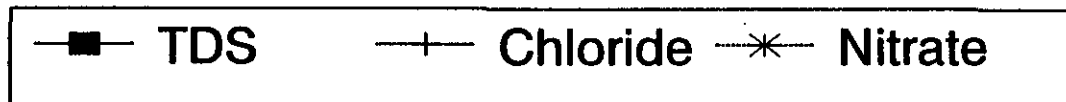
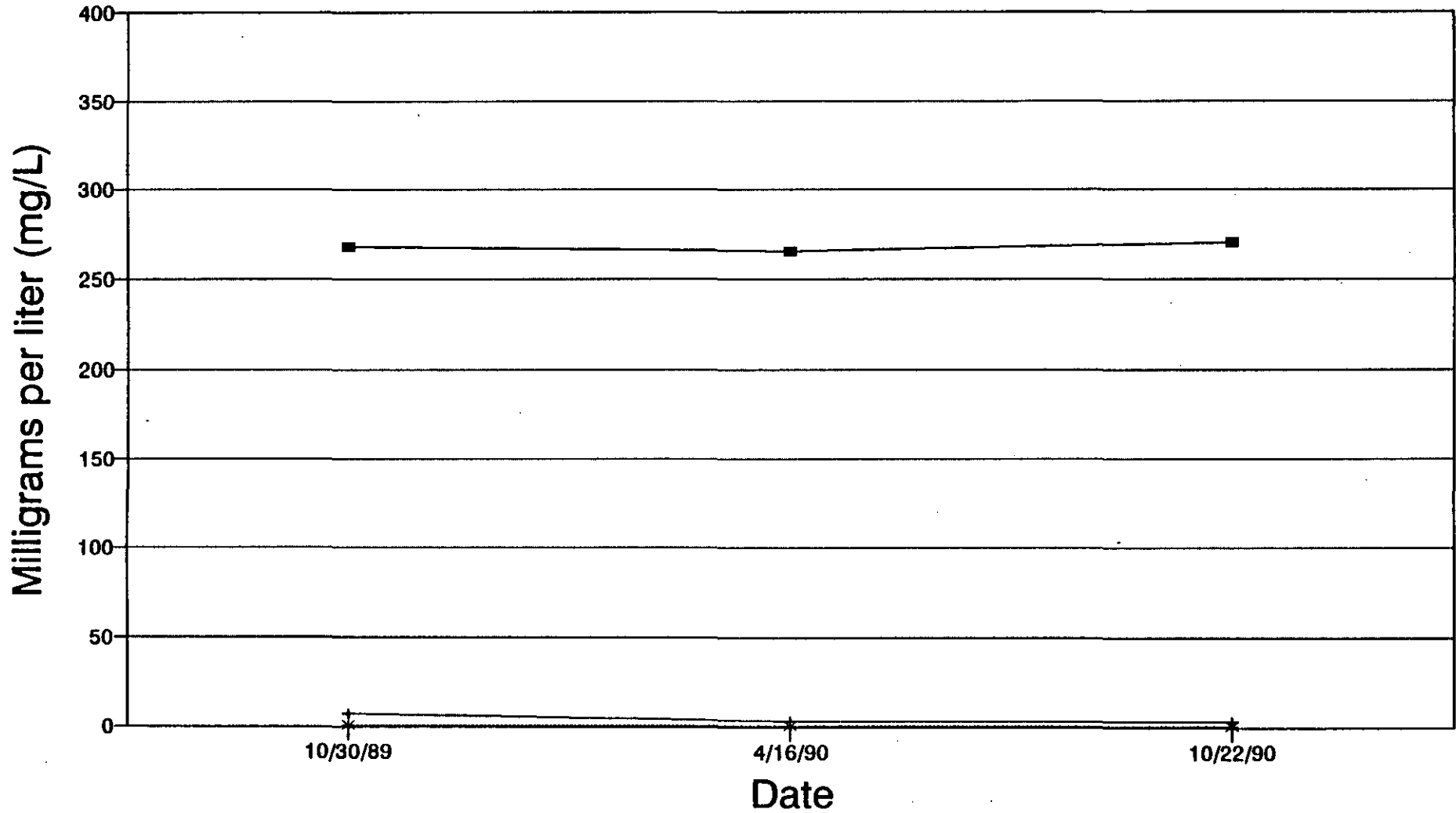
W-3



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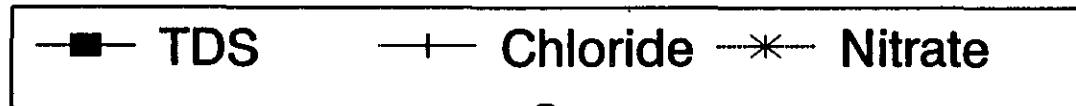
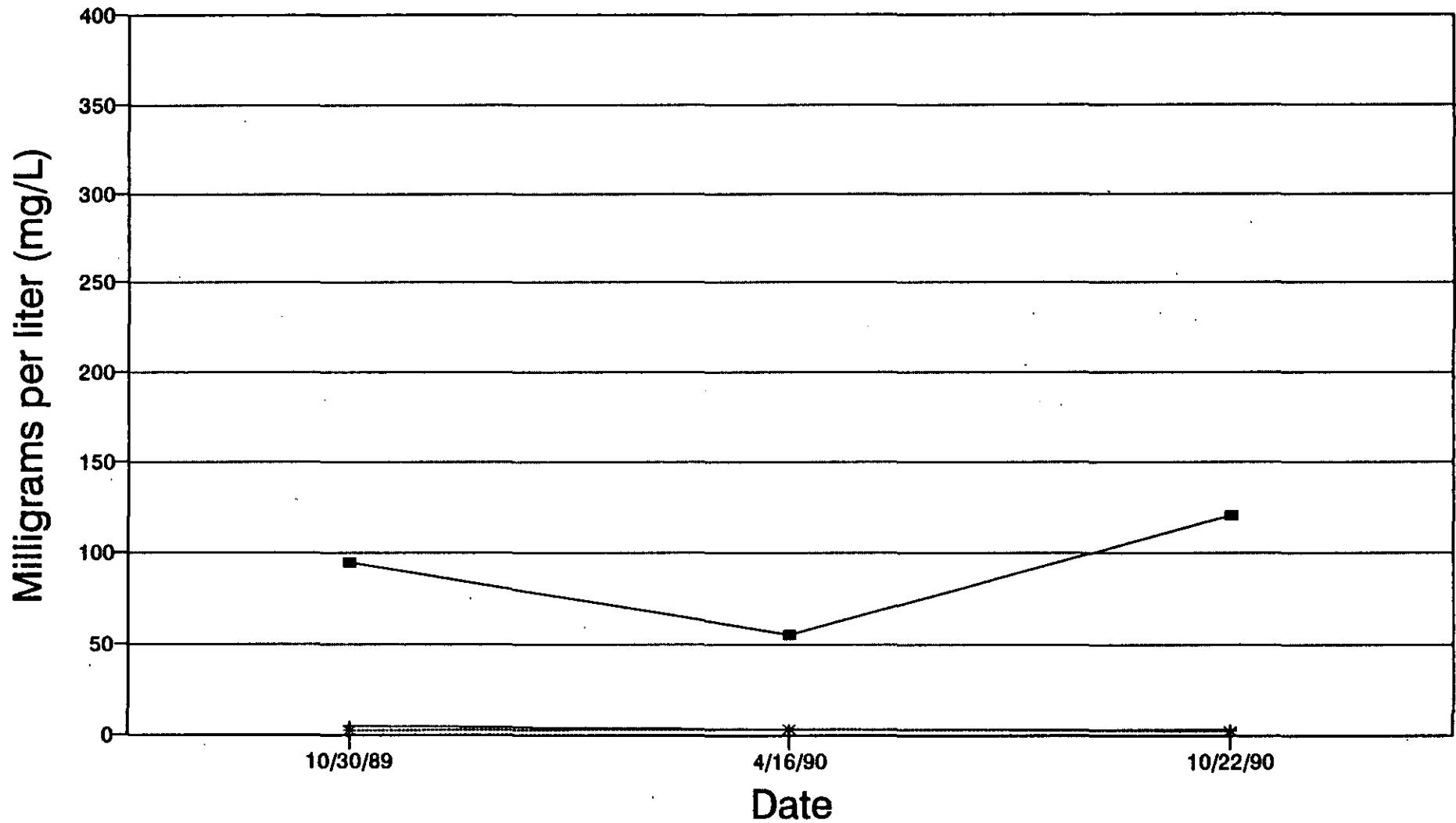
WATER QUALITY DATA

W-4



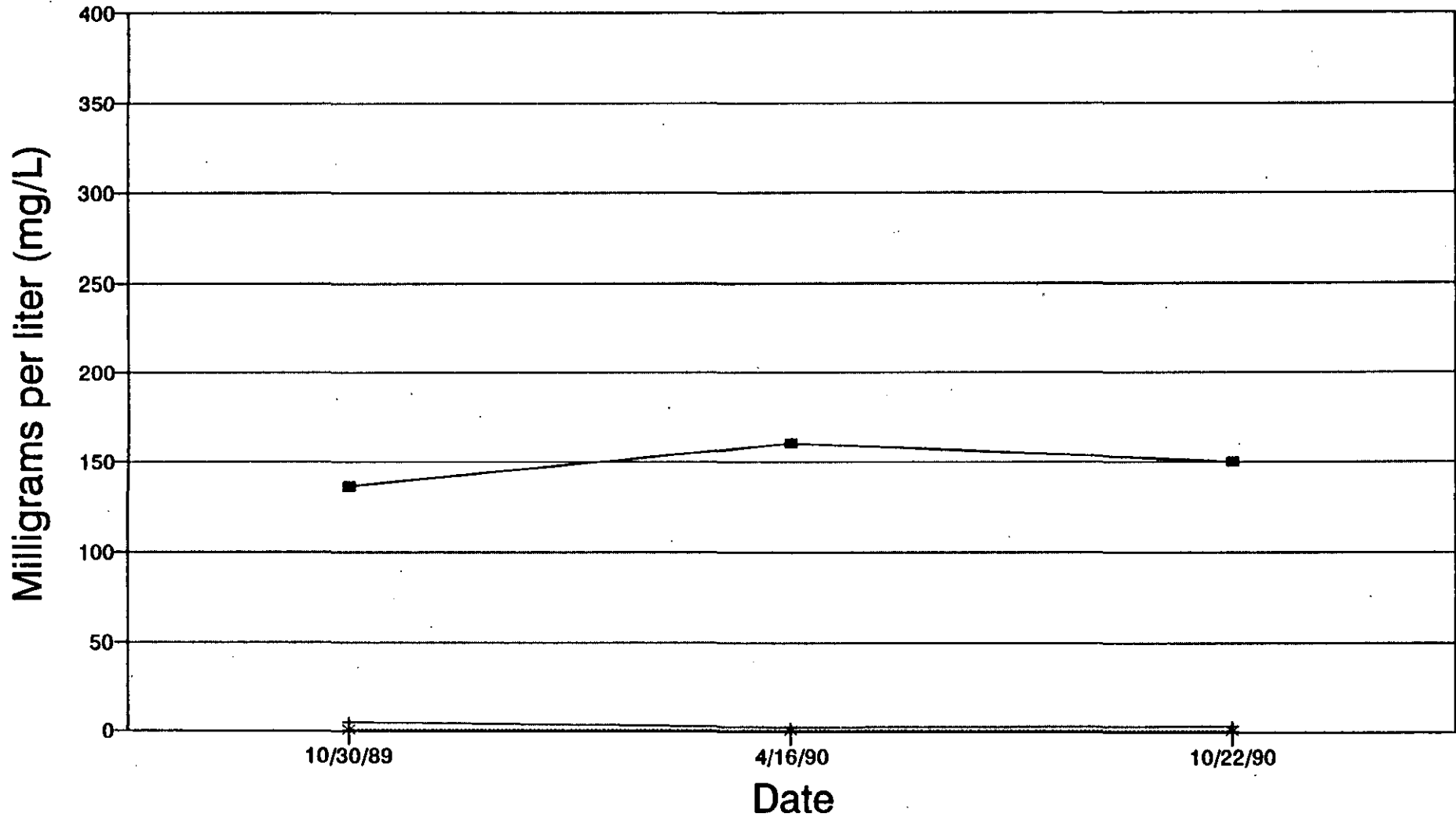
WATER QUALITY DATA

W-6



WATER QUALITY DATA

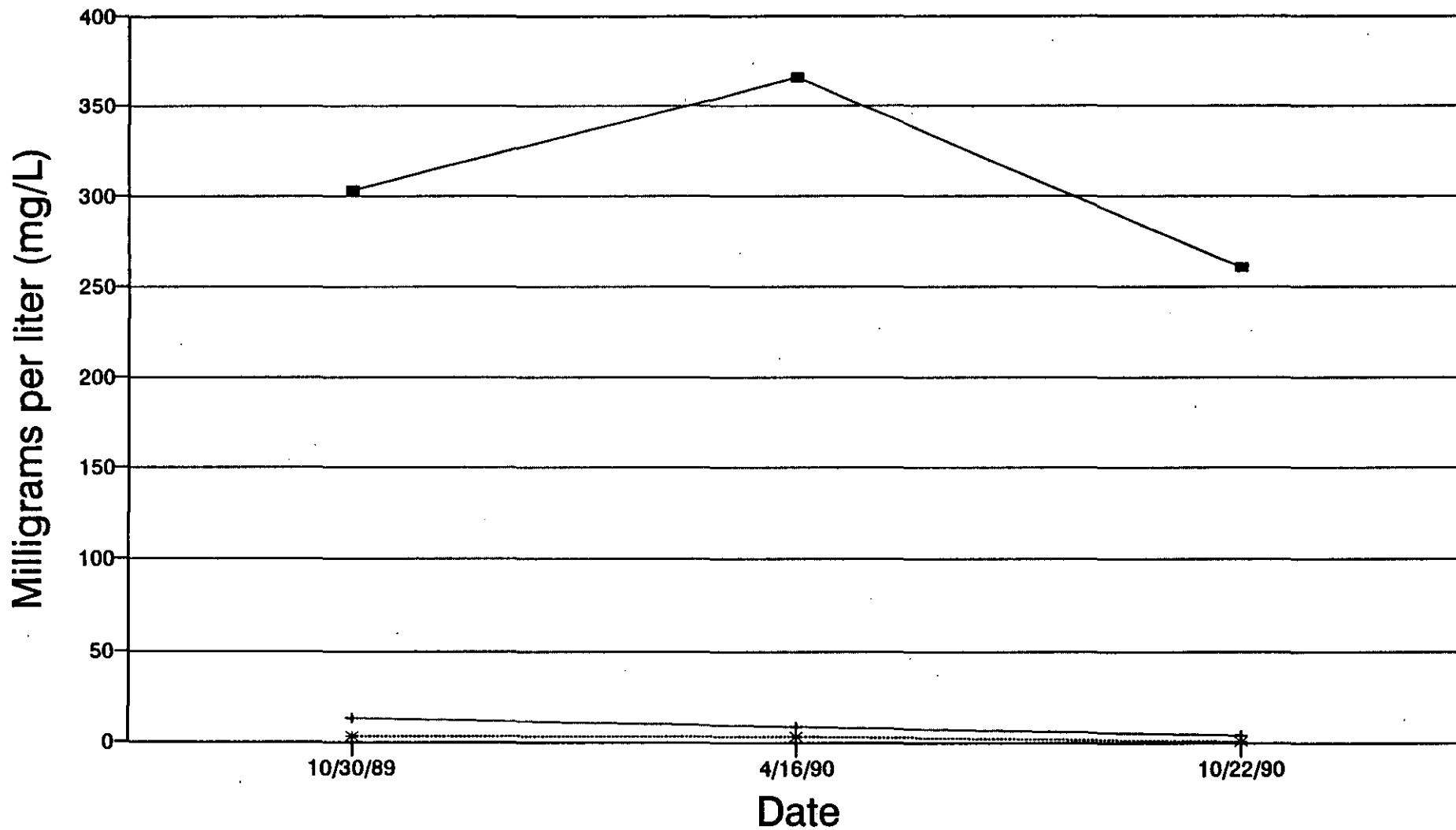
W-7



—■— TDS —+— Chloride —*— Nitrate

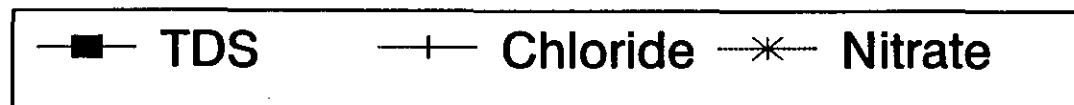
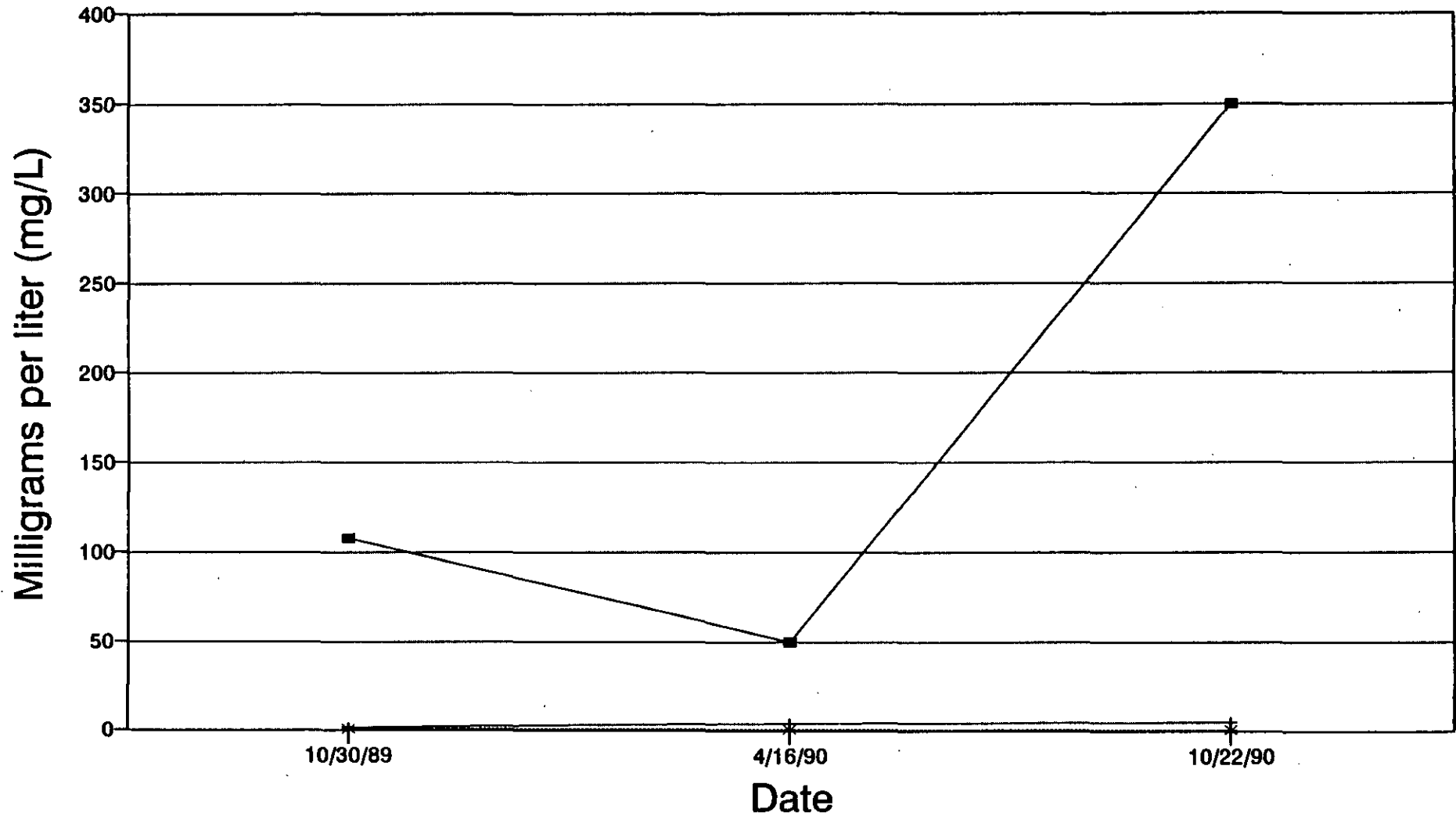
WATER QUALITY DATA

W-8



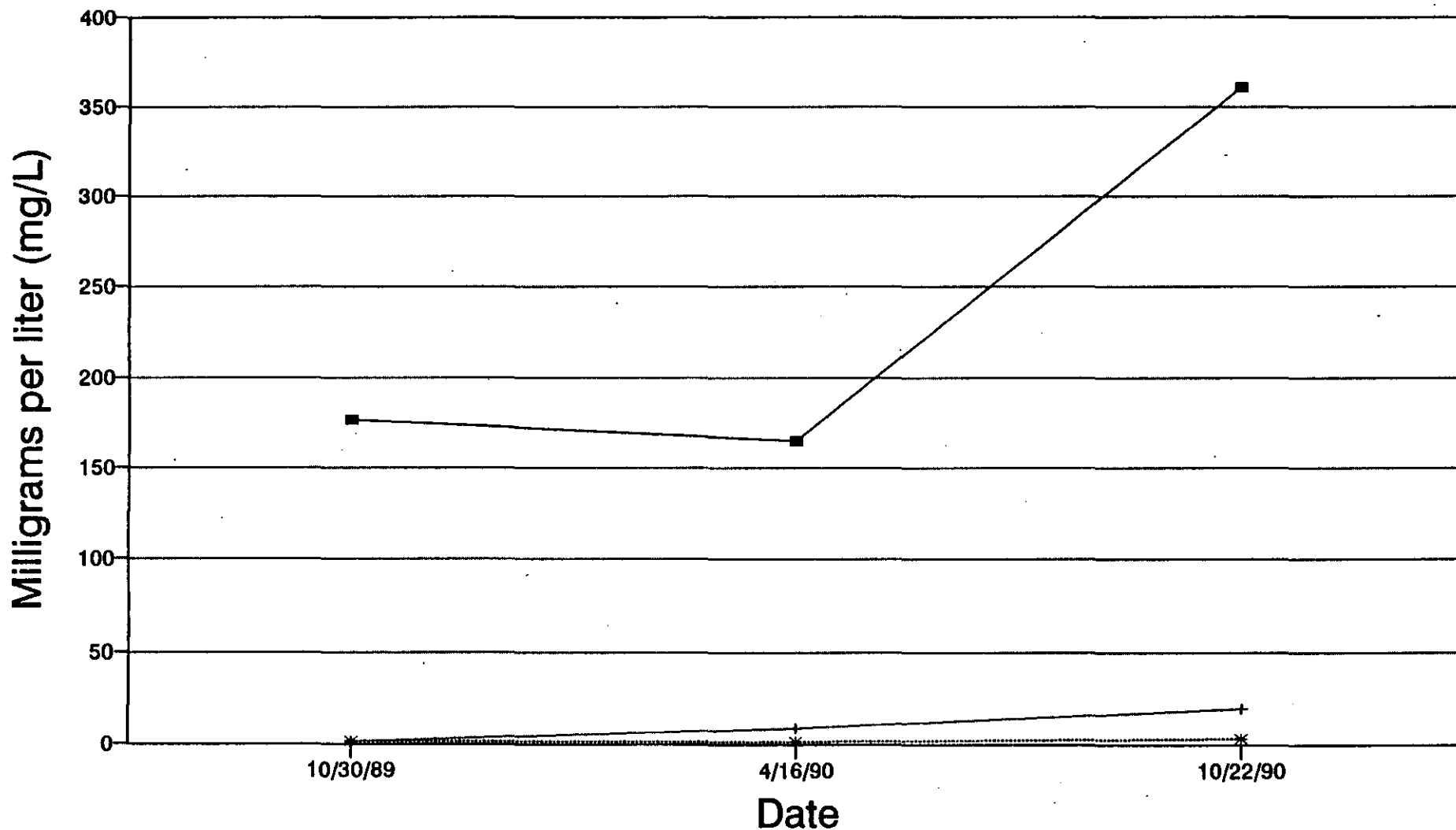
WATER QUALITY DATA

W-9A and W-9B



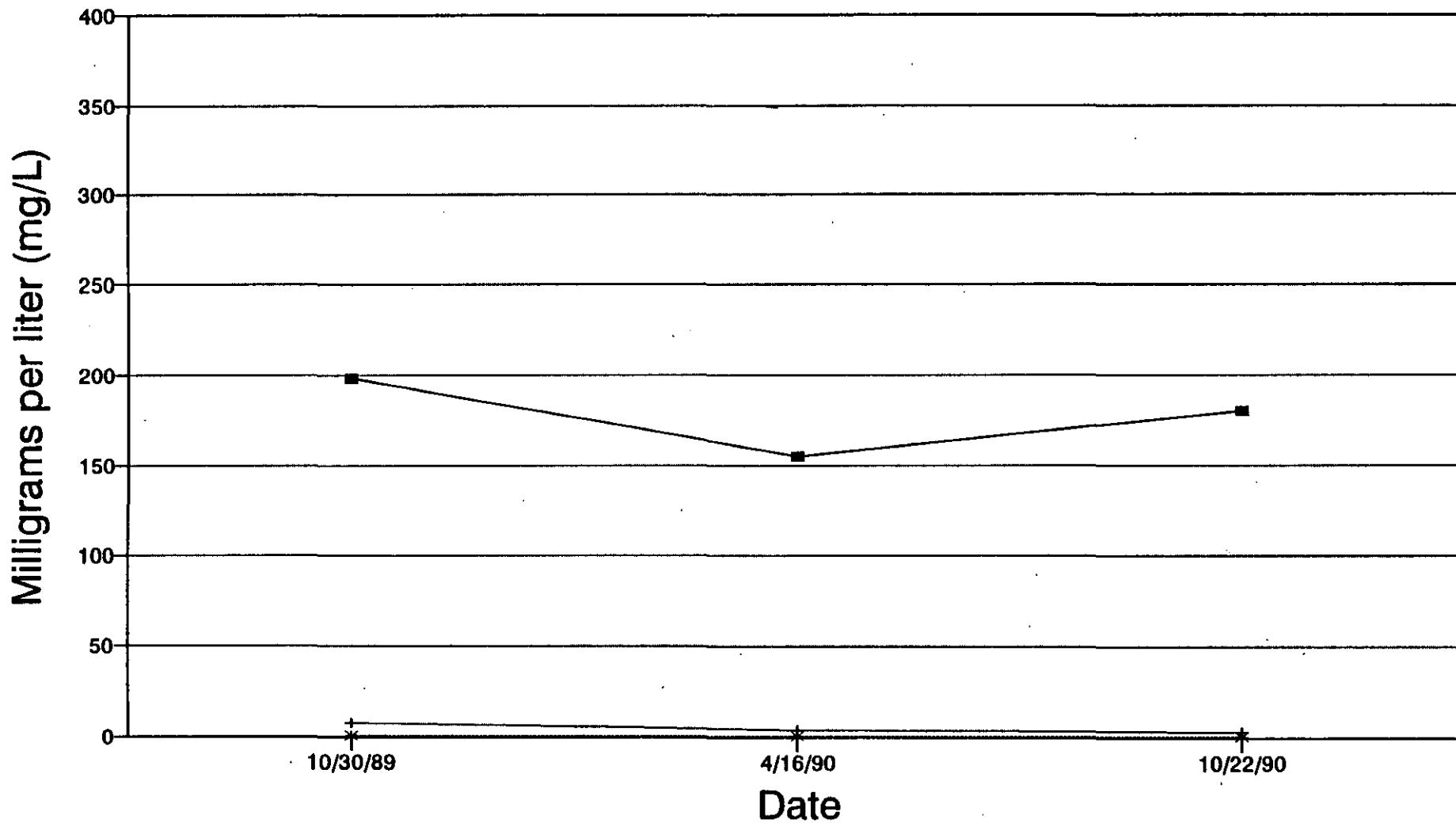
WATER QUALITY DATA

W-10B



WATER QUALITY DATA

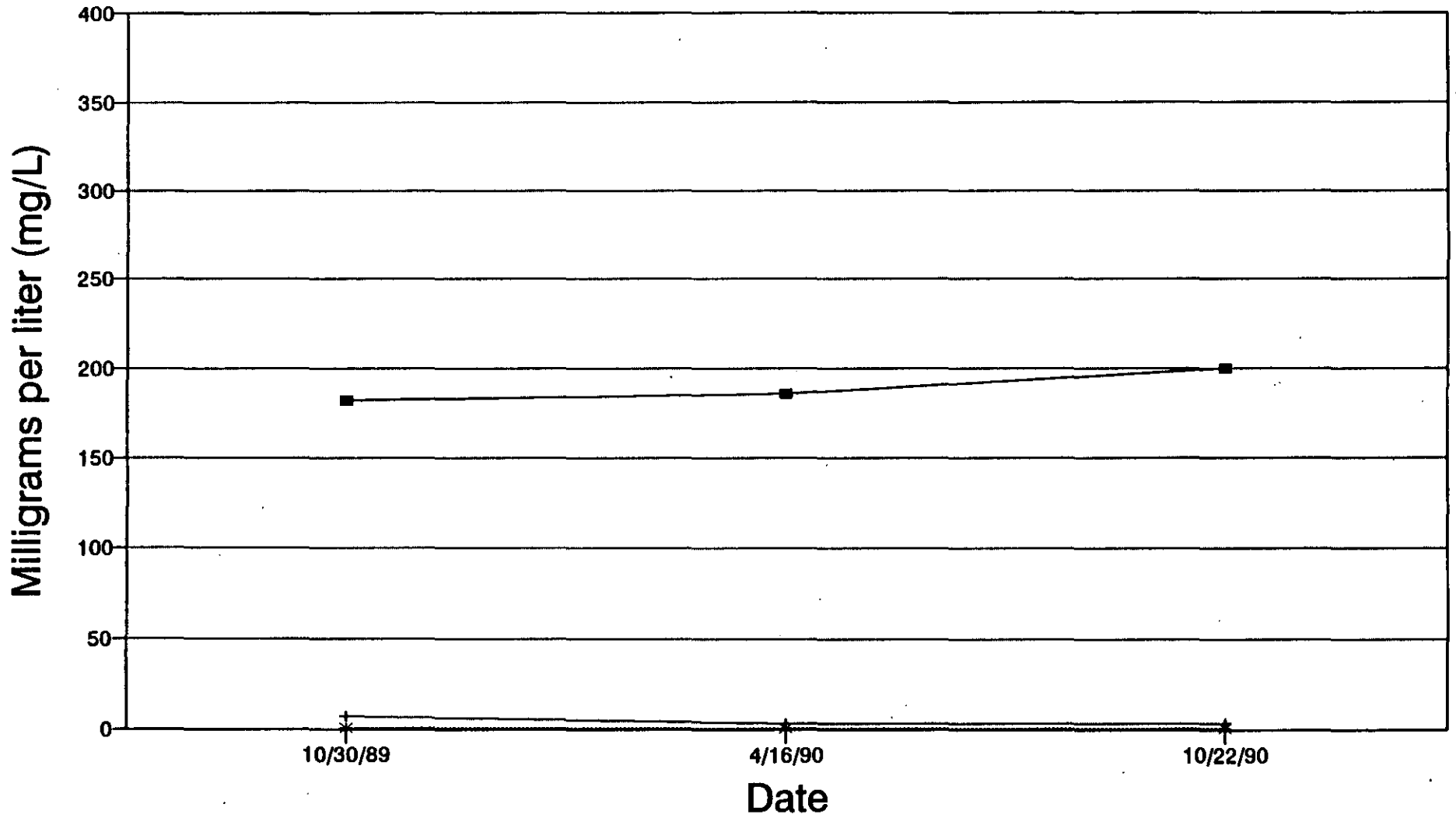
W-11



—■— TDS —+— Chloride —*— Nitrate

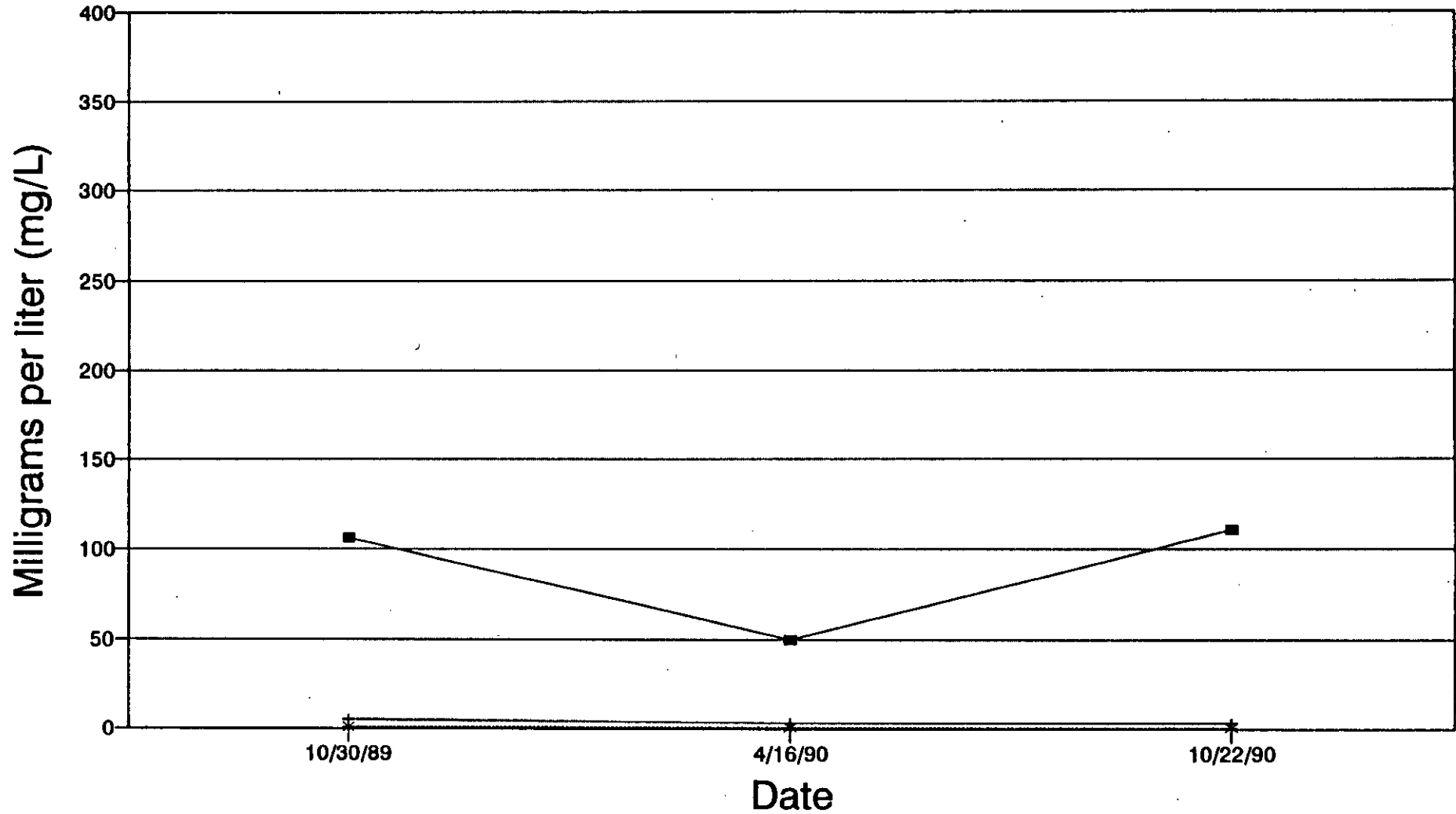
WATER QUALITY DATA

W-12



WATER QUALITY DATA

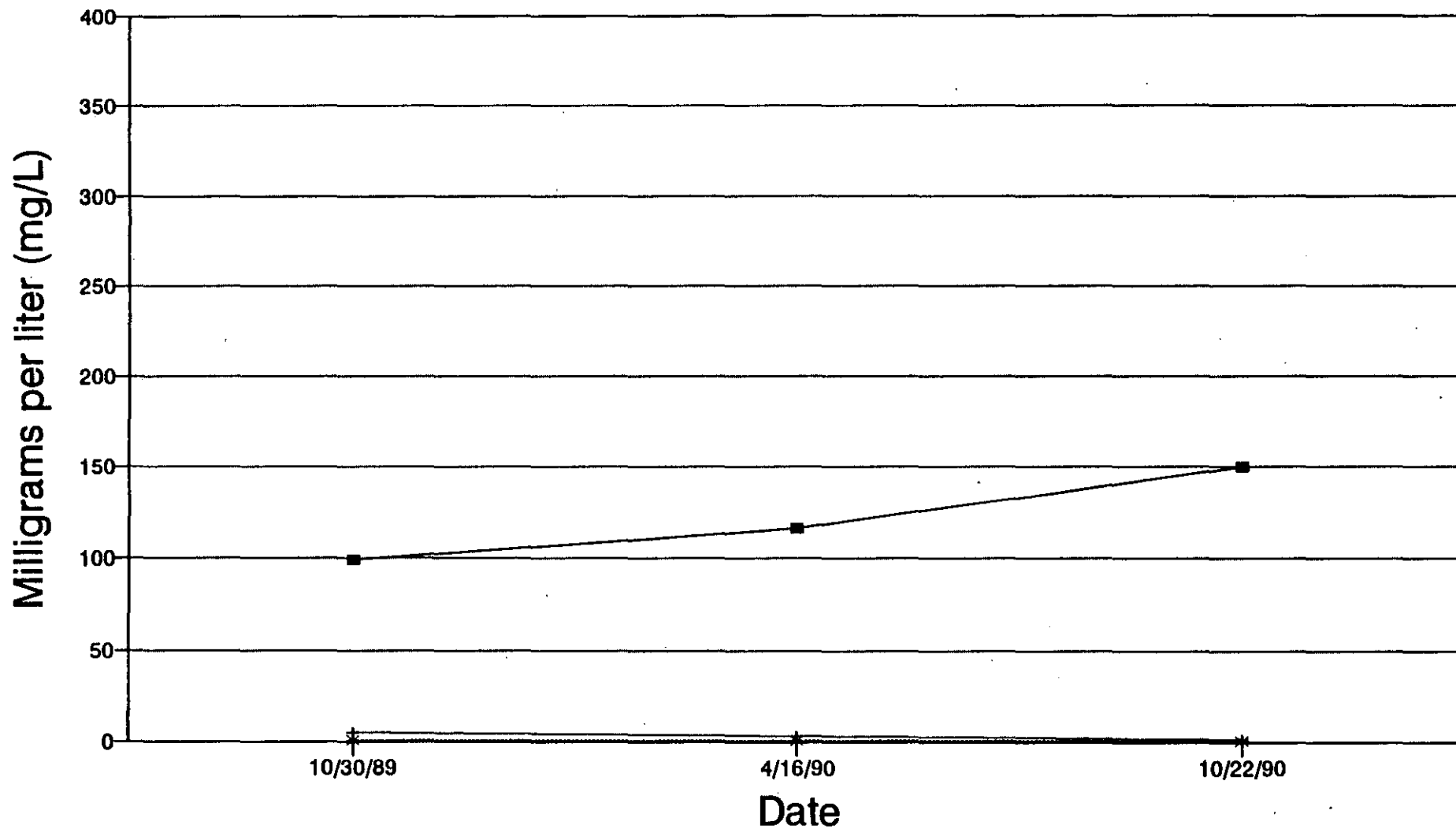
W-13



—■— TDS —+— Chloride —*— Nitrate

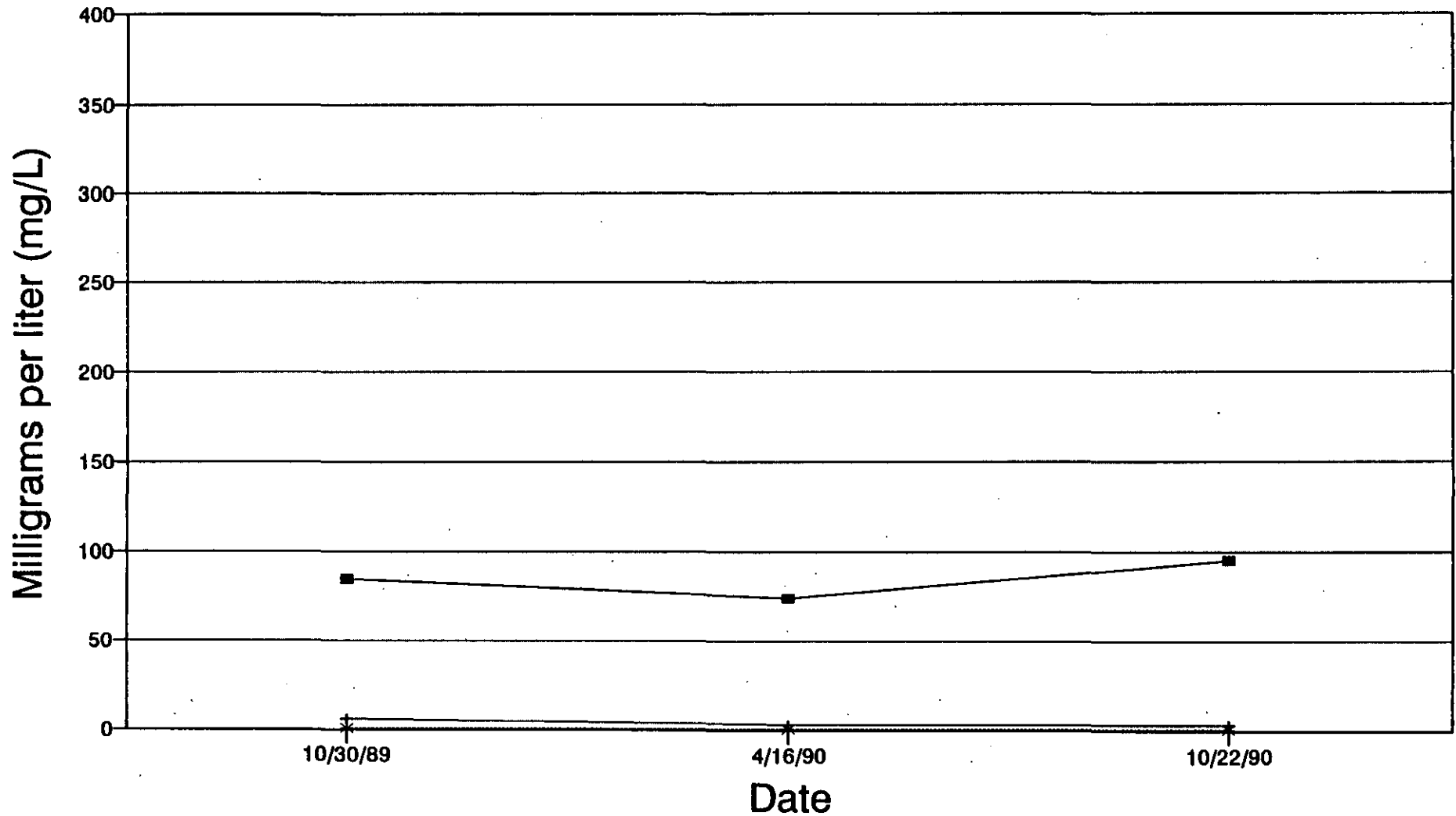
WATER QUALITY DATA

W-14



WATER QUALITY DATA

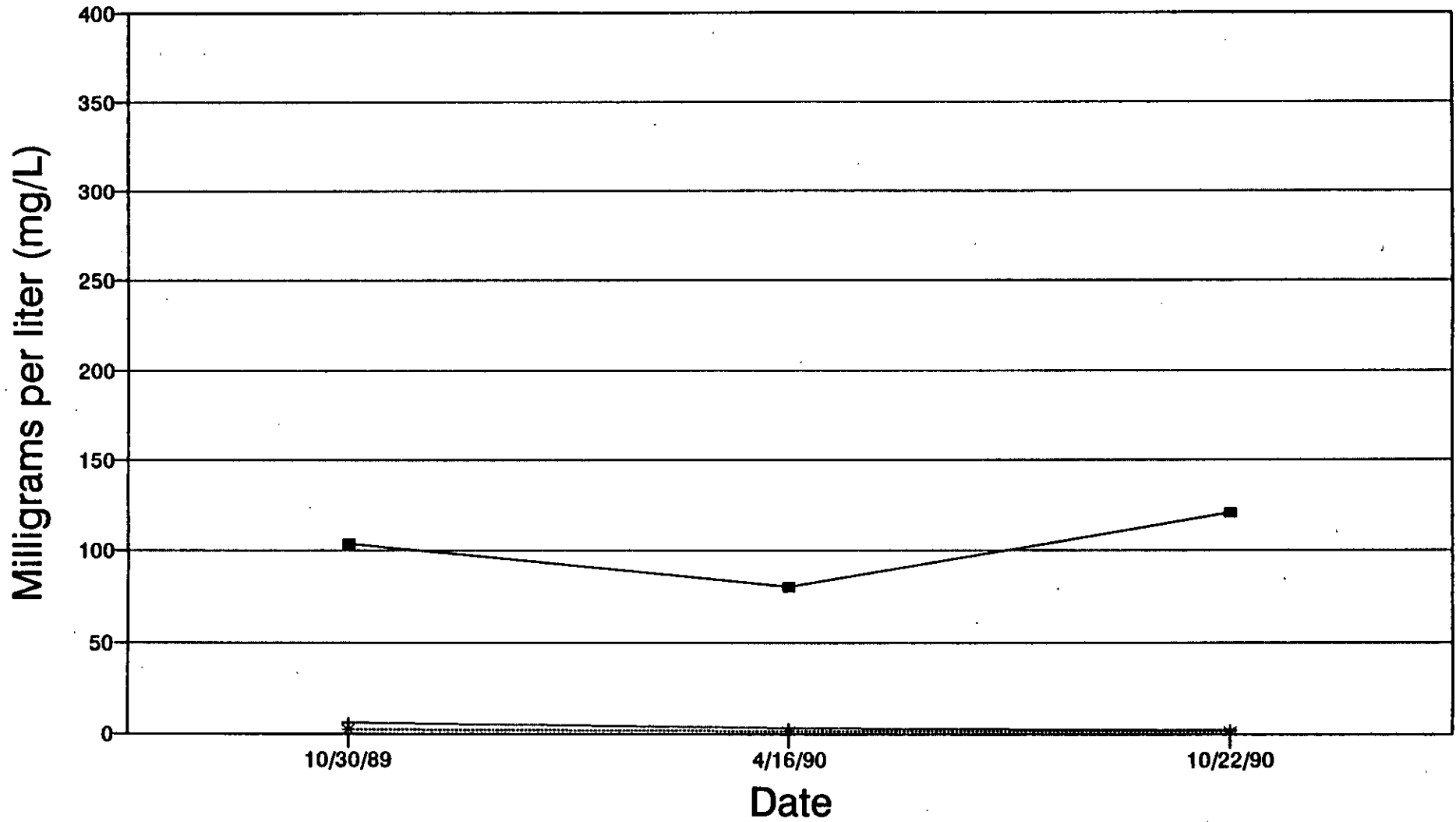
W-15



—■— TDS —+— Chloride —*— Nitrate

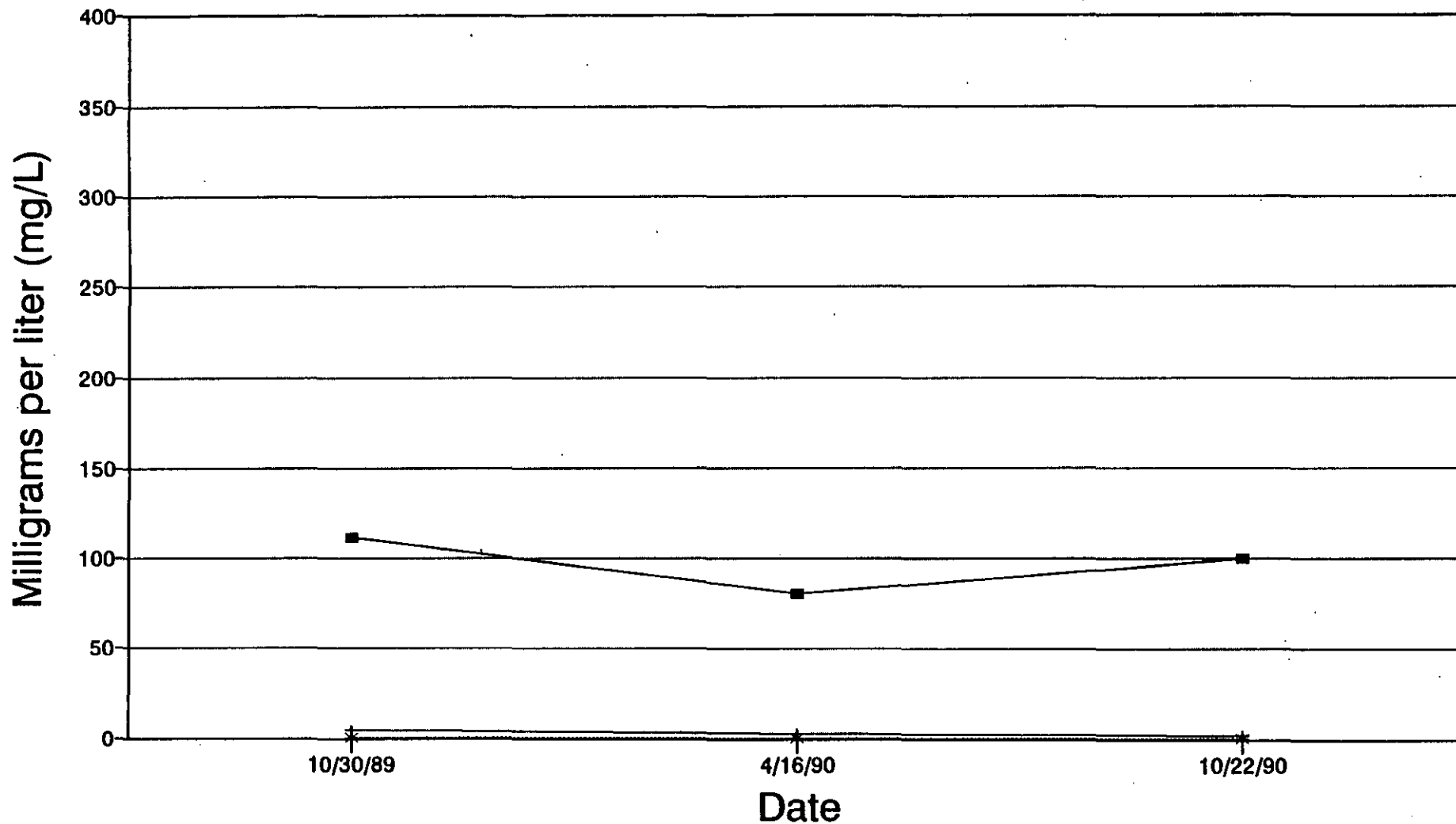
WATER QUALITY DATA

W-16A



WATER QUALITY DATA

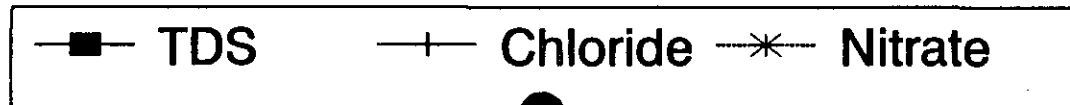
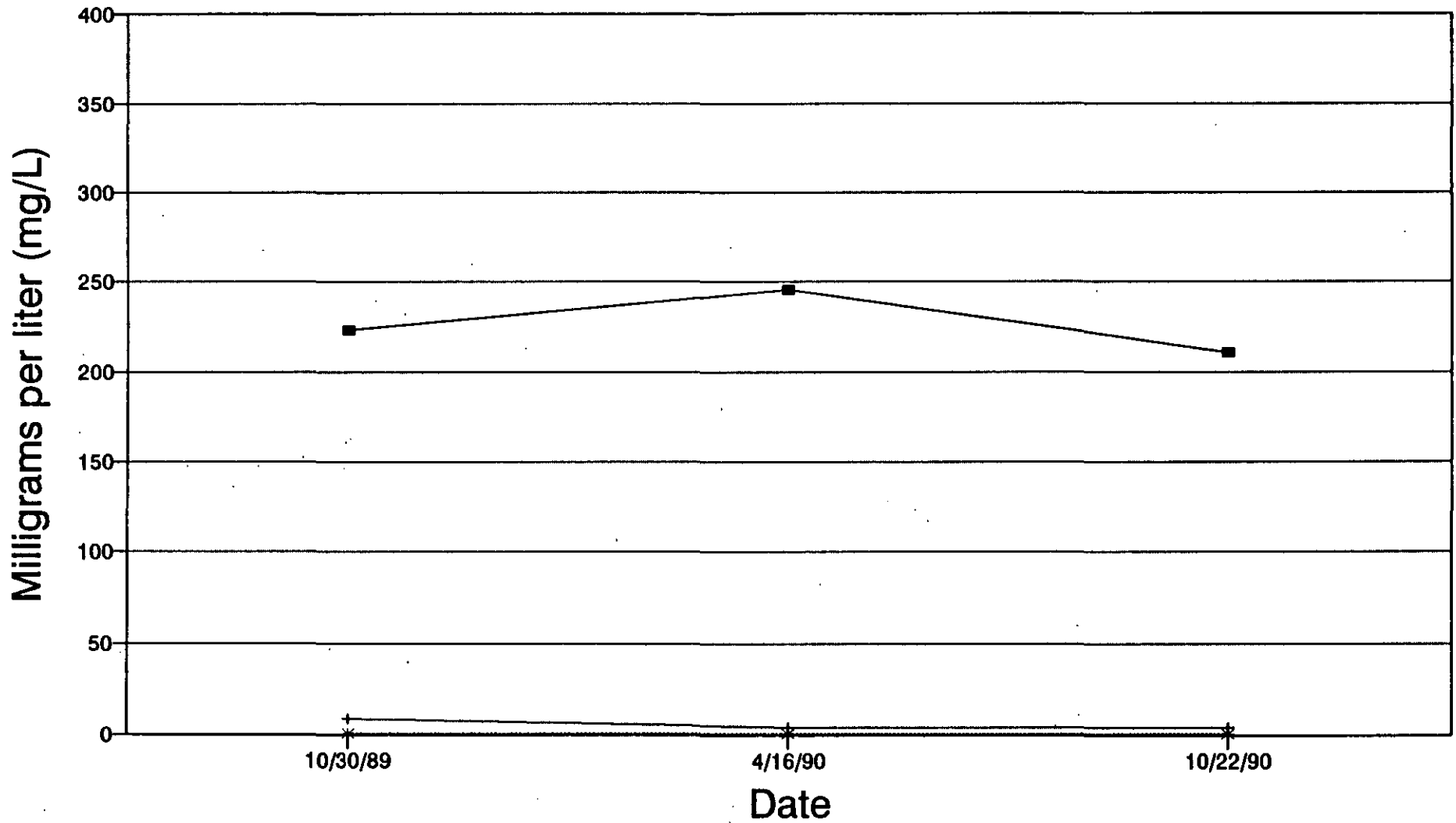
W-17



■ TDS + Chloride * Nitrate

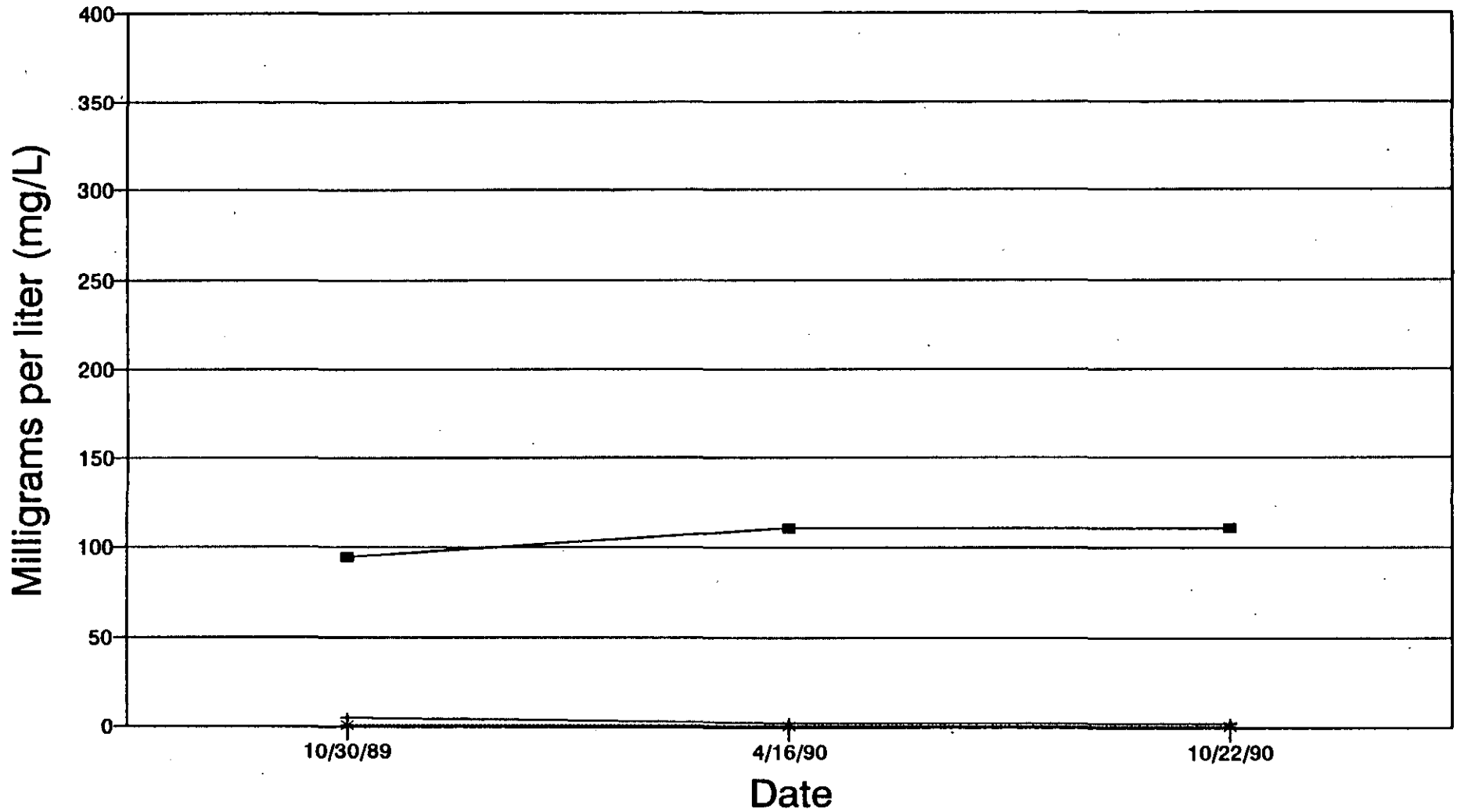
WATER QUALITY DATA

W-18



WATER QUALITY DATA

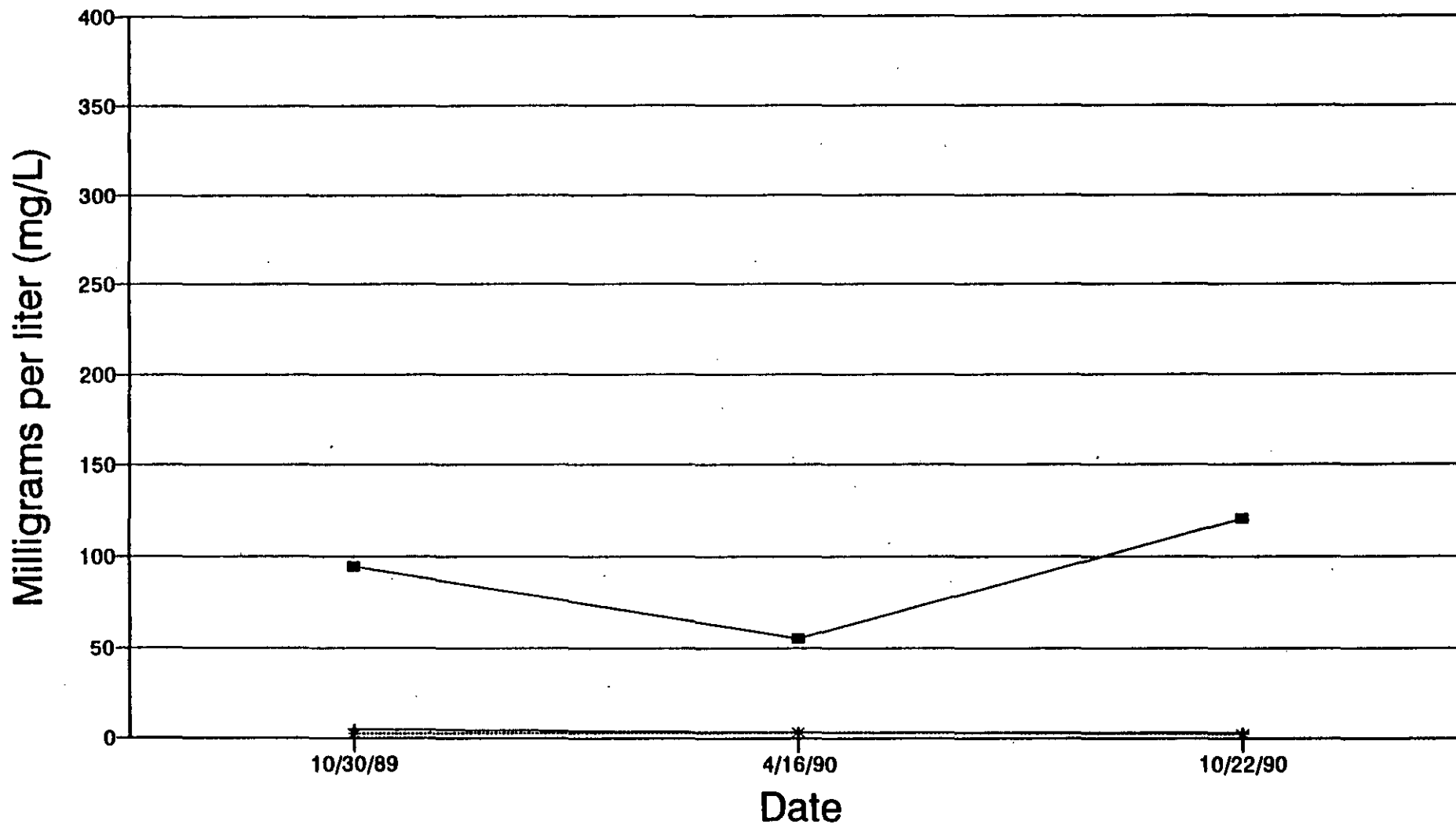
W-19



—■— TDS —+— Chloride —*— Nitrate

WATER QUALITY DATA

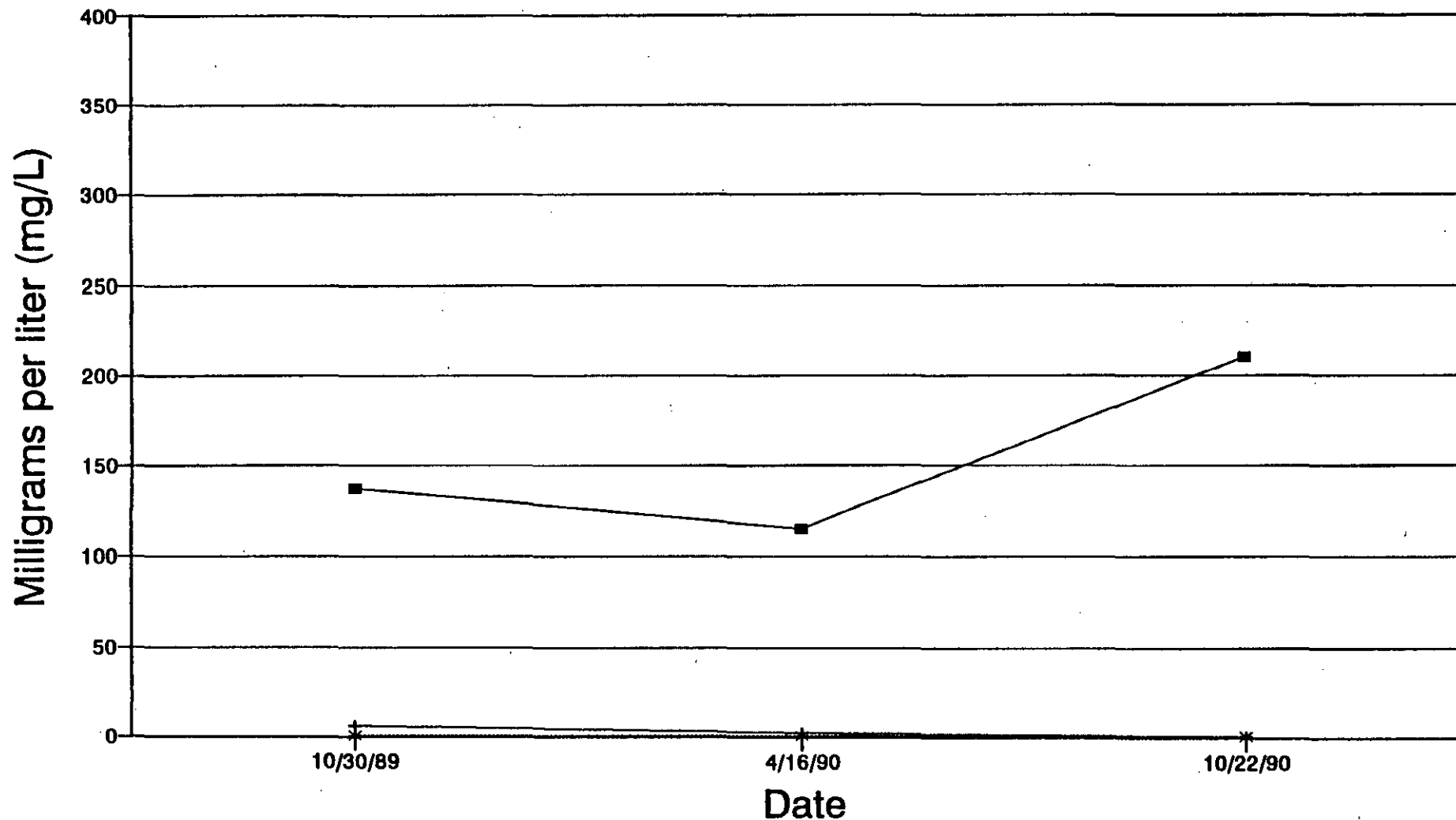
W-20



—■— TDS —+— Chloride -*- Nitrate

WATER QUALITY DATA

W-21



■ TDS + Chloride * Nitrate

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APPENDIX M

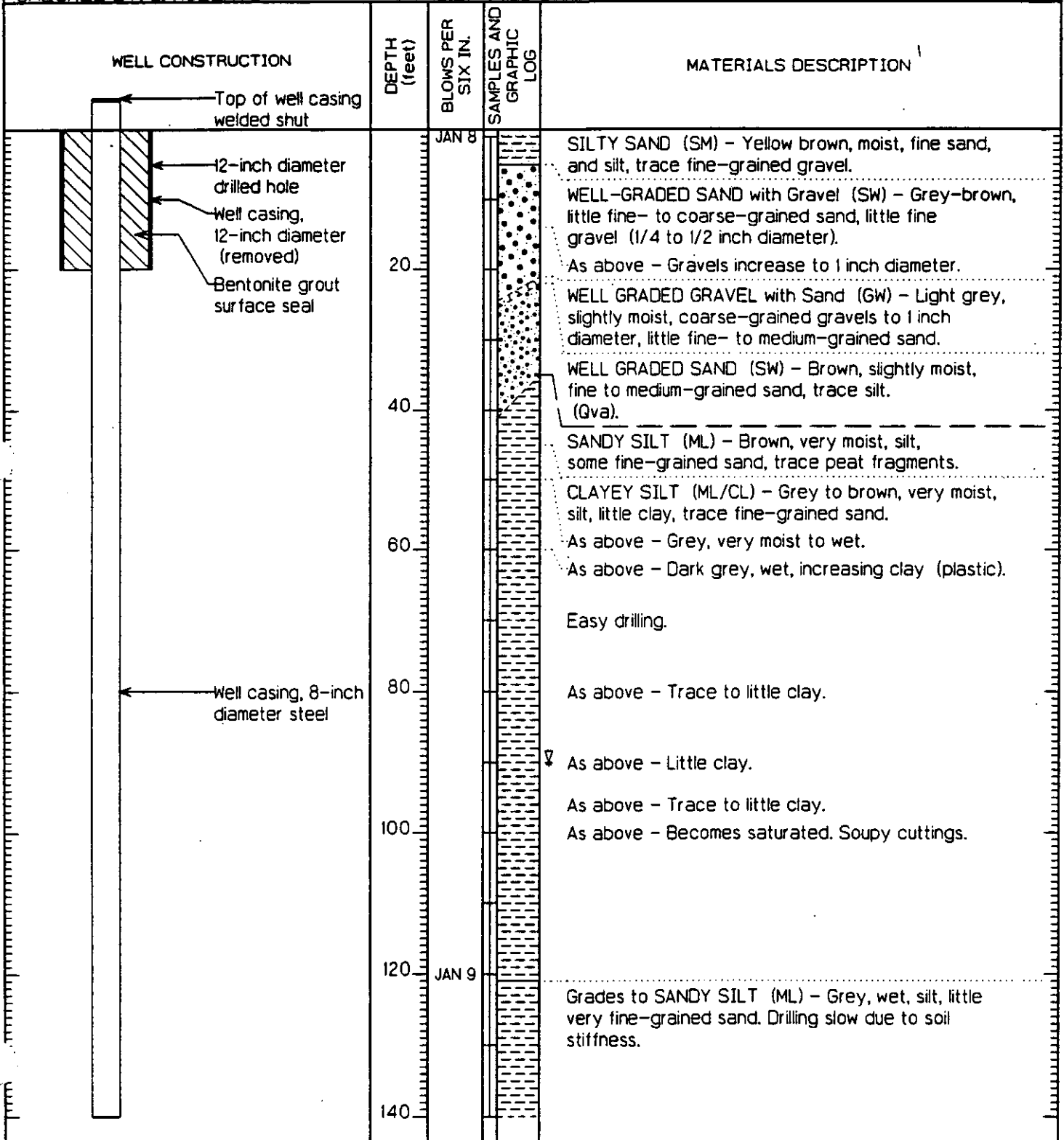
SOIL BORING LOG FOR EXPLORATORY WELL VT-1



(May 14, 1993 rev.)

PROJECT NAME: VASHON ISLAND GROUNDWATER MANAGEMENT PROGRAM
PROJECT NO: WAO28.01


CLIENT NAME: KING CO. DEPT. OF ENVIR. HEALTH
 PROJECT LOCATION: VASHON, WASHINGTON
 DATE STARTED: 8-JANUARY-92
 DATE COMPLETED: 29-JANUARY-92
 LOGGED BY: A. AMR/ J. STRUTHERS
 CHECKED BY: L. ROBERTS

SURFACE ELEV: 50feet
 DATUM: MEAN SEA LEVEL
 DRILL COMPANY: OKANOGAN DRILLING/TACOMA PUMP
 DRILLER: LEWIS ADOLPH/JON HANSEN
 DRILL METHOD: AIR ROTARY/CABLE TOOL
 SAMPLING METHOD: GRAB SAMPLE



WELL CONSTRUCTION	DEPTH (feet)	BLOWS PER SIX IN.	SAMPLES AND GRAPHIC LOG	MATERIALS DESCRIPTION
 <p>Well casing, 8-inch diameter steel</p>	<p>160</p> <p>180</p> <p>200</p> <p>220</p> <p>240</p> <p>260</p> <p>280</p> <p>300</p>			<p>Grades to SILT (ML) - Grey, wet, silt. Water added to recover soil cuttings.</p> <p>Grades to CLAYEY SILT (ML/CL) - Grey, wet, silt and clay (plastic). Stopped adding water.</p> <p>Becomes very moist at 175 feet.</p> <p>Water added to recover soil cuttings.</p> <p>As above - Trace pyrite flakes (less than 1%). Drilling easier with water added.</p> <p>Grades to SILTY CLAY (CL/ML) - Grey, very moist to wet clay and silt.</p> <p>As above - Increasing silt content.</p> <p>Grades to CLAYEY SILT (ML/CL) - Grey, wet, silt and clay. Stopped adding water.</p> <p>As above - Trace fine- to medium-grained sand.</p> <p>As above - Trace very fine-grained sand. Water added to recover soil cuttings.</p> <p>As above - Trace to little very fine-grained sand. Difficult drilling.</p> <p>Grades to SANDY SILT (ML) - Grey, wet, silt, little very fine-grained sand, trace clay.</p> <p>Stopped adding water.</p>

JAN 10

WELL CONSTRUCTION	DEPTH (feet)	BLOWS PER SIX IN.	SAMPLES AND GRAPHIC LOG	MATERIALS DESCRIPTION
 <p>Well casing, 8-inch diameter steel</p>				<p>CLAYEY SILT (ML/CL) - Grey, wet, silt, some clay, trace fine-grained sand.</p> <p>Grades to SANDY SILT (ML) - Grey, wet, silt, some very fine-grained sand.</p> <p>Casing hammer not working due to clays and silts sticking to hammer.</p> <p>Stopped adding water.</p> <p>No sample obtained due to the lack of moisture during drilling (no cuttings).</p> <p>Grades to CLAYEY SILT (ML) - Grey, very moist, silt, little clay (not water-bearing).</p> <p>Grades to SANDY SILT (ML) - Grey, wet, silt, little to some fine grained sand (water-bearing). Hydraulic hose to casing hammer broken (1 hour of down time).</p> <p>CLAYEY SILT (ML) - Grey, very moist, silt, little clay (not water-bearing).</p> <p>SILTY SAND (SM) - Light grey, wet, very fine- to fine-grained sand, little silt (10 to 15%).</p>
	320	JAN 11		<p>Grades to WELL GRADED SAND (SW) - Black-green, wet fine- to coarse-grained sand, trace to little silt (water-bearing).</p> <p>Driller estimates well is producing 40 gallons/minute.</p> <p>As above - Very fine- to fine-grained sand.</p>
	340			<p>Grades to SILTY SAND (SM) - Grey, wet, very fine-grained sand, little silt.</p>
	360			<p>POORLY GRADED SAND (SP) - Grey, wet, very fine- to fine-grained sand, trace to little silt, heaving sand. SAMPLE 420 collected for laboratory grain-size analysis.</p>
	380	JAN 11 JAN 13		<p>De-mobed air rotary drill rig and mobed cable tool drill rig. Bailed 95 feet of heaved sand prior to resuming drilling. As above - well rounded gravels (1- to 3-inch diameter). SAMPLE 435 collected for laboratory grain-size analysis.</p>
	400			<p>Bailed approximately 40 feet of sand heave.</p>
	420	JAN 13 JAN 23		<p>CLAY (CL) - Grey, moist-wet, clay, some subrounded medium- to coarse-grained sand, trace gravel (0.75 to 2-inch diameter), highly plastic.</p>
	440	JAN 24		<p>As above - Moist, trace fine-grained sand, trace silt.</p>
	460	JAN 24 JAN 27		

WELL CONSTRUCTION	DEPTH (feet)	BLOWS PER SIX IN.	SAMPLES AND GRAPHIC LOG	MATERIALS DESCRIPTION
<p>Well casing, 8-inch diameter steel</p> <p>Drive shoe and open well casing</p>	<p>480</p> <p>500</p> <p>520</p> <p>540</p> <p>560</p> <p>580</p> <p>600</p> <p>620</p>	<p>JAN 29</p> <p>JAN 29</p> <p>JAN 29</p>		<p>As above - Little medium- to coarse-grained sand (0.25 to 0.5-inch diameter).</p> <p>As above - Moist, little fine- to medium-grained sand trace rounded gravel.</p> <p>As above - Moist, trace fine-grained sand, trace to little silt.</p> <p>SILT (ML) - Grey, dry-moist, silt, little clay, crude bedding plane. Approximately 70 feet of water added to control heaving sands in open hole.</p> <p>WELL GRADED SAND with SILT (SW) - Grey, wet, very fine to medium-grained sand, subangular to subrounded, with mica and black lithic fragment, partially consolidated crude bedding plane, trace silt, (water-bearing).</p> <p>SILT with GRAVEL (ML) - Grey, moist, silt, with subrounded to rounded gravel up to 1.5-inch diameter, trace clay, trace to little medium-grained sand.</p> <p>WELL GRADED SAND/GRAVEL with Silt (SW/GW) - Grey, moist, subrounded gravel to 1.5-inch diameter, with fine- to coarse-grained sand, some to little clay and silt, occurring in chunks, dry in the middle.</p> <p>Borehole terminated at 500 feet bls, ground-water encountered at approximately 45 feet bls, and 360 feet bls during drilling. Static water level on January 29, 1992 was 88.25 feet bls (unscreened well).</p> <p>Grab samples of soil cuttings obtained from soil discharge tube, and bailer (cable tool drill-rig).</p> <p>Well elevation estimated in feet above mean sea level from Vashon 7.5-minute U.S.G.S. Topographic Map, photorevised 1968.</p>

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APPENDIX N

**LABORATORY ANALYTICAL RESULTS FOR
GRAIN-SIZE ANALYSIS**

(May 14, 1993 rev.)



CASCADE TESTING LABORATORY, INC.
TESTING & INSPECTION/ENGINEERS/GEOLGISTS

12919 N.E. 129th PLACE
KIRKLAND, WASHINGTON, 98034

(206) 823-9800

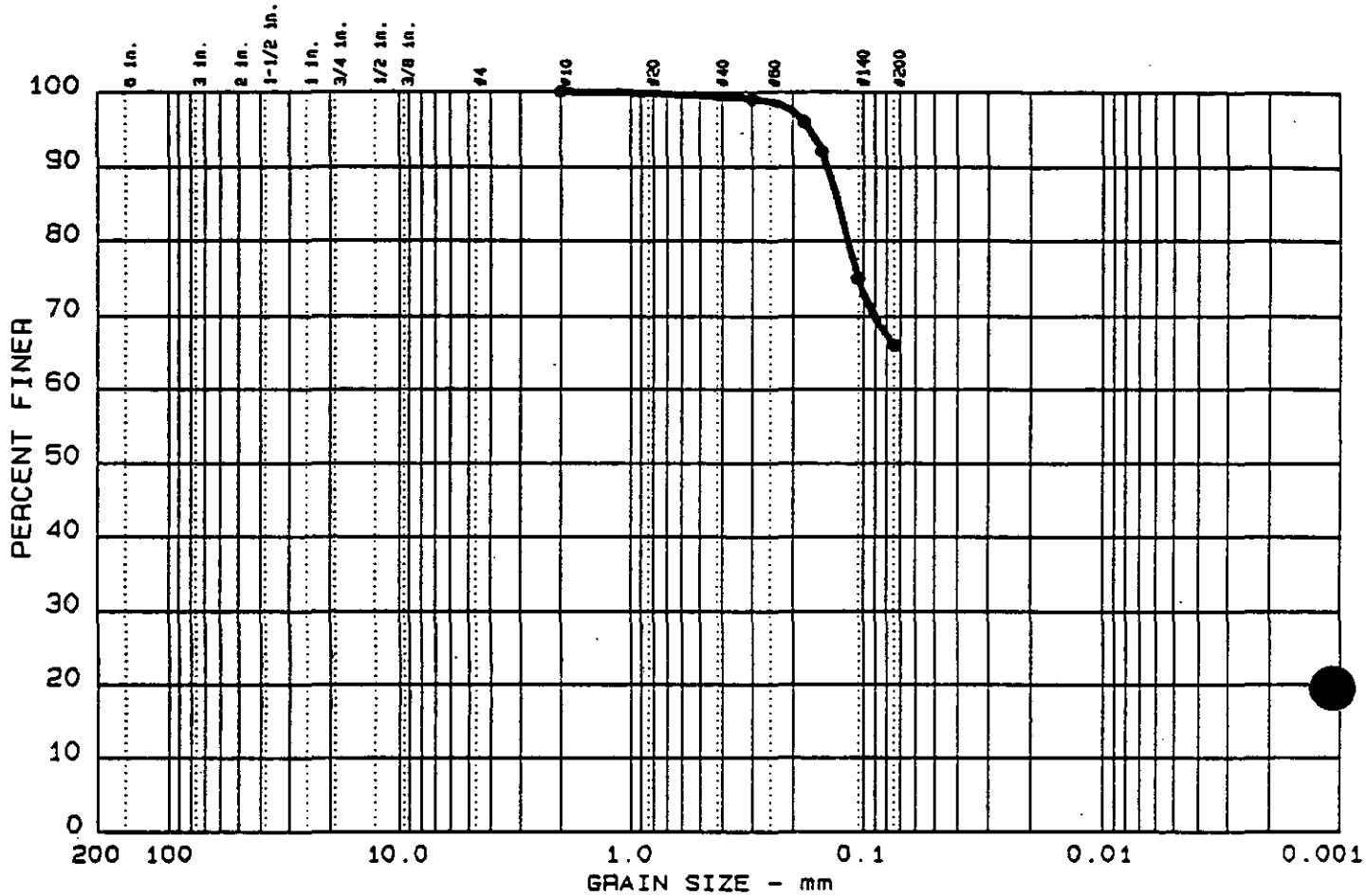
SEATTLE

(206) 525-6700

EVERETT

(206) 259-0817

GRAIN SIZE DISTRIBUTION TEST REPORT



% +75 mm	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	34.0	66.0	

SIEVE SIZE	% PASSING	SPECS	Project No.: 9201-64	Date: 1/28/92
#10	100.0		Project: VASHON - GERAGHTY & MILLER	
#50	99.0		• Location: Native - Sample #1 420	
#80	96.0		MATERIAL DESCRIPTION	
#100	92.0		gray silty sand	
#140	75.0		Remarks:	
#200	66.0			
			TESTED BY	CHECKED BY
			TW	
			SUBMITTED BY	

GJM 2-3

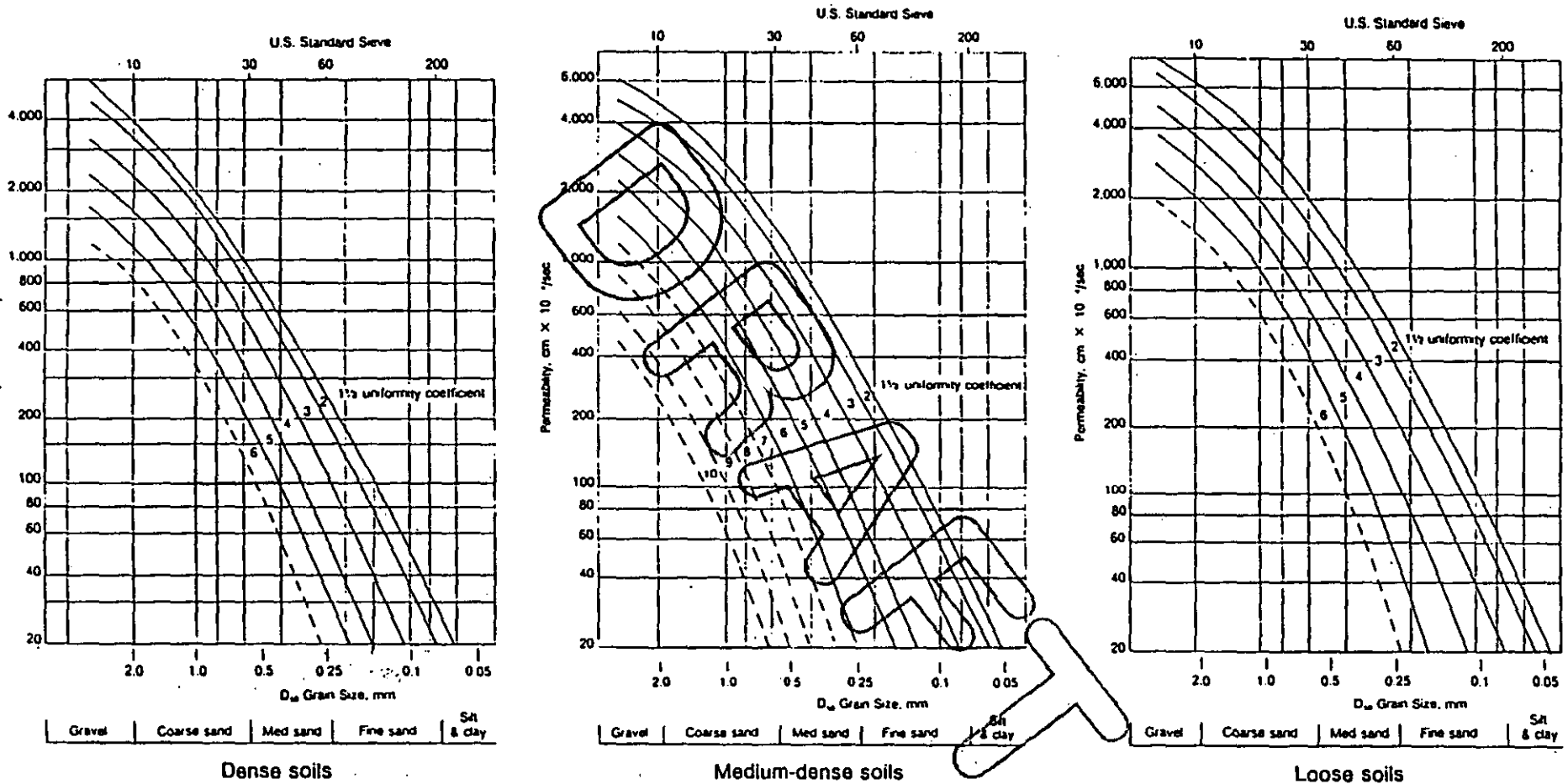


Figure 22.1. The hydraulic conductivity of materials to be dewatered can be estimated on the basis of particle size, uniformity coefficient, and density when information from pumping tests is not available. In these graphs, the D50 grain size represents the diameter of the 50-percent-

retained size. To convert permeability in $\text{cm} \times 10^{-4} / \text{sec}$ to hydraulic conductivity in gpd/ft^2 , multiply by 2.13. (Moretrench American Corporation)

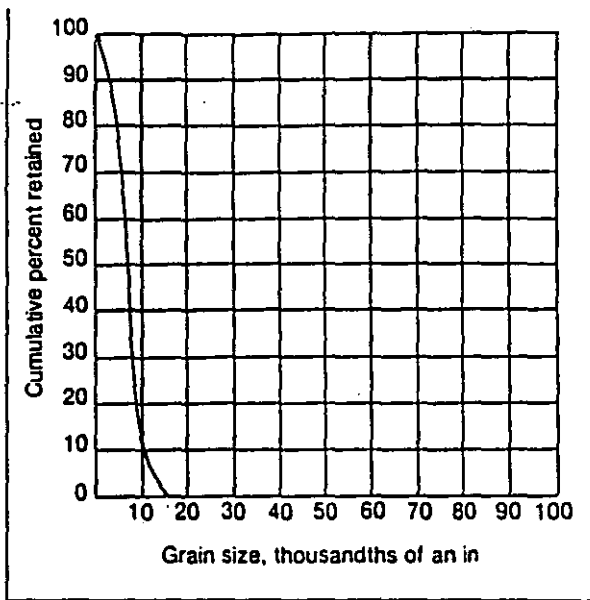


Figure 12.19. Class A curve for fine sand.

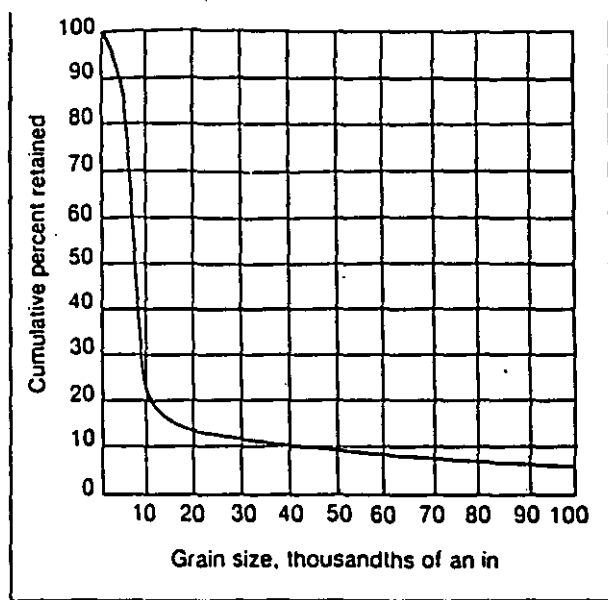


Figure 12.20. Class B curve for fine and very coarse sand.

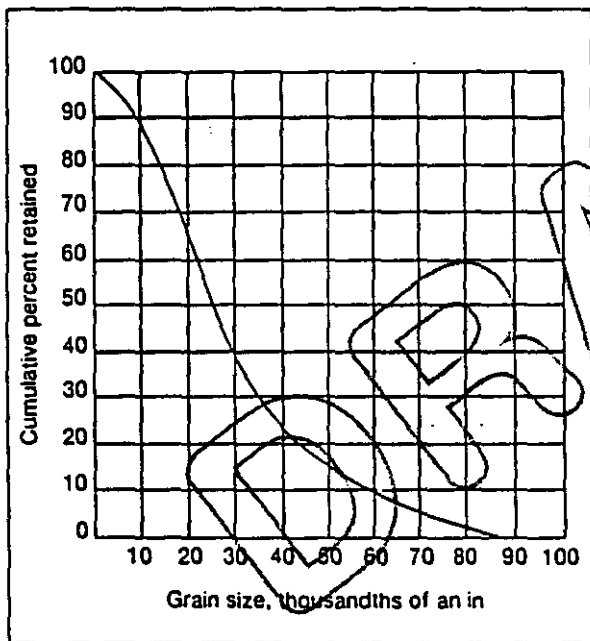


Figure 12.21. Class C curve for coarse and very coarse sand.

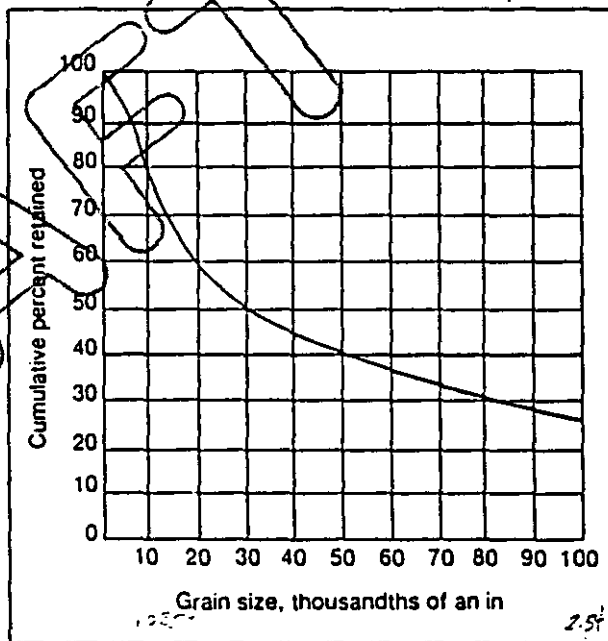


Figure 12.22. Class D curve for coarse sand and very fine gravel.

Table 22.1. Soil Density from Standard Penetration Test (ASTM D1586)*

Granular Soils	Cohesive Soils
0 - 10 Loose	0 - 4 Soft
10 - 30 Medium dense	4 - 8 Medium stiff
30 - 50 Dense	8 - 15 Stiff
Over 50 Very dense	15 - 30 Very stiff

*Blows per foot of a 140-lb hammer falling 30 inches on a standard split-spoon sampler.
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Source: Driscoll 1986.

APPENDIX O

AQUIFER CHARACTERISTICS METHODOLOGY

Aquifer characteristics have been calculated using Driscoll's (1986) grain size conversion to permeability tables. The steps performed to get these values are as follows:

- 1) The soil sample collected at depth 435 (ft. bls.) from the VT-1 boring was submitted for grain size analysis. Note the other sample (depth 420 ft bls) that was submitted for grain size analysis was not used because the graph was not finished up to 90% completion.
- 2) It was assumed that the sample collected at 435 foot depth was a dense sample because the area was overlain by a 10,000 foot sheet of ice. Density could not be determined from blow counts because mud rotary drilling was used.
- 3) To use the grain size chart, the uniformity coefficient was needed. That was calculated by $D_{60}\%(\text{passing})/D_{10}\%(\text{passing})$ [or $D_{40}\%(\text{retention})/D_{90}\%(\text{retention})$] or $0.14/0.05 = 2.8$.
- 4) The D50% reading on the grain size chart gave a value of 0.125 mm.
- 5) The permeability reading of 0.125 mm on conversion chart gives a value of 45 to 50 X 10^4 cm/sec (estimated).
- 6) Permeability was converted to hydraulic conductivity using the conversion equation (multiply by 2.13 given on Figure 22.1 attached). This yields a value of 95.8 to 106.5 gal/day/sq ft on the bottom of the conversion chart. The 10^4 and 10^4 units cancel out. To convert gal/day/sq ft to ft/day, the value was multiplied by .134. 95.8 to 106.5 gal/day/sq ft X .134 = 12.8 to 14.3 ft/day. Since these values were determined by reading charts, the calculated value would be more accurate to express as a range in values (from 10 to 15 ft/day).
- 7) Hydraulic conductivity times aquifer thickness equals transmissivity. An aquifer thickness of 60 feet was estimated from the boring log. So 10 to 15 ft/day X 60 feet = 600 to 900 ft²/day.
- 8) The storage coefficient was estimated at 10^{-3} to 10^{-5} based on typical values of confined aquifers (Driscoll 1981).

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APPENDIX O

AQUIFER CHARACTERISTIC METHODOLOGY

(May 14, 1993 rev.)

PLATES
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(May 14, 1993 rev.)

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PLATES WILL BE INCLUDED WITH FINAL REPORT

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