Appendix O Well Susceptibility Forms

This page intentionally left blank.

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

SAMMAMISH PLATEAU WATER & SEWER DISTRICT 1510 228th Avenue S.E. Issaquah, Washington 98027

WELL NO. 1

GROUND WATER CONTAMINATION

Susceptibility Assessment Survey Form

TABLE OF CONTENTS

- · Susceptibility Assessment Survey Form
- Sammamish Plateau Wells 1 WHPA Capture Zones
- Well 1R Asbuilt
- Well 1R WHPA Zones FYI
- Well Log
- Well 1 Replacement Construction and Testing Report
- Water Facilities Inventory Form
- Inorganic Chemical Analysis 1989 1993

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.1

IMPORTANT!

Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information
Well owner/manager: SALIMAMISH PLATEAU WATER & SEWER DISTRIC
Water system name: SAMMAMISH PLATEAU WATER & SEWER DISTRICT
County: KING
Water system number: 409009 Source number: 501
Well depth: 154 (ft.) (From WFI form)
Source name: WELL 1
WA well identification tag number:
weil not tagged
Number of connections: 9000 Population served: 26,000
Township: Z4 N Range: O6E
Section: 10 1/4 1/4 Section: SW/NE
Latitude/longitude (if available):/
How was lat./long. determined?
global positioning device survey topographic map
* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.
PART II: Well Construction and Source Information
) Date well originally constructed: \frac{\frac{\sqrt{8}}{5}}{2} \frac{\frac{\sqrt{9}}{\sqrt{month/day/year}}}
last reconstruction: 3/13/184/month/day/year
information unavailable

Survey Form Ver. 2.1 page 1

.5/ <u>195</u> 4	3/1984
2) Well driller: H.O. MEYER Co.	ARMSTRONG DRILL.
12t. 4, Box 17	10715 GGE AUE E
KIRKLAND, WIN.	PHYALLUP, WA.
well driller unknown	
3) Type of well:	
Drilled: rotary bored	cable (percussion) Dug
Other: spring(s) lateral co	llector (Ranney)
driven jetted	other:
Additional comments:	
	·
4) Well report available? XES (attach copy to fo	orm) NO
If no well log is available, please attach any logs, "as built" sheets, engineering reports, v	other records documenting well construction; e.g. boring
5) Average pumping rate: 500	(gallons/min)
Source of information: WATER FA	
If not documented, how was pumping rate do	
Pumping rate unknown	•
6) Is this source treated? No	
If so, what type of treatment:	
disinfection filtration carbon	filter air stripper other
Purpose of treatment (describe materials to b	be removed or controlled by treatment):
	·
7) If source is chlorinated, is a chlorine residual ma	intained:YESNO N/A
Residual level: (At the point	at closest to the source.)

Survey Form Ver. 2.1 page 2

rAKT III. Hydrogeologic Information
1) Depth to top of open interval: [check one]
< 20 ft 20-50 ft 50-100 ft \(\sqrt{100-200 ft} > 200 ft \)
information unavailable ('<' means less than; '> ' means greater than)
2) Depth to ground water (static water level):
< 20 ft 20-50 ft 50-100 ft > 100 ft
flowing well/spring (artesian)
How was water level determined?
well log other;
depth to ground water unknown
3) If source is a flowing well or spring, what is the contining pressure: $\lambda \ell/A$
psi (pounds per square inch)
feet above wellhead
4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: YES NO N/A
5) Wellhead elevation (height above mean sea level): 465 (ft)
How was elevation determined? topographic map Drilling/Well Log altimeter
other: CONSTRUCTION / TESTING REPORT
information unavailable
6) Contining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)
evidence of a confining layer in well log
no evidence of a contining layer in well log
If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the sep of the open interval? YES NO The lowest confining layer.
information unavailable

Survey Form Ver. 2.1 page 3

7) Sanitary setback:	
< 100 ft* × 100-120 ft 120-200 ft > 200 ft * if less than 100 ft describe the site conditions:	
8) Wellhead construction:	
wellhead enclosed in a weilhouse	
L' controlled access (describe): Fenced + Gated	
other uses for wellhouse (describe):	
no wellhead control	
9) Surface seal: 18 ft	
< 18 ft (no Department of Ecology approval)	('<' means less than)
< 18 ft (Approved by Ecology, include documentation)	('<' means less than)
½ > 18 ft	('> 'means greater than)
depth of seal unknown	
no surface seal	
10) Annual rainfall (inches per year):	
$_{-}$ < 10 in/yr $_{-}$ 10-25 in/yr \times > 25 in/y	ر ر

PART IV: Mapping Your Ground Water Resource
1) Annual volume of water pumped: $81,388,000$ (gallons)
How was this determined?
★ meter
estimated: pumping rate ()
pump capacity ()
other:
2) "Calculated Fixed Radius" estimate of ground water movement: (see Instruction Packet) 6 month ground water travel time: 1 year ground water travel time: 1 year ground water travel time: 1 1390 (ft) 1 11-broad WHPA Captur
6 month ground water travel time: 980 (it) per this packet
i year ground water travel time: 1390 (ft) The District The Distric
5 year ground water travel time: 3/10 (ft) Zone information This well, which is Fill awill
10 year ground water travel time: 4400 (ft) this well, which is attached. The following attached. The following auestions are answered for the capture zones identified on the WHP.
Information available on length of screened/open interval?
YES _NO identified on the WHP.
Length of screened/open interval: (tt) map.
3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary?YESNO (mark and identify on map).
4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? YES NO (mark and identify on map).
Comments:

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water) Regiona	sources	of risk	to	ground	wate
---	-----------	---------	---------	----	--------	------

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	l year	5 year	unknown
likely pesticide application				
stormwater injection wells	10	No	No	·
other injection wells * see Comments	No	No	No	
abandoned ground water well				
landfills, dumps, disposal areas				
known hazardous materials clean-up site	 			
water system(s) with known quality problems			•	
population density > 1 house/acre	no	yes	yes	·
residences commonly have septic tanks	<u>/</u>		/	
Wastewater treatment lagoons	No	No	No	. <u></u>
sites used for land application of waste	No	No	No	<u></u>

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

*Well IR	his been use	ed as an injec	thon well as	part of a	groundwater
recharge	project, w	ed as aninjeo Ph drinking	guality wat	٠ ٢	
	· ·	·			
					_
				······································	

Please indicate the occurrence of any test results since 1986 that meet (Unless listed on assessment, MCLs are listed in assistance package.)	the follo	owing conditions:
A. Nitrate: (Nitrate MCL = 10 mg/l)	<u>YES</u>	<u>NO</u>
Results greater than MCL		\
< 2 mg/liter nitrate	<u>×</u>	
2~5 mg/liter nitrate		$\overline{\lambda}$
> 5 mg/liter nitrate		$\overline{\checkmark}$
Nitrate sampling records unavailable		/
B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO.
Results greater than MCL or SAL		$\overline{\times}$
VOCs detected at least once		$\overline{\times}$
VOCs never detected	\overline{X}	
VOC sampling records unavailable		 .
C. <u>EDB/DBCP</u> :	YES	NO
(EDB MCL = 0.05 ug/l or 0.00005 mg/l . DBCP MCL = 0.2 ug/l or 0.0002 mg/l .)		
EDB/DBCP detected below MCL at least once		
EDB/DBCP detected above MCL at least once		
EDB/DBCP never detected		
EDB/DBCP tests required but not yet completed		
EDB/DBCP tests not required		
D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected		
(pesticides and other synthetic organic chemicals)		
Other SOC tests performed but none detected		
(list test methods in comments		
Other SOC tests not performed		
If any SOCs in addition to EDB/DBCP were detected, please identify and date performed, but no SOCs detected, list test methods here:		

2) Source specific water quality records:

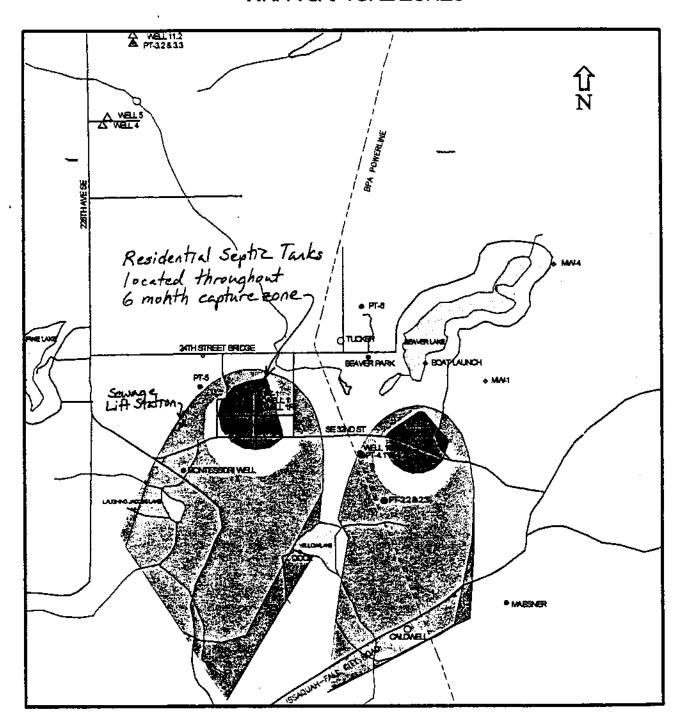
E. Bacterial contamination:	<u>YES</u>	NQ	
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	e 	\times	
Has source (in past 3 years) had a bacteriological contamination probletound in distribution samples that was attributed to the source.	em	\times	
Source sampling records for bacteria unavailable			
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution			
The following questions will help identify those ground water systems represented by the calculated fixed radius (CFR) method described in CFR areas should be used as a preliminary delineation of the critical t source. As a system develops its Wellhead Protection Plan for theses delineation method should be considered.	Part IV ime of	 For these source travel zones for the 	es, the nat
1) Is there evidence of obvious hydrologic boundaries within the 10 year time (Does the largest circle extend over a stream, river, lake, up a steep hillside, ridge?)			
YES NO			
Describe with references to map produced in Part IV: THERE ARE STREAMS FLOWING INTO AND OUT OF AND THE LAKE ITSELF IS IN THE FIVE VEAR BOUNDARD INCLUDES A PORTION OF YELLOW LAKE. THERE IS A ASSOCIATED WITH THE SOUTH WESTERN EDGE OF THE BOUNDARD ES	5/2	EP KAUINE	
2) Aquifer Material:			
A) Does the drilling log, well log or other geologic/engineering report located in an area where the underground conditions are identified as terrain?			
YES \(\sqrt{NO} \)			
B) Does the drilling log, well log or other geologic/engineering report located in an area where the underground conditions are primarily idegravel?			
YES NO			

3) Is the source located in an aquifer with a high ho flood plains of large rivers, artesian wells with high springs.)	rizontal flow rate? (These of water pressure, and/or sha	can include sources located on flow flowing wells and
\perp YES χ NO		
4) Are there other high capacity wells (agricultural,	municipal and/or industrial) located within the CFRs? N
a) Presence of ground water extraction wells	removing more than appre	oximately 500 gal/min within.
	YES N	O unknown
< 6 month travel time		<u></u>
6 month-1 year travel time	>	
1~5 year travel time		<u> </u>
5-10 year travel time		<u> </u>
b) Presence of ground water recharge wells	(dry wells) or heavy irriga	ition within
	YES N	O unknown
< 1 year travel time 🛠	_ >	<u> </u>
1-5 year travel time	Ś	<u>. </u>
5-10 year travel time	_ >	<u> </u>
Please identify or describe additional hydrologic or shape of the zone of contribution for this source. A produced in Part IV.	geographic conditions that Where possible, reference	you believe may affect the them to locations on the map
* Well IR has been used as an	injection well a	s part
of a groundwater recharge pro	reet, with donk	Uhn ·
analty water		
- Speciality Water		
	 -	·
		
	<u></u>	
		·

Suggestions and Comments

Did you attend one of the susceptibility workshops?	X YES	NO	
Did you find it useful?	\underline{X} yes	NO	
Did you seek outside assistance to complete the assessme	ent? X	YES	NO
This form and instruction packet are still in the process of questions will help us upgrade and improve this assessment confusing or problematic please let us know. How could to made clearer? Did the instruction package help you find the assessment? How much time did it take you to complete assessment without additional/outside expertise? Do you experience? Any other comments or constructive criticism	nt form. If you this susceptibili he information the form? We feel the assess	found particul ty assessment needed to com re you able to ment was valu	iar sections be improved or plete the complete the lable as a learning
Be more specific on the CFIR	w. WHI	PA trave	<u></u>
Be more specific on the CFIR to indicate that WHPA information	than can	be used, 1	£
available		- /	
•			
			· .
	,		
			

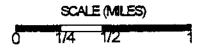
SAMMAMISH PLATEAU WELLS 1R & 2 WHPA CAPTURE ZONES

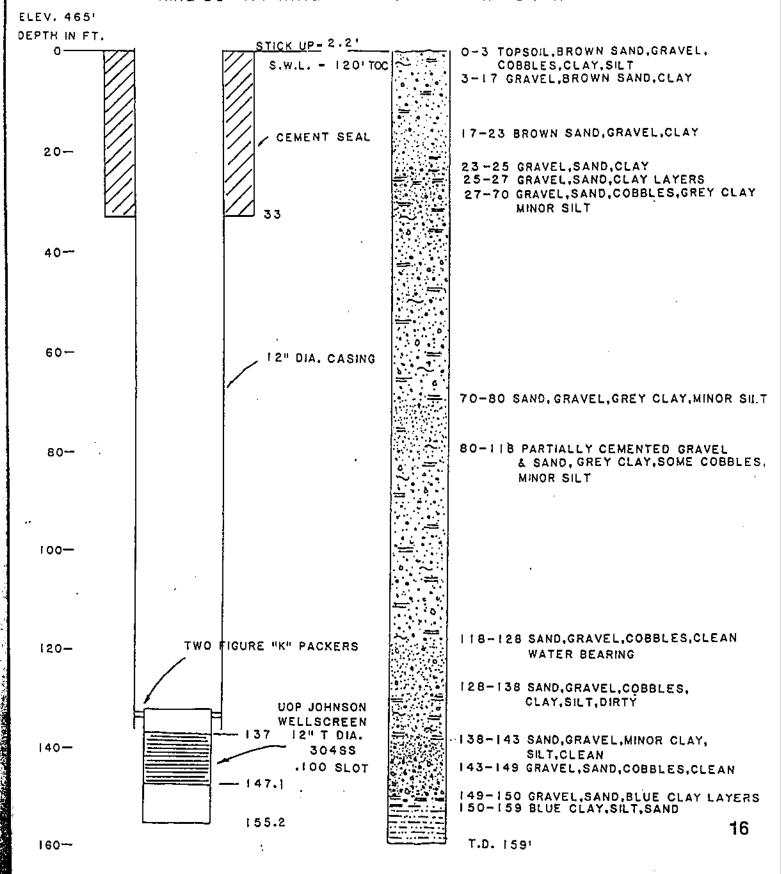


SYMBOL KEY:

- ZONE! AND SURFACE WATER MONITORING STATIONS
- ZONE III MONITORING WELL
- ZONE IIb MONITORING WELL
- △ ZONE IV MONITORING WELL

6-month capture zone	2
1-year capture zone	
5-year capture zone	
10-wear cardure zone	577

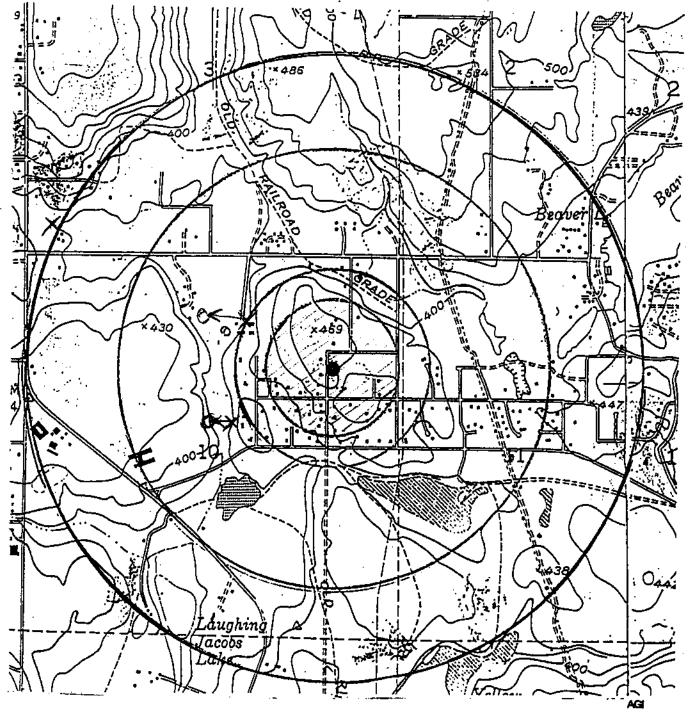




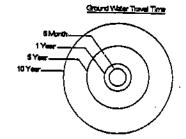
J.R.CARR/ASSOC.

Not Used - Provided FYI only. See WHPA Zones.

Sammamish Plateau Water & Sewer District Well 1R



LEGEND'



X - SEWER LIFT STATION

1/1 - SEPTIC TANKS

SCALE (FT)

0 1000 2000 3000 4000 5000

ï							,	
		24	/ GE	<u> 10 Н</u>		tor laborati Billion i i	2 1 2 2 7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	-
		35:100/1-2	ection	S S	47.61	gton	Dorn (feel)	
No.			Diagram of Section	Washingt	- A	, Washtr	THICKNESS (feel)	
WELL LOG	Date June 8 Record by Driller Source Driller's Record	CountyKing	MA SE W NE W sec 10 T 24 N, R & E. W.	Drilling Co. Ho. O. Weyer Drilling Co. Ardress Route 4, Box 17, Kirkland, Washington	Nethod of Drilling Date Work 19.24	Address, 603 Jones, Bldg., Seattle, 1, Washingtond surface, datum	MATCHAL	
IVELLI	Date Record Source	Locatio Co	rest Services	Drillin An	N. Owner	7 V	348	

8 8 8

20 N

Coarse sand & med. gravel

Dry gravel & sand

Depth format

(feel)	parenthete initia in ter iphie columi
(leat) (feet)	necrsury, in orted, Give d with stratigua s, servens, etc
MATERIAL	(Transcribe driller's terminology literally but paraphrase as necessary, in parenthese it materials water-bearing, an state and record static level if reported. Give depths in fer it mater-bearing, an state subserving indicated. Carrelate with atraferable column records approaches acrees, etc.)
Coart	(Tra

Chaisie. Following for or interiors.
Community domestic supply
Gravel & sand, some sed, mater
Hardpan & coarse gravel
Hardpan 50% solids
Hardran with course gravel and
boulders
Yollor clay and sand
Hardpan and om. gravel
sand with some sed.
some water
sand very little
Sediment
a gravel & gand, hardpan

מאמו שם מחוד מי הייה סב דמייי		
Coarse sand & coarse gravel	2	102
Very coarse gravel, up to 6 and		
	2	104
Some sed in coarse gravel		
re	7	=
Loose coarse gravel & sand	9	117
f water 1171	-	
Loose sand & med. coarse gr.	3	120
arse sand & water	10	ر 23
1 .1.7		
{	9	136
Test bailed at 50 gram at 1361		
ie gravel & Sa		
	1	밁
Very coarse gravel, med, sand	2	2712
Med. grade sand & gravel	5	747
layer hardpar		
and gravel	m	250
Flue clay and silt	-7	캢
2" from C		
Screened from 138 to 150;		
ıću		
gom with 81 DD aft.		hours
0 <u>0</u>	ter 12	hours
650 gpm with 16° BD after	밁	hours
Anenst 5 % 6, 195h		
:	•	

 \mathcal{L}^{α}

阿勒斯斯斯里

KING COUNTY WATER DISTRICT #82 WELL #1 - REPLACEMENT CONSTRUCTION AND TESTING

June 1, 1984

SUMMARY

- The decision to replace Well I was based on inefficiency which when coupled with a declining water level during summer months reduced its yield to about 200 gpm.
- Well 1 Replacement (I-R) is capable of sustaining a safe yield of 425 gpm with a specific capacity Q/S = 50 gpm/ft drawdown.
- Water quality from Well 1-R is excellent.
- Well 1-R has a 50% greater specific capacity than Well 1.

I CONSTRUCTION AND TESTING

Well I-R is located approximately 15 ft. southeast of Well 1 in the SEI/4 of the NEI/4 of Section 10 T24N R5E.

The contract for drilling was awarded to the low bidder, Armstrong Drilling of Puyallup, Washington. All drilling, construction and testing was done with a 72 Speed Star cable tool drill rig. Drilling for Well 1-R began February 23, 1984 and continued to a depth of 159 ft. with 12-inch diameter casing. See Figure 1 for geologic log.

The aquifer, penetrated from 118-149 ft. consists of sand, gravel, and cobbles with minor amounts of clay and silt from 128-138 ft. After sieve analysis of the aquifer samples, screen design was prepared and on March 8 the screen assembly was lowered into the well. Design of the screen assembly is shown in Figure 1. The 12-inch casing was extracted to 137 ft. to expose the screen. After pulling the casing the top of the packer assembly was measured at a depth of 132.1 ft. below ground surface, placing the screened interval at 137-147.1 ft. below ground surface.

A cement surface seal was placed into the annulus between the 16-inch diameter surface casing and the 12-inch diameter pipe, providing a 4 inch annular seal from ground surface to a depth of 33 ft. Initial static water level was 117.8 ft. below ground surface.

Development, using a surge block and bailer, initially produced several feet of sand in the bottom of the well, which after 8 hours development was reduced to a virtually sand-free condition. After development the static water level was 117.8 ft. below ground surface. On Harch 13, 1984, a 5-inch diameter line-shaft turbine test pump was installed with the intake at 136 ft. Discharge was to the east into a swampy lowland area. Preliminary

testing resulted in the flow rates and corresponding capacities shown below:

Q = 3	00	gpm	Q/S	=	71	gpm/ft-drawdown
Q = 4	00	gpm	Q/S	=	67	gpm/ft-drawdown
Q = 5	00	gpm	Q/S	=	59	gpm/ft-drawdown
Q = 5	00	gpm	Q/S	=	53	gpm/ft-drawdown
Q = 7	47	gpısı	Q/S	=	47	gpm/ft-drawdown

These values are approximate as stabilization of the water level was not achieved for each pumping rate. Initial backwashing produced approximately 10 grains/liter of sand.

On March 14, a 6 hour test was run at a flow rate of $Q=610~\rm gpm$. The original Well 1, 16 ft. to the northwest, was used as an observation well during testing. Results of the 6-hour test are shown in Figures 2 and 3. After 6 hours the drawdown in the pumping well was 12.2 ft. for a specific capacity $Q/S=50~\rm gpm/ft-drawdown$. Drawdown is plotted for the pumping and observation wells in Figure 2. As indicated, aquifer transmissivities of $T=375,000~\rm gpd/ft$. and $T=460,000~\rm gpd/ft$. were calculated for the pumping and observation wells respectively. Recovery is plotted for the observation well in Figure 3. This data indicates an aquifer transmissivity of $T=413,000~\rm gpd/ft$. Using this value a storage coefficient of $S=0.0003~\rm was$ calculated indicating confined aquifer conditions.

II WATER QUALITY

Water quality data for Well I-R is presented on page 10. Results of the analysis by W.M.A. Laboratory meet all D.S.H.S. standards. As reported, the nitrate concentration N=1.6~mg/L is higher than previously reported values for Well I of 0.79 mg/L (7/25/83) and 0.3 mg/L (8/3/76). A water sample should be analyzed for nitrate in early August 1984 to determine if the nitrate concentration is seasonally variable. Quarterly analysis for nitrate of the water should be done to evaluate the water quality trend.

III SAFE YIELD

SAFE YIELD = SAFE DRAWDOWN x SPECIFIC CAPACITY

Maximum drawdown level 137 ft. (Top of Screen)

Static water level 118 ft. (Ground surface 3/14/84)

Total Available Drawdown 19 ft.

Less Allowances For:

Seasonal fluctuations <u>6</u> ft. (Estimated from Figure 4)
Total 6 ft.

Useable Drawdown = 19 - 6 = 13 ft.

Available Yield = Useable Drawdown x Specific Capacity

= 13 ft. x 50 gpm/ft-drawdown

= 650 gpm

A safety factor of 50% or more is desirable as it allows for unforeseen or unpredictable fluctuations in the water table and promotes longer well life.

Using a Safe Drawdown = 8.5 ft., gives a Safety Factor =

useable drawdown - safe drawdown
safe drawdown

= <u>13 ft. - 8.5 ft.</u> 8.5 ft.

= 53%

SAFE YIELD = SAFE DRAWDOWN x SPECIFIC CAPACITY

SAFE YIELD = 8.5 ft. x 50 gpm/ft-drawdown

= 425 gpm

IV RECOMMENDATIONS

- Well I-R should be pumped at a maximum rate of 425 gpm, with the pump bowls at 137 ft. below ground surface, and 8-inch suction pipe to a depth of 151 ft.
- Water levels and corresponding production rates should be monitored closely with special attention in July and August as higher production rates lower the water level.
- Annual withdrawal from this aquifer should be reduced, with planned reductions during late summer and fall.
- Water quality should be monitored quarterly to establish seasonal fluctuations of nitrate and other indicators of potential contamination.

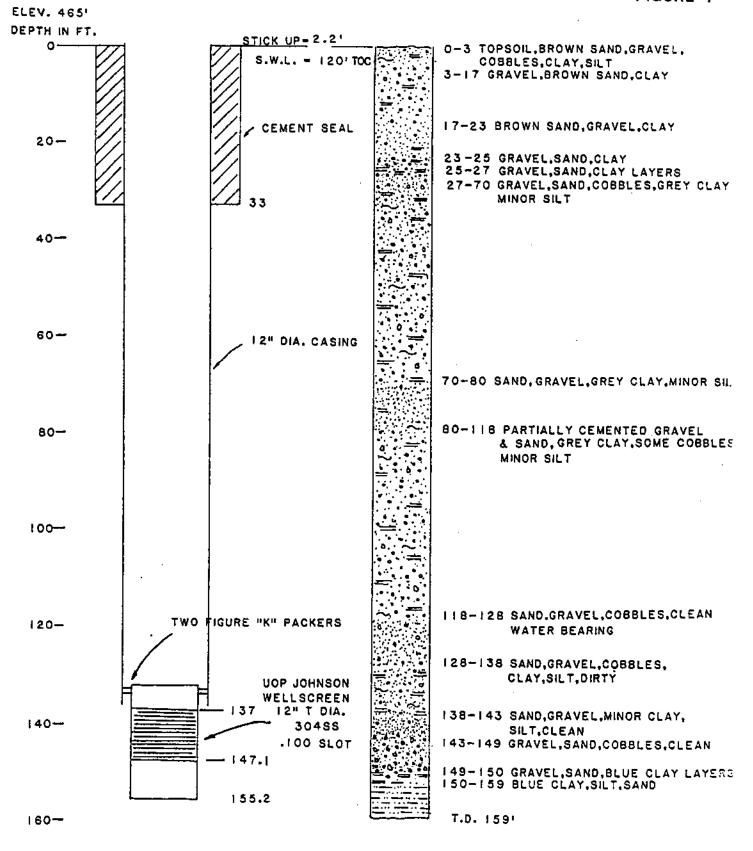
Prepared by:

J.R. CARR/ASSOCIATES

T. L. Mogg

J. R. Carr

TLM/JRC/vg



J.R.CARR/ASSOC.

	PTH T	U W	אוב	н)				.				1			· · ·				1	:		
	1	T	: :		1				-		: -	·	.			-/ :			+	_	; 	+
-	1 1 2 2	111			1										1-1	7-	1	:	:			Ť
		:	: 3			:	<u> </u>			<u> </u>	<u> </u>			:	: /	<i>T</i>			T			1
	1 ::.	1	_			-	<u>.</u> –		- -		 -		<u>· · · · · · · · · · · · · · · · · · · </u>			!			 		<u></u>	<u>+</u> -
<u>.</u>			1 1	1	╁╌		!	···			i -		 -		-1		<u> </u>		<u> </u>			1
<u> </u>			ļ	<i>1</i> :			į	~	<u>.</u>	<u> </u>							:					1
Z	 -		i la	-	†-	—–	÷			_}}	- P	<u> </u>			1	; ;			 -		 -	- -
	}	1	000)	-					Ç	-		• •	9	5				╁	- -	 - ·	-i
	2		0	•	1				uid:	_ 				· 🖭		-		: :	1		<u> </u>	-
4 X 2 X 3 X 3 X 3 X 3 X 3 X 3 X 3 X 3 X 3		-:				 -	1	: .;**	 : :			 		ල ල		 /FT						<u> </u>
T			8			:		٠.		3	3 W	· !	(วั	:	GPD.			-			
	3	- :_:	တ် ၁	- 00	-	-:	 		ļ			∹		0			l	- :	i	-	 	
·	03		3	2	3		!		. :	α		; i	Ï	, ව		. 0	. :		.]	į
<u> </u>	<u> </u>	- 6			-		ļ		 	 ∔		¦	- 6 -	_	~	ŏ			-			Ι-
		I		480			:		' :	_	i i			.	0.43	376.000			; ;			
			F	7	H		i			EL	i ,		₽		0	0	i					
3		-0	- 0	<u> </u>	-			 :-	<u> </u>	- 3		<u> </u>	-		03			1 1	 '	<u> </u>	<u> </u>	 ;
		0	7									-9		.	ব	· ·	1				 	1
		<u> </u>		: :		• •	1 :	:		; :	-			-	1 1						1 1 1	Ì
		9	. 1	:		. :	: :	1 1		: :	; ;	1	1	: [:				1:			
		Ði		7 : :		:		1.	1	;;	:	0	: :::		: :	: :		: ;		::		1
					 -	. : -	<u> </u>	•		:::						1 :	•	-:	:	. ;		H
	0	===		117	Ţ.,				L		- ⊚	3						: :	l · '	. :	::::	:
	0	11 i	i .	: !							പ്	: :			:				-	:		١ :
							1				7				::		. :	:]		1 1 1 1	
				= ; ;	1 : 1	: ::	· ·	:	177	-⊙		F	1.12	;	-1.1				1	. :		1 :
		- - - -	<u> - - </u>			1.1	-	· · ·	1	0	-								-	-: :	1.1 * *	
<u> </u>	-K-				ļ.:. ,	1	<u>[· ·</u>	: <u>-</u>		2	;				:·:	:		:				
	စ် 🕂			114		• :			0		::	: : [-	: ;	. HT	
	b∓		FH	<u> </u>	<u> </u>			٠.	0			<u> </u>			C4					. :		:
	Θ +		Ī		-1-1		i ;	!			1		•	1	4 85				: -		 - -	-
	o $\bar{+}$					ļ.i			0			:	1	1	-					: 1		
1 1		+++		<u> </u>		11	;		P.	<u> </u>		<u> </u>	<u>, </u>	į	WATER DISTRICT				-!	<u> </u>		+
				11		<u>; : </u>	1 :	0		-					H				:=1	: :	1111	
	O			111	<u> </u>	1	+	<u>; </u>		: :	:-			ġ	20		Ŧ				1 191 6	
				2 1		: -	<u> </u>	0		: 1	-	-+	: : [(_ <u> </u>	=	WDOWN/TIME GRAPH		-	: :		F -
-	O -	== :r	tu katr Galeni	1 1 1	 	1.	1				.:	-	<u> </u>		H I	1 4 5	9			1 15	7.1.1	-
	7	===		: :	1		6	4		i		•	• [1]	į	¥	I HEFLACEMENT TEST 3/14/84	ш		<u> </u>	:		- <u></u> -
=		35 5			1: :				:	: [,	\cdot \top		:	≥ 0	<u> </u>	Ξ		;- 1			
<i>1</i> •	201 - 121 24 - 121 - 121	=======	· =-1 ·				1 : :									7 %	5	~				
	1 1 1 1 1 1		101 T.			1 ,	· ·	3 7	 	:			-,	!	2 5	ָּהָ <u>הַ</u>	Z	GPM		· .		
				- : :	 	<u> </u>	<u> </u>		 -	;		ļ		;	3 6	TEST	, ō	<u> </u>		• !		[-
=====				t si					, .				_ :	ò	_		2 €	10	_ :			
		T		1 1 1] :				:					9	2 :	- -	≤	Φ.		; ;	: ::-	
		1 ,		<u> </u>					· -	<u> </u>	•	+				WELL	DRA	å		. :		Ĺ
			- - -	;··· †									- •	•	<u>-</u> -	م ا ·		. ;	:			
			17.		-			·	· ·	; 	· 	— ¦-	· —	<u>:</u>	<u>-</u> :			· <u>· </u>	 	• •		
-			H			: :						`	• • •	.		j			['			:
		•	11.		i			- 1								!						

CAST A STATE OF THE STATE OF TH	CAST DISP CAST DISP	
		1111111111111
оджен се какан бұрында ж арда ұрда борын орын орын берізік берізік берізік берізік берізік орын Торын берізік берізік		¥

JAN, FEB. MAR APR, MAY JUN, JUL, AUG SEPT (X)1, NOV DEC. NOV DEC. JAN, FEB MAR, APR, MAY JUN JUL, AUG SEPT OCT FIGURE -198 STATIC WATER-LEVEL WELL Z JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEPT. OCT. NOV. DEG. JAN, FEB. MAR. APR. MAY JUN. JUL. AUG. SEPT. OCT. NOV. DEC. PRODUCTION STATIC WATER LEVEL FLUGTUATION WELLS 1.2 1003 ... BO YR, AYNG KING COUNTY WATER DISTRICT DIATIG WATER LEVEL TEATAC FEBRUTHENDY MAR. APR. MAY JUN. JUL. AUG. SEPT. OCY. NOV. DEC. JAN, FEB. MAR. APR. MAY JUN, JUL, AUG, BEPT. OCT, HOV, DEC. 1062 ~ JAN. FEB. PRODUCTION 0 H - F I ∃**≘** 30 1.12 340 AM. 117 WATER BTATIC LEVEL fī.

J.R. CARR/ASSOC.

LABORATORY NAME

ase Print Plainly
E HEAVY PENCIL
LU NOT WRITE IN SHADED AREAS

WMA Lab - Tacoma

1	SEE BAC	K 🛕
7	FOR INSTRUC	TIONS \P

WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSES

2 - 12 1840			0. E 1.000 1.00 920 1.00 1.00 1.00	Serial .					THE MINALINES	
YDS		. 00. 2/4.7	CITY DATE RECEIVED. 24	DATE COLL		_ //	COLLECTED 8Y		oug Toul 51-5562	
			ious out of compliance sam	•		No. 🗆				
			ory number of the previous	sample? -						
1 TEM 1.0. NO	· s	YSTEM	NAME: CWD 82				SYSTEM C	one)	King	
SAMPLE LOCATI					····-		(1)2 3	1 4	17.119	
			REATMENT	AFTER	IF TA	KEN AFT	ER TREATMENT PRINATEDW	T WAS IT _ ATER SOF	FILTEREDFLUORIDATED TENER: TYPE USED	
SOURCE		·/	SOURCE NO. IF SO	URCE IS LAKE	OR STRE	AM, ENT	ER NAME	IF SAMPLE	WAS DRAWN FROM DISTRIBUTION S	YSTEM
7	. SURFACE . SPRING		WELL PURCHASE — —					IT WAS CO	LLECTED FROM SYSTEM AT: (ADORES	SS)
			CONTRACTOR TO STATE OF THE STAT		SEA		RT TO: (PRINT F	<i>,</i> .	•	
			10 10 12 15 15 15 15 15 15 15 15 15 15 15 15 15			() (+	2. Carr/	A-SSOC	: (26 S	
REMARKS:	. 1	1- F	2			P.1	o. Box	<u> 1/58</u>		
_1N=		/ - /			6.	a H	2 box	Street , WA,	98335	
<u> 133</u>	, —				Tele	' CITY مُر) phone: {	106, 85	5/ - 4	ZIP COOE 5562	
6 hr	tes+	at	- 600 GPM			An	**			
	<u> </u>		L/	BORATOR	Y REP	ORT	K28		•	
			(00	NOT WRITE BE	LOW THI	S LINE)				
⊭STS	I •MCL	Less Than	AESULTS		Comp	esnaile ON	Chemist	ı	Laboratory Number (if different than above)	
Arsenic A		 	A 0 0 7	 	1	1.00	Initials		(11 Guistelli filali 80046)	
ium 84	9.00	 	0000	mg/l			JTV			*****
Cadmium cd	p		O O O I	mg/t mg/l	-		JTV			
Comlum Cr	0.05		0.001	mg/I	-		JTV			
Iron #e	0.3		00.03	mg/l	1		JTV			
i d Pb	0.05 P		0.001	mg/l	1		17			 _
Manganese Mn	0.05		0.012	mg/l	1-		JTV			_
cury Hg	0.002 P		<u>.0005</u>	mg/l	-		DLA			
5. anium se	0.01 P		0.001	mg/l)TV			
CH-187 Ag	0.05	==	0.001	mg/1	<u>-</u>) TV			
ium Na			<u> </u>	mg/l	<u></u>) TV			
Hardness			<u> </u>	mg/I As CaCO3 Micromhos/cm	<u> </u>		DLA	<u> </u>		
ductivity	700 P	_	0778	25° C	-		DLA			
Turbidity	1.0		000.5	NTU			DLA	<u>'</u>		
Fluoride F	15.0 2.0		<u> </u>	Units	-		DLA			
and saw	10.0		00/	mg/l	-		DLA			
Cinoride a	250		000/	mg/l	<u> </u>		DLA			<u> </u>
ate 504	250		<u> </u>	mg/l	+ -		DLA		PAGE 10	
			·							



WATER FACILITIES INVENTORY (WFI)

DATE RECEN	POIZ12/94 POATED 1994
Ans'd	
DATE MPRATE	9: 61/11/94

Environmental Health

Read Instructions on back before completing

1. SYSTEM ID N	O. 2. COUNTY	•	GROUP	TYPE	WRIA	WEI COMPLETED BY	,	TI	TLE
3. SYSTEM NAM				СОММ	9	DAY TELEPHONE	·	DATÉ	
			.			OK! IEEE/RONE		oa.e	
STREET ADDRE	ITSH PLATEAU WA SS	11=4 - 5		454		8. SUBMITTED	NEW SYSTEM	NO CHANGE	REACTIVATE
1510.2	28TH AVE SE.		•			FOR	SYSTEM NAME CHANGE	UPDATE	DELETE
P.O. BOX (IF API						1 1	E - ENTER ONLY IF CHANGING V		
	一切称为 11 子 11 11 11 11 11	3 ·	"	2.00		40 1 1 1 1 1			
CITY			STATE	ZIP CODE			G ANY RESIDENTS (PEOPLE D BY THE SYSTEM), COMPLET		
ISSAGU		H	Δ.	9302					MTIA
•	ME (LAST, FIRST)			OWNER NO		CONNECTION	and the second second second	POPULATION	
STREET ADORE	ISH PLATEAU W	RIPR E		1 300			UW CARRANA (
	28TH AVE. S.F.	Alago grafico d'anti- action d'Alagon			- ' · ·	77-352	3844	23.04	
P.O. BOX (IF API	PLICABLE		19 T	er e	Dr. ju		G ANY NON-RESIDENTS (I		
	Manufacture of the first of	er de la	-	1 1.61			DENTS, ETC.), COMPLETE THIS	n	
CITY SALE				رأ تحاصفا أبليها أ		11. NUMBER NON-R	ESIDENTIAL CONNECTIONS		
I SSAGU	AH NTACT PERSON	L L	<u> </u>	9302	7			Action to the second	anger i Terri Tradi
	E. LITTLE -)		्य १०० ।				E DAILY NON-RESIDENTIAL POP ACH MONTH; MAKE ENTRY FOR		The state of the s
		EVENING TEL			o yeşên	(486) (3.7 (65.0 9.7)	40	- Company	
	2-6255				A Marian Arab	Print of the second	MAY COME TO THE FACE OF		n grayer and grayer an
6. OWNERSH (CHECK O	iP .	PREDOMI (CHECK C		HARACTERIS	TIC	MAR. TO SO THE STATE OF		这种的过去时	100 C 100 M
- W-4	·····································	1	ون آرديو (الم		- Comme	13, DOES THE SYST	TEM SERVE AT LEAST 25 OF THE DAYS PER WEEK FOR AT LEAS	TT 180 DAYS PER YEAR?	
_ 	NON-PROFIT	RESIDE	9.5-4.7				VES NO		
	FOR PROFIT	BUSINE	SS/INDL	STRIAL/	7 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -				Services
COOKIL)	r/cmy/PUD/			/COMMERCIA: D SERVICE			15.	DISTRIBUTION RESERVO	OFF(S)
STATE	ASTRICT).	10000	L/DAY	7.0		CONNECTIONS	METERED 15	TOTAL CAPACITY	
FEDERAL				HES, ETC.)	e de la companya de La companya de la co	8,84	4	12,850,0	OO GALLONS
- n'i	THE PARTY OF		and the same		y 37 m			and the state of	
		و اسست						, , , , , , , , , , , , , , , , , , ,	
SOURCE	. SOURCE NAME		8. SOUF	GORY	9. USE 2		VELL 23. SOURCE 24. SEPTH CAPACITY	SOURCE LOCATION	
	IST UTILITY'S NAME FOR SOURCE		38 . .	្រុំ	3 4		A PARTY OF	** N. S.	A Property of State of the Sta
	IP SOURCE IS: PURCHASED OR INTERTIED, LIST SELLER'S ID#			EATE BY	1 1	₩ [and the first that the second of the second		
	AND NAME USING FOLLOWING- FORMAT: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		- 전설 : * - 목표 : **		5 . 5			4 1/4 SEC. TH	
	EXAMPLE 77050Y/SEATTLE		_ <u>2</u>	HEY!	SON		(4) (2) (2) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4		A 45
		Kiri		3252	SEASO	NOW CHOP			SWT
1. 12	ELL I	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						/NE 10 24	
, - r	عا بيت وعام يعاملنان تسمستك فتمسا كالكا ا	TERET X		11114	*		1 1	4 1	N 06E
	ELL # 5				1 I I	11111		/SW 34 25	
4 * -	(ELL)。 は、4 の (デット)。) (行した - 6	Santan (N						/NH 34 25: /38 32 25	
1	IFLE 6 IELL #7	x					- 1	/SE 21 24	1 - 1 1
	IFLL #9	l x			·[]			/SE 21 24	
		l l		$\prod \prod$					
			MINIMU			OLOGICAL SAMPLING	,	o lore lore l	NOW ARA
. 25. 				28. JAN	FEB	1 1	MAY JUN JUL AU		NOV DEC
NO ADDROVED	SECURCES (DESI DI ANIO)			136	30	30 30 30		0 30 30 BY DOH	33 36 UHD
) SERVICES (PER PLANS) TICAL WATER SUPPLY SERVICE AF	<u>^)</u>	res	NO	GW MG	MT AREA? YES	700	81 004	
	TE RETRO. CHANGES			I REVIEWER			1 USE ONLY	DATE	<u> </u>

SAFFARISH FLATEAU WATER & SERER DISTRICT

FATER SAFFLE INFORMATION FOR INORGANIC CHEMICAL AMALYSES - 1989

				•				
¥31-	KELL † 8/4/89	FELL 2 4/10/69	YELL 4 4/10/69	WELL 5 4/10/89	FELL 6 7/17/89	KE1L 7 7/17/69	FELL 8 4/10/69	. NCL
H &	7.06	7.23	B.22	B,32	7.46	7.48	17.05	
Arsenic	*0.010	.0.010	*0.010	40.010	•0.010	*0,010	40.010	0.05
Eerlum	*0.25	*0,25	+0,23	• 0 . 25	+0,25	.0.25	*0.25	0.1
Cecmfum	0.003	200.0	*0.002	*0.002	40.002	,0,002	*0.602	10.0
Chromlum	*0.010	*0.010	*0.010	.0.010	•0.010	•0.010	*D.010	0.005
fren	•0.05	*0.05	•0.05	+0.05	*0.05	0.05	\$0.05	0.3
Lead	•0.010	• D. C10	*0.010	*0.010	*0.010	*0.010	10.010	0.05
Pergeosse	*0.010	.0.010	0.041	0.042	0.026	0.010	• 0.010	0.05
Fercury	.0.0010	*0.0010	*0.6010	.0.0010	*0.0010	*0.0010	.0.0010	0,062
Stlenium	*0.005	\$00.00	*0.005	*0.005	•0.005	•0.005	• 0.005	0.01
S: <e.< td=""><td>*0.010</td><td>*0.010</td><td>*0.010</td><td>*0.010</td><td>*0.010</td><td>*0.010</td><td>0.010</td><td></td></e.<>	*0.010	*0.010	*0.010	*0.010	*0.010	*0.010	0.010	
Sodium	• ≎	• 10	*10	•10	• 10	4.10		3
Kerchess	60	87	63	£1	æ 7	74	·	
Conductivity	155	220	160	150	120	200	200	900
Turbld14y	•0.1	** O *	*0.2	*0.1	+0.1	. 0.2	*0.1	
Color	*5.0	+5.0	15.0	45.0	•5.0	15.0	.5.0	
Fluoride	, D.2	*0.2	*0.2	.0.2	*0.2	*0.2	*0.2	
Midrete	1.1	1.0.	•0.2	*0.2	. 0.2	9.	* 0 *	
Chloride	•10	* 10	• 10	•10	•10	110	*10	250
Sulfete								250

*PCL is the Fexinum Conteminent Level Allowed

*Less Then

(Notes theil 7 was rested for Iron & Turbidity and those nurhers are listed that

WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1990

						,		
ITEM	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WELL 9	** MCL
	9/1/90	4/10/89	9/1/90	06/1/6	9/1/90	06/1/6	06/1/6	•
рн	6.74	7.23	7.26	7.74	7.88	7.29	7.12	
Arsenic	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Barium	<0.25.	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	1.00
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
Chromium	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Iron	<0.05	<0.05	<0.05	<0.05	50.0>	<0.05	<0.05	0.3
Lead	<0.005	<0.0100	<0.005	<0.00	<0.005	<0.005	<0.005	0.05
Kanganese	<0.010	<0.0100	<0.039	<0.037	<0.028	<0.010	<0.010	0.05
Mercury	<0.0010	<0.0010	<0.00.0>	<0.0010	<0.0010	<0.0010	<0.0010	0.002
Selenium	<0.05	<0.005	<0.00>	<0.005	<0.005	<0.005	<0.005	0.01
Silver	<0.010	<0.0100	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Sodium	<10	<10	<10	<10	<10	<10	<11	
Hardness	79	87	58	58	51	72	72	
Conductivity	85	220	150	154	125	189	188	700
Turbidity	<0.2	<0.4000	<0.1	<0.1	<0.2	<0.1	6.0>	1.0
Color	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0	<10.	15
Fluoride	<0.2	<0.2000	<0.2	<0.2	<0.2	<0.2	<0.2	2.0
Nitrate	<1.3	<0.7000	<0.2	<0.2	<0.2	<0.2	<1.3	10.0
Chloride	<10	<10	<10	<10	<10	<10	<10	250

PARTS PER MILLION

- < Less than Detectable Limits
- ** Maximum Contaminant Level

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1991

ITEM	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WELL 8	** MCL
	7/12/91	7/12/91	7/12/91	7/12/91	7/12/91	7/12/91	7/12/91	
pH	9.9	6.4	7.3	6.7	6.7	7.1	8.9	
Arsenic	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Barıum	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	1.00
Cadalua	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
Chromium	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
tron	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.3
Lead	.<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.05
Manganese	<0.010	<0.010	<0.018	<0.026	<0.023	<0.010	<0.010	0.05
Mercury	<0.0010	<0.010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0000
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.00	0 01
Silver	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	70.0
Sodium	7.	6.	9.	8	5	10	12	2
Hardness	61	99	52	51	43	61	7.5	
Conductivity	180	270	120	130	120	190	210	700
Turbidity	0.2	9.0	.4	<0.3	٤.	4.	0.3	1.0
Color	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.	15
Fluoride	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.7	21
Nitrate	1.2	<1.9	1.8	<0.2	<0.2	<0.2	1.3	
Chloride	<10	<10	<10	<10.	21	24	<10	

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS — 1992

					į			
ITEM	WELL 1	WELL 2	WELL 4	WELL S	WELL 6	WELL 7	WELL 8	** MCL
	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	7/12/91	• ••
рЯ	. 7.0	7.3	7.93	8.4	8.4	7.7	8 9	
Arsenic	<0.010	<0.01	<0.01	<0.01	<0.01	<0.01	010	90
Barium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.25	1 00
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
Chromium	<0.05	<0.05	<0.05	<0.0>	<0.05	<0.05	<0.010	0.05
Iron	<0.05	<0.05	<0.05	<0.05	0.37	<0.05	<0.05	0.3
LORG	<0.002	<0.002	<0.0025	<0.002	<0.002	<0.002	<0.005	0.05
Hanganese	<0.01	<0.01	0.043	<0.041	0.038	<0.01	<0.010	0.05
Hercury	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0010	0.00
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	0.05
Sodium	9.5	6.1	8.7	8.4	4.8	10	1,	200
Hardness	85.	75	62	62	56	79	75	
Conductivity	180.	150	140	140	120	170	210	200
Turbidity	0.46	0.42	.33	0.32	.90	.32	0.3	1.0
Color	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.	15
Fluoride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	20.3	-
Witzate	1.0	<1.8	<1.0	<1.0	<1.0	0 12	1 1	10
Chloride	<20.	<20	<20	<20	<20	<20	1.10	030
Sulfate	10.	<10.	<10.	<10	<10	11	21.	000
Copper	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		200
Tinc	<0.05	<0.05	<0.05	<0.05	<0.05	20.05		2
Aluminum	<5.0	<5.0	<5.0	<5.0	<5.0	<5.03		3.0
Calcium	19.	18.	18	18	16	20-		

SAMMANISHIPLATEAU WATERANDISENENERDISTHICT Merisample informationiforinorisanic cheminal analysish 1983

ITEM CONTRACTOR WELL	WELL'S	WELL 2 WELL 4	WELL	WELL 5	WELL 6	WELL 7	WELL 8	WELL 9	MCL
and the statement of	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	
Arsenic	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05
Barium	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-
Cadmium	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.01
Chromiuth	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Copper	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.3
lion () () () ()	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.17	0.3
Lead 💮 🛴	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.05
Manganese	< 0.01	< 0.01	< 0.043	< 0.041	< 0.092	< 0.01	< 0.01	< 0.01	0.05
Mercury 🚞 🚋 < 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.005
Selenium 💸 💸 🕟 🔹 0.00	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01
Silver	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05
Sodium 👾 🐪 🛴 🛴	9.1	9.3	9.0	7.7	8.4	9.5	10.	8.5	
Zinc 🗽 💮 🛴 < 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	5
Hardness 💨 💮	78.	80	65	65	66	79	75	89	
Conductivity	190	150	160	150	210	190	190	160	700
Turbidity 💮 💮	0.10	0.49	0.17	0.15	0.1	0.1	0.14	0.43	1
Color	ç.	5.	5.	5.	5.	5.	5.	5.	15
Chloride	< 20	× 20	< 20	< 20	< 20	< 20	< 20	< 20	250
Fluoride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	9 0.5	. 2
Nitrale 💮 🐣	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.1	< 1.0	10
Sullate :	< 10	< 10	< 10	< 13	< 10	< 10	< 10	< 10	250

LEGEND

Less Than Delectable Limits
 Maximum Contaminant Level

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

SAMMAMISH PLATEAU WATER & SEWER DISTRICT 1510 228th Avenue S.E. Issaquah, Washington 98027

WELL NO. 2

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

TABLE OF CONTENTS

- Susceptibility Assessment Survey Form
- Well 2 Asbuilt
- Sammamish Plateau Well 2 WHPA Capture Zones
- Well 2 WHPA Zones FYI
- Well Log
- Water Facilities Inventory Form
- Inorganic Chemical Analysis 1989 1993

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.1

IMPORTANT!

Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

FART I: System Information
Well owner/manager: SAMMAMISH PLATEAU WATER & SEWER DIST
Water system name: SAMMAMISH PLATEAU WATER & SEWER DIST
County: KING
Water system number: 409009 Source number: 50Z
Well depth: 132 (ft.) (From WFI form)
Source name: WELL 2
WA well identification tag number:
well not tagged
Number of connections: 9000 Population served: 26,000
Township: 24 N Range: 06E
Section:
Latitude/longitude (if available):/
How was lat./long. determined?
global positioning device survey topographic map
* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.
PART II: Well Construction and Source Information
1) Date well originally constructed: 10-115168month/day/year
last reconstruction:/ month/day/year
information unavailable

Survey Form Ver. 2.1 page i

2) Well driller: KICHARDSON NELL DIZILLING	→
2) Well driller: KICHARDSON NELL DRILLING 219 So. 1157 ST.	
TACOMA WIN. 98KUU	<u> </u>
well driller unknown	
3) Type of well:	
∑Drilled: rotary bored	
Other: spring(s) lateral collector (Ranney)	•
driven jetted other:	
Additional comments:	_
	· · · · · · · · · · · · · · · · · · ·
4) Well report available? X YES (attach copy to form) NO	
If no well log is available, please attach any other records documenting well construct	tion; e.g. boring
logs, "as built" sheets, engineering reports, well reconstruction logs.	
5) Average pumping rate: 360 (gallons/min)	
Source of information: WATER FACILITIES INVENTORY	_
If not documented, how was pumping rate determined?	_
	_
Pumping rate unknown-	
6) Is this source treated? N_O	
If so, what type of treatment:	
disinfection filtration carbon filter air stripper other	
Purpose of treatment (describe materials to be removed or controlled by treatment):	
	_
	<u> </u>
7) If source is chlorinated, is a chlorine residual maintained:YESNO^	4/A
Residual level: (At the point closest to the source.)	

Survey Form Ver. 2.1 page 2

PART III: Hydrogeologic Information
1) Depth to top of open interval: [check one]
< 20 ft 20-50 ft 50-100 ft 100-200 ft > 200 ft
information unavailable ('<' means less than; '> ' means greater than)
2) Depth to ground water (static water level):
< 20 ft 20-50 ft 50-100 ft > 100 ft
flowing well/spring (artesian)
How was water level determined?
well log other:
depth to ground water unknown
3) If source is a flowing well or spring, what is the confining pressure: NA
psi (pounds per square inch)
feet above wellhead
4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: YES NO
5) Wellhead elevation (height above mean sea level): $4/4$ (ft)
How was elevation determined? topographic map Drilling/Well Log altimeter
other:
information unavailable
5) Contining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)
evidence of a confining layer in well log
no evidence of a contining layer in well log
If there is evidence of a contining layer, is the depth to ground water more than 20 feet above the to of the open interval? YESNO
information unavailable
·

Survey Form Ver. 2.1 page 3

7) Sanitary setback:	
< 100 ft = \frac{X}{2} 100-120 ft 120-200 ft > 200 ft * if less than 100 ft describe the site conditions:	
	· · · · · · · · · · · · · · · · · · ·
8) Wellhead construction:	
wellhead enclosed in a wellhouse controlled access (describe): FENCED T G	ATED
other uses for wellhouse (describe):	· · · · · · · · · · · · · · · · · · ·
no wellhead control	
9) Surface seal: 18 ft	
< 18 ft (no Department of Ecology approval)	('<' means less than)
18 ft (Approved by Ecology, include documentation)	('<' means less than)
∑ > 18 ft	('> ' means greater than)
depth of seal unknown	
no surface seal	
10) Annual rainfall (inches per year):	
< 10 in/yr 10~25 in/yr > 25 in/y	г

PART IV: Mapping Your Ground Water Re	esource	
1) Annual volume of water pumped:(ga		
How was this determined?		
meter		
estimated:pumping rate ()	
pump capacity ()	
other:	·	
"Calculated Fixed Radius" estimate of ground was (see Instruction Packet)	ater movement:	
6 month ground water travel time:	440	(it) These are the CFR's per this packet.
I year ground water travel time:	620	(ft) The District has
5 year ground water travel time:	1390	(ft) additional WHPA Captur Zone Information for this
10 year ground water travel time:	1970	(ft) well, which is attached. Th
Information available on length of screened/	open interval?	- following questions are answered for the capture
YES _ NO		zones identified on the WHPA map.
Length of screened/open interval: 20	(ft)	WHITA MAY.
3) Is there a river, lake, pond, stream, or other obviboundary? YES NO (mark and i	ious surface water body identify on map).	within the 6 month time of travel
4) Is there a stormwater and/or wastewater facility, a month time of travel boundary? YES	treatment laguon, or hol	ding pond located within the 6 identify on map).
Comments:	/	
		
·		
		
		

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month 1 year 5 year unknown
likely pesticide application	/ /
stormwater injection wells	<u>No No No</u>
other injection wells \$ see comments	No No No
abandoned ground water well	- V
landfills, dumps, disposal areas	<u>No</u> <u>No</u> <u>No</u>
known hazardous materials clean-up site	No No No
water system(s) with known quality problems	
population density > 1 house/acre	YES YES YES
residences commonly have septic tanks	YES YES YES
Wastewater treatment lagoons	No No
sites used for land application of waste	<u>No No No</u>

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

Well 2	has been use	das an inje	ction well a	s part of a
grounder	ter recharge	project, w	with drinking	quality water
			<u></u>	<u>. </u>

Please indicate the occurrence of any test results since 1986 that meet (Unless listed on assessment, MCLs are listed in assistance package.)	the foli	owing conditions:
A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
		$\stackrel{\cdots}{\sim}$
< 2 mg/liter nitrate	\preceq	<i>-</i>
2-5 mg/liter nitrate		X X X
> 5 mg/liter nitrate		$\stackrel{\sim}{\nearrow}$
Nitrate sampling records unavailable		
B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL	7.85	$\stackrel{\smile}{\sim}$
VOCs detected at least once		\Diamond
VOCs never detected	\overline{X}	
VOC sampling records unavailable	7-	
C. EDB/DBCP:	YES	NO
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)		
EDB/DBCP detected below MCL at least once		
EDB/DBCP detected above MCL at least once		
EDB/DBCP never detected		
EDB/DBCP tests required but not yet completed EDB/DBCP tests not required		
O. Other SOCs (Pesticides):	YES	NO
Other SOCs detected		<u></u>
(pesticides and other synthetic organic chemicals)	_	_
Other SOC tests performed but none detected		
(list test methods in comments		
Other SOC tests not performed		
If any SOCs in addition to EDB/DBCP were detected, please lidentify and date		
performed, but no SOCs detected, list test methods here:		

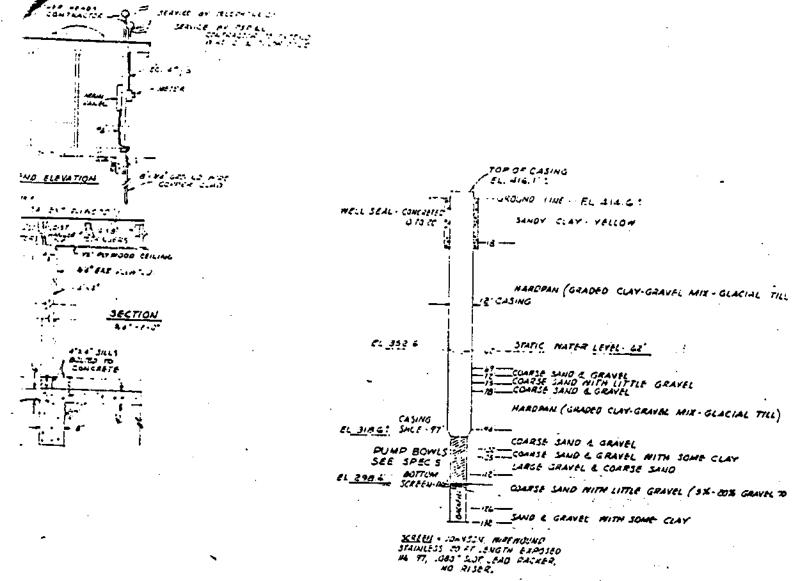
2) Source specific water quality records:

E. Bacterial contamination:	YES	<u>NO</u>
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	ne 	\angle
Has source (in past 3 years) had a bacteriological contamination prob found in distribution samples that was attributed to the source.	lem 	<u> </u>
Source sampling records for bacteria unavailable		
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution		
The following questions will help identify those ground water system represented by the calculated fixed radius (CFR) method described in CFR areas should be used as a preliminary delineation of the critical source. As a system develops its Wellhead Protection Plan for these delineation method should be considered.	Part IV time of	'. For these sources, the travel zones for that
1) Is there evidence of obvious hydrologic boundaries within the 10 year tim (Does the largest circle extend over a stream, river, lake, up a steep hillside, ridge?)	e of trav and/or	rel zone of the CFR? over a mountain or
YES NO		
Describe with references to map produced in Part IV:		
THEIR ARE STREAMS FEEDING AND EXITING YE YEAR CAPTURE ZONE, ALTHOUGH YELLOW LAKE IS CONE. THERE IS ALSO A PAVINE LOCATED AT THE SOLOF THE FIVE AND TEN YEAR CAPTURE ZONES	LLOW UTS/C ITHEZ	LAKE, IN THE S WE THE CAPTURE N ENGE
OF THE PIVE AND TEN THAT CATIOLE EDINES	•	
2) Aquiter Material:		•••
A) Does the drilling log, weil log or other geologic/engineering repolocated in an area where the underground conditions are identified atterrain?	orts iden s fractur	tify that the well is ed rock and/or basalt
YES NO		
B) Does the drilling log, well log or other geologic/engineering repolocated in an area where the underground conditions are primarily in gravel?	orts indicionalist indicates in the second indicates in the second in th	cate that the well is as coarse sand and
YES NO		

flood plains of large rivers, artesian wells with high water pressure springs.)	and/or:	shallov	include sources locat of flowing wells and	en ou
YES				
4) Are there other high capacity wells (agricultural, municipal and/o	or indust	riai) lo	cated within the CFR	s? No
a) Presence of ground water extraction wells removing more	than ap	proxin	nately 500 gal/min w	ithin
	YES	NO	unknown	
< 6 month travel time	_	_		
6 month-1 year travel time		<u>/</u>	·	
1-5 year travel time		2		
5-10 year travel time	_	2	· · ·	
b) Presence of ground water recharge wells (dry wells) or I	neavy irr	igation	within	
•	YES	NO	unknown	
< 1 year travel time	_	_		
1-5 year travel time		7		
5-10 year travel time		<u> </u>		
Please identify or describe additional hydrologic or geographic conshape of the zone of contribution for this source. Where possible, produced in Part IV.	ditions the reference	nat you e then	i believe may affect is to locations on the	the map
Well 2 has been used as an injection we	ll as	pac	t of	
a groundwater recharge project, with do	inkin	9 <i>9</i> ,4	ality.	
water.	•		/	
				
			, <u>, , , , , , , , , , , , , , , , , , </u>	
	-			

Suggestions and Comments

Did you attend one of the susceptibility workshops?	X YES NO	
Did you find it useful?	X YES NO	
Did you seek outside assistance to complete the assessm	ment? X YES NO	
This form and instruction packet are still in the process of	of development. Your comments, suggestions an	ıd
questions will help us upgrade and improve this assessm confusing or problematic please let us know. How could	nent form. If you found particular sections	
made clearer? Did the instruction package help you find assessment? How much time did it take you to complet	the information needed to complete the	
assessment without additional/outside expertise? Do yo experience? Any other comments or constructive criticis	ou feel the assessment was valuable as a learning	
The state of the s		
•		
		•
."		
· · · · · · · · · · · · · · · · · · ·	·	
		



LOG OF EXISTING WELL Nº 2

A JOHNS IMANUSCES

124 C CE ESUAL

125 C CE ESUAL

126 C CE ES

NUTSUCTION GRIDE

44.04471

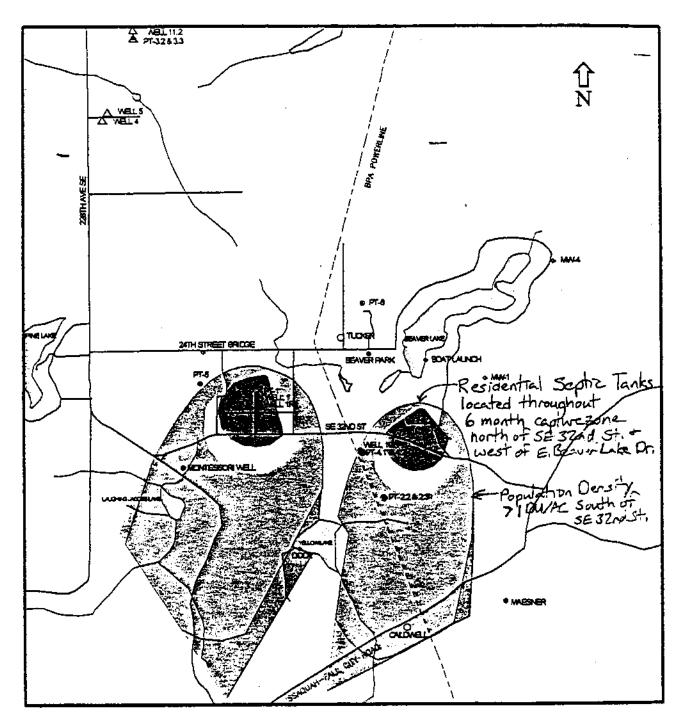
4423

in Small William &

CONTRACT II - ULILO. "1, "2 4"3

MING COUNTY WATER DISTRUCT Nº 121
WELL SITE & CONTROL BUILDING Nº Z
BUILDING FOR MECHANICAL & SIEC DETAILS

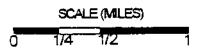
SAMMAMISH PLATEAU WELLS 1R & 2 WHPA CAPTURE ZONES



SYMBOL KEY:

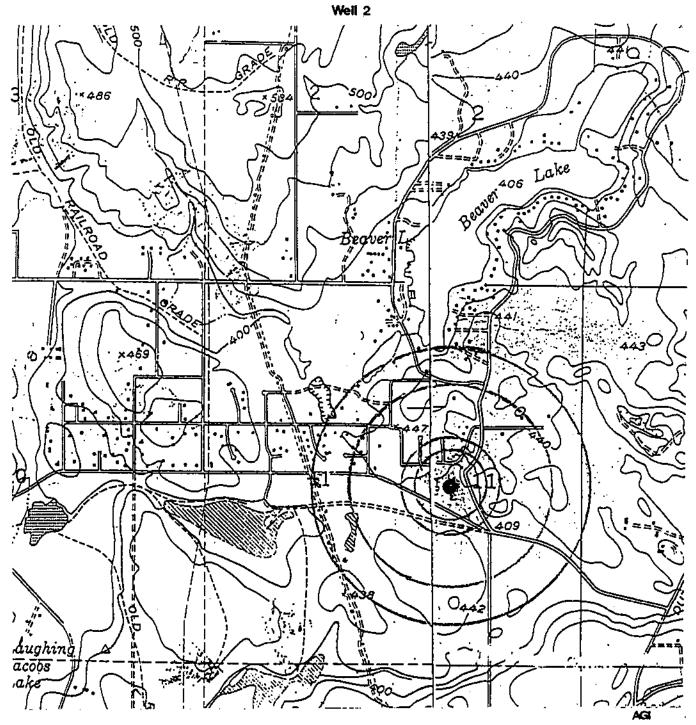
- ♦ ZONE I AND SURFACE WATER MONITORING STATIONS
- ZONE IIa MONITORING WELL
- ZONE III MONITORING WELL
- A ZONE IV MONITORING WELL

6-month capture zone	. .
1-yeer capture zone	
5-year capture zone	
10-year capture zone	\Box

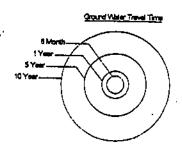


Not Used - Provides = Ylonly. See LUHPA Zones

Sammamish Plateau Water & Sewer District



LEGEND



		SCAL	Æ (FT)		
)	1000	2000	3000	4000	5000

--

24256 32 32md, Rt 1, Issaquah, Wa 36027 (1) O THER: Name King County Water District #121 2) LOCATION OF WELL: County King NW K SE K Seell T 24 N R 65 WM Tearney and distance from section or subdivision corner 570 ft West & 100 ft South of NE corner of NW 1/4 (10) WELL LOG: (3) PROPOSED USE: Comestic 🛭 Industrial 🗀 Municipal 🛣 Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation. irrigation [Test Well [Other П (4) TIPE OF WORK: Owner's number of well-MATERIAL ** Method: Dug [] New well Bored [Yellow sandy clay 18 Cable III Driven [Deepened Jetted [] <u> Harrican</u> 18 Reconditioned [] Rotary 🗇 69 Coarse sand & gravel, water Diameter of well 12 (5) DIMENSIONS: inches Coarse sand & little gravel 75 Drived 132 rt Depth of completed well 116 Coerse gravel & sand 75 Haraban 00. (6) CONSTRUCTION DETAILS: - 00 Light brown hardban Casing installed: 12 - prem. from 0 n. to 97 n. Coarse sand & gravel Vater 9 101 _ ft. to _ ***** Coarse sand & gravel 101 102 #L 100 ... Clay coated sand & gravel 10Z 105 Perforations: Yes [] No CE Large gravel & coarse sand 105 a 🛶 Type of perforator used..... Large gravel & coarse sand 717 - 51ZE of perforations par pa. . ta. Coarse sand & little gravel _ ft. to _ _ 12. Coarse sand & little pea gravel ß. . ft. to perforations from _ 119 Coarse sand & little gravel - - -. ft. to 122 Coarse sand & some gravel 126 -Screens: Yes 20 No [] UPO Johnson --- 126 Clay coated send & gravel Land of the same and the t <u>a t</u> a la griffa disa a 👍 🤧 Gravel packed: Yes | No E Size of gravel: et. • Surface seal: Yes & No To w To what depth? ____20 . 🕰 7 A " 'E Did my strata contain unusable water? Tes () NoII Type of water?_ Depth of strata... Method of sealing strata off. -The state of the state of (7) ZUMP: Manufacturer's Name Type: ____ R.P. (3) WATER LEVETS: Land-surface elevation above mean sea level.... 414 : - 1 + m rt. below top of well Dese 10/10/68 Static level 62 Arterian pressure _______ the per square inch. Date. --- Artesian water is controlled by..... (Cap, valve, etc.) Drawdown is amount water level is lowered below static level _ (c) Well Tests: . Work marted Sept. 17 19 68 Completed Oct. 15. Was a nump test made? Yes 2 No C R yes, by whom? Driller 2 + 3/2 WELL DRILLER'S STATEMENT: aid: it. drawdown after 12 20 gel./min. with 11 hrs. SCO This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. A region of lecovery data (time taken as zero when pump turned off) (water level measures from well top to water level) NAMERichardson Vell Drilling Co. Time Water Level Time Water Level Time (Person, Arm, or corporation) (Type or print) Address 219 So. 115th St., Taccma, Yash. 9844/s Date of test 10/10 & 10/11/53 _gal_/min, with_ .ft. drawdown after.... Leterian Bory r.p.m. Datal. Temporature of water One Was a chemical analysis made? Yes M. No O License No. 223-02-6500 Date October 30

A Company of the Comp

9070 ₩ 6802 Cerr.

さんて STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION DIVISION OF WATER RESOURCES

Drilling Co. Richardson Well Drilling Col, Inc. 0 Area..... Record by Driller Driller's Record County King Location: State of WASHINGTON Map Source WELL LOG ŕ

Address 219 So. 115th St., Tacoma, Wash, 98444

Method of Drilling Cable Date October 30, 19 68 Owner King County Water District No. 121

SWI. 62 ft. Date October 10 , 1968 Dims 12" x 116 Address 24256 S.E. 32nd, Rt. 1, Issaguah, WA

COARS. MATERIAL	 From (feet)	To (feet)

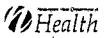
l'Iranscribe dellier's terminology literally but foraubrase as necessury, in parentheses, below land-surface delum unites and record static level if reputtit. Give driphs in feet below land-surface datum unites olitewise indicated. Correlate with stratikraphic column, if iterible. Following log of materials, list all easings, perforations, acteurs, etc.)	ntersaury, in urtel, Give d with atraciary	aphrase as necessury, in parentheses, level if reputrid. Give depths in feet Correlate with stratist-sphic column, perforations, acreens, etc.)
Municipal		
Clay, yellow sandy	0	18
Hardpan	1.8	69
Sand, coarse & gravel, water	69	72
Sand, coarse & little gravel	72	7.5
Gravel, coarse & sand	7.5	78
Hardpan	78	90
Hardpan, 11ght brown	06	94
Sand, coarse & gravel, water	94	101
Sand, coarse & gravel	101	102
Sand, clay coated & gravel	102	105
Gravel, large & sand, coarse	105	111
Gravel, large & sand, coarse	111	112
Sand, coarse & little gravel	112	113
Sand, coarse & little pea grapel 113	rel 113	119
Sand, coarse & little gravel	119	122

1469-05-12-63,

ontinued	
TOG	
N.E.	

4

																	 æ	2	•	- 50	ē
				¥,	×						×	ij	3	150	,		\$				"
	To (feel)	•	126	132							er 12 b	12									
,	Froin (feet)		122	126		1	S	n 96 ft.		ere	ft, afte	ft. "									-
LOGContinued	Матемаг	Depth forward	Sand, coarse & some gravel	Sand, clay coated & gravel		12" from 0 ft. to 97 f	: UOP Johnson, Stain	Diam: 12" slot size .080 from	to 110 rt.	Surface seal: to 20 ft., concrete	R.p.m. with 11	500 g.p.m. with 36					•				
7.1E.	COARF														.						



Environmental Health

WATER FACILITIES INVENTORY (WFI)

DATE PERMEN	。 <u>4〒10171279</u> 4
OATE RECEN	1994
Ans'd	

Read instructions on back before completing

I. SYSTEM	AID NO. 2 COUNTY	GROU	P TYPE	WRIA	WFI COMPLE	TEO BY	<u></u>	IS MPOAT	TILE	411.
1. SYSTEM			Loumm.							
	NAME LAMISH PLATEAU		cuća.		DAY TELEPH	ONE		DAT	E	
STREET A	DORESS	441=1-2-3 :	<u>- 1 - 7</u>		8. SUBMITT	ED NEW	SYSTEM	NO CHAN	IGE RE	ACTIVATE
	228TH AVE SE.				FUR	SYST	EM NAME CHANGE	UPDATE	O€	LETE
P.O. BOX (1	F APPLICABLE)			- 1	OLD SYSTE	M NAME - ENTI	IR ONLY IF CHANG	ING WITH THIS WE	1	
CITY		STAT	E ZIP CODE				neglection	·		
1534	GUAH		9402	, ,	DWELLING	ERVED BY TH	HESIDEN IS (PE E SYSTEM), COM	OPLE LIVING IN A PLETE THIS SECTI	ON:	
4. OWNER	'S NAME (LAST, FIRST)		OW RENWO		9. NUMBER COMPRE	ACTIVE RESIDE	NTIAL	10. NUMBER ACT		
STREET AS	AHISH PLATEAU	HATER F	300	27			e e i nagagetta.	to Ares to a		
		<u></u>			-,	8844	្រៃក្រស់ <u>គ</u>	25.	647,	• .• ·
	F APPLICABLE)		 .	$\neg \neg$			•	IS (I.E., TRAVELER	-	
	······································	·	**				ETC.), COMPLETE			
(ITY		STAT			11, NUMBER	NON-RESIDENT	RAL CONNECTIONS			
	QUAH CONTACT PERSON	<u> </u>	9502	77	40.0000.41	ED405 0484				· · ·
_3UMA	LD F. LITTLE -	MANAGER	_				NON-RESIDENTIAL ITH. MAKE ENTRY	POPULATION FOR EACH MONTH	" k	
DAY TELEP		EVENING TELEPHON	E (4.5)		Jame			ART		
20A=	392-6256 BBHD	7. PHEDOMINANT	CHARACTERIS	THE			- नेप	100 mm	HEM.	
(CHEC	K ONE GNLY)	(CHECK ONE O			13, DOES TH	E SYSTEM SER	VE AT LEAST 25 O	F THE SAME NON-R	ESIDENTS	
PRIV	ATE NON-PROPIT	RESIDENTIAL.			POR 4 OF	MORE DAYS	ER WEEX FOR AT	LEAST 180 DAYS M		
	ATE FOR PROFIT	RECREATIONA BUSINESS/WE		i	Level N	YES				
رچې ليند	NTY/CITY/PUD/ ER DISTRICTI		L/COMMERCIA	١.	14. TOTAL M	MARCO.	 	15. DISTRIBUTION	A BESEDVANIE	
STAT		SCHOOL/DAY				TIONS METERE	D	TOTAL CAPAC		•
FEDE	RAL	OTHER (CHUR	CHES, ETC.)	.	В	.844	=	12.8	50,000	GALLONS
		. January Carl			<u> </u>	· · · · · · · · · · · · · · · · · · ·	<u> </u>			
DOH	17. SOURCE NAME	18. SQU		9. USE 20.		22. WELL	23. SOURCE	24. SQURCE LOCA	TION	
MEER	<u> </u>	CAT	EGORY		TREATMENT	DEPTH	GARACITY			
	UST UTILITY'S NAME FOR SOURCE IS PURCHASED OR		5 2							Ž N D
	INTERTIED, LIST SELLER'S ID# AND NAME USING FOLLOWING:		TO SEE	16960	3 8	(FEET)	(GPM)	1/4, 1/4 SE	· 1. '''' 1	ANG.
	POFIMAT: XXXXXXX/NAME EXAMPLE: 77050Y/SEATTLE	· - () - () - () - () - () - () - () - (# # # # # # # # # # # # # # # # # # #	SEASONAL EMERGENCY SOURCE LEET	NOME CHLORINATION PLIPATION RUDPIONTION OTHER	· A s		SEC. NO	•	SWTR EVAL
	2 ⁸ . *	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 3	SEASON EMERGE SOURCE	CHECK CHECK	ľ	·			SWT VOC
-01	AREL I	x	Х		x	154	500	M/NE 10	2411 0	00=
202 202	WELL 2	<u> [</u> .		*	x	132	360	*#\SE 11	244 0)5E
703 504	WELL # 5 WELL # 40 5	2	X]		715		IW/5W 34		65
304	MELL 6	X	1111 /*	, [714	5	5W/NW 34)ろE)ろぞ
500	WELL #7					150	3	1E/SE 32 SE/SE 21	I_	795 165
107	45 5 11 00	x				150		F/SE 21		165
						j	,	,		
		MUNICAL	IM GEOMESO	ANTERIOR	GGICAL SAMPI	ING SCHEDU				
25.			ZE JAN		MAR RAM		JUN JUR.	AUG SEP	OCT NOV	DEC
		·	30	30 5		30 3	4 4 4	30 30	<u> </u>	1 30
	VED SERVICES (PER PLANS)	<u> </u>	1			ST SANITARY	1 200		Y DOH	h-to
	CRITICAL WATER SUPPLY SERVICE , DATE RETRO. CHANGES		NO M SEMERATE	GW MGMT	AREA?	YES	NO USE ON.	y	<u></u>	
_,,		SIGNATURE OF DOI	D SCAIGMEN					DATE		

SAFFARISH FLATEAU RATER & SEKER DISTRICT

VATER SAMPLE INFORMATION FOR INDREANIC CHEMICAL AMALYSES - 1989

:				•				
H	NEIL 1 6/4/69	VELL 2 4/10/69	FELL 4 4/10/E9	KELL 5 4/10/89	FELL 6	VELL 7 7/17/69	VELL 8	TOH.
# A	7.06	7.23	8.22	8,32	7.46	7 48		
Arsenic	.0.010	.0.010	*0.010	40.010	010		50.1.	! !
Eerlum	*0.25	0.25	*0.25	*0.25	*0.25		979.0	0.05
Cecalum	*0.002	.0.002	*0.002	.0.002	*D. 602	57.0	67.0.	o
Chromlum	.010°	10.01	*0.010	• 0.010	0.010	700.04	. D. COZ	0.01
Irea	*0.05	*0.05	*0.03	\$0.0\$	*0.05		013.0.	0.005
leed	•0.010	•0.010	•0.010	40.050			50.0	٥.٥
Pergenese	•0.010	010.04	0 041		013.7	0.010	010.01	0.05
Percury	•0.0010	40,0010	•0.6010	40.04	0.026	0.010	010.04	0.05
Selenica	*0.005	000			.0.0010	*0,0610	.0.0010	200.0
		63.4	<00°0.	10.005	*D.005	\$00.0	*0.005	0.01
	8 10 ° 0'.	0.010	*0.010	*0.010	+0.010	*0.010	0.010	0.05
Sodium	•10	01.	01.	• 10	•10	• 10		
Parchess	09	67	63	£1	48	: -	2	
Conductivity	fy 155	220	160	150	120			
Turbidity	1.0.1	*0.4	*0.2	. 0.		. 007	002	700
Color	.5.0		*5.0			7.0		0,
Fluoride	*0.2				0.67	13.0	. 0.5.	15.0
Witcota			7.0.	10.2	*0.2	40.2	\$0.2	2.0
	-	.0.1	2.0	*0.2	+0.2	1.6	, O. 2	10.0
Chiorice Chiorice	01.	0.	•10	•10	•10	• 10		24.0
Sulfete								
			:				•	250

*MCL is the Fexinus Conteminent level Allowed

*tess Then

AcTest/1 .h

(Rote: Fell 7 has re-fested for Iron & Turbidity and those numbers are disted above.)

MATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1990

			•					
ITEM	WELL 1	WELL 2	WELL 4	MELL 5	WELL 6	AELL 7	в ттам	** MCL
	06/2/6	4/10/89	9/1/90	9/1/90	9/7/90	06/1/6	06/1/6	
pit	6.74	7.23	7.26	7.74	7.88	7.29	7.12	
Arsenic	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Barium	<0.25.	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	1.00
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
Chromium .	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Iron	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.3
Lead	<0.005	<0.0100	<0.005	<0.005	<0.005	<0.005	<0.005	0.05
Manganese	<0.010	<0.0100	<0.039	<0.037	<0.028	<0.010	<0.010	0.05
Mercury	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002
Belenium	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
silver	<0.010	<0.0100	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Sodium	<10	<10	<10	<10	<10	<10	<11	
Hardness	79	87	58	58	51	72	72	
Conductivity	85	220	150	154	125	189	188	700
Turbidity	<0.2	<0.4000	1.0>	<0.1	<0.2	<0.1	6.0>	1.0
Color	<5.0	<5.0	<10.0	<10.0	0.5>	<5.0	<10.	15
Fluoride	<0.2	<0.2000	<0.2	<0.2	<0.2	<0.2	<0.2	2.0
Nitrate	<1.3	<0.7000	<0.2	<0.2	<0.2	<0.2	<1.3	10.0
Chloride	<10	<10	01>	<10	<10	<10	<10	250

PARTS PER MILLION

- Less than Detectable Limits
- ** Maximum Contaminant Level

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1991

	İ							
1 TEM	WELT. 1	t tan						
		7 TEVT 2	METT 4	WELL 5	WELL 6	WELL 7	WELL 8	** MCr.
	7/12/91	7/12/91	7/12/91	7/12/91	7/12/01	7/13/01		
						1/27/	1/17/1	
Hd	9	7 7						
Arsenic	010		(.3	6.7	6.7	7.1	6.8	
Barium	27.07	070.07	<0.010	<0.010	<0.010	<0.010	<0.010	0 0
Cadminim	\$0.25	<0.25	<0.25	<0.25	<0.25	<0.25	30.07	60.0
Cadmitain	<0.002	<0.002	<0.002	<0.00	200	77.07	C2 . 0 \	1.00
Chromium	<0.010	<0.010	010	7000	200.00	<0.002	<0.002	0.01
Iron	<0.05	<0 0×	0.010	20.010	<0.010	<0.010	<0.010	0.05
Lead	<0 00E	200	50.05	<0.05	<0.05	<0.05	<0.05	٠,0
Manganese	200	500.05	<0.00>	<0.005	<0.005	<0.005	<0.005	0 0
Mercuria	20.010	<0.010	<0.018	<0.026	<0.023	V0 010	2000	50.0
Z no Tau	<0.0010	<0.010	<0.0010	0100 0>	0.00	מיסי	010.05	0.05
setenium	<0.005	<0.005	20 00 V	2000	0700.0	<0.00.00	<0.0010	0.002
Silver	<0.010	010	50.00	500.05	<0.005	<0.005	<0.005	0.01
Sodium	2	070.0	<0.010	<0.010	<0.010	<0.010	<0.010	300
Hardnese		٥٠	9.	8	5	10	17	
Conductivities	19	99	52	51	43	61	75	
יהייבר ליודאדרא	180	270	120	130	120	100	6,0	
ini bidity	0.5	9.0	4.	60 3		720	210	700
Color	<5.0	<5.0	2 4		•	. 4	0.3	1.0
Fluoride	د 0 ک	2 5		0.0	<5.0	<5.0	<5.	15
Mitrate	2	2000	20.7	<0.2	<0.2	<0.2	<0.2	
Chlorida	307	,,,,	8.1	<0.2	<0.2	<0.2	-	
	710	<10	<10	<10	21	2.4		

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS — 1992

наті	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WELL 8	• + MCT.
	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	7/12/91	
nd	7.0	7.3	7.93	8.4	8.4	7.7	0 7	
Arsenic	<0.010	<0.01	<0.01	<0.01	100		0.0	
Barium	<0.1	40.1	<0.1	20.0	10.07	20.01	<0.010	• 05
Cadmium	<0.002	<0.002	<0.002	<0.00	7000	40. I	<0.25	1.00
Chromium	<0.05	<0.05	<0.05	<0 05	700.00	200.02	<0.002	0.01
Iron	<0.05	<0.05	20.05	20.00	20.03	<0.05	<0.010	0.05
Lead	<0.002	<0.00	50000	50.05	0.37	<0.05	<0.05	0.3
Hanganese	20 03	70.007	50.0025	<0.002	<0.002	<0.002	<0.005	0.05
Heroure	70.0	20.01	0.043	<0.041	0.038	<0.01	<0.010	0.05
	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0010	0.002
11.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
JPA116	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	010	0.05
en Thos	9.5	6.1	8.7	8.4	4.8	10	12	60.0
Hardness	85.	75	62	62	56	70	7.5	
Conductivity	180.	150	140	140	120	170	210	000
Purhidity	0.46	0.42	.33	61.0	00	,	2.07	00/
Color	<5.0	<5.0	<5.0	0 52	0 3/	25.	0.3	1.0
Fluoride	<0.5	<0.5	<0.5	20 5	20.00	65.0	^55.	15
Nitrate	1.0	<1.8	<1.0		21.0	20.3	50.5	2
Chloride	<20.	<20	<20		230	200	4.3	TO
Sulfate	10.	<10.	<10.		×10	11	7.70	250
Copper	<0.02	<0.02	<0.02	60	5000	11		250
Zinc	<0.05	40.05	200	70.00	70.05	<0.02		1.0
Alminum	<5.0	50.00	\$0.03	<0.05	<0.05	<0.05		5.0
Calcium	201	2.5	73.0	<5.0	<5.0	<5.0		
	,,,,	18.	18	18	16	20.		

ITEM CONTRACTOR	WELL 1	WELL'2 : WELL : WELL 5	WELL		WELL 6	WELL 7 WELL 8 WELL 9	WELL 8	WELL 9	MCL
A STANDER OF	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	
Arsenic	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05
Barium	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1
Cadmium 🔧 👔 < 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.01
Chromitati	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Copper	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.3
From S. Salas, Salas	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.17	0.3
Lead	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.05
Manganese	< 0.01	< 0.01	< 0.043	< 0.041	< 0.092	< 0.01	< 0.01	< 0.01	0.05
Mercury 高速速速	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.002
Selenium 🔏 🛴	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01
Silver	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05
Sodium Jana Sanda	9.1	9.3	0.6	1.7	8.4	9.5	10.	8.5	
Zinc	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	5
l lardness 🔣 👡	78.	90	99	65	63	79	97	89	
Conductivily South	190	150	160	150	210	190	190	160	200
Turbidity	0.10	0.49	0.17	0.15	0.1	0.1	0.14	0.43	-
Color	5.	5.	5.	5.	5.	5.	-2	5.	15
Chloride 💮 🛴	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	250
Fluoride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
Nitrale 🐪 🔝 🖔	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1 >	< 1.0	10
Sulfate	< 10	< 10	< 10	< 13	< 10	< 10	< 10	< 10	250

LEGEND < Less Than Detectable Limits

** Maximum Contaminant Level

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

SAMMAMISH PLATEAU WATER & SEWER DISTRICT 1510 – 228TH Avenue SE Sammamish, Washington 98075

(425) 392-6256

WELL 2.2

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

TABLE OF CONTENTS

- Susceptibility Assessment Survey Form
- ➤ Well 2.2 Calculated Fixed Radius FYI
- ➤ Water Well Report
- ➤ Well 2.2 Hydrogeologic Log and Construction Details
- > Wellhead Protection Program for Plateau and Cascade View Well Report Information
 - Aquifer Zone II definition
 - WHPAs and Potential Contaminants
 - Figure 4.1 WHPA Capture Zones
- ➤ Water Sample Tests
 - Water Bacteriological Analysis 5/21/96
 - Inorganic Chemical Analysis 5/21/96
 - Water Sample Information for Radiation Chemical Analyses 5/21/96
 - ICP Metals 5/21/96

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.2

IMPORTANT! Please complete one form for each ground water source (well, well field, spring) used in your water system. Photocopy as necessary.

PART 1:	System Information			
Well owner/m	nanager: <u>Sammamish Pla</u>	ateau Water & Sewer Distr	lct	
Water system	name: Sammai	mish Plateau Water & Sewe	er District	
County:	King			
Water system	number: 409009	Source number:		
Well depth: _	180	(ft.) (From WFI form)		
Source name:	Well 2.2			
WA well iden	tification tag number:	AAD383		
	_ well not tagged			
Number of cor	nnections: 14358	Population se	rved: 48.036	
Fownship:	24N	Range: <u>06E</u>		
Section:	11	1/4 1/4 Section	on: NW/SW	
Latitude/longit	tude (if available):	/	M. H. L.	
How was lat./l	ong. determined?			
oth	global positioning device	esurve	ey topographic map	
Please refer t	o Assistance Packet for deta	ails and explanations of all q	uestions in Parts II through V.	
PART II:	Well Construction and S	Source Information		
) Date well or	riginally constructed: _0	05 / 09 / 96 month/day/ye	ear	
	_ last reconstruction:	/ / month/day/year		
	information unavailable			

2) Well driller: Holt Dri	ling, Inc.		, , , , , , , , , , , , , , , , , , ,
well driller u	nknown		
3) Type of well:			
X Drilled:	_ rotary	bored	X cable (percussion) Dug
Other:	_spring(s)	lateral col	lector (Ranney)
_	_ driven	jetted	other:
Additional comme	ents:		
		·	
4) Well report available?	X YES (a	attach copy to fe	orm)NO
			her records documenting well construction; e.g. rts, well reconstruction logs.
5) Average pumping rate:	500	· W · S · A · L	(gallons/min)
Source of informa	tion: <u>Rechar</u>	ge/Production	Well 2.2 Construction and Testing Report
If not documented	, how was pu	mping rate dete	rmined?
Pumpin	g rate unknov	wn	
6) Is this source treated?			
If so, what type of	treatment:		
disinfection	X filtration	carbon filte	er air stripper _X_ other
			emoved or controlled by treatment):
-	•		ove Manganese. The water is also treated
with sodium hydr			
7) If source is chlorinated,			
			he filters (At the point closest to the source.)

PART III: Hydrogeologic Information	
1) Depth to top of open interval: [check one]	
<20 ft20-50 ft50-100 ft <u>X</u> 100-200 ft>200 ft	
information unavailable ('<' means less than; '>' means greater than)	
2) Depth to ground water (static water level):	
<20 ft20-50 ft _X 50-100 ft>100 ft	
flowing well/spring (artesian)	
How was water level determined?	
X well log other:	
depth to ground water unknown	
3) If source is a flowing well or spring, what is the confining pressure:	
psi (pounds per square inch) or	
feet above wellhead	
4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source:YESNO	
5) Wellhead elevation (height above mean sea level):	
How was elevation determined? X topographic map Drilling/Well Log altimeter	
other:	
information unavailable	
6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)	
X evidence of a confining layer in well log	
no evidence of a confining layer in well log	
If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the bottom of the lowest confining layer? X YES NO	ıe
information unavailable	

The wen is armed approximately so rect from the east	rn property line, which is th
right of way line of Beaver Lake Drive. However, the	oadway was relocated and th
ditchline and roadbed are more then 100 feet from the	well.
3) Wellhead construction:	
X wellhead enclosed in a well house	
X controlled access (describe): The well is locked in a	shelter that is monitored.
other uses for well house (describe):	
no wellhead control	
) Surface seal:18 ft	
< 18 ft (no Department of Ecology approval)	('<' means less than)
< 18 ft (Approved by Ecology, include documentation)	('<' means less than)
<u>X</u> > 18 ft	('>' means greater than)
depth of seal unknown	
- •	

PART IV: Mapping Your Ground Water Resource
1) Annual volume of water pumped: <u>261,000,000</u> (gallons)
How was this determined?
meter
estimated: pumping rate ()
pump capacity ()
X other: Water rights
2) "Calculated Fixed Radius" estimate of ground water movement: (see Instruction Packet)
6 month ground water travel time: 1,390 (ft)
1 year ground water travel time: 1,970 (ft)
5 year ground water travel time: 4,400 (ft)
10 year ground water travel time: 6,220 (ft)
Information available on length of screened/open interval?
X YES NO
Length of screened/open interval:
These are the CFR's per this packet. The District has additional Well Head Protection Area (WHPA) Capture Zone information, which is attached. The following questions are answered for the capture zones identified on the WHPA map.
3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6-month time of travel boundary? X YES NO (mark and identify on map).
There are two wetlands located on the Well 2.2 property. One wetland is approximately 120-feet to the northwest and the other approximately 60-feet to the southeast.
4) Is there a storm water and/or wastewater facility, treatment lagoon, or holding pond located within the 5-month time of travel boundary? YES _X_ NO (mark and identify on map).
Comments: Septic Systems serve the homes to the north of SE 32 nd Way and west of Beaver
Lake Drive and are within the 6-month time of travel boundary. Gravity sewers serve the
reas to the south of SE 32 nd Way and east of Reaver Lake Drive.

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application				X
stormwater injection wells	No	No	No	
other injection wells (see comments)	No	No	No	
abandoned ground water well			l	X
landfills, dumps, disposal areas	No	No .	No	
known hazardous materials clean-up site	No	No	No	
water system(s) with known quality problems				X
population density > 1 house/acre		4 house	e / acre	Per .
residences commonly have septic tanks	Yes	No	No	ing second
Wastewater treatment lagoons	No	No	No	· .
sites used for land application of waste	No	No	No	1

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

Vell 2.1 has been used as an injection well as part of a groundwater recharge project.	
ystem, or domestic, water was used in the project.	
eptic systems serve the homes to the north of SE 32 nd Way and west of Beaver Lake	
rive.	

A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
Results greater than MCL	<u>ILU</u>	X
< 2 mg/liter nitrate	<u> X</u>	
2–5 mg/liter nitrate		<u> </u>
> 5 mg/liter nitrate		<u> X</u>
Nitrate sampling records unavailable		X
B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES_	NO
Results greater than MCL or SAL		X
VOCs detected at least once		X
VOCs never detected	X	
VOC sampling records unavailable		<u>X</u>
C. EDB/DBCP:	YES	<u>NO</u>
(EDB MCL = 0.05 ug/l or 0.00005 mg/l . DBCP MCL = 0.2 ug/l	or 0.0002 mg/l.)	
EDB/DBCP detected below MCL at least once		<u>X</u>
EDB/DBCP detected above MCL at least once		<u>X</u>
EDB/DBCP never detected		<u>X</u>
EDB/DBCP tests required but not yet completed		<u>X</u>
EDB/DBCP tests not required	X	
D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected		X
(pesticides and other synthetic organic chemicals)		<u>X</u>
Other SOC tests performed but none detected *		<u>X</u>
(list test methods in comments)		
Other SOC tests not performed	<u>X</u>	
If any SOCs in addition to EDB/DBCP were detected, please ide	ntify and date. If oth	her SOC
tests were performed, but no SOCs detected, list test methods her	re:	
The state of the s		-

2) Source specific water quality records:

E. Bacterial contamination:	YES_	<u>NO</u>
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).		X
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.		X
Source sampling records for bacteria unavailable	-	X
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution		
The following questions will help identify those ground water systems which may represented by the calculated fixed radius (CFR) method described in Part IV. For areas should be used as a preliminary delineation of the critical time of travel zon system develops its Wellhead Protection Plan for theses sources, a more detailed should be considered.	r these sou es for that	rces, the CFR source. As a
1) Is there evidence of obvious hydrologic boundaries within the 10-year time of (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/oridge?)		
X_YESNO		
Describe with references to map produced in Part IV:		
There are streams feeding and discharging from Yellow Lake, in the 5 year c	apture zoi	ne,
although Yellow Lake is outside the capture zone. There is also a ravine loca	ted at the	
southern edge of the five and ten year capture zones.		
2) Aquifer Material:		
A) Does the drilling log, well log or other geologic/engineering reports id- located in an area where the underground conditions are identified as fract terrain?		
YESX_NO		
B) Does the drilling log, well log or other geologic/engineering reports inclocated in an area where the underground conditions are primarily identific gravel?	licate that ted as coars	the well is e sand and
X YESNO		

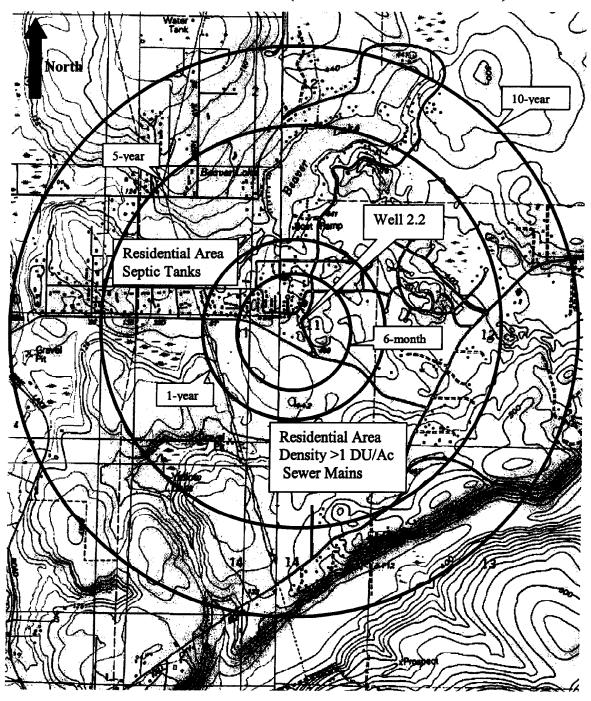
3) Is the source located in an aquifer with a high on flood plains of large rivers, artesian wells with springs.)			
YESX	NO		
4) Are there other high capacity wells (agricultur X YES NO	al, municipal and/o	or industrial) loca	ted within the CFRs
 a) Presence of ground water extraction w within 	ells removing mor	e than approxima	tely 500 gal/min
***************************************	YES	NO	unknown
< 6 month travel time	125	X	WINDIO WII
6 month-1 year travel time	X		
1–5 year travel time	X		
5–10 year travel time		X	
b) Presence of groundwater recharge wel	ls (dry wells) or he	avy irrigation wi	thin
	YES	NO	unknown
< 1 year travel time	_X	NO	utiktiowii
1–5 year travel time			
5–10 year travel time		<u>X</u>	
J 10 Juli Marve Mile	`. <u></u>		
Please identify or describe additional hydrologic of shape of the zone of contribution for this source. produced in Part IV. The Wellhead Protection Program for Plateau	Where possible, re	ference them to l	ocations on the map
June 24, 1998 for the Sammamish Plateau Wat	ter & Sewer Distri	ct discussed the	ground water
flow for the Plateau Area wells. The ground w	vater flow directio	ns within each a	quifer were
evaluated using static water levels from well co	mpleted within t	ne aquifers. We	ll 2.2 is in
aquifer zone II, which is made up of three subz	ones To The end	He The ten of	inone II
aduner zone 11, which is made up of three subz	Oues, ma, mo, and	I Mc. The top of	ZUME II
occurs at elevations of approximately 350 to 16	0 feet above MSL	. Zone II thickn	ess ranges
from 5 to 150 feet. A potentiometer surface ma	p for wells compl	eted in Zone II s	hows that
ground water flow is generally to the northwest	or northeast dire	ction.	
The WHPA for aquifer zone II is attached and	is used to answer	the questions in	this survey.

Suggestions and Comments

Did you attend one of the susceptibility workshops?	YES	X NO
Did you find it useful?	YES	NO
Did you seek outside assistance to complete the assessment?	X YES	NO
This form and instruction packet are still in the process of devel and questions will help us upgrade and improve this assessment	t form. If you fou	nd particular sections
confusing or problematic please let us know. How could this so made clearer? Did the instruction package help you find the int		
assessment? How much time did it take you to complete the for assessment without additional/outside expertise? Do you feel the	orm? Were you al	ble to complete the
experience? Any other comments or constructive criticisms you		

Sammamish Plateau Water and Sewer District Well 2.2

"Calculated Fixed Radius" Water Travel Times FOR INFORMATION ONLY (WHPA USED FOR ANALYSIS)



Scale: 1" = 2,000' Ground Water Travel Times shown: 6 month, 1 year, 5 year and 10 year

> Survey Form Ver. 2.2 Page 11

File Original and First Copy with Department of Ecology Second Copy—Owner's Copy Third Copy—Driller's Copy

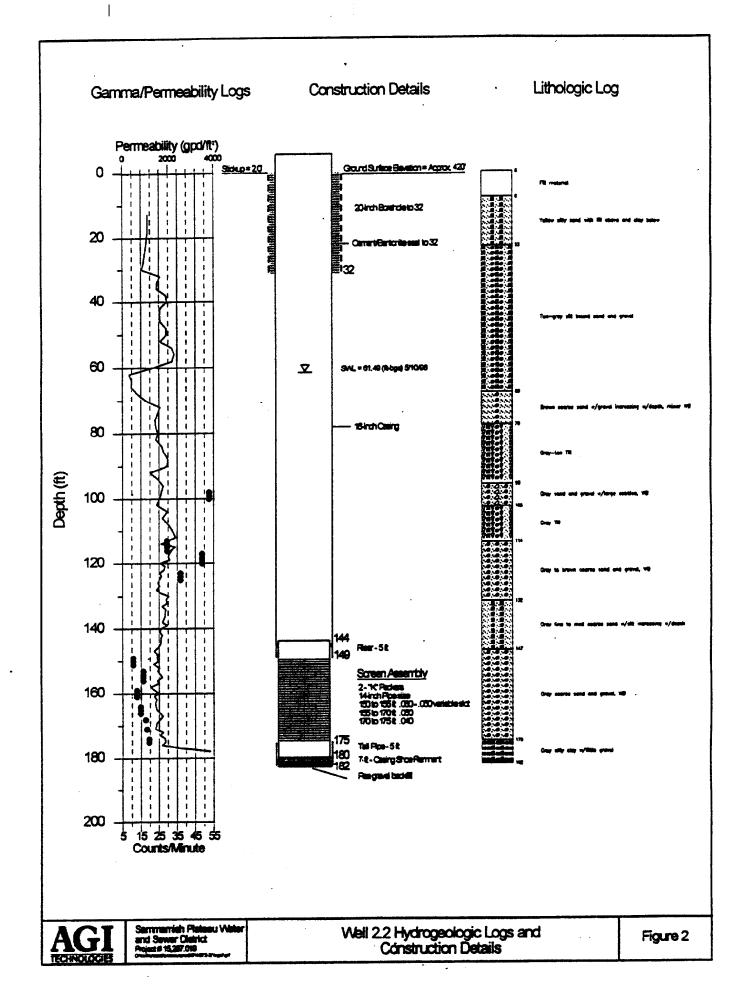
WATER WELL REPORT

Start Card No. W 16381

STATE OF WASHINGTON

Unique Well I.D. #AND383

(1)	OWNER: Name Sammermish Plateau Water and Sever Distr	ict Address 1510 229th Avenue SE, Issagah	. WA 99	029
(2)	LOCATION OF WELL: County King	. NW % SE % 8== 11 T 2	4 M R	€ ",
(22)	3401 Fac	t Beaver Lake Drive		
(3)	PROPOSED USE: Domestic Industrial Municipal & Test Well Dotter	(10) WELL LOG OF ABANDONMENT PROCEDUR	d structure.	and show
(4)	TYPE OF WORK: (If more than one) 2.2	thickness of aquifers and the kind and nature of the material in eq with at least one entry for each change of information.	ich stratum	penetrated
	Abandoned C New well 305 Method: Dug C Bored C	MATERIAL.	FROM	70
	Despend G Cable XX Driven G Reconditioned G Rotary G Jetted G	Fill material	0	8_
		Yellow silty sand grading from fill-clay Tan-gray silt-bound sand and gravel	<u>8</u> 23	23 66
(5)		Proven coarse sand w/oravel increasing w/dth		78
	Drilled 182 feet. Depth of completed well 180 ft.	Gray-tan Till	78	96
(6)	CONSTRUCTION DETAILS:	Gray sand & cirvl w/large cobbles, w-bearing		103
	Casing installed: 16 Diam. from +2 ft. to 149 ft.	Gay Till	103	114
	Weided Diam. from tt. to the the term of t	Gray to brun coarse sand & crv1, w-bearing	114	132
	Threaded	Gray fine to medium coarse sand w/silt	132	147
	Perforations: Yes No 2	Gray coarse sand & gravel, water-bearing	147	175
	Type of perforationsin. byin.	Grav silty clay w/little gravel	175	182
	perforations from R. to R.			
	R_ to R.			
	perforations from ft. to ft.			
	Screens: Yee No.			
	Menofecture's Name Johnson			
	ten Variable a con to a central			
	16" 0.050 155 170	 		
	Out of Bases Committee Com			
	Gravel placed from			
	Surface seat: Yes 2 No			
	Did any strate contain exceptio water? Yes Hotel Type of water? Depth of strate			
	Method of seeling strate off			
(7)	PUMP: Manufacturer's Name			
	Туре:НР			
(8)	assa mana a mana a Landaminon alamino			
	WATER LEVELS: above mean see level 2001 A. 417 n. Static level 63.8 ft. below top of well Date 5-2-95			
	Arteolea pressurelbs. per equere lach Date			
	Artesian water is controlled by(Cip, valve, etc.))			
	WELL TESTS: Orandous is amount water level is lowered below static level	Work started ACC11 16, 1995 18. Completed May 9,		10 30
	Nan a pump test made? Yes K No No Nyes, by whom? AGT	WELL CONSTRUCTOR CERTIFICATION:		
	/leid:500_ gel./min. with44.59_ ft. drawdown after24 hrs.	I constructed and/or accept responsibility for constr		
		and its compliance with all Washington well const Materials used and the information reported above a		
	Recovery date (lime taken as zero when pump turned off) (water level measured rom well top to water level)	knowledge and belief.		
1	Imo WeterLovel Time WaterLovel Time WaterLovel	NAME Holt Drilling 10621 Took Road E	ast	
	min 84.65 5 mln 80.50 60 min 66.67	(PERSON, PIRM, OR CORPORATION)	(TYPE OR	PRO(T)
	min 83.10 10 min 77.32 125 min 64.98 min 82.18 20 min 73.11 203 min 64.56	Address Puyallup, WA 98372		
	Dete of least 5-20 to 21-95	0 1 1/1/		
		(Signed) A Analog HW License No	<u>, 1099</u>	
	inter test	Contractor's		
	decise flow	No. FELTYTE 68 05 Date 7 - 9		10.96
_	519	-		





completed in three of the four aquifers that lie beneath the Plateau Upland: Zones II, III, and IV.

Aquifer Zone II - Plateau Wells 1R. 2, 10, and Proposed Wells 2.2, 15, and 16

- Aquifer Zone II transmissivity ranges between 5,000 and 300,000 gallons per day per foot (gpd/ft), and thickness ranges between 5 and 150 feet.
- The aquifer system is bounded by the Plateau margins to the north, east, and west, and a bedrock boundary exists to the south and southeast of the North Fork Channel.
- The central portion of the Plateau near the North Fork receives most of the recharge. The general direction of ground water flow in Aquifer Zone II is northward between District Wells 10 and 15. North of District Well 10, ground water flows east and west toward the Plateau margins.
- The hydraulic gradient in Aquifer Zone II is approximately 0.001 to 0.002 between District Wells 10 and 15.

Aguifer Zone III Plateau Wells 6 and 11.1

- Aquifer Zone III transmissivity ranges between 11,000 and 45,000 gpd/ft, and thickness ranges between 20 and 100 feet.
- Data are insufficient to determine aquifer boundaries; however, it is likely the aquifer is bounded by bedrock to the south near the North Fork Channel.
- The aquifer is recharged in the central portion of the Plateau. The direction of ground water flow is away from the north-south ground water divide and appears to be eastward in the vicinity of Well 11.1. At Well 6, ground water flows to the west.
- The hydraulic gradient in Aquifer Zone III is approximately 0.001 eastward at Well 11.1 and approximately 0.003 westward at Well 6.

Aquifer Zone IV Plateau Wells 4, 5, and 11.2

 Aquifer Zone IV transmissivity ranges between 14,000 and 42,000 gpd/ft, and thickness ranges between 90 and 200 feet.

AGI 15,287.015 June 24, 1998



4.3.3 Additional Data Needs

To maintain the inventory of potential sources of contamination, the following data need to be collected and included during future risk analysis updates:

- Status of previously identified potential contamination sources
- New potential contamination sources

4.4 WHPAS AND POTENTIAL CONTAMINANTS

Figures 4.1 through 4.6 show the WHPAs delineated for the District's production wells and the location of potential contaminant sources. Each WHPA and the risk from potential contaminant sources are described in the following sections.

4.4.1 Plateau Aquifer Zone II

WHPAs for District Wells 1R, 2.1, 2.2, 10, 15, and 16 are contiguous, so they were evaluated as one well field; the composite WHPA is shown in Figure 4.1. From the proposed District Well 16 location at the northern limit, the combined WHPA fans over 30,000 feet to the south-southwest and over 22,000 feet to the southeast. The Klahanie housing development, two regional thoroughfares, one powerline, and one gas line lie within this WHPA. Potential sources of contamination, identified by yellow numbers on Figure 4.1, include:

- No. 8 Natural gas line right-of-way where herbicides may be used for maintenance.
- No. 10 Active fire station which has an active diesel underground storage tank.
- No. 11 Powerline right-of-way where herbicides may be used for maintenance.
- No. 12 Regional thoroughfare where hazardous materials may be spilled in a truck accident and where herbicides may be used for maintenance.
- No. 29 Junior High School where degreasers and cleaners are used for maintenance.
- No. 32 Sanitary sewer pipes which could break and leak contents (not identified by a yellow number on Figure 4.1 because of the widespread nature of potential source).

AGI 15,287.015 June 24, 1998



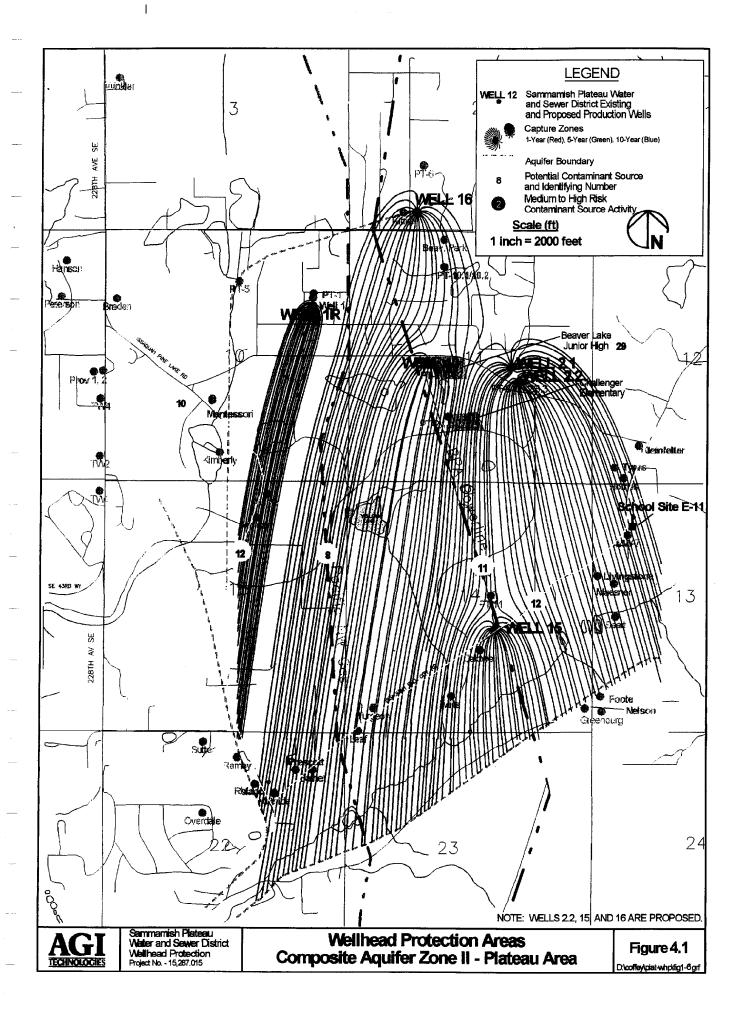
No. 33 - Residential septic systems which could either overflow or leak and discharge to soil before adequate biodegradation occurs (not identified by a yellow number on Figure 4.1 because of the widespread nature of potential source).

Risk assessment for the above activities shows no high or medium-risk activities.

4.4.2 Plateau Aquifer Zone III

District Wells 6 and 11.1 were evaluated separately because they are not contiguous, as shown on Figure 4.2. The Well 6 WHPA extends approximately 3,600 feet to the east in a relatively narrow, 500-foot wide fan. No potential sources of contamination were located within or near this WHPA. The Well 11.1 WHPA extends approximately 2,000 feet uniformly in a radial pattern and encompasses the Sammamish Plaza shopping complex. Potential sources of contamination identified by yellow numbers on Figure 4.2 include:

- No. 1 Removed underground storage tank, which is not on the Department of Ecology (DOE) leaking underground storage tank list.
- No. 2 Location of illegal drug laboratory, which was removed from the DOE contaminated site list.
- No. 3 Inglewood Junior High School, which may store hazardous laboratory chemicals which could spill.
- No. 4 Removed underground storage tank, which is not on the DOE leaking underground storage tank list.
- No. 6 Active underground storage tanks, which are not on the DOE leaking underground storage tank list.
- No. 7 Removed underground storage tank, which is on the DOE leaking underground storage tank list.
- No. 8 Natural gas line right of way where herbicides may be used for maintenance.
- No. 9 One active and one removed underground storage tank, which are on the DOE leaking underground storage tank list.
- No. 11 Powerline right-of-way where herbicides may be used for maintenance.



SOUND ANALYTICAL SERVICES 4813 PACIFIC HWY. E. TACOMA, WA 98424 (206) 922-2310 FAX (206) 922-5047 WATER BACTERIOLOGICAL ANALYS

SAMPLE COLLECTIC If Instru			N BACK OF GC uple will be reje	
		ECOLLECTED 方:02 AM 図PM	Kira	
TYPE OF SYSTEM PUBLIC INDIVIDUAL (serves only 1 residence)	F PUBLIC SYST	EN CONPLE		CINCLE GROUP
NAME OF SYSTEM				
SPECIFIC LOCATION WHE	Ur11 3,	2		
(ie, kitchen tep @ school, fin	e station, fountain)	O.	ELEPHONE NO. NY () ···*/·	5752
manage = 63		C < E	/ENING ()	
SAMPLE COLLECTED BY:		1 -	RESEARCH CONSTRAIN	•
SOURCE TYPE:	STREY //19	~-	• • • • • • • • • • • • • • • • • • • •	<u> </u>
STANCE NAME			PURCHASED or INTERTIE	COMBINATION or OTHER
SEND REPORT TO: (Print P				
AGI TO I		Allo	* T C-	Hey
Po Pox	1158			
- Harlor			WASHINGTO	18335
		# 1		£****
		i o i	Tier:	
4.	da ma tin			
E Weis				
	633)		•
CECTOCICS			t an any	36 35 50 November 1
MF . I	MPN	PA	(MAC)	
		ig (€ Eo	California and Control of Control	-)100-etg.
CO DO CO			TO THE PARTY OF	
	Casa-		·	
<u>G</u>			Ö	
TI JUNEATIBRACTORY, CA		TER SMALE		ATIEFACTORY,
REPEAT [E. Cali present	E Cost	boom C	collicens absent
1 ABQUIRED U	Food present I SIDE OF GREEN	Food at	CPLANATION OF I	MATE .
	3 70	1. 1.		
and the second of the second o		AG	VIE	ACCT. I
	()			

SOUND ANALYTICAL SERVICES, INC.

WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS

DO NOT WRITE IN SHADE			OXES NUI	MBERED	1 THRU 13, SEE 1			NS
LABORATORY NUMBER. 107のミスラブ		LABORATORY REPORT (Do Not Write Inside This Box)						
DATE RECEIVED	Tests		MCL	Less Than	Result	Units	Compliance Yes No	Chemist Initials
1. Date Collected	Antimony	Sb	0.006		AND	mg/L		PR
5/21/96	Arsenic	As	0.05		OCHOLO	mg/L		140
2. System Name:	Barium	Ba	2.0		ND	mg/L	/	PH
The same a second same	Beryllium	Ве	0.004		NO	mg/L	/	أبماكم
3. System ID 4. Circle Group	Cadmium	Cd	0.005		ND	mg/L	ノ	PB
(J.7.) 2 (A) B	Chromium	Cr	0.1		ND	mg/L	/	PH
5. County: K, 1.7	Copper	`Cu	1.3 🔻		M	mg/L	/	PP
6. Source Type: (circle)	Iron	Fe	0.3		NP	mg/L	/	1/4
Surface (Well)	Lead	Pb	0.015 *		ND	mg/L	/	P.V.
Spring Purchase	Manganese	Mn	0.05		0.086	mg/L	/	PP
7. Sample Taken (circle)	Mercury	Hg	0.002		ND	mg/L	/	10
Before After	Nickel	Ni	0.1		ND	mg/L	/	71
Treatment Treatment	Selenium	Se	0.050		ND	mg/L	/	PA
8. Source No.: Source Name:	Silver	Ag	0.1		ND	mg/L	1	PH
1003 B 8 C A	Sodium	Na	None		5.0	mg/L		r'r
10. Collected By: ne day /A:1	Thallium	π	0.002		NP	mg/L	/	بيرام
Telephone: () % 7 , *** **	Zinc	Zn	5.0		ND	mg/L	/	Ph
11. If taken after treatment, circle:	Hardness		None		70	mg/L		110
Fluoridation Chlorination	Conductivity		700		140	umhos	/	KK
Filtration Other	Turbidity		1.0		0.2	עוא	/	KK
Water Softener Type	Color		15.0		ND	Units	/	KL
12. If taken from distribution, indicate address	Chloride	Cl	250		3	mg/L	✓	11
Name:	Cyanide	CN	0.2		Ni)	mg/L	/	LE
	Fluoride	F	2.0		NI)	mg/L	1	RK
13. Party to pay for testing:	Nitrate	as N	10.0		0.16	mg/L	/	LK
Name:	Nitrite	as N	1.0		ND	mg/L	V	L.K
Address:	Sulfate	SO.	250		9	mg/L	V	LK
and the same of the	TDS		500		120	mg/L		1:10
Telephone: ()	LABORATORY				1 = 11 = 1			
BOLKERLY MANNEY	Laboratory State	V		*		Date of Re		
S. High in Hall a water	F - 12-7977		HER			44.6		6-

MCL - Maximum Contaminant Level

Reference SOP #SAS-0513

Please Print Plainty

__LISE HEAVY PENCIL

Health Services Division PUBLIC HEALTH LABORATORIES 1610 N.E. 150TH ST., SEATTLE, WA 96155-7224



WATER SAMPLE INFORMATION FOR RADIATION CHEMICAL ANALYSES

コ	UMBER .	SYSTE	M NAME:			T	SYSTEM	1.D. NO.	SYSTEM CLASS	SOURCE NUMBER
_					renderi	IED.	MEU		(circle one)	NEW
0	_1_0_ <u>5261</u> _	_ SAM	MAMISH PLA		7	. •	NEW		COUNTY	
In II	aut u pa da maggaj sig	vicus cui c	skyman osomblymess k	17 Ynn	1 1	No	П			
l ye	s, what was the lab	oratory nu	mber of the previous	sample?			== ==		KING # Sample was drawn from	
		RFACE _	3. WELL	if sounce is	LAKE OR STR	EAM, ENT	ER NAME		IF SAMPLE WAS DRAWN FROM IT WAS COLLECTED FROM SY	STEM AT: (ADDRESS)
TYP	'E: 2. SP	RING _	4. PURCHASE							
				I						
		TE OF FINA PORT	L					SENO REF	ORT TO: (PRINT FULL NAME & ADD	PAESS)
			06106	196						
	L		<u> </u>	<u>/ </u>		_	RON	LITTLE	HAME	
	DATI	E COLLEC	TED DATE RE	CEIVED			SAM	HZIMAM	PLATEAU WATER/S	EWER
	05_	<u>/_21_/</u>	96 05 /2	3_/_96_		-	151	0 - 228	th AVE. S.E.	
							ISS	AQUAH	9802	9
								CITY		ZIP COOE
_						n	PLEPHONE	206	<u>, 851-5562</u>	·
										•
				(0	LABORAT TIRW TON 0					
		LESS	AESIA IS		·MCI.	COMP	LIANCE	CHEMIST	1	
_	ANALYSES	(FEATE	pCI/L		pCi/L	YES,	NO NO	MITALS	LABORATORY	SUPERVISOR
	.ss Alphe			<u> </u>		<u> </u>		14.	()Q-() (Name or	Initials)
U	ranium					<u></u>		£	VBR TE	jumi 66
	ross Alpha inus Uranium			• •	15		•	·	CHARGE: 450.00+	100 - 100 a
R	a dium-226				. 3				RH	ALIMAY TOTA
B	ndium-228								REMARKS:	,
	adium-226 Plus							 	ADDITIONAL COP	Y TO:
R	RANN,		125 F 25	06.11	5_		· · ·	M5/BR	SCOTT COFFEY	
1 <u>r</u>	(/110%/-/42		175 = 50	PUL				אמוןניית	AGI TECHNOLOGI	ES
								<u> </u>	P.O. BOX 1158	
ļ									GIG HARBOR, WA	98335
⊥ _α	rose Bets		-ND	. •	50	V		16		
30	Irontium-89				80					
S	Ironlium-90				8					
C	esium-134				. 60				_	
	dine-131								•	
L				•	3					•
	itium				20,000			 		
<u> </u>					· · · · · · · · · · · · · · · · · · ·			<u> </u>	•	
			,					ļ		
i		1 1		ļ					•	

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Sammamish Plateau Water &

Date: June 6, 1996

Sewer District

Report On: Analysis of Water

Report No.: 56831

IDENTIFICATION:

Sample received on 05-22-96

P.O. No. 478

ANALYSIS:

Lab Sample No. 56831-1

Client ID: Well 2.2

ICP Metals Per EPA Method 6010 Date Analyzed: 5-23-96 Units: mg/L

<u>Parameter</u>	Result	POL
Calcium	15	0.50
Potassium	3.4	0.50
Magnesium	4.8	0.10

General Chemistry Units: mq/L

<u>Parameter</u>	Method	Result	POL
Bicarbonate (as CaCO ₂)	SM 2320B	65	5

PQL - Practical Quantitation Limit

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

SAMMAMISH PLATEAU WATER & SEWER DISTRICT 1510 228th Avenue S.E. Issaquah, Washington 98027

WELL NO. 4

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

TABLE OF CONTENTS

- Susceptibility Assessment Survey Form
- Sammamish Plateau Well 4 WHPA Capture Zones
- Well Log
- Elevation Illustration
- Water Facilities Inventory Form
- Inorganic Chemical Analysis 1989 1993

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.1

IMPORTANT!

Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

System Information	
Well owner/manager: SAMMAMISH PLATEAU WATER + SEWER	Net
Water system name: SAMMAMISH PLATEAU WATER & SEWER C	0/3/. V.c.
County: KING	1131
Water system number: 409009 Source number: 504	
Well depth: 714 (ft.) (From WFI form)	
Source name: WF/1 #4	
WA well identification tag number:	
well not tagged	
Number of connections: 9000 Population served: 26,000	
Township: 25 N Range: 06E	,
Section: 34 1/4 1/4 Section: SW/WW	
Latitude/longitude (if available):	
How was lat./long. determined?	
global positioning device survey topographic map	
* Please refer to Assistance Packet for details and explanations of all questions in Parts II thro	ough V. 🦳
PART II: Well Construction and Source Information	
1) Date well originally constructed: 3/23/70 month/day/year	
last reconstruction:/ month/day/year	
information unavailable	

Survey Form Ver. 2.1 page I

2) Well driller: KICHARDSON WELL DRILLING	
P.O. Box 2266	
TACOMA, Wn. 98444	
well driller unknown	
3) Type of well:	
X_Drilled: rotary bored cable (percussion) Dug	
Other: spring(s) lateral collector (Ranney)	
driven jetted other:	
Additional comments:	
4) Well report available? XYES (attach copy to form) NO	
If no well log is available, please attach any other records documenting well construction; e.g. be logs, "as built" sheets, engineering reports, well reconstruction logs.	ring
5) Average pumping rate: 625 gpH (gallons/min)	
Source of information: WATER FACILITIES INVENTORY	
If not documented, how was pumping rate determined?	
Pumping rate unknown	
6) Is this source treated?	
If so, what type of treatment:	
disinfection filtration carbon filter air stripper \(\sqrt{} \) other	
Purpose of treatment (describe materials to be removed or controlled by treatment):	
CHLOZINATION FOR ODOR CONTROL.	
·	
7) If source is chlorinated, is a chlorine residual maintained:YESNO	
Residual level: (At the point closest to the source.)	

Survey Form Ver. 2.1 page 2

PART III:	Hydrogeologic Information
-	op of open interval: [check one]
<	20 ft 20-50 ft 50-100 ft 100-200 ft × > 200 ft
in	oformation unavailable ('<' means less than: '> ' means greater than)
	round water (static water level):
_ <	20 ft 20_50 ft 50_100 ft / > 100 ft
fl	owing well/spring (artesian)
How	was water level determined?
<u>×</u> ,	veil log other:
de	epth to ground water unknown
3) If source i	s a flowing well or spring, what is the contining pressure:
	psi (pounds per square inch)
· 	or feet above wellhead
4) If source i	is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated rece:YESNO NA
5) Wellhead	elevation (height above mean sea level): 360 th
	was elevation determined? topographic map Drilling/Well Log altimeter
	other: HYDRAULIC PROFICE MAP
_	information unavailable
6) Contining report descr	g layers: (This can be completed only for those sources with a drilling log, well log or geologic ibing subsurface conditions. Please refer to assistance package for example.)
\times	evidence of a confining layer in well log
	no evidence of a contining layer in well log
o f t i	he open interval? YES NO OF THE COWEST CONFINING LAYER.
-	information unavailable

Survey Form Ver. 2.1 page 3

7) Sanitary setback:	
< 100 ft* 100-120 ft 120-200 ft > 200 ft * if less than 100 ft describe the site conditions:	•
8) Wellhead construction:	
wellhead enclosed in a wellhouse	4
controlled access (describe): Locked en +18	PANCE/EXIT
IN WELLHOOSE	
other uses for wellhouse (describe):	
no wellhead control	
9) Surface seal: 18 ft	
< 18 ft (no Department of Ecology approval)	('<' means less than)
< 18 ft (Approved by Ecology, include documentation)	('<' means less than)
∑ > 18 ft	('> 'means greater than)
depth of seal unknown	
no surface seal	
10) Annual rainfall (inches per year):	
$_{-}$ < 10 in/yr $_{-}$ 10-25 in/yr $_{+}$ > 25 in/y	·r

urce	
ns)	
)	
movement:	
<u>620 (ft)</u>	
_880(ft)	
en interval?	
(ft)	
s surface water body within the 6 mornitify on map).	ith time of trave
atment lagoon, or holding pond located NO (mark and identify on map).	d within the 6
	_
	
**	_
	_

PART V: Assessment of Water Quality

 Regional sources of risk to ground wa 	ater:	ater
---	-------	------

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month 1 year 5 year unknown
likely pesticide application	
stormwater injection wells	No No No
other injection wells	No No No
abandoned ground water well	<u>V</u>
landfills, dumps, disposal areas	<u>No No No — — — — — — — — — — — — — — — —</u>
known hazardous materials clean-up site	No No No
water system(s) with known quality problems	\tau \tau \tau \tau \tau \tau \tau \tau \tau
population density > 1 house/acre	YES YES YES_
residences commonly have septic tanks	
Wastewater treatment lagoons	<u>No</u> <u>No</u> <u>No</u>
sites used for land application of waste	<u> 100 No 100</u>
Mark and identify on map any of the risks listed at travel boundary? (Please include a map of the we Please locate and mark any of the following.)	
If other recorded or potential sources of ground wa travel circular zone around your water supply, plea	

Please indicate the occurrence of any test results since 1986 that meet (Unless listed on assessment, MCLs are listed in assistance package.)	the foil	owing conditions:
A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
Results greater than MCL	<u> </u>	. <u>≺</u>
< 2 mg/liter nitrate	$\overline{\times}$	
2~5 mg/liter nitrate	<u></u> <u>≺</u>	$\overline{\times}$
> 5 mg/liter nitrate		$\overrightarrow{\nabla}$
Nitrate sampling records unavailable		7
B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL	<u> </u>	$\stackrel{\sim}{\sim}$
VOCs detected at least once		\Rightarrow
VOCs never detected	X	
VOC sampling records unavailable	/_	
C. EDB/DBCP:	YES	NO.
(EDB MCL = 0.05 ug/l or 0.00005 mg/l . DBCP MCL = 0.2 ug/l or 0.0002 mg/l .)		
EDB/DBCP detected below MCL at least once		
EDB/DBCP detected above MCL at least once		
EDB/DBCP never detected		
EDB/DBCP tests required but not yet completed		
EDB/DBCP tests not required		
D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected		<u>o</u>
(pesticides and other synthetic organic chemicals)		
Other SOC tests performed but none detected		
(list test methods in comments		
Other SOC tests not performed		
If any SOCs in addition to EDB/DBCP were detected, please, identify and date	. If oth	ier SOC tests were
performed, but no SOCs detected, list test methods here:		
		· · · · · · · · · · · · · · · · · · ·

2) Source specific water quality records:

Bacterial contamination: YES NO	
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	
Source sampling records for bacteria unavailable	
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution	
The following questions will help identify those ground water systems which may not be accurated represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, CFR areas should be used as a preliminary delineation of the critical time-of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.	
I) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)	
¥ YES NO	
Describe with references to map produced in Part IV:	
2 PERENNIAL STREAMS Flowing into and out of a large	
2 PERENNIAL STREAMS Flowing into and out of a large wetland in the north third of the capture zones. Steep hill	
going up to the south.	
2) Aquifer Material:	
A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?	
YES 🔀 NO	
B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravei?	
YES NO	

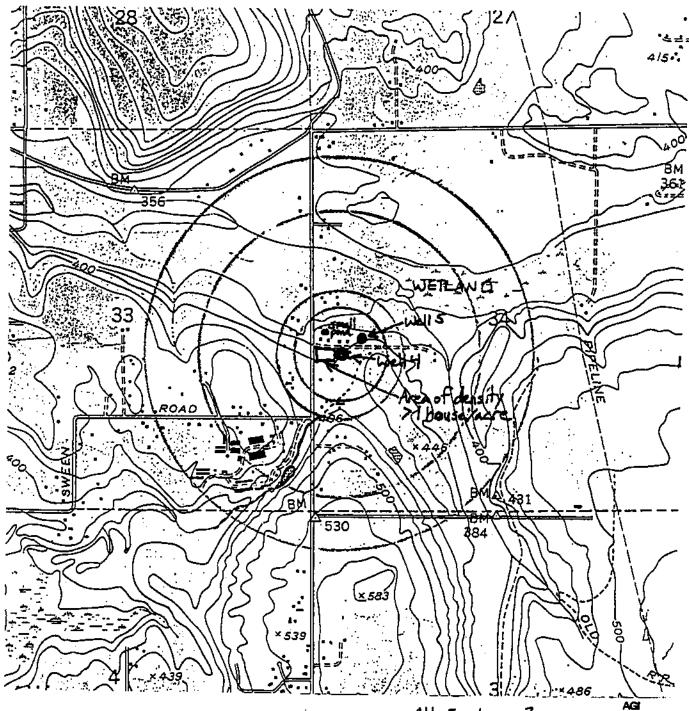
	ngs.) ✓		
	YESNO		
4) A	are there other high capacity wells (agricultural,	municipal and/or industrial) located within the CF	Rs? Y
	a) Presence of ground water extraction wells	removing more than approximately 500 gal/min v	vithin
		YES NO unknowπ	
	< 6 month travel time	<u> </u>	
	6 month-1 year travel time	<u> </u>	
	1-5 year travel time	<u> </u>	÷ .
	5-10 year travel time		•
	b) Presence of ground water recharge wells	dry wells) or heavy irrigation within	
		YES NO unknown	
	< 1 year travel time	<u> </u>	
	1~5 year travel time		
	5-10 year travel time		
		geographic conditions that you believe may affect where possible, reference them to locations on the second contract of the second contra	
		•	
		•	
			-
			-
	-		
	-		
	-		

Suggestions and Comments

Oid you attend one of the susceptibility workshops?	X YES	NO	
Did you find it useful?	<u> </u>	NO	
Did you seek outside assistance to complete the assessmen	nt? 🐰	YES	NO
			• • • • • •
This form and instruction packet are still in the process of questions will help us upgrade and improve this assessment confusing or problematic please let us know. How could the made clearer? Did the instruction package help you find the assessment? How much time did it take you to complete the assessment without additional/outside expertise? Do you freezeerience? Any other comments or constructive criticisms.	t form. If you his susceptibil e information the form? We feel the asses	u found particular lity assessment b needed to comp are you able to co sment was valual	sections e improved or lete the implete the lete as a learning
<u> </u>			
		<u></u> -	
			
			
		· · · · · · · · · · · · · · · · · · ·	
		<u>.</u>	
·			<u>. </u>
	·· ·····		W-44-

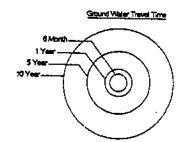
Survey Form Ver. 2.1 page 10

Sammamish Plateau Water & Sewer District Well 4



LEGEND

All Capture Zone areas served by residential septiz tanks.



SCALE (FT)

0 1000 2000 3000 4000 5000

Original and Sixt Copy with Divisions of Water Management of WATER WELL REPORT and Copy Owner's Copy of the State of State of Washington with the Copy of the State of State of Washington with the Copy of the State of State of Washington with the Copy of the State of State of Washington with the Copy of the State of State of Washington with the Copy of the State of State of Washington with the Copy of the State of State of Washington with the Copy of the State of Stat

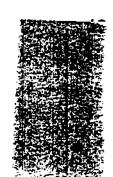
LOCATION OF WELL CONTRACTOR TO THE PROPERTY OF THE PERSON 6 DMESSIOCS 6 Constitution having Sol Salara والعرب فيعرف والمهيئة والمتناطرة CONCLUDE FOR STY SECTION क्षांद्रवसूत्रवर्षेत्रकाते । १८०० । असी अस्ति । हार्तहरू स्ट्रांस स्ट्रांस स्ट्रांस Service Formation TAKE LEVELS 1. 5 TOTAL TRIBUSE TYTE PATTER A PROPERTY OF THE PROPERTY OF

THE VILLERY AND ASSESSMENT OF THE PARTY OF T

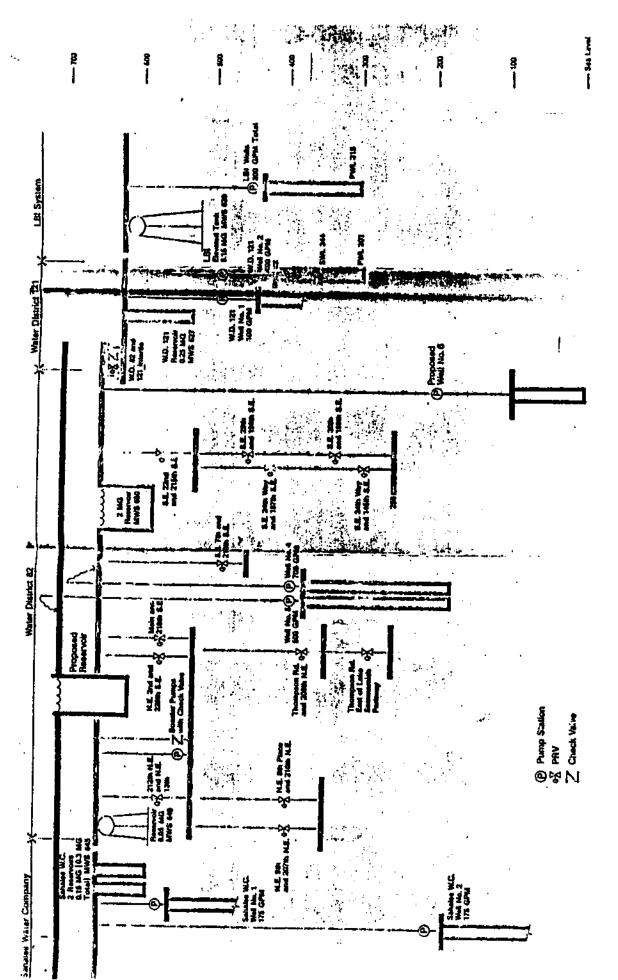
opli	10373
Per.	9719
FSI.T. T	ng.

STATE OF WASHINGTON DEPARTMENT OF CONSERVATION DIVISION OF WATER RESOURCES

TSIT.	rog		
	. Driller		
l	Driller's record		
ource.,			
ocation	n: State of WASHINGTON	3/1	
Cov	intyKing	יול . דע	
Are	a	_ <u> </u>	
	P		i
NW	14 SW 14 sec 34 T 25 N, R 6 👯		
eillin a	Co Richardson Well Drilling	Co It	Section C.
ر د د	dress P.O.Box 2266, Tacoma, WA	98444	
			33.0.70
Me	thod of Drilling <u>cable</u> Date King County Water District #		"'W' 1 A' '("A"
	•		
	iress_Issaquah, WA		
Aud st	urface, datum		***************************************
WL:	175 Date March 16 19.70	Dims.:12	<u> </u>
		<u> </u>	1
	•		
(Trainsteri	MATERIAL nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if repr	orted. Give d	lepths in fer
Tra (Tra materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if repreductive datum unless otherwise indicated. Correlate as Following log of materials, list all casings, perforation	necessary, in orted. Give d	(feet) parentheses lepths in fer
Tra: materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if repredesaring an enter a local literal correlate as Following log of materials, list all casings, perforation Municipal supply	necessary, in orted. Give d	(feet) parentheses lepths in fer
Tra (Tra materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if repride surface datum unless otherwise indicated. Correlate e. Following log of materials, list all casings, perforation Minicipal supply Top soil	necessary, in orted. Give depth stratigns, screens, et	(feet) parentheses lepths in fer sphie column
Tra (Tra materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if repredesaring an enter a local literal correlate as Following log of materials, list all casings, perforation Municipal supply	(feet) necessary, in orted. Give c ofth stratigms, screens, et	(feet) parentheses lepths in fer
Tra (Tra materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if reprid-surface distum unless otherwise indicated. Correlate as. Following log of materials, list all casings, perforation Municipal supply top soil hardpan & boulders sand cemented & gravel	necessary, in orted. Give depth stratigns, screens, et	(feet) parentheses lepths in fer sphie column
Tra (Tra materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if repredentation of the state of the	(feet) necessary, in wired. Give of with stratigri s. servens, et O m 3	(feet) parenthrees lepths in feet sphte column c.) 3
Tra (Tra materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if reprid-surface distum unless otherwise indicated. Correlate as. Following log of materials, list all casings, perforation Municipal supply top soil hardpan & boulders sand cemented & gravel	(feet) necessary, in orted. Give c oith stratign s, screens, et 0 m 3	greatheress parentheress (epths in fee sphte column c.) 3 43 72 79
Tra (Tra materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record atotic level if representation of the surface datum unless otherwise indicated. Correlate as Following log of materials. Hat all casings, perforation Municipal supply top soil hardpan & boulders sand cemented & gravel clay, yellow, gravel & sand	(feet) necessary, in orted. Give c oith straticra, servens, et 0 m 3 43 72	greatheress parentheress (epths in fee sphte column c.) 3 43 72 79
Tra (Tra materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record atotic level if representation of the control of the contro	(feet) necessary, in necessary, in rited. Give c eith stratign s, screens, et 0 m 3 43 72 79	(feet) parenthrees lepths in feet sphte column c.) 3 43 72 79 110
(Trai materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if representations and state in the state of the st	(feet) necessary, in orted. Give c with stratigre s, screens, et 0 m 3 43 72 79 110	(feet)
Tra (Tra materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record atotic level if representation of the control of the contro	(feet) necessary, in orted. Give c with straticra a, screens, et 0 m 3 43 72 79 110 118	(feet)
Tra (Tra materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if representation of the paraphrase desum unless otherwise indicated. Correlate as Following log of materials. Hat all casings, perforation Municipal supply top soil hardpan & boulders sand cemented & gravel clay, yellow, gravel & sand hardpan, brown clay & sand, yellow hardpan, brown clay & sand, yellow hardpan, brown clay, bu, gravel & sand gravel, sand & clay grey	(feet) necessary, in orted. Give c oith straticre s, screens, et 0 m 3 43 72 79 110 118 155	3 43 72 110 118 155 169
(Trai materi	nscribe driller's terminology literally but paraphrase as all water-bearing, so state and record static level if representations and state in the state of the st	(feet) necessary, in orted. Give c oith straticri s, screens, et 0 m 3 43 72 79 110 118 155 169	(feet)
(Trai materi	nscribe driller's terminology literally but puraphrase as all water-bearing, no state and record static level if repreded-surface datum unless otherwise indicated. Correlate a Following log of materials. Ilst all casings, perforation Municipal supply top soil hardpan & boulders sand cemented & gravel clay, yellow, gravel & sand hardpan, brown clay & sand, yellow hardpan, brown clay & sand, yellow hardpan, brown clay, bn, gravel & sand gravel, sand & clay grey clay (bn) fine sand & gravel gravel, course sand & some wat	(feet) necessary, in seried. Give coith straticre a, screens, et 0 m 3 43 72 79 110 118 155 169 190 2r 199	(feet)
(Trai materi	nscribe driller's terminology literally but puraphrase as all water-bearing, no state and record static level if repreded-surface datum unless otherwise indicated. Correlate a Following log of materials. Ilst all casings, perforation Municipal supply top soil hardpan & boulders sand cemented & gravel clay, yellow, gravel & sand hardpan, brown clay & sand, yellow hardpan, brown clay & sand, yellow hardpan, brown clay, bn, gravel & sand gravel, sand & clay grey clay (bn) fine sand & gravel gravel, course sand & some wat gravel, sand & clay grey	(feet) necessary, in orted. Give c oith straticri s, screens, et 0 m 3 43 72 79 110 118 155 169	(feet)
i materi klow ian	nscribe driller's terminology literally but puraphrase as all water-bearing, no state and record static level if repreded-surface datum unless otherwise indicated. Correlate a Following log of materials. Ilst all casings, perforation Municipal supply top soil hardpan & boulders sand cemented & gravel clay, yellow, gravel & sand hardpan, brown clay & sand, yellow hardpan, brown clay & sand, yellow hardpan, brown clay, bn, gravel & sand gravel, sand & clay grey clay (bn) fine sand & gravel gravel, course sand & some wat	(feet) necessary, in seried. Give coith straticra, screens, et	(feet)
(Trai materi	nscribe driller's terminology literally but puraphrase as all water-bearing, no state and record static level if repreded-surface datum unless otherwise indicated. Correlate a Following log of materials. Ilst all casings, perforation Municipal supply top soil hardpan & boulders sand cemented & gravel clay, yellow, gravel & sand hardpan, brown clay & sand, yellow hardpan, brown clay & sand, yellow hardpan, brown clay, bn, gravel & sand gravel, sand & clay grey clay (bn) fine sand & gravel gravel, course sand & some wat gravel, sand & clay grey clay, grey & fine sand	(feet) necessary, in seried. Give coith straticra, screens, et	(feet)

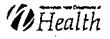


1013- 1013-	. Material	From (feet)	To (feet)
	Depth forward		
	sand, cemented & gravel	271	280
	rock, gravel & grey clay	280	330
	clay, sand & gravel	330	35
	clay, grey sand & gravel	351	37
	sand, cemented & gravel	370	38
	glay gray & gravel XXX	380	39
	sand cemented & gravel	397	41
	clay grey, some sand & gravel	411	43
	clay, grey & fine sand	433	54:
	clay, dry.grey	542	570
	sand, fine & clay grey	570	574
	clay grey	574	59.
	sand f & c & gray clay	595	649
	clay, sand grey	649	65
	sand, clay grey & some clay	651	686
	gravel, clay grey & sand .	. 686	689
	sand, cemented & gravel clay	689	696
	sand & gravel, water formation	696	717
	Casing: 12" from 0 to 680'		
	Screens: UOP Johnson, stainle		1
	10 SS 100 from 697' b	٠ 717 ٥	
	Surface Seel: cement 20;		-
	Pump test: 750 gpm with ? DD	afger 2	4 hrs.
	800 broken suction	could	not ge
			-
		7. 1.	
		•	7 8-4-7-4
		•	



i

.



WATER FACILITIES INVENTORY (WFI)

OATE DENEM	 AR F O1712794
PER 1	1994
kao'd	

Environmental Health

Read Instructions on back before completing

		<u> </u>	, .				. DAI	E HODATE!	9: 61/11/ 09
I. SYSTEM	DO NO. 2 COUNTY	GROU	P TYPE	WRIA	WFI COMPLET	ED 64			TITLE
<u>-6.193</u>			<u> </u>	1 9					
3. SYSTEM	NAME	* *** *			DAY TELEPHO	NE		GATE	
		AU MATER E S	EMES						, , _
STREET AC			•	11	B. SUBMITTED	'~-'	W SYSTEM	NO CHANGE	REACTIVATE
	228TH AVE	SF.				 	STEM NAME CHANGE	UPDATE	DELETE
r.u. dox (#	APPLICABLE)				OLD SYSTEM	NAME - EN	TER ONLY IF CHANGIN	IG WITH THUS WIT	
CITY						,		- 4.	•
•		STAT	E 20 CODE		SYSTEMS SEL	AVING ANY	Y RESIDENTS (PEO THE SYSTEM), COMPL	PLE LIVING IN A	
LSSA	S NAME (LAST, FIRST)	WA	9902		9. NUMBER A		30.00 M		
			OWNER NO	:	COMMECT	10115		POPULATION	
STREET AC	AHISH PLATE	AU HAIER F	300	'' 			The Constitution of	ু পঞ্জ বিল্ কৃতি ক্ষেত্ৰ	
	ura .	بموريتهم فإزرا فيأفي ويواد		- 1	्रां संस् र ेष्	884	Sam (127)	25,6	٠ 7 , ٢٠٠٠
	228TH AVE.	<u> </u>	· · ·						
	ो क्लिक्ट के देखा _र	والمراجع والمنافع والمنافع والمنافع					Y NON-RESIDENTS (, ETC.), COMPLETE T		
CITY		STAT	E ZIP COOE		11. NUMBER N	ON-RESIDE	NTIAL CONNECTIONS	1.15~5、1.70(確か会)が、	Section of the second
1554	- 14 % & - 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	le . Très altre viè an l	9802	,			ف وشائدها المال	No. of the last last last	
	CONTACT PERSON	Francis Linearing Control	TILE		12 DATED AV			OPULATION	
RUMA	LD F. [[]]	E - MANAGER			SERVED #	OR EACH M	ONTH MAKE ENTRY P	OR EACH MONTH	
DAY TELEP	HONE WALLEY CONTRACT	EVENING TELEPHON		- New York	JAC (1944)	No.	is recording	AND SOLD SOLD SOLD	
226-	392-6254		· · · · · · · · · · · · · · · · · · ·		型·30 (1) (2)	MATE IN	The Transfer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
G. OWNER	ASHIP K ONE ONLY)	7. PREDOMINANT (CHECK ONE O		TIC	ing self all	78 <u>54)</u>	J. 43. 25.	一种独独的	
			Carl Carl and the Carl	\$ 110.00	12, DOES THE	SYSTEM SE	RVE AT LEAST 25 OF	THE SAME NON-RESI	DENTS
PRIV	ATE NON-PROPIE	Y RESIDENTAL	**************************************		POH 4 OH)	WORLE DATS	PER WEEX FOR AT U	EAST 180 DAYS PER 1	FEART
	ATE: FOR PROFIT		L 36		4000	' YE	S NO	MIT THE THE	***************************************
	NL GOVERNMENT	9USINESS/IN AGRICULTUR/	L/COMMERCIA	.					<u> </u>
WAT	ER DISTRICT)	LOOGING/FO	*		14. TOTAL NEX	MBER KONS METER	16TP	15. DISTRIBUTION RE TOTAL CAPACITY	
STAT	据 " The Table 19 19 19 19 19 19 19 19 19 19 19 19 19	SCHOOL/DAY	CARE 3	-		Same Free S		(C)	
FEDE		OTHER (CHAP			Я,	844		12.850	O OOO GALLONS
		Contraction of the Contraction o	 .			41.5			
18. DOH	17. SOURCE NAME	18. 50	(DCE 1	9. USE 20. :	21.	22. WELL	22 500005	A COURCE GC 1710	
SQUACE			EGGRY		REATMENT	DEPTH	CAPACITY 2	4. SOURCE LOCATIO	P.
NUMBER	UST UTELTY'S NAME FOR	Source 92F	3 4 8	- <u>- 1</u>	3 3 3	15 12 34	A CONTRACTOR	2000 x 30	· 通知 普里
	P SOURCE IS PURCHAS	SED OR	A MANEO	9	1 1			· 一、	
	INTERTIED; LIST SELLES AND NAME USING FOLL	OWING	' 2 E E .	E	ã ã	(F整整7)	(GPM)	1/4, 1/4 SEC.	TWP RNG.
	FORMAT: XXXXXXX /NAI EXAMPLE: 77050Y/SE/			3 8 8	300	-0.4		SECT NOT	F A A A
	tetaga ting	1	EPPRIO RAMETY NITRIE PURCHA PURCHA	SCHOOL IN	MOME OHLOMATIN FLIMATION FLUCHERATIC OTHER				SWIREV VDG EVAL
	AELL 1		֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓			15.	= 00 5	415 12	
502	HELL 2					154 132		#/NE 10 . H/SE 11	24N 06E
503	WELL # 5	x x		4	`{	716	1	W/5% 34	251 265
304	WELL # 4	. x			£	714		H/NH 34	25N 05E
205	HELL 6	x	11111	\ \ \ \ \ \	£	365	I I	E/SE 32	25N 05E
50a	WELL #7			[] x	.[][]	150	1	4	24N 06E
307	4FLL #9	x		111 1 1	1111	150	1 1	1	241 005
						. 30	""	., , ,	<u> </u>
]		
		MINIM	UM REQUIRED	BACTERIOLO	GICAL SAMPLI	NG SCHED	ULE		·
25.			26 JAN	FEB M	AR APR	MAY	AN AL	AUG SEP O	CT NOV DEC
			30	30 30	130	30	30 30	30 30 3	0 33 30
	VED SERVICES (PER PLANS)				DATE OF LAS	NATIMAE TE		Ú BA DA	он ию
	CAITICAL WATER SUPPLY SE		NO	QW MGMT A	REA?	YES	NO POR UNIO		
EFFECTIVE	DATÉ RETRO, CHANGES	SIGNATURE OF DO	H REVEWER					DATE	İ
								1	

SAPPARISH PLATEAU KATER & SEPER DISTRICT

WATER SAFFLE INFORMATION FOR INORGANIC CREMICAL AMALYSES - 1989

				, ,	•			
 168	FELL 1 E/4/69	YE11 2 4/10/69	FELL 4 4/10/89	KELL 5 4/10/89	VELL 6 7/17/89	KELL 7 7/17/69	FELL 0 4/10/29	. RC1
 E.	7.06	7.23	8.22	8,32	7.46	7.48	*7.05	
hrsenic	•0.010	.0.010	*0.010	*0.010	010.04	*0.010	•0.010	0.05
Ferlum	+0.25	.0.25	*0.25	.0.25	*0.25	*D.25	10.25	• • • • • • • • • • • • • • • • • • •
Cedislum	• 0.002	*0,002	10.002	*0.002	\$0,00	\$0.002	•0.00	0.01
Chromlum	*0.010	0.0.0	*0.010	.0.010	00.010	•0.010	+0.610	0.005
 Iren	*0.05	\$0.0\$	*0.05	\$0.05	\$0.05	0.05	\$0.0\$	0.3
 Leed	•0.010	*0.610	*0.010	010.01	010,01	40.010	010.00	0.05
Pergenese	010.04	•0.010	0.041	0.042	0.026	00.010	*0.010	0.05
Percury	•0.0010	•0.0010	.0.0010	•0.0010	.0.0010	*D.0010	*0.0010	0,002
Selenium	*0.005	*0.00\$	\$00.00	10.003	•0.005	•0.005	*0.005	0.0
Silver	*0.010	*0.010	*0.010	*0.010	.010.04	*0.010	0.010	0.05
Sodlum	410	•10	• 10	110	•10	10	0.	
Ferdness	60	87	63	[]	8	74	· _	
Conductivity	155	220	160	150	120	200	200	200
Turbidity	*0.1	*0.4	+0.2	•0.1	*0.1	. 2.0	•0.1	0.1
Color	*5.0	15.0	45.0	45.0	45.0	15.0	. 2.0	15.0
Fluoride	*D.2	* 0.2	*0.2	*0.2	•0.2	*0.2	.0.2	2.0
Filreto	-:	1.0.1	*0.2	¥0.2	10.2	9.1	*D.2	0 0
Chiorice	•10	410	0.	•10	910	•10	+10	250
Sulfeta								250

*PCL is the Fexison Contemisent Level Alloyed

*less Then

P. Treatite

(Note: Vell 7 nes re-tested for Iron & Turbidity and those numbers are listed above.)

BAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1990

I'I'EM	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WELL B	** MCL
	06/2/6	4/10/89	06/2/6	06/1/6	06/1/6	06/1/6	9/1/90	
pH	6.74	7.23	7.26	7.74	7.88	7.29	7.12	
Arsenio	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Barium	<0.25.	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	1.00
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
Chromium	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Iron	<0.05	<0.05	<0.05	<0.05	<0,05	<0.05	<0.05	0.3
Lead	<0.005	<0.0100	<0.005	<0.005	<0.005	<0.005	<0.005	0.05
Manganese	<0.010	<0.0100	<0.039	<0.037	<0.028	<0.010	<0.010	0.05
Mercury	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002
Belenium	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
Silver	<0.010	<0.0100	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Bodium	<10	<10	<10	<10	<10	<10	<11	
Hardness	79	87	58	58	15	72	72	
Conductivity	85	220	150	154	125	189	188	700
Turbidity	<0.2	<0.4000	<0.1	<0.1	<0.2	<0.1	<0.9	1.0
Color	<5.0	<5.0	<10.0	<10.01>	<5.0	<5.0	<10.	15
Fluoride	<0.2	<0.2000	<0.2	<0.2	<0.2	<0.2	<0.2	2.0
Nitrate	<1.3	<0.7000	<0.2	<0.2	<0.2	<0.2	<1.3	10.0
Chloride	<10	<10	<10	<10	<10	<10	<10	250
•								

PARTS PER MILLION

- < Less than Detectable Limits</pre>
- ** Maximum Contaminant Level

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1991

				-				
1.rem	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WELL 8	** MCI.
	7/12/91	7/12/91	7/12/91	7/12/91	7/12/91	10/61/2	7/13/01	2
					177-11	7/77/	16/21//	
p11	9.9	6.4	7 3	6 3				
Arsenic	<0.010	<0.010	010	7.0	/ 0	7.1	6.8	
Barium	<0.25	20.07	20.010	50.010	<0.010	<0.010	<0.010	0.05
Cadmium	2000	67.0	50.25	<0.25	<0.25	<0.25	<0.25	1.00
Chromium	2000	20.00	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
Lron	010.07	50.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
- Page	50.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.3
Manager	500.05	<0.005	<0.005	<0.00>	<0.005	<0.005	<0.005	0.05
West of the second	<0.010	<0.010	<0.018	<0.026	<0.023	<0.010	<0.010	20.0
Mercury	<0.0010	<0.010	<0.0010	<0.0010	<0.0010	<0.00	0100	0.03
selenium	<0.005	<0.005	<0.005	<0.00>	<0.005	000	0100.0	0.002
Silver	<0.010	<0.010	<0.010	<0.010	010	500.07	500.05	0.01
Sodium	7.	6.	Б	2	010.0	010.07	010.0>	0.05
Hardness	61	66	5.3		5	0.1	12	
Conductivity	180	370	*20	70	4.3	61	75	
Turbidity	200	2/3	777	130	120	190	210	700
Tarpration of the control of the con	0.6	0.6	. 4	<0.3	.3	b •	0.3	0 [
E COLOR	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< F	
r luor lde	<0.2	<0.2	<0.2	<0.2	<0.7	2000		- T.3
NICrate	1.2	<1.9	1.8	<0.2	<0.2	3.00	2.0.5	
Chloride	<10	<10	<10	<10	21	27.5	1.3	
				_	-	**	=	-

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS — 1992

ТТВН	WELL 1	WELL 2	P TIEM	WELL 5	WELL 6	WELL 7	HELL 8	** MCL
	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	7/12/91	
ри	7.0	7.3	7.93	8.4	B. 4	7 7	9	
Arsenic	<0.010	<0.01	<0.01	<0.03	10 07	, ,	0.0	
Barium	<0.1	<0.1	<0.1	- 0>	70:07	70.07	50.010	•05
Cadmium	<0.002	<0.002	<0.002	<0.00	7.00	1.05	50.25	1.00
Chromium	<0.05	<0.05	<0.05	<0.05	20.02 20.05	200.00	50.002	0.01
Iron	<0.05	<0.05	20 02	20.07	50.0	50.05	<0.010	0.05
Lead	<0.00	200	50.00	50.05	0.37	<0.05	<0.05	0.3
Handanese	700.07	20.005	<0.0025	<0.002	<0.002	<0.002	<0.005	0.05
Karran	10.02	10.02	0.043	<0.041	0.038	<0.01	<0.010	0.05
110010	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0010	0.002
	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
TACE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	0.06
SOCIUB	9.5	6.1	8.7	8.4	4.8	10	12	
dardness	85.	75	62	62	56	79	75	
Conductivity	180.	150	140	140	120	170	210	200
rurbidity	0.46	0.42	.33	0.32	06	32	2 0	200
Color	<5.0	<5.0	<5.0	<5.0	0 80	20 30		0,1
Fluorido	<0.5	<0.5	<0.5	<0.5	200	2 2	73.	13
Nitrate	1.0	<1.8	<1.0	<1.0	21.0		70.7	7
chloride	<20.	<20	<20	<20	<20	230		770
Sulfate	10.	<10.	<10.	<10	012	11	017	250
Copper	<0.02	<0.02	<0.02	<0.02	<0 0>	2000		250
Zinc	<0.05	<0.05	<0.05	<0.05	20.07	20.00		1.0
Aluminum	<5.0	<5.0	<5.0	<5.0	50.03	60.02		5.0
Calcium	.61	18.	18	18	16	2.5.6		
			T		-	**		

WANTER SAMPLE INFORMANTON FORTING ROANIC CHEMICAL ANALYSIS = 1998 ... SAMMAMISHIPLATEAU WATER AND SEWER DISTRICT

ITEM AND STATES	WELL 1	1 WELL 2 WELL 4 WELL 5	WELL 4		WELL 6	WELL 7 WELL 8		WELL 9	MCL
The American Section 1995	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3.2.93	
Arsenic	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05
Barium Santa	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1
Cadmium 💍 🐩 🔑	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	10.0,
Chromiuth : 100 100 100 100 100 100 100 100 100 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Copper	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.3
lron	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.17	0.3
HTTP://www.peag	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.05
Manganese 🚬 🚞	< 0.01	< 0.01	< 0.043	< 0.041	< 0.092	< 0.01	< 0.01	< 0.01	0.05
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.002
Selenium 💸 🐪	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01
Silver	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05
Sodium Sandara	9.1	9.3	9.0	1.7	8.4	9.5	10.	8.5	
Zinc	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	5
Hardness	78.	80	65	65	93	79	75	89	
Conductivity	190	150	160	150	210	190	190	160	700
Turbidity 💮 👔	0.10	0.49	0.17	0.15	0.1	0.1	0.14	0.43	1
Color	5.	5.	5.	5.	5.	5.	5.	5.	15
Chloride	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	250
Fluoride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	. 2
Nitrate : :	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.1	< 1.0	10
Sullate	< 10	< 10	< 10	< 13	< 10	< 10	< 10	< 10	250

LEGEND

< Less Than Detectable Limits

** Maximum Confaminant Level

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.2

IMPORTANT! Please complete one form for each ground water source (well, wellfield, spring) used in your water system.

Photocopy as necessary.

PART I:	System Inform	nation	
Well owner/1	manager :	Sammamish Plate	au Water & Sewer District
Water system	name :	Sammamish Plate	au Water & Sewer District
County:	King		
Water system Original Well	number:4 source numbe	409009 er SO4	Source number: New Replacement Well (Replaces
Well depth: _	855 (ft.) (F	rom WFI form)	
Source name:		Well 4R	
	ntification tag nu _ well not tagge	amber: <u>AAS</u> - <u>270</u>	
Number of co	onnections:	14358	Population served: 48,036
Township:	25N		Range:
Section:	34		1/4 1/4 Section: <u>NW1/4 of the SW1/4</u>
	gitude (if availak /long. determin		609 / -122.03
<u>x</u> _of	_ global positio ther: <u>Online Kin</u>	ning device g County imap - h	surveytopographic map ttp://www.metrokc.gov/gis/mapportal/iMAP_main.htm
* Pleas throug		ance Packet for de	etails and explanations of all questions in Parts II
PART II:	Well Construc	tion and Source I	nformation
1) Date well o	originally constru	ucted: <u>03</u> / <u>18</u> /	/ <u>04</u> month/day/year
	last reconstru	action://_	_month/day/year
	information	unavailable	

2) Well driller:	Stephen J Sch	<u>neider – Schnei</u>	<u>ider Equ</u>	<u>iipment I</u>	nc.		_
	21881 River R	load NE					
	St. Paul, Oreg	on 97137					<u> </u>
well driller	unknown						
3) Type of well:							
<u>x</u> Drilled:	<u>x</u> rotary	bored	cabl	le (percus	ssion) _ [Oug	
Other:	spring(s)	lateral colle	ector (Ra	anney)			
	driven	jetted	othe	er:			
Additional cor	mments:						
4) Well report availab	le? <u>x</u> YES (a	nttach copy to f	orm)	NO			
		ease attach any , engineering re					nstruction; e.g.
5) Average pumping	rate:	2,000		_(gallons	/min)		
Source of info	rmation: <u>Repla</u>	acement Well 4	R Const	ruction a	nd Testing	g Report (C	CDM, 2004)
If not docume	nted, how was	s pumping rate	determi	ined?			<u> </u>
_ Pumping ra	te unknown						
6) Is this source treate	ed?						
If so, what typ	e of treatment	:					
7.2		on carbon fi	lter a	air strippe	er othe:	r	
		be materials to					ent)·
-	,	ered to remove				oy treating	eric).
water is cinor	mated and mi	ered to remove	: Mangai	nese and	Arsenic		
7) If source is chloring	atad is a shlaw	ino rocidual ma	intained	4. Y VE		NO.	_
,		3 nnm free afte			_		,

PART III: Hydrogeologic Information

1) Depth to top of open interval: [check one]
< 20 ft 20–50 ft 50–100 ft 100–200 ft <u>X</u> >200 ft
information unavailable ('<' means less than; '>' means greater than)
2) Depth to ground water (static water level):
$_{-}$ < 20 ft $_{-}$ 20–50 ft $_{-}$ 50–100 ft $_{X}$ >100 ft
flowing well/spring (artesian)
How was water level determined?
well logX_ other:Measured to within 0.01 ft with electronic sounding device
_ depth to ground water unknown
3) If source is a flowing well or spring, what is the confining pressure:
psi (pounds per square inch) or feet above wellhead
4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source:YESNO
5) Wellhead elevation (height above mean sea level):352_ (ft)
How was elevation determined? X topographic map Drilling/Well Log altimeter
other:
information unavailable
6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)
X evidence of a confining layer in well log
no evidence of a confining layer in well log
If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the bottom of the lowest confining layer ? X YES NO
information unavailable

7) Sanitary setback:	
$X < 100 \text{ ft}^*$ _ 100–120 ft _ 120–200 ft _ > 200 ft * if less than 100 ft describe the site conditions:	
Well site is about 70 feet from Main Street - a gravel county road that provides access t	o about
2 Properties. A setback exemption was allowed by King County Health Department	_
lue to the deep (695 ft) surface seal 3) Wellhead construction:	
\underline{X} wellhead enclosed in a wellhouse	
X controlled access (describe): The well will be locked in a wellhouse that	<u>is</u>
monitored via telemetered security systems	<u>—</u>
other uses for wellhouse (describe):	
no wellhead control O) Surface seal:	_
18 ft	
< 18 ft (no Department of Ecology approval) ('<' means less than)	
< 18 ft (Approved by Ecology, include documentation)('<' means less than)	
$\underline{x} > 18 \text{ ft}$ ('>' means greater that	n)
depth of seal unknown	
no surface seal	
0) Annual rainfall (inches per year):	
$_{-}$ < 10 in/yr $_{-}$ 10-25 in/yr $_{\underline{X}}$ > 25 in/yr	

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: <u>359,739,504</u> (§	gallons)
How was this determined?	
meter	
estimated: pumping rate ()
pump capacity ()
X other: Water Rights	
2) "Calculated Fixed Radius" estimate of ground wa (see Instruction Packet)	ater movement:
6 month ground water travel time:	(ft)
1 year ground water travel time :	1,103(ft)
5 year ground water travel time:	<u>2,467</u> (ft)
10 year ground water travel time:	(ft)
Information available on length of screened	/open interval?
X YES_NO	
Length of screened/open interval:	<u>85</u> (ft)
3) Is there a river, lake, pond, stream, or other obvictravel boundary? X YES NO (mark	•
4) Is there a stormwater and/or wastewater facility the 6 month time of travel boundary? X YE	r, treatment lagoon, or holding pond located within SNO (mark and identify on map).
Comments: A large wetland occupies the north leading Septic Systems serve the homes along Main Street.	half of the 6-month time of travel boundary. A gravity sewer line runs parallel along Main Street

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

6 month 1 year 5 year unknown
likely pesticide application
stormwater injection wells
other injection wells (See Comments)X X X XX_
abandoned ground water well
landfills, dumps, disposal areas
known hazardous materials clean-up site
water system(s) with known quality problems
population density > 1 house/acre
residences commonly have septic tanks
Wastewater treatment lagoons
sites used for land application of waste
Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (<i>Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.</i>)
If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:
The Wellhead Protection Program for Plateau and Cascade View wells Report prepared in June 24, 1998
for the Sammamish Plateau Water & Sewer District discussed the ground water flow for the Plateau area wells.
Well 4R is in Zone IV. The top of Zone IV occurs at elevations of approximately 340 to 500 feet below sea level.
Sections related to potential sources for the Zone IV and shallower Zone III aquifers are attached and used to
Answer the questions in the above survey. Well 5 continues to be used as a recharge well as
part of a groundwater recharge project. Potable system groundwater is used for the injection source.

2)	Source	specific	water c	mality	records
-	Jource	Specific	water	₁ uanty	iccoras

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

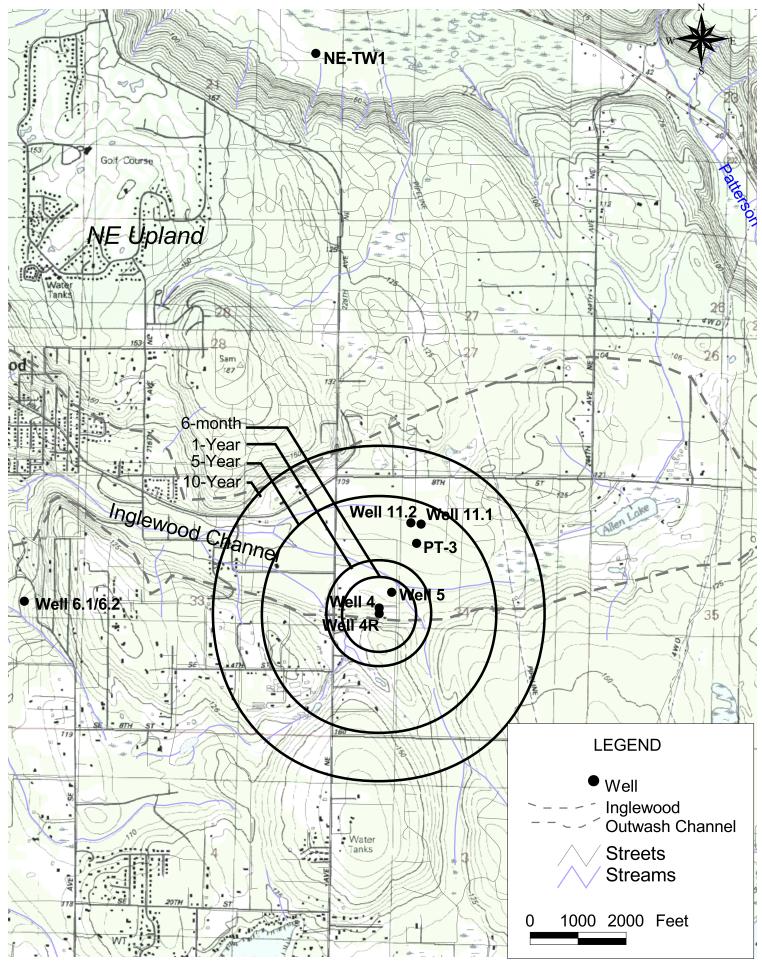
A. <u>Nitrate</u> : (Nitrate MCL = 10 mg/1)	<u>YES</u>	NO V
Results greater than MCL		<u>X</u>
< 2 mg/liter nitrate		
2–5 mg/liter nitrate		
> 5 mg/liter nitrate		
Nitrate sampling records unavailable	••	
B. <u>VOCs</u> : (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	<u>YES</u>	<u>NO</u>
Results greater than MCL or SAL		<u>X</u>
VOCs detected at least once		<u>X</u>
VOCs never detected	X_	_
VOC sampling records unavailable		<u>X</u>
C. <u>EDB/DBCP</u> :	<u>YES</u>	<u>NO</u>
(EDB MCL = 0.05 ug/l or 0.00005 mg/l . DBCP MCL = 0.2 ug/l or 0.0002 mg/l .)		
EDB/DBCP detected below MCL at least once		
EDB/DBCP detected above MCL at least once		
EDB/DBCP never detected		
EDB/DBCP tests required but not yet completed		
EDB/DBCP tests not required	_X	
D. Other SOCs (Pesticides):	<u>YES</u>	
Other SOCs detected		
(pesticides and other synthetic organic chemicals)		
Other SOC tests performed but none detected		
(list test methods in comments)		
Other SOC tests not performed	_X	
If any SOCs in addition to EDB/DBCP were detected, please identify and	date.	If other SOC tests were
performed, but no SOCs detected, list test methods here:		

E. <u>Bacterial contamination</u> :	<u>YES</u> <u>NO</u>
Any bacterial detection(s) in the past <u>3</u> years in samples source (not distribution sampling records)	
Has source (in past 3 years) had a bacteriological contar found in distribution samples that was attributed to the	
Source sampling records for bacteria unavailable	
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution	
The following questions will help identify those ground accurately represented by the calculated fixed radius (C these sources, the CFR areas should be used as a prelim travel zones for that source. As a system develops its W sources, a more detailed delineation method should be	CFR) method described in Part IV. For hinary delineation of the critical time of Wellhead Protection Plan for theses
1) Is there evidence of obvious hydrologic boundaries within the CFR? (Does the largest circle extend over a stream, river, lake, mountain or ridge?)	
YESX_ NO	
Describe with references to map produced in Part IV:	
2) Aquifer Material:	
2) riquirer iviateriai.	
A) Does the drilling log, well log or other geologic/englocated in an area where the underground conditions are basalt terrain?	
YESXNO	
B) Does the drilling log, well log or other geologic/engi	
located in an area where the underground conditions as and gravel?	0 1

3) Is the source located in an aquifer located on flood plains of large rivers wells and springs.)			
YES	X NO		
4) Are there other high capacity wells CFRs? YES	s (agricultural, municipal a	and/or indu	strial) located within the
a) Presence of ground water e within	extraction wells removing	more than a	pproximately 500 gal/min
		YES NO) unknown
< 6 month travel time		X	
6 month-1 year travel time		X	
1–5 year travel time		_X	
5-10 year travel time		X	
b) Presence of ground water rec	harge wells (dry wells) or hea	avy irrigation	within
		YES NO) unknown
< 1 year travel time		_X	_
1–5 year travel time			
5-10 year travel time			
Please identify or describe additional hydrogeneous the zone of contribution for this source. IV.			
The Wellhead Protection Program for Pla	ateau and Cascade View wel	lls Report pre	pared in June 24, 1998
for the Sammamish Plateau Water & Sev	wer District discussed the gro	ound water flo	ow for the Plateau area wells.
The ground water flow directions within e	each aquifer zone were evalu	ated using sta	atic water level from wells
completed within the aquifer zone. Well approximately	4R is in Zone IV. The top of 2	Zone IV occui	rs at elevations of
340 to 500 feet below sea level. A poten	tiometric surface map for we	ells completed	l in Zone IV shows that ground
water flow is generally to the west and no	orthwest direction.		

Suggestions and Comments

Did you attend one of the susceptibility workshops?	YES	X NO
Did you find it useful?	YES	NO
Did you seek outside assistance to complete the assessment?	X_YES	NO
This form and instruction packet are still in the process of development questions will help us upgrade and improve this assessment form. If yo problematic please let us know. How could this susceptibility assessminstruction package help you find the information needed to complete the take you to complete the form? Were you able to complete the assess Do you feel the assessment was valuable as a learning experience? A criticisms you have would be appreciated.	ou found partice ent be improve ne assessment ment without a	ular sections confusing or d or made clearer? Did the ? How much time did it dditional/outside expertise?



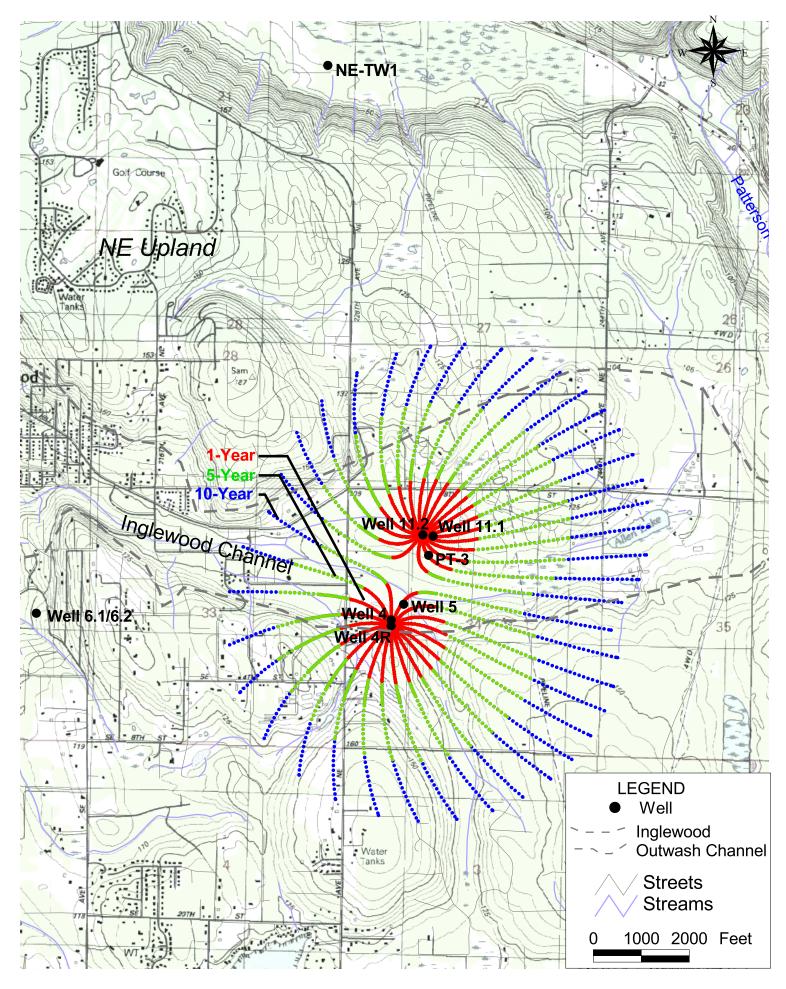


Table A-1: Input Data for EPA WHPA Code 2.2 Analytical Models

Zone/Well Name	Zone IV / 4R, 11.2
----------------	--------------------

GPTRAC Semi-analytical Options

Variable Name	Symbol	Value
Aquifer type	IAQFR	Confined
Transmissivity	TRANSM	5561 FT2/DAY
Hydraulic gradient	GRADNT	0.002
Ambient flow direction	ALPHA	180°
Porosity	POROS	20 percent
Saturated thickness	В	100 to 200 ft
Confining bed hydraulic conductivity ¹	KPRIM	10 ⁻¹ gal/day/ft2
Confining bed thickness ¹	BPRIM	92 ft
Areal recharge rate ²	CAPN	NA
Original saturated thickness ²	CAPH	NA
Maximun radius of influence ²	RMAX	NA
Boundary conditions	IBOUND	None
Well pumping rate (4R, 11.2)	QPWELL	2,000, and 1,800 gpm
Well recharge rate	QRWELL	NA
X-coordinate (ft) (4R, 11.2)	XPWELL	1,344,847, 1,345,493
Y-coordinate (ft) (4R, 11.2)	YPWELL	224,324, 226,241

1Leaky confined aquifers only; 2 NA Not applicable Unconfined aquifers only

COMMENTS

Ambient flow direction is measured counterclockwise from x-axis. Well pumping rate was estimated from water right application.

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

SAMMAMISH PLATEAU WATER & SEWER DISTRICT 1510 228th Avenue S.E. Issaquah, Washington 98027

WELL NO. 6

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

TABLE OF CONTENTS

- Susceptibility Assessment Survey Form
- Sammamish Plateau Well 6 WHPA Capture Zones
- Well Log
- Elevation Illustration
- Water Facilities Inventory Form
- Inorganic Chemical Analysis 1989 1993

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.1

IMPORTANT!

Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information	
Well owner/manager : SAMMAMISH	PLATEAU WATER T SEWER DIS
Water system name : SAMMAMISH	PLATEAU WATER + SEWER DIST
County:KING	·
Water system number: 409009	Source number: 50 5
Well depth: 365 (ft.) (F.	rom WFI form)
Source name: WELL 6	
WA well identification tag number:	
well not tagged	
Number of connections: 9000	Population served: 26,000
Township: Z5 N	Range: 06E
Section: 3Z	1/4 1/4 Section: <u>NE/SE</u>
Latitude/longitude (if available):	
How was lat./long. determined?	
global positioning deviceother:	survey topographic map
* Please refer to Assistance Packet for det	tails and explanations of all questions in Parts II through V.
PART II: Well Construction and Source In	aformation
1) Date well originally constructed: 8/_/g	SC month/day/year
last reconstruction://	
information unavailable	•

Survey Form Ver. 2.1 page :

2) Well driller: STORY T ARMSTRONG	
PUYALLOP Wn.	
PULYALLOP Win.	
well driller unknown	
3) Type of well:	
∠Drilled: rotary bored ∠ cable (percussion) Dug	
Other: spring(s) lateral collector (Ranney)	
drivenjetted other:	
Additional comments:	
4) Well report available? YES (attach copy to form) NO	
If no well log is available, please attach any other records documenting well construction; e.g. bor logs, "as built" sheets, engineering reports, well reconstruction logs.	ing
5) Average pumping rate: 600 (gallons/min)	
Source of information: WATER TACILITIES TNUENTORY	
If not documented, how was pumping rate determined?	
Pumping rate unknown	
6) Is this source treated? \sqrt{ES}	
If so, what type of treatment:	
disinfection filtration carbon filter air stripper \(\sqrt{\sqrt{o}} \) other	
Purpose of treatment (describe materials to be removed or controlled by treatment):	
CHLOZINATION FOR ODOR CONTROL	
7) If source is chlorinated, is a chlorine residual maintained: YES YES NO.	
Residual level: (At the point closest to the source.)	

Survey Form Ver. 2.1 page 1

PART III: Hydrogeologic Information
1) Depth to top of open interval: [check one]
< 20 ft 20-50 ft 50-100 ft 100-200 ft \(\section > 200 ft \)
information unavailable ('<' means less than; '> ' means greater than)
2) Depth to ground water (static water level):
< 20 ft 20-50 ft 50-100 ft > 100 ft
tlowing well/spring (artesian)
How was water level determined?
well log other:
depth to ground water unknown
3) If source is a flowing well or spring, what is the contining pressure: \mathcal{N}/\mathcal{A}
psi (pounds per square inch)
or feet above wellhead
4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source:YESNO
5) Wellhead elevation (height above mean sea level): 280 (ft)
How was elevation determined? topographic map \(\sum \) Drilling/Well Log altimeter
other:
information unavailable
6) Contining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)
VES evidence of a contining layer in well log
no evidence of a contining layer in well log
If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top of the open interval? YESNO
information unavailable
Survey Form Mer. 2.1 page 3

7) Sanitary setback:		
< 100 ft* 100-120 ft * if less than 100 ft descri		
		· · · · · · · · · · · · · · · · · · ·
8) Wellhead construction:		
wellhead enclosed in a we	llhouse	
controlled access (describe): FENCED TGI	ATED (LOCKED)
other uses for wellhouse (describe):	
no wellhead control		
9) Surface seal: 18 ft		
< 18 ft (no Department of E	(cology approval)	('<' means less than)
< 18 ft (Approved by Ecolog	y, include documentation)	('<' means less than)
¥ > 18 ft .		('> 'means greater than)
depth of seal unknown		•
no surface seal		
10) Annual rainfall (inches per year):	/	
< 10 in/vr 10-25	in/yr × > 25 in/y	/r

Mapping Your Ground Water Re	$M_{\rm c}$
1) Annual volume of water pumped: (ga	llons)
How was this determined?	
meter	
estimated: pumping rate (
pump capacity ()
other:	
2) "Calculated Fixed Radius" estimate of ground wa (see Instruction Packet)	iter movement:
6 month ground water travel time :	
l year ground water travel time :	390 (ft)
5 year ground water travel time:	<u>880</u> (ft)
10 year ground water travel time:	1240 (ft)
Information available on length of screened/o	pen interval?
YES _ NO	
Length of screened/open interval:	(ft)
3) Is there a river, lake, pond, stream, or other obvious boundary? YES X NO (mark and ic	ous surface water body within the 6 month time of trave dentify on map).
Is there a stormwater and/or wastewater facility, to month time of travel boundary? YES	reatment lagoon, or holding pond located within the 6
Comments:	

PART V: Assessment of Water Quality

n	Regional	sources	of ri	sk to	ground	water
	1/421411111	3000	~		3.0	

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	l year 5 year unknown
likely pesticide application		_ _ _ _ _
stormwater injection wells	No	<u>Lio</u> <u>No</u>
other injection wells	<u>₩∂</u>	<u> </u>
abandoned ground water well		
landfills, dumps, disposal areas	<u>/\s</u>	<u>No</u> <u>No</u>
known hazardous materials clean-up site	<u>/l/a</u>	<u>//3 </u>
water system(s) with known quality problems	· 7	77 7 7
population density > 1 house/acre	YES.	YES YES
residences commonly have septic tanks	<u> </u>	
Wastewater treatment lagoons	10	<u> </u>
sites used for land application of waste	<u>/L'd</u>	<u>//3 //5</u>

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.)

	 		·		
<u> </u>	 .			··-	
	 	<u> </u>			

Please indicate the occurrence of any test results since 1986 that meet (Unless listed on assessment, MCLs are listed in assistance package.)	the foll	owing conditions:
A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
Results greater than MCL		-
< 2 mg/liter nitrate	$\overline{\checkmark}$	
2-5 mg/liter nitrate		
> 5 mg/liter nitrate		- - - - - - - - - -
Nitrate sampling records unavailable		/
8. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL		$\overline{\mathbf{x}}$
VOCs detected at least once		\geq
VOCs never detected	\overline{X}	
VOC sampling records unavailable		
C. EDB/DBCP:	YES	NO
(EDB MCL = 0.05 ug/i or 0.00005 mg/i. DBCP MCL = 0.2 ug/i or 0.0002 mg/i.)		
EDB/DBCP detected below MCL at least once		
EDB/DBCP detected above MCL at least once		
EDB/DBCP never detected	_	
EDB/DBCP tests required but not yet completed		
EDB/DBCP tests not required		
D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected		
(pesticides and other synthetic organic chemicals)		
Other SOC tests performed but none detected		
(list test methods in comments		
Cther SOC tests not performed		
If any SOCs in addition to EDB/DBCP were detected, please, identify and date	e. (for	ier SOC tesis were
performed, but no SOCs detected, list test methods here:		

2) Source specific water quality records:

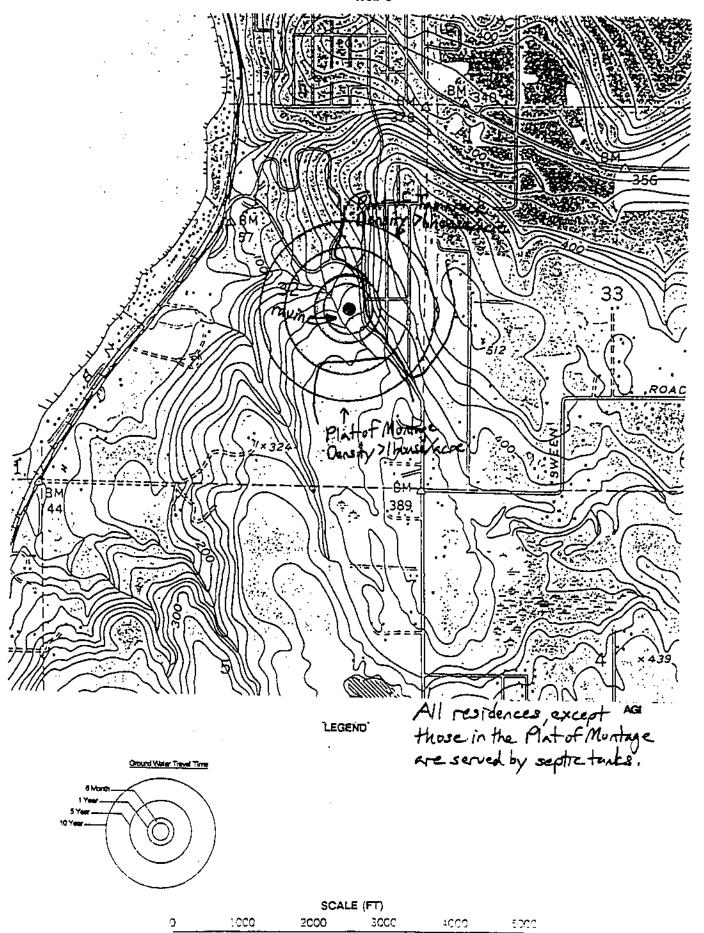
E. Bacterial contamination: YES NO
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.
Source sampling records for bacteria unavailable
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution
The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, to CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.
1) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)
YES NO
Describe with references to map produced in Part IV:
STEEP HILLSIDE + raving. This area is on the hillside
STEEP HILLSIDE + ravine. This area is on the hillside coming down from the East Sammamuch Plateau to Lake Sammam
2) Aquifer Material:
A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as tractured rock and/or basalt terrain?
YES NO
B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?
YES NO

flood plains of large rivers, springs.)	an aquifer with a high hor artesian wells with high	rizontal flow rate? (The water pressure, and/o	iese car r shallo	include sources located on w flowing wells and
YES	NO			
4) Are there other high capa	acity wells (agricultural, r	nunicipal and/or indus	strial) id	ocated within the CFRs?
a) Presence of groun	nd water extraction wells	removing more than a	pproxi	mately 500 gal/min within
< 6 month travel ti	•	YES	NO NO	unknown
6 month-1 year tra-	vel time			
1-5 year travel time				
5-10 year travel tim	1e		4	
			_	
b) Presence of groun	nd water recharge wells (dry wells) or heavy ir	rigation	within
< 1 year travel time		YES	_	unknawn
1-5 year travel time			4	
5-10 year travel time	e	_	_	
			_	
Please identify or describe ac shape of the zone of contribu produced in Part IV.	Iditional hydrologic or gen ution for this source. Wh	ographic conditions the ere possible, reference	nat you se them	believe may affect the to locations on the map
	<u></u>			 ,
				
			<u> </u>	
				
				

Suggestions and Comments

Did you attend one of the susceptibility workshops?	X YES		
Did you find it useful?	\underline{X} YES	NO	
Did you seek outside assistance to complete the assessme	ent? X	YES	NO
		·	
			· · · · · ·
This form and instruction packet are still in the process of questions will help us upgrade and improve this assessment confusing or problematic please let us know. How could made clearer? Did the instruction package help you find assessment? How much time did it take you to complete assessment without additional/outside expertise? Do you experience? Any other comments or constructive criticism.	ent form. If you this susceptibil the information the form? We I feel the asses	ity assessment l needed to comp are you able to c sment was value	or sections of improved or plete the omplete the able as a learning
•			
			
		<u></u>	
	······································		
			·

Sammamish Plateau Water & Sewer District Well 6



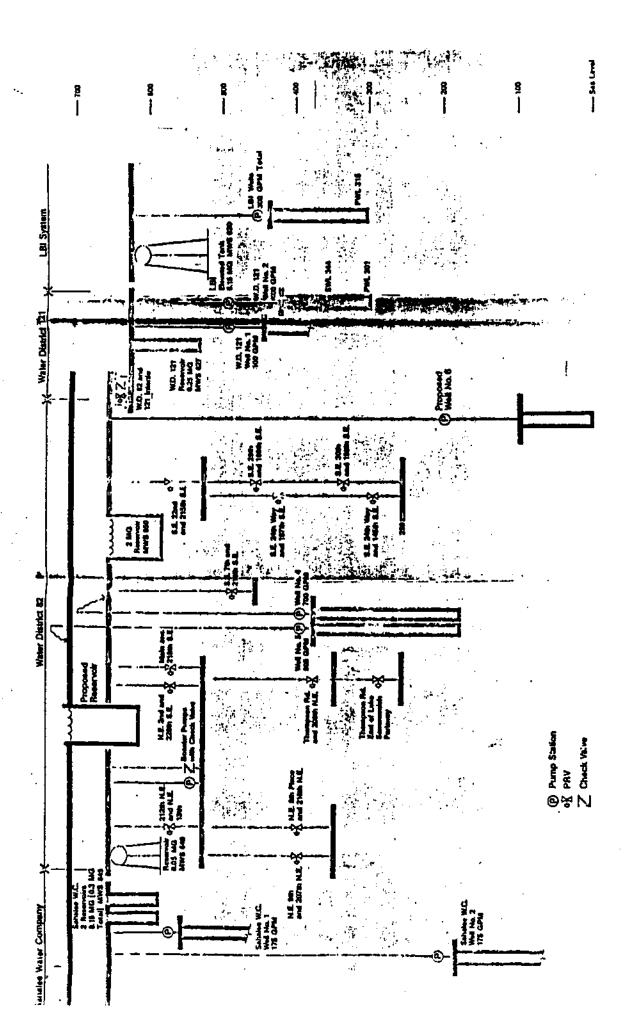
WATER WELL REPORT

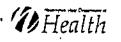
Application No. G1-23897
Permit No. G1-23897

STATE OF WASHINGTON

(1) UNINER Name KING COUNTY WATER USI.	Addres 1510 228-AUG SE ESSAQUATE
Searing and distance from section or subdivision corner 2538 (+')	V 4 1020 Fr W OF SE CORESON 27-25-6
(A) DRABAGER TIGH	
(3) PROPOSED USE: Domestic 🖸 Industrial 🗆 Municipal 🕱	(10) WELL LOG:
Irrigation [] Test Well [] Other []	Formation: Describe by color, character, size of material and structure, and
(4) TYPE OF WORK: Owner's number of well (if more than one)	stratum penetrated, with at least one entry for each change of formation.
New well . Method: Dug . Bored .	MATERIAL FROM ITO
Despened 7 [] Cable & Driven []	SALO & GRAVEL WELKY TO 172
Reconditioned Rotary Jetted	
	the same of the sa
5) DIMENSIONS: Diameter of well 12	SAUG & CHANG WI CLAY 50 68
Drilled 366 tt Depth of completed well 366 %	COMPACTSO JANO & GRAVEL GB 108
States of Completed Will.	BENUN SANO AND GEARE TOB 142
6) CONSTRUCTION DETAILS.	LATER SOLLE AND THE PROPERTY OF
Casing installed: 16 Diam from Q ft to ZO T	BEALD FINE SANOWIN BUILDERES
Thresded J 12 Diam from O n to 366 m	GRAY SILT FILE SAUGHARITE ZIN
Weided E	CLAY TAYER TOP TO A TERMENT
	A STATE OF THE PROPERTY OF THE
Perforations: Te C Ro Z PA	
Type of perforator used Total Marie Co.	一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个
SIZE of perforations in by the base in	GLATTUERTOIRTY FROM THE TEST
perforations from	TO MEDIANO THE PROPERTY OF THE
perforations from	TELL TO SEE THE SHEET OF SALES LINE TO THE TOTAL
Derivation of the second of th	Parket and the state of the sta
perforations from the transmitter to	DARK GRAT SICT VICELA TOTAL 331
	データーでは、10mmのでは、10mmのできた。 10mmのできた。 10mmのでは、1
Screens: Yes p No Co. 10	GRAY TO BELLY BOOK TO BE THE BOOK TO
Manufacturer's Name SUOHUSOU Sales	THE STATE OF THE S
Model to the second sec	
Diam & G The State SUC SUC SUC SUC SUC SUC SUC SUC SUC SUC	
Diam. Slot size Two from the land of	ESICHARCENS FIRMSAUGHTERMED
The state of the s	· · · · · · · · · · · · · · · · · · ·
CITATOR DECEMBER No CAN Street Canada	TO THE RESIDENCE OF THE PARTY O
Gravel placed from 132	
THE RESERVE OF THE PARTY OF THE	
Juli lacts South Yes W No Figure To what depth 7	
Material med in seal Coulder of its Median in the life any strate contain unusable water? If Yes If I No M	
Did any strate contain unusable water? If Yes Charles	Market Control of the
Type of waters the Depth of strate	THE REST OF THE PARTY OF THE PA
Type of waters Canada Depth of strate	
7) PUMP: Manufacturer's Name PERKLESS WARREN	一大学者は、一大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大
	ALL PROPERTY AND THE RESIDENCE OF THE PROPERTY
8) WATER PEVELS Tand surface direction I BO	大公中国位置的 不足的 经收益的 医神经神经神经神经神经神经神经神经神经神经神经神经神经神经神经神经神经神经神经
WATER EXVELS	
atic level 112 Man in below top of well Date 6/80	
riesian pressurers	
Artesian water to controlled by All Carried	
Artesian water is controlled by (Alleway Rame) of Artesian water is controlled by (Alleway Rame) of Artesian water is a controlled by (Cap valve etc.)	THE RESERVE OF THE PARTY OF THE
9) WELL TESTS: Drawdown in amount water level in	
as a pump test made? Yes 52 No [] If yes, by whom? DRICLER	Work started 10 10 Completer Sept. 30
leid: 600 gal/min, with 142 ft drawdown after to an hist.	WELL DRIELER'S STATEMENT
and the state of t	"一点","我们就是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个
	This well was drilled under my jurisdiction and this report is
	The to the best of my knowledge and helles which where the literature
ecovery data (time taken as zero when punny turned off) (water lave)	NAME - Story & Creations 200
Time. Water Level Time Water Level Time. Water Level	NAME: Story & Ares Grone 200
1 160 1000 119	(Person, firm, or corporation) (Type or print)
10 145'	
	Address 10(1) - 66th AV Bast Puyallup, Yn
/38 /32'	了一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个
Date of test 6-4-80	(Siment)
uler test gai/min with ft drawdown after him	[Signed]
ctestars flower to the state of	A STATE OF THE PARTY OF THE PAR
imperature of water Was a chemical analysis made? Yes 🛣 No 🗔	License No OLG Dale 9-17
and the company of th	
" (USE ADDITIONAL SHE	ITS IF NECESSARY

the state of the s





WATER FACILITIES INVENTORY (WFI)

Read Instructions on back before completing

DATE RECEN	AR BOLZISZIE
FEB 1	1994 1994
Aps'd	

1. SYSTEM	10 NO. 2 C	OUNTY		GROUP	TYPE	WR	<u>~</u>	WFICO	MPLETED BY			11T=	115071		GTZTJ TUE	<u>' - </u>
- 900		LNG			CLIMM	.]	a l	1							142	
J. SYSTEM	MAME							DAY TE	EPHONE				DAT			
<u>Leasens</u>	7 4 1 2 1 4 1	PLATEAU :	dater.	5 SE	150		ł	i					_	_		
STREET ADO				-				8. SUBI	ATTEO	NEW SY	STEM		NO CHAP	¥GE	REACTIV	ATF
		AVE SEA							<u> </u>	SYSTEM	NAME CHA	NGE"	UPDATE	<u> </u>	DELETE	
P.O. SOX (#F /	APPLICABLE)						\Box	.oro &	STEM NAME	- ENTER	ONLY IF CHA	WENG WI	TH THIS WE			
								L						•		
CITY				STATE	ZP COOR			SYSTEM	S SERVING	ANY RE	SIDENTS	(PEOPLE I	JVING IN A			
Lisa G	UAH.			W.A.	<u>. 940</u>		╝	DMEIT	NG SERVED	BY THE S	YSTEM), C	OMPLETE	THIS SECTI	GN		
1	NAME (LAST,)	-	:		OWNER	O.	٦	9. NUM	SER ACTIVE	RESIDENT	AL .:	. 10. N	UMBER ACT	IVE RESIDE	NTIAL	
STREET ADD	HEINE	PLATEAU !	MATER	<u>£</u>	30	97				$ad\sim$						
									8	844			25.	647		
P.O. SOX (#F /	228TH	AVE. S.	<u> </u>				_			1			1675	7 1 1		
7.00.000.18.7	~~~~	4 1		•				SYSTEM	S SERVING	ANY NO	N-RESIDE	NTS (I.E.	TRAVELER	S,		
СПУ		·					4		EES, STUD				ECTION			
				STATE	ZIP COOE		İ	f1, NUM	BER NON-RE	SIDENTIAL	CONNECTI	ONS	1.6	10		
S. SYSTEM C	CONTACT PERS	2ON		dA.	930	2.7		 -		·	<u> </u>	-	71			
SUMAL		TILE -	W 4 4 7 4 7 7	-0	TITLE		-	12 ENTE	R AVERAGE TO FOR EAC	DAILY NO	HAESIDENT	IAL POPUL	ATION			, .
	ONE	TILE -	MANAGI		77. 94	: .	-	1444				y	CA MORITY		*******************************	A.Z.
1 1 20A+3	92-425				•			profession to the same		MAY.		M7				
6. GWNERS	SHIP		7. PREDOM	INANT CH	ARACTERI	STIC		142				- 			2 - 12 - 15	
CARRON	ONE GNLY)	in the many application	(CHECK	QNE QNLY)			13, 0063	THE SYSTE	M SERVE	TI FAST 2	105 Det 1	ALS MAN O			
PRIVAT	TE NON-PROF		X RESIDE	ENTRAL.	en en en en en en en en en en en en en e	• * .		FOR -	SHOW BO	REP EYA	WEEK FOR	AT LEAST	80 0AYS PE	DI YEAR?	•	
	TE: FOR-PROFI			ATIONAL	.4.	٠			ـــان	YES	NO NO		- 4	of William		•
	GOVERNMENT	r l		ISS/INDUS ULTURAL/O	TRIAL /	M.				•	- بيما	÷	7	.•		
WATER	OSTRICT).	\$ m		4G/F000		- .	П		LNUMBER				STROUTION		R(\$)	
STATE		• • • • •	SCHOO	X./DAY CA	RE	•		CON	ECTIONS M	ETERED			TAL CAPAC		,	
SEDERV	AL,			(CHURCHE	S, ETC.)		П		8.84	4	* * * * * * * * * * * * * * * * * * * *	; .	12.8	50.00	· .	
·			2 × 8 × 5 × 7			·	ا لــ					' ' '	1210	20,00	A GYILL	ONS
16L DOH 1	17. SOURCE N												•			
SQUACE	IV. SOUNCE N	AME	1	B. SOURC CATEGO		g. USE		21. TREATMEN	22. WE		SOURCE CAPACITY	24. SQL	IRCE LOCA	TION		
NUMBER			. /		, a				, OE,		THE PARTY.		. 1	n . A	1	-
	F SOURCE	NAME FOR SOURCE S PURCHASED OR		1.1	5 2		اءا				.,	<u> </u>				É
		JST SELLER'S 10= ISING FOLLOWING		3	E-TREATED E-UNTPEATED		3	¥ z	(FEE	n	(GPM)	1/4, 1/	/4 SEC	. Twe	PNG	ALUA
	PORMAT: XX	DUCK/NAME	- 149 F	3 . ž	97 - 97 1	3 2 2	1	A TOTA		".].	: 4.	SEC				VA
	EXAMPLE 1	7050Y/SEATTLE] ;		NTEATH PURCHA PURCHA	SEASON SEASON SURFICE	SOURCE SOURCE	HONE CHLORBIA PLIRATION PLUGHICAT	5			1	· [SWTR EV VOC EVA
		······································		* * 3 % <u>*</u>	255	<u> </u>	2	8955	<u> </u>			1				35
	ACLL I			1111				x	1 19	4	500	SAZN	E 10	2414	065	П
I	WELL 2		X			*]		×!	1.3	12	.360	NHIS		24N		
	WELL #	5	X	1 1'1 1					71	.6	450	MW/3	34	250	065	
	WELL #	4	X	1111	}. X			*	71	4	625	SW/N	W 34	2511	OSE	} }
	HELL A	•	X			!		 	34	15	500	NE/S	E 32	254	065	
	WELL # WFLL #*		X			*		$\Box\Box$	15		.000	SE/S	E 21	2414	068	lf
	AFLL #		X			111	1	۲ [<u>]</u>	15	10 3	,500	55/2	E 21	241	265	
										-	•		1 1]	
				1				[1]]	<u> </u>			1	<u> </u>	<u> </u>	1	
25.				25.		Mena: FEB		_	HPILINGISCH YAM MAY		1 4-					
				-0.							AR	AUG	SEP	OCT !	NOV D	EC
IO. APPROVED	D SERVICES (PI	ER PLANS			130	30	137		30	30	30	30	30	30		إندا
		SUPPLY SERVICE AF	O REAZI (IV	E 5	NO	GW MG	:M7 4		LAST SANI		LEGAL COLUMN	10 U	97	90H	ם אט	!
SFFECTIVE DAT			SIGNATURE			GIT MU	arrit A	EAC	YE9	NO	Ussa o	NLY	24.75			
													DATE			

SAPPANISH FLATEAU NATER & SEVER DISTRICT

FATER SAMPLE INFORMATION FOR INDRGANIC CHEMICAL AMALYSES - 1969

I E K	FELL 1 E/4/69	VELL 2 4/10/69	YELL 4 4/10/69	FELL 5 4/10/89	KELL 6 7/17/89	KELL 7 7/17/69	FELL 8 4/10/69	* KCL
H d	7.06	7.23	8.22	8,32	7.46	7.48	\$0.7*	
Arsenic	.0.010	.0.010	*D.010	•0.010	*D.010	10.010	010.01	0.05
Erlum	*0.25	.0.25	*0.25	*0.25	.0.25	*0.25	*0.25	0.1
Cedalum	.0.002	•0.002	*0.002	*0.002	*0.00	•0,002	*0.002	0.01
Chreatum	•0.010	010.04	*0.010	•0.610	.0.010	*0.010	013.04	0.605
Irea	*0.05	*0.05	*0.05	•0.05	*0.05	0.05	10.05	v.0
Leed	.0.010	•0.010	010.0	•0.010	*0.010	10.610	10.010	0.05
Pergenesa	*0.010	•0.010	0.041	0.042	0.026	0.000	10.010	0.05
Percury	•0.00.0	*0.0010	.0.0010	.0.0010	*0.0010	*0.0610	.0.0010	0.002
Selenium	*00.00	\$00.00\$	*0.005	•0.005	*0.00	*0.00\$	*0.005	0.01
Silver	*0.010	•0.010	•0.010	*0.010	*0.010	*0.010	0.010	0.05
Sedium	410	• 10	•10	10	•10	•10	10	
Ferchess	09	87	63	£1	48	7.4	- -	
Conductivity	15.5	220	160	150	120	200	. 002	700
Turbldlty	1.0.	*D.4	*0.2	1.0.	1.0.	0.2	1.0.	0.1
Color	• 5.0	•5.0	45.0	45.0	15.0	15.0	. 2.0	15.0
fluoride	10.2	*0.2	*0.2	*0.2	+0.2	*0.2	10.2	2.0
Witreto	<u>:</u>	7.0.	+0.2	*0.2	+0.2	1.6	.0.2	10.0
Chiorica	•10	1 0	•10	•10	10	• 10	• 10	250
Sulfeto								250

*PCL is the Fextrum Conteminant level Allowed

*tess Then

P. Treat April

(Note: Vell 7 ses re-tested for Iron & Turbidity and those numbers are listed above.)

WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1990

ITEM	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WELL 8	** MCL
	9/1/90	4/10/89	9/1/90	06/1/6	06/1/6	06/1/6	06/1/6	
pH	6.74	7.23	7.26	7.74	7.88	7.29	7.12	
Arsenia	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Barium	<0.25.	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	1.00
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
Chromium .	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Iron	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.3
Lead	<0.005	<0.0100	<0.005	<0.00	<0.005	<0.005	<0.005	0.05
Manganese	<0.010	<0.0100	<0.039	<0.037	<0.028	<0.010	<0.010	0.05
Mercury	<0.0010	<0.0010	<0.0010	<0.00.0>	<0.0010	<0.00.0>	<0.0010	0.002
Belenium	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
Silver	<0.010	<0.0100	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Bodium	<10	<10	<10	<10	<10	<10	<11	
Hardness	79	87	58	58	51	72	72	
Conductivity	85	220	150	154	125	189	188	700
Turbidity	<0.2	<0.4000	<0.1	<0.1	<0.2	<0.1	<0.9	1.0
Color	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0	<10.	15
Fluoride	<0.2	<0.2000	<0.2	<0.2	<0.2	<0.2	<0.2	2.0
Nitrate	<1.3	<0.7000	<0.2	<0.2	<0.2	<0.2	<1.3	10.0
Chloride	<10	<10	<10	<10	<10	<10	<10	250

PARTS PER MILLION

Less than Detectable Limits

** Maximum Contaminant Level

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1991

THE PARTY OF THE P								
41.EM	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WELL 8	** #CI
	7/12/91	7/12/91	7/12/91	7/12/91	7/12/91	17/12/01	7/13/01	
						1,177	16/21/	
Hd	6.6	7 7	,					
Arsenic	010		,	6.7	6.7	7.1	8.9	
Barina	20.01	070.05	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Cadmina	67.00	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	100
	<0.00	<0.002	<0.002	<0.00>	<0.002	<0.002	2000	7.00
	<0.010	<0.010	<0.010	<0.010	40 010	2000	200.00	10.0
Iron	<0.05	<0.05	<0 0×	2000	010.00	070.02	<0.010	0.05
Lead	<0.005	40 00E	50.07	50.05	<0.0>	<0.05	<0.05	0.3
Manganese	010	500.0	500.00	<0.005	<0.005	<0.00>	<0.005	0.05
Mercury	010.05	<0.010	<0.018	<0.026	<0.023	<0.010	<0.010	0.00
A Though	<0.0010	<0.010	<0.0010	<0.0010	<0.0010	<0.00.0	0100	60.0
Selentul.	<0.005	<0.005	<0.005	<0.005	20 00E	20000	0100.0	0.002
Silver	<0.010	<0.010	010	010		200.00	<0.00>	0.01
Sodium	7	, ,	010.0	070.02	<0.010	<0.010	<0.010	0.05
Hardness		5	اً.	8	5	10	12	
Conductivity	70.	90	52	51	43	61	75	
Pin-1, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	180	270	120	130	120	190	210	200
idi bidicy	0.2	9.0	₹.	<0.3			200	00/
COTOL	<5.0	<5.0	<5.0	<5.0	7 8		0.3	1.0
Fluoride	<0.2	<0.2	<0.0	2 0 0	200	0.0		15
Nitrate	1.2	<1.9	7 0	7.0.0	\$0.7	<0.2	<0.2	
Chloride	610	, , ,	0.7	20.5	<0.2	<0.2	1.3	
		710	012	<10	21	24	<10	
								_

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS — 1992

нап	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WISTAL B	** MCL
	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	7/12/91	
Hď	7.0	7.3	7.93	8.4	8.4	7.7	6.8	
Arsenic	<0.010	<0.01	<0.01	<0.01	<0.01	<0.01	010	50
Barium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.25	1 00
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	20.0
Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.010	0.05
Lron	<0.05	<0.05	<0.05	<0.05	0.37	<0.05	<0.05	0.3
Lead	<0.002	<0.002	<0.0025	<0.002	<0.002	<0.002	<0.005	0.05
Hanganese	<0.01	<0.01	0.043	<0.041	0.038	<0.01	<0.010	0.05
Harcury	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0010	0.002
Selentum	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
VII ver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	10.0
Sodius	9.5	6.1	1.8	8.4	4.8	10	12	60.0
Hardness	85.	75	62	62	56	79	75	
Conductivity	180.	150		140	120	170	210	200
rurbidity	0.46	0.42	.33	0.32	06	12	٠ 0	
Culor	<5.0	<5.0		<5.0	<5.0	<5.0	, , , , , , , , , , , , , , , , , , ,	16
Fluoride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	
Nitrate	1.0	<1.8	<1.0	<1.0	<1.0	<1.0	1.3	10
Chloride	<20.	<20	<20	<20	<20	<20	<10	350
Sulfate	10.	<10.	<10.	<10	<10	11	24.	250
Copper	<0.02	<0.02	<0.02	<0.02	<0.02	<0 03		0.5
Zinc	<0.05	<0.05	<0.05	<0.05	<0.05	20 02) C
Aluminum	<5.0	<5.0	<5.0	<5.0	<5.0	(S 0		0.0
Calcium	19.	18.	18	18	16	20.		

WATER SAMPLE INFORMATION FOR INGENIEM CALEMIDAL ANALYSIS - 1999 WELL 6 WINELL 7 WELL 8 WELL 9 < 0.0002 3-2-93 < 0.005 < 0.002 < 0.002 < 0.05 75 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 < 0.02 0.14 ۰ ک 200 8 ₽. ιų < 0.0002 3-2-93 < 0.005 < 0.002 < 0.002 < 0.05 < 0.02 < 0.05 < 0.05 < 0.01 < 0.01 < 0.01 9.5 2 2 96 20 × 0.1 79 r. < 0.092 < 0.0002 3-2-93 < 0.005 < 0.002 < 0.002 < 0.05 < 0.02 < 0.05 < 0.01 < 0.05 < 0.01 8.4 < 0.5 < 0.1 93 210 < 20 <u>.</u> S WELL 2 WELL 4 WELL 5 < 0.0002 3-2-93 < 0.005 < 0.002 < 0.002 < 0.041 < 0.05 < 0.05 < 0.02 < 0.01 < 0.01 < 0.05 0.15 0.1 × < 0.5 7.7 55 < 20 65 က် < 0.0002 3-2-93 < 0.002 < 0.005 < 0.002 < 0.043 < 0.02 < 0.05 < 0.01 < 0.05 < 0.05 < 0.01 0.17 0.6 160 < 20 65 S. < 0.01 < 0.0002 3-2-93 < 0.002 < 0.002 < 0.005 < 0.02 < 0.05 < 0.05 < 0.01 9.3 < 0.05 < 0.01 5.49 < 0.5 < 1.0 150 < 20 80 WELL 1 < 0.0002 3-2-93 < 0.002 < 0.002 < 0.005 < 0.02 < 0.05 < 0.05 < 0.01 < 0.05 < 0.01 < 0.01 0.10 < 0.5 o: |-< 0.1 6 < 20

Manganese 💮 💉

ead 🚉 🏅

Selenium 🧠

Silver

Mercury

0.05

0.0

< 0.002

< 0.05 < 0.02 < 0.17

Chromium

Copper

Lon

Cadmium

Barium

Arsenic

ITEM

0.05

< 0.01

× 0.1

. MCL

SAMIMAMISHIPLATEAUIWATERAND SEWERIDISTRIOT

3.2.93

0.3 0.05 0.05 0.002 0.01

< 0.0002

< 0.005

< 0.01

< 0.05 8.5

< 0.002

× 0.01

LEGEND

250

250

< 0.5

< 20

5.

700

160

89

78 190

Hardness Conductivity

Chloride

Fluoride Nitrate

Furbidity

् Solo Solo

Suc Sur Z Sodium

WTRMCLS.XLS

Less Than Detectable Limits

^{**} Maximum Contaminant Level

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

SAMMAMISH PLATEAU WATER & SEWER DISTRICT 1510 228th Avenue S.E. Issaquah, Washington 98027

WELL NO. 7

GROUND WATER CONTAMINATION

Susceptibility Assessment Survey Form

TABLE OF CONTENTS

- Susceptibility Assessment Survey Form
- Sammamish Plateau Well 7 WHPA Capture Zones
- Well Log
- Water Facilities Inventory Form
- Inorganic Chemical Analysis 1989 1993

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.1

IMPORTANT!

PART I:

Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information
Well owner/manager: SAMMAMISH PLATEAU WATER + SEWER DO
Water system name: SAMMAMISH PLATEAU WIATER & SEINER DIST
County: KING
Water system number: 409009 Source number: 50 6
Well depth:
Source name: WELL 7
WA well identification tag number:
well not tagged
Number of connections: 9000 Population served: 26,000
Township: Z4 N Range: 06 E
Section: 2/ 1/4 1/4 Section: SE/SE
Latitude/longitude (if available):/
How was lat./long. determined?
global positioning device survey topographic map
* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.
PART II: Well Construction and Source Information
1) Date well originally constructed: 3/6/month/day/year
last reconstruction:/ / month/day/year
information unavailable

Survey Form Ver. 2.1 page :

2) Weil driller:	LOKKAIDO DEILLING Y DEV.
	PO. DEX 100
	GRAHAM, WIN.
weil driller	
3) Type of well:	
∑Drilled:	rotary bored cable (percussion) Dug
Other:	spring(s) lateral collector (Ranney)
	driven jetted other:
Additional com	iments:
If no well log	e? YES (attach copy to form) NO is available, please attach any other records documenting well construction; e.g. boring
=	sheets, engineering reports, well reconstruction logs.
5) Average pumping r	are: 2,000 (gallons/min)
Source of info	rmation: WATER FACILITIES TRUENTORY
If not docume	nted, how was pumping rate determined?
Pumping G	ate unknown
6) Is this source treate	ed? VES-will be
	pe of treatment:
disinfecti	on filtration carbon filter air stripper \(\square\) other
IN 1994	TREATMENT TO RAISE PH USING
SODIUM H	TREATHENT TO RAISE PH USING IDROXIDE — FOR CORROSION CONTROL TO BE IMPLEMENTED OF 1994, Perced is a chloring residual maintained: YES NO NA NA NA NA NA NA NA NA NA
7) If source is chloring	F 1994, sated, is a chlorine residual maintained: YES NO AA
Residual leve	1: (At the point closest to the source.)

Survey Form Ver. 2.1 page 2

PART III:	Hydrogeologic Information
l) Depth to t	op of open interval: [check one]
	< 20 ft 20-50 ft × 50-100 ft 100-200 ft > 200 ft
i	nformation unavailable ('<' means less than; '> ' means greater than)
2) Depth to	ground water (static water level):
\swarrow	< 20 ft 20-50 ft 50-100 ft > 100 ft
:	lowing well/spring (artesian)
How	was water level determined?
\times	well log other:
d	epth to ground water unknown
3) If source	is a flowing well or spring, what is the contining pressure:
	psi (pounds per square inch)
<u> </u>	or feet above wellhead
4) If source with this so	is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated ///
5) Wellhead	elevation (height above mean sea level): $\frac{1}{72}$ (ft)
Hov	w was elevation determined? topographic map Drilling/Well Log altimeter
	other:
	_ information unavailable
6) Continir report desc	g layers: (This can be completed only for those sources with a drilling log, well log or geologic ribing subsurface conditions. Please refer to assistance package for example.)
YE	evidence of a confining layer in well log
	no evidence of a confining layer in well log
	there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top the open interval? YESNO
	information unavailable

Survey Form Ver. 2.1 page 3

7) Sa	nitary set	back:	
	<u>×</u> <	100 ft* 100-120 ft 120-200 ft > 200 ft * if less than 100 ft describe the site conditions:	
8) W	elihead co	onstruction:	
	X	wellhead enclosed in a wellhouse	
	χ	controlled access (describe): GATED/LOCICA	
	_	other uses for wellhouse (describe):	
		no wellhead control	
9) Su	rface sea		
	_ <	18 ft (no Department of Ecology approval)	('<' means less than)
	<	18 ft (Approved by Ecology, include documentation)	('<' means less than)
	*	18 ft	('> 'means greater than)
	deg	oth of seal unknown	
	no	surface seal	
A (01	nnual rai	nfall (inches per year):	
	<	10 in/yr 10-25 in/yr > 25 in/y	r

PART IV: Mapping Your Ground Water Reso 519, 977.00	urce	
1) Annual volume of water pumped: (gallo	ons)	
How was this determined?		
meter		
estimated: pumping rate ()	
pump capacity ()	
other:		
Calculated Fixed Radius* estimate of ground water (see Instruction Packet)	er movement:	
6 month ground water travel time:	800_	The Sammanish Plateau (tt) Water + Sewer District
l year ground water travel time :	1140	(it) Participated in the Lower Issaguah Valley Wellhead (it) Protection Plan. The Frame (it) Protection Plan. The Frame (it) Zones are attached, as we
5 year ground water travel time:	2540	(tt) Protection Plan. The Figure
10 year ground water travel time:	359D	for lyr, Syr + layr capture (it) Zones are attached, as we
Information available on length of screened/op	en interval?	as figures regarding potential contamination sources. A com-
YESNO		copy of the report is also included. District Wells 74 &
Length of screened/open interval:	(ft)	are considered combined.
3) Is there a river, lake, pond, stream, or other obvious boundary? YES NO (mark and ide	us surface water bo entify on map).	ody within the 6 month time of travel
Is there a stormwater and/or wastewater facility, tremonth time of travel boundary? YES	eatment lagoon, or NO (mark a	holding pond located within the 6 nd identify on map).
Comments:		
	· · · · · · · · · · · · · · · · · · ·	
		

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water	l)	Regional	sources	of	risk	to	ground	water
---	----	----------	---------	----	------	----	--------	-------

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

Note: We need	بدد سے 6 month	l year	5 year	unknown
BILL			4	
				<u> </u>
				
•	<u>No</u>	160	1/2	
n-up site	No	No	Yes_	
ality problems				_
icre	<u>No</u> _	100	<u> V; э </u>	
ic tanks	No	No	Yes	
	<u> 1/2</u>	<u> </u>	<u> / [/ 2</u>	
of waste	No	No	100	
	n-up site ality problems cre ic tanks	n-up site No Ality problems cre ic tanks No Ai	n-up site No No No No Aity problems cre ic tanks No No	n-up site No No Yes Ality problems cre ic tanks No No Yes No No Yes No No Yes No No Yes

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

Undurground StockE TANKS - See attached Figures+ Tal	,le
Chining Handless	
Luke/oil Change Facilities	
CAR REPAIR STATIONS	
DRY CLEANERS	

Please indicate the occurrence of any test results since 1986 that meet (Unless listed on assessment, MCLs are listed in assistance package.)	the follo	owing conditions:
A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	<u>NO</u>
Results greater than MCL		\times
< 2 mg/liter nitrate	\mathbf{X}	
2-5 mg/liter nitrate		\leq
> 5 mg/liter nitrate		\overline{Z}
Nitrate sampling records unavailable		
B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL		\times
VOCs detected at least once		\times
VOCs never detected	\overrightarrow{A}	
VOC sampling records unavailable		
C. EDB/DBCP:	YES	NO
(EDB MCL = 0.05 ug/i or 0.00005 mg/i, DBCP MCL = 0.2 ug/i or 0.0002 mg/l.)		
EDB/DBCP detected below MCL at least once		
EDB/DBCP detected above MCL at least once		
EDB/DBCP never detected		
EDB/OBCP tests required but not yet completed		
EDB/DBCP tests not required		
D. Other SOCs (Pesticides):	<u>YES</u>	NO
Other SOCs detected	_	.
(pesticides and other synthetic organic chemicals)		
Other SOC tests performed but none detected		
(list test methods in comments		
Other SOC tests not performed		
If any SOCs in addition to EDB/DBCP were detected, please, identify and dat	e. lf ot	her SOC tests were
performed, but no SOCs detected, list test methods here:		

2) Source specific water quality records:

	Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).
	Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.
	Source sampling records for bacteria unavailable
Part V	: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution
	The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.
	ere evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? ne largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or
	YES NO
	Describe with references to map produced in Part IV:
<u></u>	AGUAH (IREEK
STE	EP HILL (GRAVEL P.+) GRAND RIDGE AREA
2)	Wan Manadala
⇒) Aqu	fer Material:
	A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?
	YES NO
	B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?
	YES NO

<u>YES</u>

<u>NO</u>

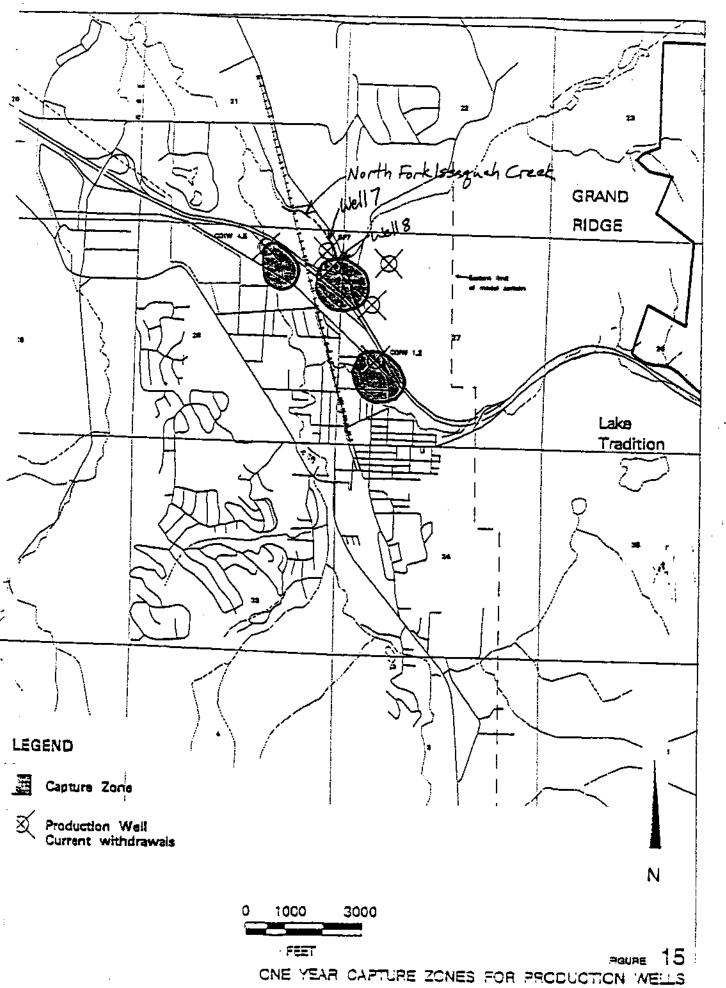
E. Bacterial contamination:

flood plains of large rivers, artesian wells with high was springs.)	ntal flow rate? (These can include sources located on ter pressure, and/or shallow flowing wells and
YESNO	
4) Are there other high capacity wells (agricultural, mur	nicipal and/or industrial) located within the CFRs?
a) Presence of ground water extraction wells rer	moving more than approximately 500 gal/min within
	YES NO unknown
< 6 month travel time	<u> </u>
6 month-1 year travel time	<u> </u>
1-5 year travel time	<u> </u>
5-10 year travel time	
	-
b) Presence of ground water recharge wells (dr	y wells) or heavy irrigation within
	YES NO unknown
< 1 year travel time	
1-5 year travel time	
5-10 year travel time	
Plane Identify and the state of	
Please identify or describe additional hydrologic or geo- shape of the zone of contribution for this source. Whe produced in Part IV.	graphic conditions that you believe may affect the re possible, reference them to locations on the map
See Lower Issaguah Valley	Wellhead Protection Plan
District Wells 7+8 are consider	ered together.
The District is correctly applying	g For a Well Field designation
	J
	

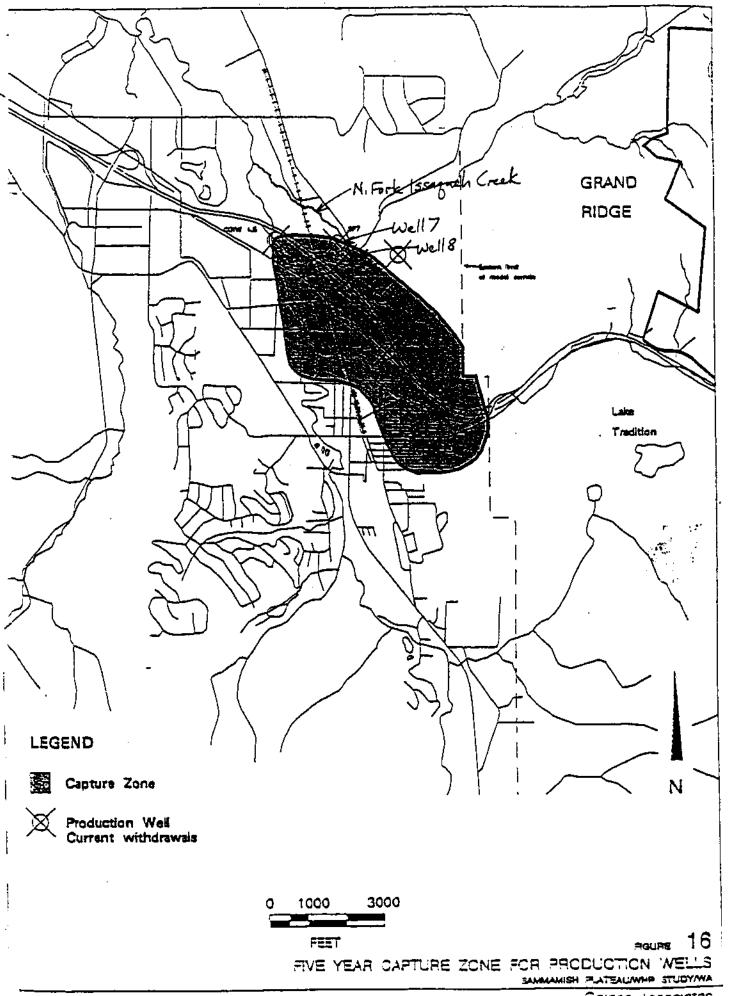
Suggestions and Comments

Old you attend one of the susceptibility workshops?	X YES	NO	
Oid you find it useful?	X YES	NO	
Did you seek outside assistance to complete the assessme	nt? 🙏	YES	NO
			•

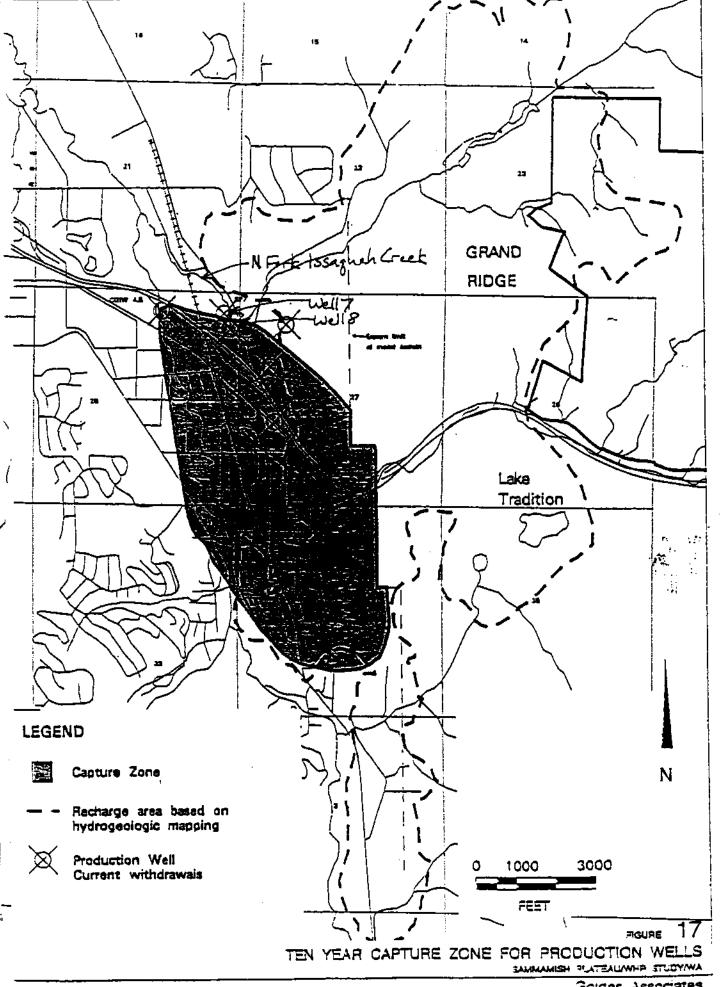
This form and instruction packet are still in the process of questions will help us upgrade and improve this assessment confusing or problematic please let us know. How could to made clearer? Did the instruction package help you find the assessment? How much time did it take you to complete assessment without additional/outside expertise? Do you experience? Any other comments or construction assisting	nt form. If you his susceptibiline information the form? We feel the assess	found particularly assessment to needed to compare you able to comment was valued.	r sections pe improved or plete the pomplete the ble as a learning
experience? Any other comments or constructive criticism	is you have wo	ouid be apprecia	ted.
		· · · · · · · · · · · · · · · · · · ·	
•			
			
	·· · · · · · · · · · · · · · · · · ·		
	·····		
	· · · · · · · · · · · · · · · · · · ·		
<u> </u>			
		, - <u>.</u>	 -
	<u></u>		_
		,	
			

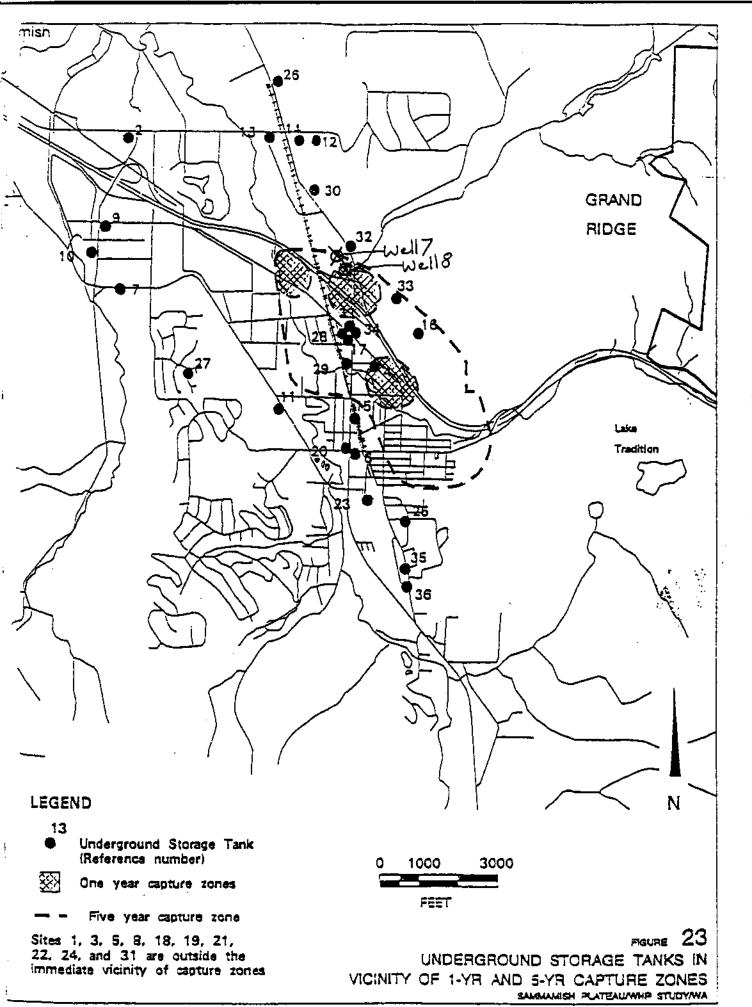


SAMAMISH PLATEALIMAP STUDYWA



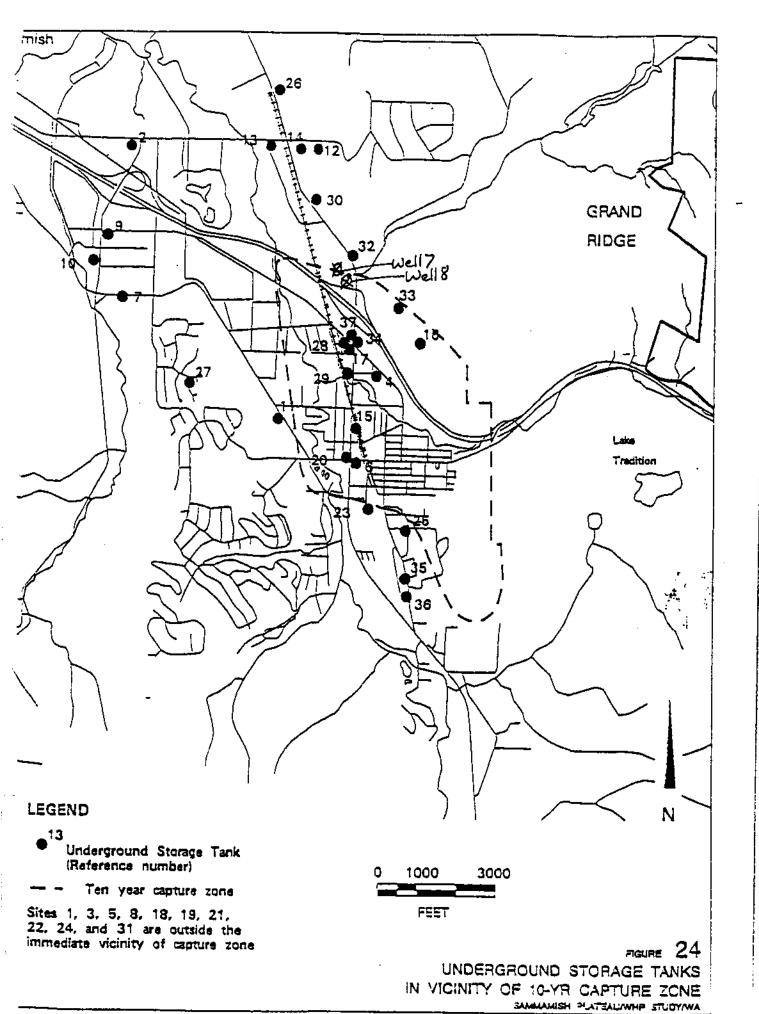
Golder Associates

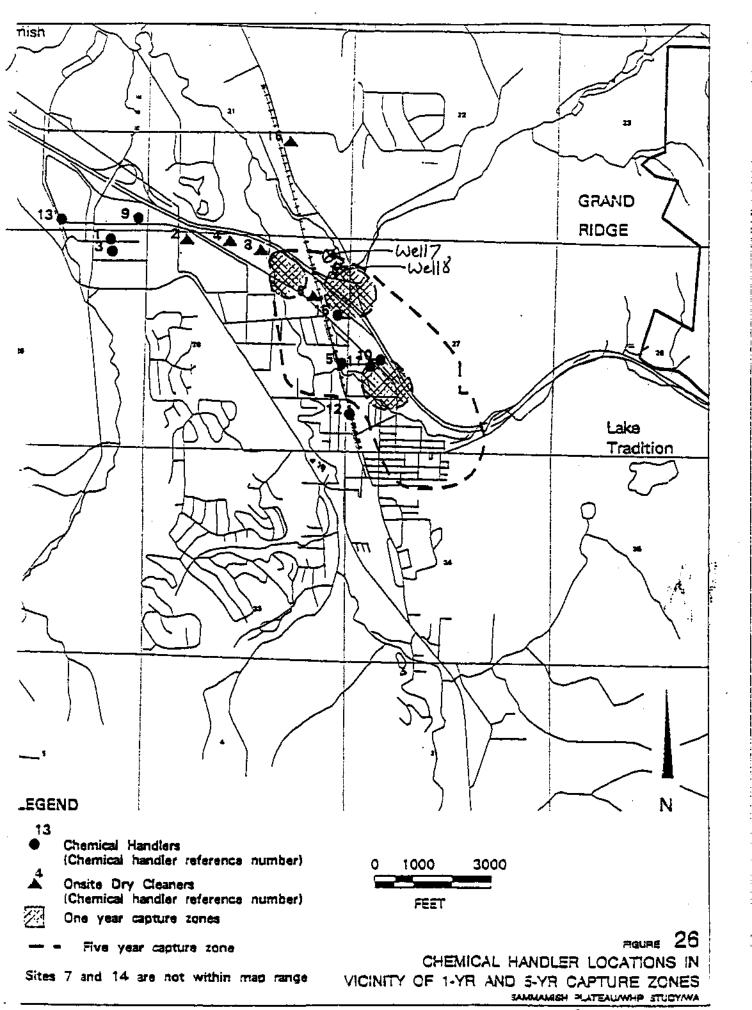


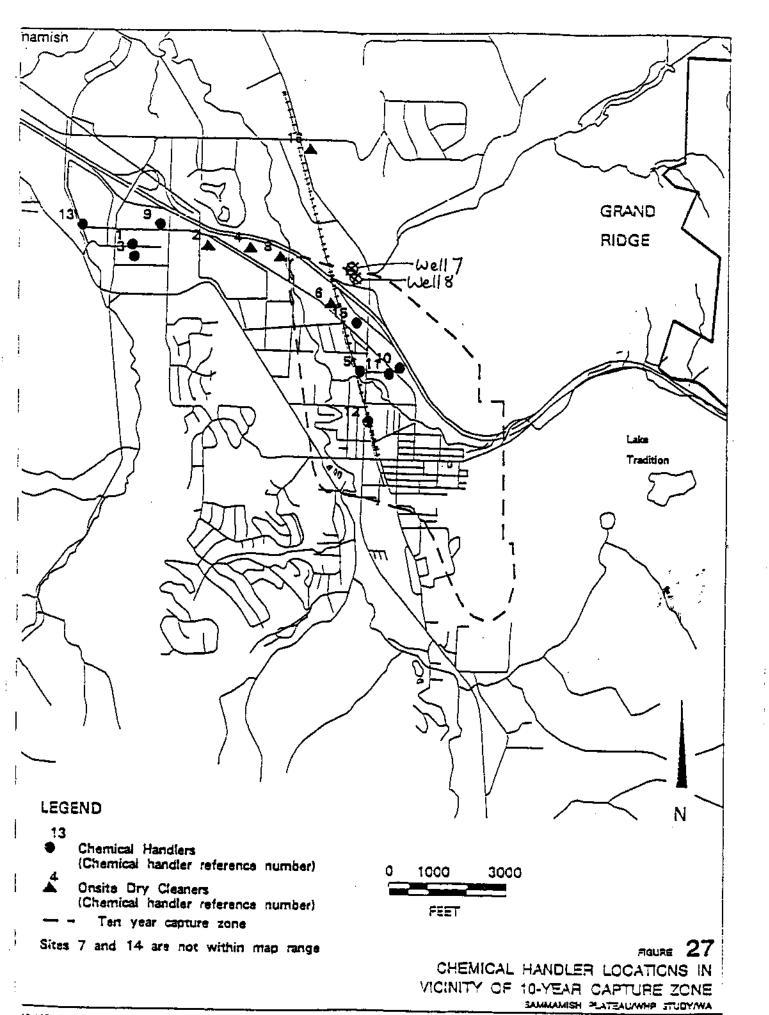


3-1252 Sgugalami 93/93

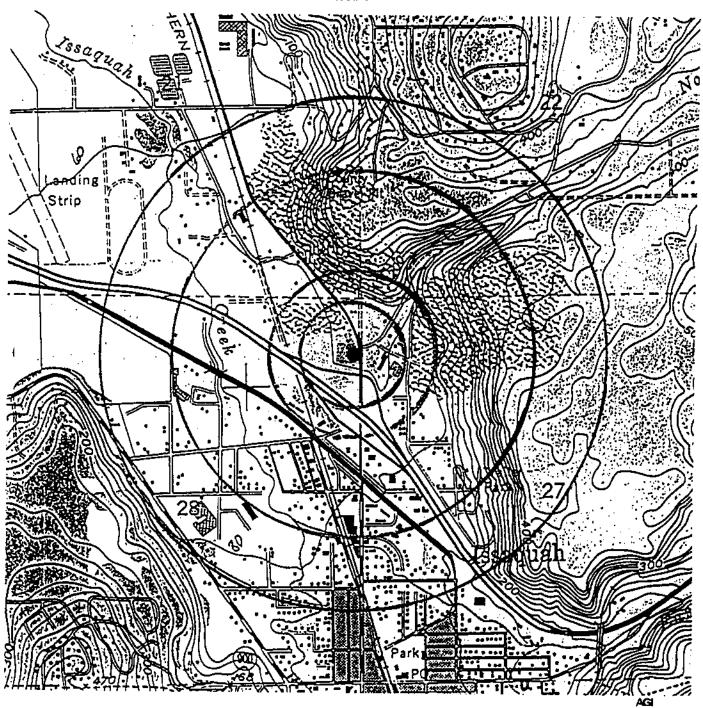
Golder Associates



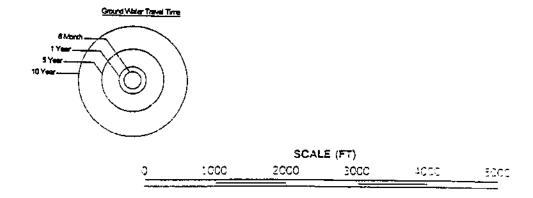




Sammamish Plateau Water & Sewer District Well 7



LEGEND



SUMMARY USTS AND CHEMICAL HANDLERS IN WHPA'S

	Source Type/Number	Owner	Conteminent	Quantity Onsite (gallons)	Previous Quantities	Number of Operational Tanks
1-YR WHPA - COI 1/2	, UST-14 CI-10 CI-11 CI-11	Reda Transportation Gliman Auto Body Grange Supply Grange Supply	Gasoline Solvent Solvent Gasoline	20,000 55 55 70,000	₹ ₹ ₹ ₹	
1 vo talliba . (*)(45	None					
1-YR WILPA - SPWSD 7/8	CR-15 UST-17 UST-28 UST-34	Precision Tune Chevron B.P. Arco	Waste oil Gasoline Gasoline Gasoline	500 60,000 81,200 81,100 80,000	2 2 2 2 2 2 2 2	. m w w ~
	/c-lcO			W1 17	ź	s
5-YR WIPA	UST-33 UST-16	Lakeside Closed	Gasoline Gasoline	0 0	3,300 AN	. o m
	UST-17	Chevron	Gasoline Gasoline	62,200	ž	ч п ч
	02-150 UST-34	Arco	Gasoline Gasoline	80,000	YZ	
y 21 -	UST-29	Darigold Dirks Dry Clean	Gasoline Solvent	000'69 \$5 \ \ \ \	* × ×	, , ·
	CIFIZ	Darigold Lakeside	Waste Oll/Solvent	5000/50	ž	•
10-YR WIPA	UST-15	Issaquah Feed	Gasoline	30,000**	4,400 51,100	o 1
	UST-6	Texaco	Gasoline	20,000	¥ 2	n 14
	USF-23	Issaquah Middle School Oark Etementary	Casoline Gasoline	001'1	2,200	
	UST-38	Bus Carege Transportation	Gasoline Gasoline	000'09	NA NA	
	U21:36					

11) status unknown 18 closed in-place NA Not available

File Original and First Copy with

WITED WELL DEDOOM

Second Copy — Owner's Copy Third Copy — Driller's Copy	STATE OF WASHINGTON	Permit No
(1) OWNER: Name KING CO	CUNTY WATER DISTRICT 82, 1510 228th	
(2) LOCATION OF WELL: C	County KING NE 1/4	NE 4 Sec 28 T 24 N. R 6 W.
(3) PROPOSED USE: Domesti	na Test Well Other Formation: Describe by color.	character, size of material and structure, and

1
(2) LOCATION OF WELL: County KING
Bearing and distance from section or subdivision corner
(3) PROPOSED USE: Domestic [Industrial [Municipal] Irrigation [Test Well [Other [
(4) TYPE OF WORK: Owner's number of well 7 New well 9 Method: Dug Bored Deepened Cable 2 Driven Reconditioned Rotary Jented
(5) DIMENSIONS: Diameter of well 16 inches. Drilled 151 rt. Depth of completed well 151 rt.
(6) CONSTRUCTION DETAILS: Casing installed: 16 Diam. from 0 ft to 82.6 ft Threaded
Perforations: Yes No No No No No No No No No No No No No
Screens: Yes S No C Manufactured's Name UOP - JOHNSON Type 304 SS Model No Model No 103 rt Diam. 14 PShot size 100 from 82 fn. to 103 rt Diam. Slot size 100 from 103 rt to 123 ft Gravel packed: Yes C - No C Size of Frive 7-146.9 Gravel placed from XX rt. to rt.
Surface scal: Yes No To what depth? SO rt. Material used in seal Did any strata contain unusable water? Yes No Type of water? Depth of strata Method of sealing strata of
(7) PUMP: Manufacturer's Name
Туре:
(8) WATER LEVELS: Land-surface elevation above mean sea level
9) WELL TESTS: Drawdown is amount water level is
Vas a pump test made? Yes \(\frac{1}{2}\) No \(\frac{1}{2}\) If yes, by whom? \(\frac{1}{2}\) \(\frac{1}2\) \(
10 10 rd
scovery data (time taken as zero when pump turned off) (water level measured from well top to water level) Time Water Level Time Water Level Time Water Level
Date of test
atler test gai min with it drawdown after hrs.

Temperature of water 56. Was a chemical analysis made? Yes & No 🗆

(10) WELL LUG:		
Formation: Describe by color, character, rice of materia show thickness of aquifers and the kind and nature of stratum penetrated, with at least one entry for each c	i and stru the mater hange of	eture, and al in eac formation
MATERIAL	FROM	
Fill, wood, clay, gravel,	1 0	1 6
silt	<u> </u>	
Gravel, sand, clay, silt	6	17
Gravel, brown sand	17	
Brown clay, sand	20	20 24
Brown sand, gravel, clay,	24	65
_silt		
Brown sand, clay, silt	65	69
Brown sand, gravel, clay,	69	85
silt	-	
Brown sand, gravel, clay,	85	90
silt. WATER BEARING		
Gravel, cobbles, brown sand	90	130
clay, silt		
Brown sand, gravel	130	133
Brown sand, gravel, layers	133	136
clay		
Sand, gravel, clay, silt.	136	148
WATER BEARING		
Brown clay, sand, some grav	-1148	151
		<u> </u>
	<u> </u>	
	T	
	[

Work started 7ah 28 19.84. Completeding 19.24 WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

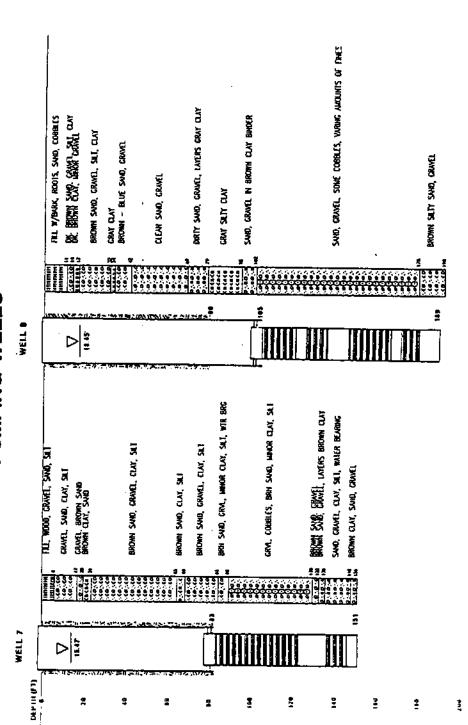
NAME Hokkaido Drilling & Dev. Corp.
(Person, irm, or corporation) (Type or print)

Address P.O. Box 100 Graham, WA [Signed]. A Duller)

License No. 0492

-

SPW&SD WELLS 7 & 8 PUMPING WELLS

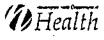


- GROUND SURFACE ELEVATION APPROX, 72 FEE

NOT TO SCALE

• WELLS 7 & B ARE 16-INCH DIAMETER WITH 14-INCH SCREEN ASSEMBLIES • \(\times\) HOM-PUMPING WATER LEVELS (9/16/90)

* WELL & IS 350 FEET SOUTH OF WELL 7



WATER FACILITIES INVENTORY (WFI)

DATE RECEN	AE T OLZ L Z. 24
FEB 1	1994
Ane'd	

Environmental Health

Read Instructions on back before completing

		·····							24.	<u> 14 - 12</u>	CATE	11.41	7117	
. SYSTEM ID NO.	Z. COUNTY	- GA	OUP TYP	ME WAI	^	WFI COM	PLETED E	Υ				TITLE		
<u>9869 - </u>	136		ښتا∡	<u>981</u>	4		 .							
1 SYSTEM NAME						DAY TEL	EPHONE				DATE			
	24 SEVLEVII 4 1	<u>153 C</u>	SEMES		┦ }	BL SUBA	erren.	T				1 - 1		
STREET ADORESS				•	- 11	FOR		 `-'	SYSTEM	—	O CHANGE		EACTIVATI	€
1510 22 P.O. BOX (#F APPUC	RIH AVE SE.					10100			EM NAME CHANGE IR ONLY IF CHANGE		POATE	_il°	ELETE	∤
P.O. BOX IF APPOL	worst					- OCD 31	DIEM NAI	ME . CMIC	H ONLT IF CHANGE		MID WEI			
CTY	· <u>·</u>	91	ATE ZPC	ODE	┵									
	• •	•			11				RESIDENTS (PEI E SYSTEM), COMP					
4. OWNER'S NAME		НА		<u>1027.</u> Erino.	┩╏	9. NUME	ER ACTIV	E RESIDE	NTIAL	10. NUMB	ER ACTIVE	RESIDENTI	AL .	
	SH PLATEAU WA	T50 C	!	3007		COM	MECTION	s 100 € 18414 3		1	LATION			l
STREET ADDRESS		AICR A		20:77	-							. 7		
 1510-22	ÄTH AVE. S.E.			•••				0044	A THOM	•₹ (:	25,64	ি গ্ৰিক		
P.O. BOX (IF APPLIC		L <u>.,,</u>			⊣ հ	SYSTEM	S SERVIN	G ANY	NON-RESIDENT	SUF_TRA	WELFRS.			
	. "				11				ETC.), COMPLETE					
CITY	1.4	. 57	TATE ZIP C	00€	7 [FL NUM	HON RBE	RESIDENT	TAL CONNECTIONS	1 1				
ISSAGUA	H	WA	9	3027	_]	<u> </u>	<u></u>		ر عرباندر <u></u>	<u> </u>		<u> </u>		
5. SYSTEM CONTA	·	4 62° (1) 4	. TITLE			12. ENTI	R AVERA	GE DAILY	NON-RESIDENTIAL	POPULATIO	X			
- COMALD	E. LITTLE - N	IANAGER			_] [3ER1	ED FOR E	ACH MON	ITH MAKE ENTRY	FOR EACH N	AONTH			
DAY TELEPHONE	Reservation of the second	MENING TELEPH	IONE !			14K				444				1
206-392							La Santa	MAY	10000000000000000000000000000000000000		10 41 16	HEDW.		[
6. OWNERSHIP (CHECK ONE)		PREDOMINA (CHECK ON		TERISTIC			• • •		E RESERVED TO	-			212	
	سما کمین ۱۰		11.00	· weeks and [1	┑╽				VE AT LEAST 25 O YER WEEK FOR AT					
PANATE NO	-	- RESIDENTI	_		·				F	A 12		10		
LOCAL GOV		RECREATE BUSINESS	DNAL / INDUSTRIAL	,				YES	راما الما					- 1
(COUNTY/C	MY/PUD/ 🔭 📙	AGRICULTI	JRAL/COMM	ERCIAL.		44 ===				Las Sugra		GERN-05/4	h.	
WATER DIST	THICT)		FOOD SERVIC	Œ	$ \cdot $		L NUMBE NECTION		.		IBUTION RE L CAPACITY			
FEDERAL		SCHOOL/		•	-11				-					1
	-		IURCHES, ETC	·)			8.8	44		1	2,850	,000	GVITO	NS
	,				المصا			-		<u> </u>	'			
	OURCE NAME	18.	SOURCE	19. USI		21.		WELL	23. SOURCE	24. SOURC	E LOCATIO	IN-		
SOURCE NUMBER			CATEGORY			TREATME	श ।	HTGE	CAPACITY				,	
	UTILITY'S NAME FOR SOURCE.			2				**	s theselve	•••		['		NO 25
	SOURCE IS FURCHASED OR TERTIED, LIST SELLERS ID#	******	. 4 2		9		- 1			1 p				Y I
AN	D NAME USING FOLLOWING	1 (1940) 5		3 1 1 2		10 a 1	[. "	EEN	(GPM)	1/4, 1/4 SEC.	SEC.	TWP	AMG	NAI ALU
	RMAT: XXXXXX/NAME AMPLE: 77050Y/SEATTLE		3 4 4 5	PURCHASE A PERMANENT SEASONAL SHEPGENG	SOUNCE IN	# \$ Q &	55							SWTR EV Voc Eval
			BUREN SPRENC FUNGE NIERT	E E 3 3	3	MONE CHEORNATION PLINATION PLINATION	품	ĺ						35
501 AC	LL 1	1		1	1 1	(H	F . T	154	500	5ょ/どん	10	2414	00=	
SG2 WE		X		 k				132		WH/SE			360	- }
103 HE		x		Y		ķil	1 1	715		4W/3W	1	253	065	
504 WEI	LL # 4 -	x		x	{	<u> </u>	1 1	714	625	54/4H	34	25!1	りろそ	
୍ଟିପ୍ର ଧରା	LL 6 ·	X				<u> </u>		355	500	ME/SE	3.2	ZEN	05E	
300 HE		X				x	4 1	150		SE/SE		24%	068	
307 45	[[¦3	X		T	}	۲ r		150	3,500	\$5/\$E	21	7411	065	1
								ļ	·					
		<u> </u>	1111	<u> </u>			 	<u> </u>			<u> </u>	<u> </u>	<u> </u>	
76		HE	NIMUM REGU					SCHEOU MAY		AUG	SEP (C	CT N	ov I o	EC
25.				IAN FE				_ i	TUN TUL					l
\	BLOCKE (DED OF ANIO)		13.0	130	13.!				0 30	<u> 30 </u>	30 sy o		1 UHO 1	لنا
MU. APPROVED SE	AVICES (PER PLANS)	<u>)</u>	T 1		MGMT /		YE		NO FOR US		a + 0	<u> </u>	1 040	:
CVCTELL IN COURSE														
SYSTEM IN CRITICAL	AL WATER SUPPLY SERVICE AR	SIGNATURE OF			MCHAI I	MEA7		9	USE ON	<u>LY</u>	ATE			

SAFFARISH FLATEAU KATER & SEKER DISTRICT

FATER SAFFLE INFORMATION FOR INORGANIC CREDICAL APALYSES - 15E9

•				: •				
-1EX	FELL 1 E/4/E9	FELL 2 4/10/69	FELL 4 4/10/E9	WELL 5	FELL 6	VELL 7	63/01/7 8 1134	, NCL
	-	4 4 4 4 4 4 4 1						1 2 1 4 2
i d	7.06	7.23	8.22	8.32	7.46	7.48	*7 04	ļ
Arsento	.0.010	.0.010	40.010	.0.010	0.010	10.010		
Eerlum	*0.25	*0.25	*0.25	+0,25	.0.25	*0.25	*	6 -
Cedetum	* D.002	10.002	*0.002	•0.002	• 0.002	0.00	7 4 4	- i
Chromlum	0.010	010.00	010.0*	•0.610	40.010	0.00	70.1.0	0.01
fren	*0,05	*0.05	.0.05	*0.05	*D.03	90		caa'a
Leed	•0.010	.0.010	0.010	*0.010	010		co.o.	r.
Mergenese	*0.010	•0.010	0.041	CFU O		00.0	010.0.	0.05
Fercury	.0,0010	*0.0010		7.00	970.0	0.010	•0.010	0.05
				0.0010	*0.0010	.0.0610	.0.0010	0.002
	• 0.005	\$00.00\$	*0.005	*0.005	*0.00*	.0.005	*0,005	10.0
Silver	010.01	•0.010	*0.010	*0.010	•0.010	*D.010	6	
Sedlum	• 10	•10	110	01.	-10			5.0
Perchess	60	87	63	61		2 ;	2 ;	
Conductivity	155	220	160	. F.	e 5	y	-	
Turbidity	•0.1	*.O.4	.0 2				200	200
Color	4		:			0.2	1.0	0.
	n.c.	0.5	45.0	45.0	.5.0	15.0	. 5.0	15.0
Liboride	*0.2	.0.2	*0.2	10.2	.0.2	*0.2	*0.7	
VII rete	-:	1.0.	*0.2	*0.2	,0,2	· •		· '
Chlorice	•10	\$10	10	• 10	•		7.0	p. 01
Sulfate					2	2	10	250
					•			250

*HCL is the Fexicus Contestnent level Alloved

*tess Then

(Roter Vell 7 ves re-tested for Iron & Yorbidity and those numbers are listed above.)

AnTest/1 +h

BAHMANIGH PLATEAU WATER AND BEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYBIS - 1990

ITEM	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WELL 8	** MCL
	06/2/6	4/10/89	06/1/6	06/1/6	9/1/90	9/1/90	06/1/6	
							•	
pH	6.74	7.23	7.26	7.74	7.88	7.29	7.12	
Arsenic	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Barium	<0.25.	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	1.00
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
Chromium	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Iron	<0.05	<0.05	<0.05	<0.05	<0,05	<0.05	<0.05	0.3
Lead	<0.005	<0.0100	<0.005	<0.005	<0.005	<0.005	<0.005	0.05
Manganese	<0.010	<0.0100	660.0>	<0.037	<0.028	<0.010	<0.010	0.05
Mercury	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002
Belenium	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
silver	<0.010	<0.0100	<0.010	<0.010	<0.010	<0.010	<0.010	0.05
Sodium	<10	<10	<10	<10	<10	<10	<11	
Hardness	79	87	85	58	51	72	72	
Conductivity	85	220	150	154	125	189	188	700
Turbidity	<0.2	<0.4000	<0.1	<0.1	<0.2	<0.1	<0.9	1.0
Color	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0	<10.	15
Fluoride	<0.2	<0.2000	<0.2	<0.2	<0.2	<0.2	<0.2	2.0
Nitrate	<1.3	<0.7000	<0.2	<0.2	<0.2	<0.2	<1.3	10.0
chloride	<10	<10	<10	<10	<10	<10	<10	250

PARTS PER MILLION

Less than Detectable Limits

** Maximum Contaminant Level

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1991

ITEM	WELL 1	WELL 2	WELL 4	WELL. 5	WELL A	WOLF 7		
,	7/12/91	7/13/01			0 11711	/ 1774	R TTEM	** MCL
	7, /2,	16/77/	16/27//	7/12/91	7/12/91	7/12/91	7/12/91	
oll								
A 100 100 100 100 100 100 100 100 100 10	9.0	6.4	7.3	6.7	6.7	7.1	0 9	
VI SellIC	<0.010	<0.010	<0.010	<0.010	V0 010	2000	0.0	
barıum	<0.25	<0.25	<0.25	<0.25	20.07	070.07	40.010	0.05
Cadmium	<0.002	CO 002	200	2000	67.0	<0.75	<0.25	1.00
Chromium	<0.010	200.07	200.00	<0.002	<0.002	<0.002	<0.002	0.01
Iron	070.07	010.05	<0.010	<0.010	<0.010	<0.010	<0.010	50 0
7 n d	20.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	20.0
	<0.00	<0.005	<0.005	<0.005	<0.005	40 00E	200	
ranganese	<0.010	<0.010	<0.018	<0.026	2000	500.0	50.00	0.05
Mercury	<0.0010	<0.010	0100	20.00	.0.023	010.05	<0.010	0.05
Selenium	<0 00 K	2000	OTOO	0100.0	<0.0010	<0.0010	<0.0010	0.002
Silver		500.0	<00.0>	<0.005	<0.005	<0.005	<0.005	2
Sodium	010.02	<0.010	<0.010	<0.010	<0.010	<0.010	<0.00	10.0
יייייייייייייייייייייייייייייייייייייי	.,	.9	9.	8	5	10	12.01	0.00
naruness	61	99	52	51	43	2	77	
conductivity	180	270	120	130	120	700	7.5	
Turbidity	0.2	0.6	•		720	730	210	700
Color	0 4/	2	•	۲۵.3	٠.	4.	0.3	1.0
Flooride	0.00	0.05	<5.0	<5.0	<5.0	<5.0	<5×	15
יייי איייייייייייייייייייייייייייייייי	<0.2	<0.2	<0.2	<0.2	<0.2	ć 02		-
Pitrate	1.2	<1.9	1.8	<0.2	200	7.0	70.7	
Chloride	<10	<10	V10		70.5	70.7	1.3	
			7.		77	24		

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS — 1992

тем	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL, ?	WELL 8	** HCI,
	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	7/12/91	
	1							
Ho	7.0	7.3	7.93	8.4	8.4	7.7	6.8	
Arsenic	<0.010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	0.5
Barium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.25	60 -
Cadalua	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01
Chromina	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.010	0.05
ron	<0.05	<0.05	<0.05	<0.05	0.37	<0.05	<0.05	0.3
Lead	<0.002	<0.002	<0.0025	<0.002	<0.002	<0.002	<0.005	0.05
Mauganese	<0.01	<0.01	0.043	<0.041	0.038	<0.01	<0.010	0.05
Hercury	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0010	0.002
Selentum	<0.005	<0.005	<0.005	<0.00	<0.005	<0.005	<0.005	0.01
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	0 05
Solium	9.5	6.1	8.7	8.4	4.8	10	12	
Hardness	85.	75	62	62	56	79	75	
Conductivity	180.	150	140	140	120	170	210	700
Turbidity	0.46	0.42	.33	0.32	.90	.32	0.3	1.0
Color	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.	15
Fluoride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	2
Hitrate	1.0	<1.8	<1.0	<1.0	<1.0	<1.0	1.3	10
Chlorida	<20.	<20	<20	<20	<20	<20	<10	250
Sulfate	10.	<10.	<10.	<10	<10	11		250
Copper	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		0 1
Zinc	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		0 5
Aluminum	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		
Galcium	19.	18.	18	18	16	20.		

WTRMCLS.XLS

WATTER SAMPLE (NEOFINATION FORTINGFGANIC CHEMICAL ANALYSIS - 1998 200 250 250 0.05 0.05 0.05 0.3 0.05 0.05 0.002 0.01 0.0 JOM . < 0.0002 3-2-93 WELL 9 < 0.002 < 0.002 < 0.005 < 0.05 < 0.05 < 0.01 < 0.01 < 0.02 < 0.17 < 0.01 0.43 8.5 160 < 20 68 ь SAMIMAMISH PLANTEAU WATERAND SEWER DISTRICT < 0.0002 3-2-93 0.0050.01 WELL B < 0.002 < 0.002 < 0.05 < 0.05 < 0.05 < 0.02 < 0.01 < 0.01 0.14 - × < 0.1 190 2 V ₽. 75 5. WELL 7 < 0.0002 3.2.93 < 0.002 < 0.005 < 0.002 < 0.05 < 0.05 < 0.02 < 0.05 × 0.01 < 0.01 < 0.01 9.5 6 6 × 20 0 5. MELL 2 WELL'S WELL 5 WELL 6 < 0.0002 3-2-93 < 0.002 < 0.092 < 0.005 < 0.002 < 0.05 < 0.05 < 0.02 < 0.01 < 0.01 < 0.05 < 0.5 8.4 < 0.1 210 20 × 93 <u>-</u> 5 < 0.0002 3-2-93 < 0.005 < 0.002 < 0.002 < 0.041 < 0.05 < 0.02 < 0.05 < 0.05 < 0.01 < 0.01 0.15 < 0.5 7.7 v 0.1 < 20 55 83 κi < 0.0002 < 0.002 < 0.043 3-2-93 < 0.002 < 0.005 < 0.05 < 0.05 < 0.02 < 0.05 < 0.01 < 0.01 0.17 9.0 < 0.5 < 1.0 < 160 < 20 0 v 65 ĸ, < 0.0002 3-2-93 < 0.005 < 0.002 < 0.002 < 0.02 < 0.05 < 0.05 10.0 > × 0.01 < 0.05 v 0.01 9.3 < 0.5 ۸ 0.1 9 2 4 150 < 20 80 5. WELL 1 < 0.0002 3-2-93 < 0.002 < 0.002 < 0.005 < 0.02 < 0.05 < 0.05 < 0.01 < 0.05 < 0.01 10'0 > 0.10 < 0.5 < 0.1 9.1 < 20 190 78 ľ. Selenium 💸 📡 🕵 Chromium Chromia Manganese Sodium 💢 🕍 Mercury 🕾 🛬 👺 ead and bear lardness Conductivity Turbidity Zinc Chloride luoride Silver Cadmium Copper Nitrate Sullate Barium Arsenic lon Color

LEGEND

< Less Than Detectable Limits

" Maximum Contaminant Level

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

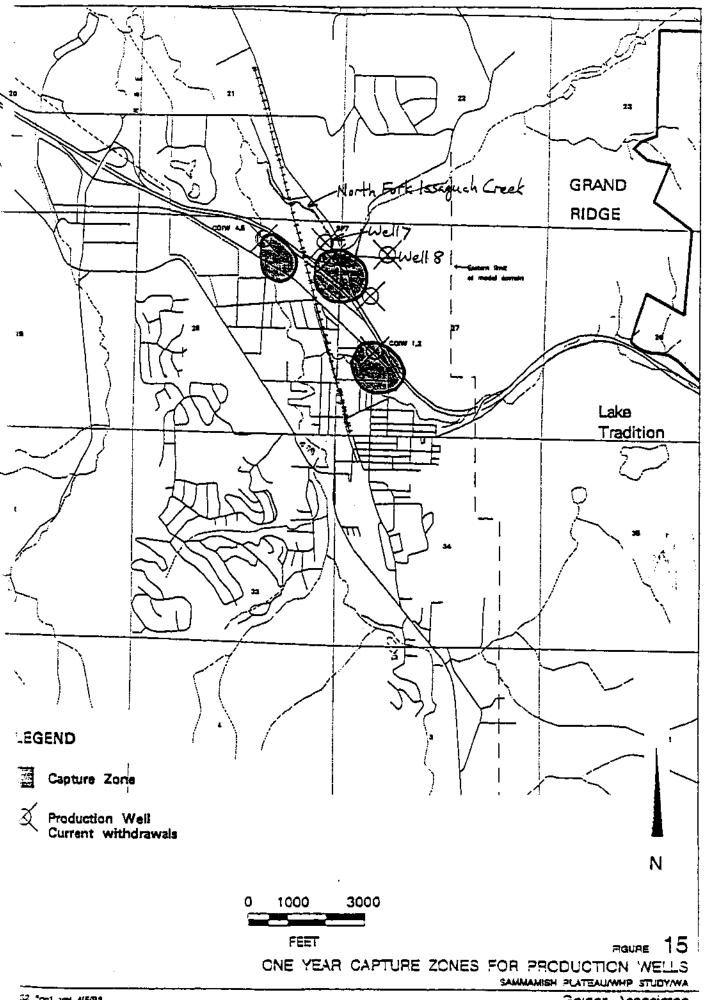
SAMMAMISH PLATEAU WATER & SEWER DISTRICT 1510 228th Avenue S.E. Issaquah, Washington 98027

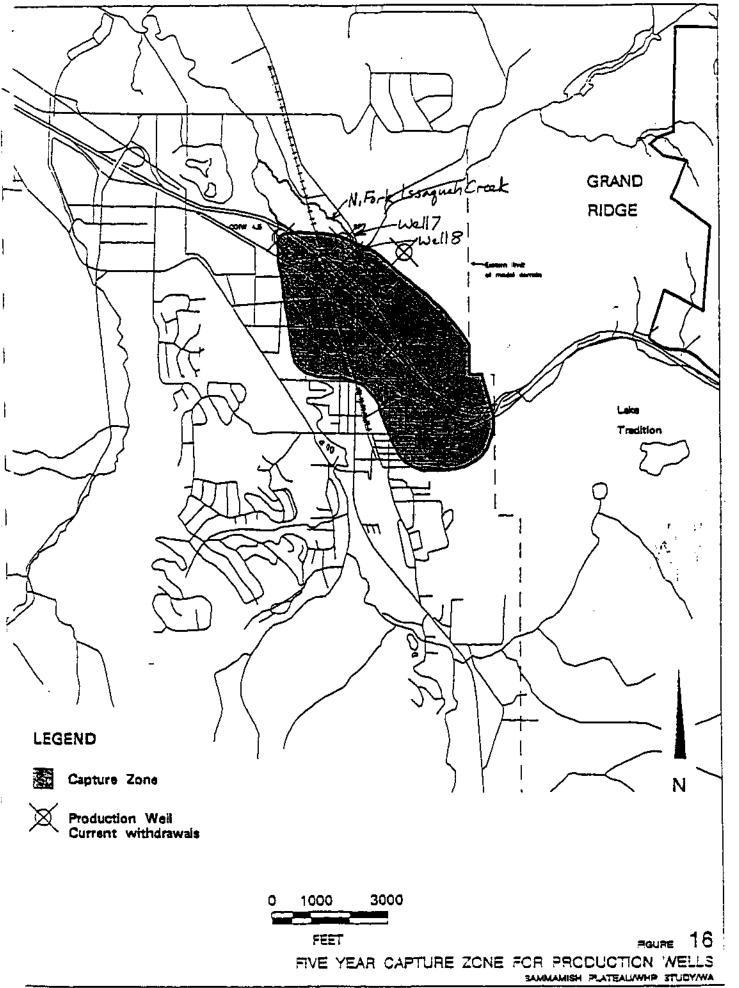
WELL NO. 8

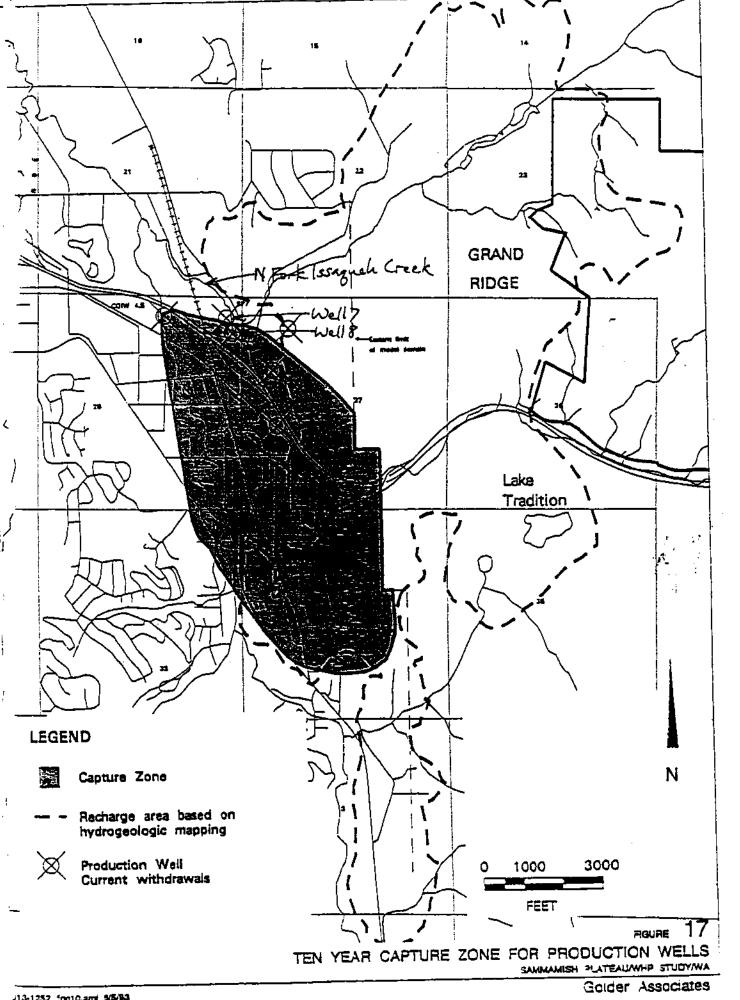
GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

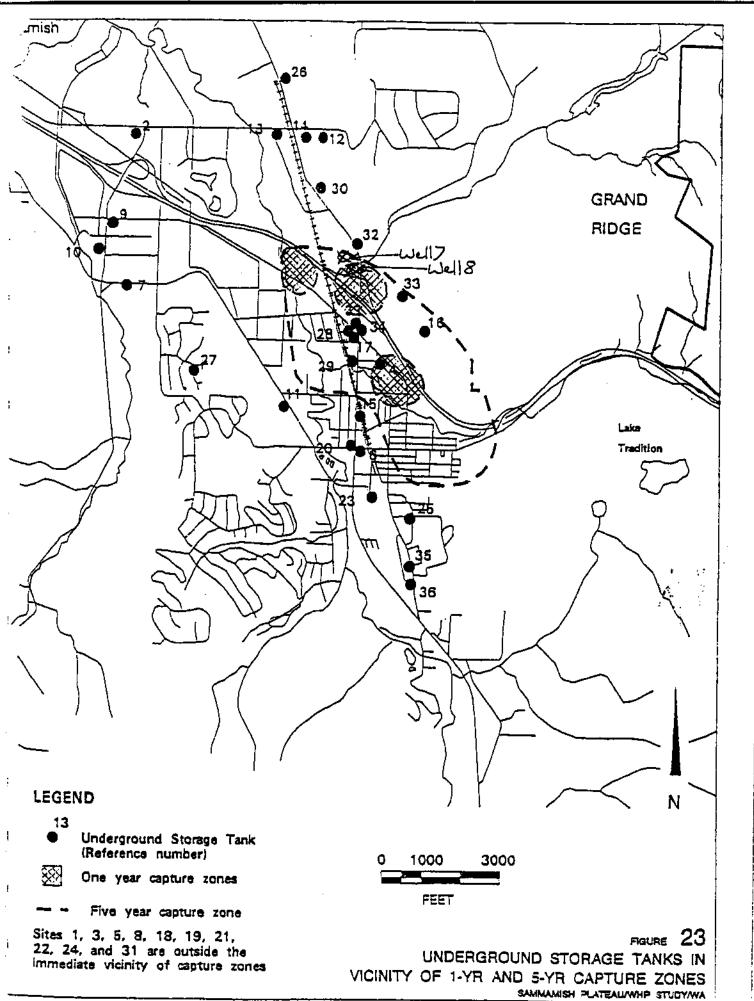
TABLE OF CONTENTS

- Susceptibility Assessment Survey Form
- Sammamish Plateau Well 8 WHPA Capture Zones
- Well Log
- Water Facilities Inventory Form
- Inorganic Chemical Analysis 1989 1993





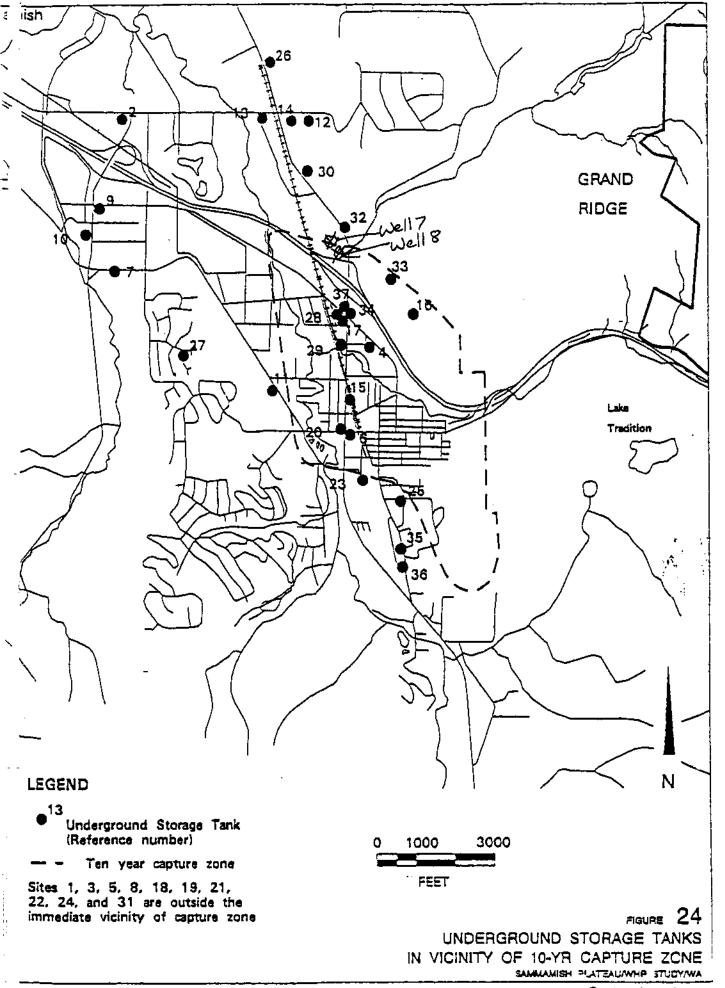


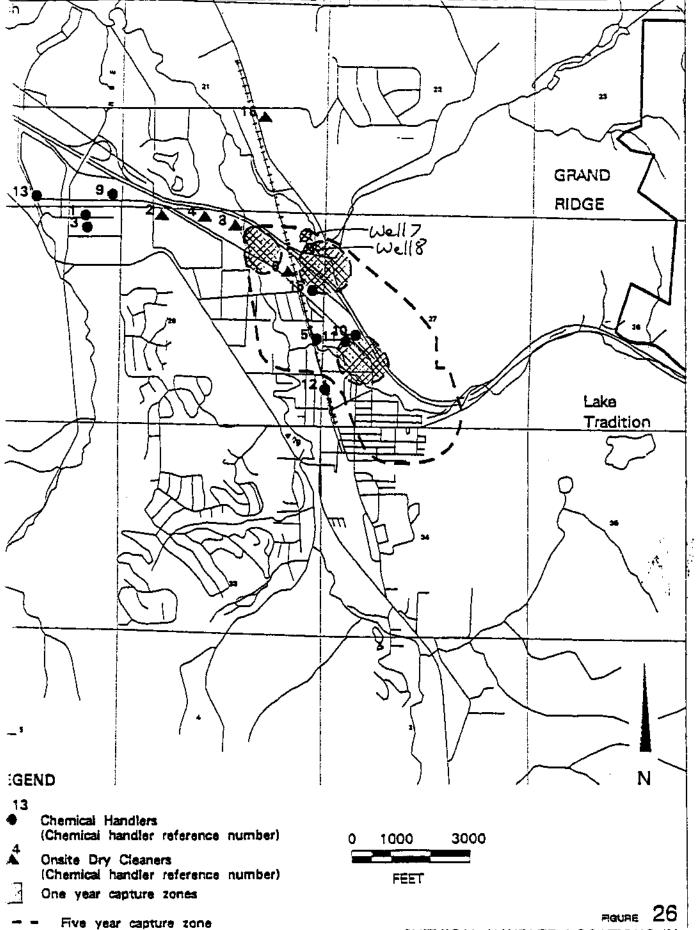


3-1252 !quqiq.ami s/3/93

Golder Associates

:=

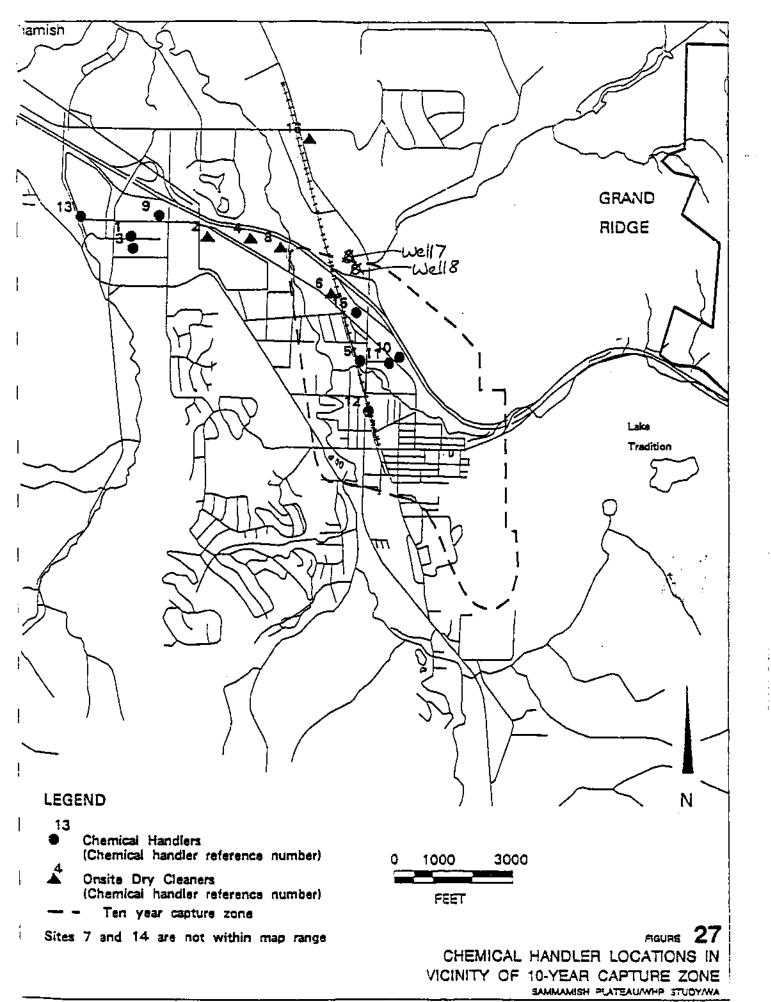




CHEMICAL HANDLER LOCATIONS IN VICINITY OF 1-YR AND 5-YR CAPTURE ZONES

SAMMANISH PLATEAUWHP STUDYWA

tes 7 and 14 are not within map range



SUMMARY USTS AND CHEMICAL HANDLERS IN WHPA'S

					Pravious	Number of
	Source Type/Number	Owner	Contaminant	Quantity Onsile (gallons)	Quantities	Operational Tanks
				IND OC	ž	
	115'T-14	Reda Transportation	Casoline	20,000	Ž	•
1-YK WHI'A - COL 1/2		Gilman Auto Body	Solvent	8 4	2	•
	CH:11	Grange Supply	Solvent	200	2	3
	1.1.5 1.2.1.4	Grange Supply	Gesoline	70,000		
1-YR WHPA - COL 45	None					
	u	Presision Tane	Waste oil	005	;	
1-YR WILLA - SPWSD 7/8	CI-113	Cheuron	Gasoline	9000	≨ :	י מ
	71-ISD		Gasoline	82,200	ź	.
	USI-58	110	Cassina	81,100	ž	ດ .
	H-150	gy ,	o di Control	60,000	ź	*
	LE-ISO	Texaco	SUITOCHY)			
			Casoline	61,100	ž	ч
S-YR WIBA	UST-33	Lakeside	Confine	. •	3300	-
	1 UST-16	Closed	and the second	00009	ž	~
	USIF-17	Chevron	Casourie	82,240	¥	'n
	USI:38	3.5		0.018	122,200	vo.
	UST-34	Arco	Casalia	00104	Ž	-
	UST-37	Техасо		20000	+00009	т
	USF-29	Darigold	Casoline	200,000	Ž	
	450	Dirks Dry Clean	Solvent	3 ;	ž	
	250	Dariguld	Diesel	NA Sunta	2	,
	CIES	Lakeside	Weste Oil/Solveni	orhoo		
				_	4,400	0
4 Va 121 124	USF-15	Issaguah Feed	LASOUNC 	intro oc	51,100	_
IO-IN WILL	USE-20	Mobil (closed)	Casoune	CO ONL	ž	<u>س</u>
	11ST-6	Texaco	Casoline	00000	201.15	~1
	157.23	Issaguah Middle School	Gasoline	motor.	0/6	-
	1152.35	Clark Elementery	Gasolina			
	1181535	Bus Carage	Casoline	s &	2	
	1000	Transportation	Gasoline	on/no	t Att	
	AC-100					

113 status unknown 42 closed in-place NA Not available

Golder Associates

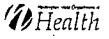
File Original and First Copy with Department of Ecology Second Copy — Owner's Copy Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Арріісацол No.

/1\ ATTACK CAMPER 11	Permit No	······································
(1) OWNER: Name KING COUNTY WATER DISTRI	CT ## 82 1510 228 th SE	
') LOCATION OF WELL: County_KINGKING	ME . ME 1120 24	
earing and distance from section or subdivision corner	AMALIA INEALIA Sec. ZO. TZG.N. R	6_E _w
(3) PROPOSED USE		
Stephen a	, <u>~ , ~ , ~ , ~ , ~ , ~ , , , , , , , , </u>	
frrigation [Test Well [Other [shows this was and or court, character, fixe of material and ste	
(4) TYPE OF WORK: Owner's number of well	stratum penetrated, with at least one entry for each change of	rial in ea
(if more than one),,,	MATERIAL	
T State C	PACE TO SEE TO SEE	
Reconditioned Rotary Jetted	I I HEOLO COLO COLO COLO COLO COLO COLO COLO	11
	1 1) 670649 9134	
5) DIMENSIONS: Diameter of well 16 inches	NYOUN ASSAULT	
Drilled 190 ft. Depth of completed well 198189 ft		32
6) CONSTRUCTION DETAILS:	1 1	34
O CONSTRUCTION DETAILS:	Brown-blue sand, gravel, silt 34	42
Casing installed: 16 "Diam. from +2.0 a to 105 a	Close wood, peat	
Threaded Diam. from 120 ft to 125 ft	Clean sand, gravel 42	69
Welded [] " Diam. from 135 n. to 145 n.	Dirty sand, gravel, layers 69	79
Perforations: Yes No 2 165 - 170	grey clay	
Type of perforator used 179 - 189	Grey silty clay 79	95
SIZE of perforations in. by in.	Sand, gravel, in brown clay 95	
perforations from ft. to ft.	binder	
perforations from ft. to ft.	Sand, gravel, some cobbles 102	178
perforations from ft. to ft.	varying amounts of f	nes
Sergemen		190
Screens: Yes X No D Manufacturer's Name UOD-JOHNSON 304-SS	170	130
Diam. Slot size -060 from 105 No. 120		<u> </u>
Diam. Stot size and 125 m. 135	· · · · · · · · · · · · · · · · · · ·	
Gravel packed: Yes O No M Size of gravel:		
Grave) placed from ft. to ft.		
Surface seal: Yes No C To what denth? SO		
Material used in seal Cement/Bentonice		
TMA	·	
Type of water? Depth of strata	 	
Method of sealing strata off		
\ PYDATO.		
) PUMP: Manufacturer's Name		
Туре: Н.Р		
WATER LEVELS: Land-surface elevation +- 72		
12.6 above mean sea level		
exism pressure		
Artegian water is controlled by		
(Cap, valve, etc.)		
WELL TESTS: Drawdown is amount water level in		
TANK TANK TO TO!	Work started 8/6/84	
lowered below static level	Lampiered.	_ 19
a pump test made? Yes 1 No If yes, by whom: Filler		
td: 1977 gal/min. with 22 ft. drawdown after \$ 1/2 hrs.	WELL DRILLER'S STATEMENT:	
a pump test made? Yes No If yes, by whom: I I ler id: 1977 gal/min. with 22 ft. drawdown after \ hrs.	This well was drilled under our fundation and able	enort in
id: 1977 gal/min. with 22 ft. drawdown after \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	WELL DRILLER'S STATEMENT: This well was drilled under my jurisdiction and this r true to the best of my knowledge and belief.	eport is
id: 1977 gal./min. with 22 ft. drawdown after 3 hrs.	This well was drilled under our fundation and able	eport is
id: 1977 gal/min. with 22 ft. drawdown after 3 hrs. "" "" "" "" "" "" "" "" ""	This well was drilled under my jurisdiction and this r true to the best of my knowledge and belief.	
id: 1977 gal/min. with 22 ft. drawdown after hrs. "" "" "" "" "" "" "" "" ""	This well was drilled under my jurisdiction and this r true to the best of my knowledge and belief. NAME Tokk and the light of the properties of the proper	
id: 1977 gal./min. with 22 ft. drawdown after \ hrs. "" "" "" "" "" "" "" "" ""	This well was drilled under my jurisdiction and this r true to the best of my knowledge and belief. NAME Tokk and the little of the true of the print of the true	G Et)
id: 1977 gal./min. with 22 ft. drawdown after hrs. "" "" "" "" "" "" "" "" ""	This well was drilled under my jurisdiction and this r true to the best of my knowledge and belief. NAME Hock and Dad Lilian Development (Type or pri Address Graham, WA	G et)
a pump test made? Yes No If yes, by whom?	This well was drilled under my jurisdiction and this r true to the best of my knowledge and belief. NAME Hock and Dad Lilian Development (Type or pri Address Graham, WA	G et)
a pump test made? Yes No If yes, by whom?	This well was drilled under my jurisdiction and this r true to the best of my knowledge and belief. NAME Hock and Dad Lilian Development (Type or pri Address Graham, WA	G et)
is a pump test made? Yes No If yes, by whom? I'll or hid: 1977 gal/min. with 22 ft. drawdown after \ hrs. """ """ """ """ """ """ """	This well was drilled under my jurisdiction and this r true to the best of my knowledge and belief. NAME Tokk and the little of the true of the print of the true	()



WATER FACILITIES INVENTORY (WFI)

DATE RECEN	 存在1 01717794
FEB 1	1994
Aps'd	

GATE UPGATED: 61711

Environmental Health

Read Instructions on back before completing

I. SYSTEMID NO. 2 COUNTY	GAOL	P TYPE WRIA	WFI COMPLETED BY	! <u>A</u> I =	TOPOATEO : G	·
3. SYSTEM NAME	A	10.144 9		 		
STRWTHISH BETT	EALL HATES & &	suca	DAY TELEPHONE		DATE	
STREET ADDRESS			8. SUBMITTED NE	W SYSTEM	NO CHANGE	REACTIVATE
1510 228TH AVE	Sē.		57	STEM NAME CHANGE	UPDATE	DELETE
P.O. BOX (IF APPLICABLE)		j	OLD SYSTEM NAME - EA	TER ONLY IF CHANGING W	TH THIS WA	
слтү	STAT	E ZIP CODE			* 41	
153AGUAH		99027	DWELLING SERVED BY	Y RESIDENTS (PEOPLE THE SYSTEM), COMPLETE	LIVING IN A THIS SECTION	
4. OWNER'S NAME (LAST, FIRST)		OWNER NO.	9. NUMBER ACTIVE RESI		NUMBER ACTIVE RESIDENT	TIAL
STREET ADDRESS	FAU HATER 5	3007			n -mental parenters	
_1510_228TH_AVE	· · · · · · · · · · · · · · · · · · ·		884	A 972 85 6 6 6	25,647	بدار جود
P.O. BOX (IF APPLICABLE)	· ·			Y NON-RESIDENTS (LE		
	<u> </u>	·	EMPLOYEES, STUDENTS	, ETC.), COMPLETE THIS	SECTION	
ary .	STAT	·	11. NUMBER NON-RESIDE	NTIAL CONNECTIONS	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
I SSAGUAH 5. SYSTEM CONTACT PERSON	<u> </u>	98027 TILE				· .
LUNALD E. LITTI	E - MANAGER		SERVED FOR EACH M	Y NON-RESIDENTIAL POPL ONTH MAKE ENTRY FOR E	ILATION ACH MONTH	
DAY TELEPHONE	EVENING TELEPHON	E (15 / 15 / 15	2AL	, m		
206-192-6256 W OWNERSHIP	7. PREDOMINANT	CHACACTE D/CT/O		A Property of the Control of the Con	275 - 102 F-102	
(CHECK ONE ONLY)	(CHECK ONE O	NLY)	13 0055 THE SYSTEM OF	RVE AT LEAST 25 OF THE		2012
PRIVATE NON-PROFIT	Y RESIDENTIAL	Per visit of 1994 and in	FOR 4 OR MORE DAYS	PER WEEK FOR AT LEAST	180 DAYS PER YEAR? 📑	•
PRIVATE FOR PROFIT	RECREATION			S NO		•
COUNTY/CTTY/PUD/		L/COMMERCIAL			·-	<u> </u>
WATER DISTRICT	T II ILOOGING/FO	DO SERVICE	14. TOTAL NUMBER		XSTRIBUTION RESERVOIR(es l
STATE	 	CARR	CONNECTIONS METER		TOTAL CAPACITY	·
	SCHOOL/DAY				TOTAL CAPACITY	
STATE	SCHOOL/DAY	CHES, ETC.)	CONNECTIONS METER			
STATE FEDERAL	SCHOOL/DAY OTHER (CHUR	CHES, ETC.)	8,844	NED .	TOTAL CAPACITY	
STATE FEDERAL 16. EIGH 17. SQUACE NAME SQUACE	SCHOOL/DAY GTHER (CHUR	CHES, ETC.)		NED .	TOTAL CAPACITY	
STATE FEDERAL 16. BOM SOURCE NUMBER UST UTILITY'S NAME FO	SCHOOL/DAY OTHER (CHUR 18. SQL GAT	(ACE 19. USE 20. EGGAY	8 , 8 4 4	23. SQUACE 24. SQ	12,850,000	
STATE FEDERAL 16. SON SOURCE NAME SOURCE NUMBER UST UTLITY'S NAME FOR SOURCE SERVERCHE INTERTIED, UST SELLS	SCHOOL/DAY OTHER (CHUR 16. SQL GAY A SQURCE. ASSED OR ERS to	(ACE 19. USE 20. EGGAY	8,844 21. TREATMENT DEPTH	23. SQUACE 23. SQUACE CAPACITY	12,850,000	GALLONS GALLONS
STATE FEDERAL 15. SIGH SQUACE RUMBER UST UTELITY'S NAME FO F SQUACE IS PURCH. INTERTIED, UST SELL AND NAME USING FOR	SCHOOL/DAY OTHER (CHUR 16. SQU GAT RI SOURCE ASSED OR ER'S 10# LOWNIG	CHES, ETC.) 19. USE 20. 19. USE 20. 19. USE 20. 19. USE 20.	8,844 21. TREATMENT 22. WELL DEPTH	23. SQUACE 24. SC	12,850,000	MAILUATION AVIOLATION
STATE FEDERAL 17. SQUACE NAME SQUACE NUMBER UST UTILITY'S NAME FO F SQUACE 85 PURCH INTERTIED, UST SELL AND NAME USING FOL	SCHOOL/DAY OTHER (CHUR 16. SQU GAT RI SOURCE ASSED OR ER'S 10# LOWNIG	CHES, ETC.) 19. USE 20. 19. USE 20. 19. USE 20. 19. USE 20.	8,844 21. TREATMENT 22. WELL DEPTH	23. SQUACE CAPACITY 24. SC	12,850,000	MAILUATION AVIOLATION
STATE FEDERAL 16. DOM SOURCE NUMBER UST UTILITY'S NAME FO F SOURCE & PURCH INTERTIED, UST SELLI AND NAME USING FOO FORMAT: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	SCHOOL/DAY OTHER (CHUR 18. SQL GAY A SOURCE USED OR ERS DA LOWING AME PATILE 19. SCHOOL/DAY 19. SQL GAY	SAFANGE ON SAFANGE ON	21. THEATMENT 22. WELL DEPTH WILLIAM SOLVENDON WE WOUND WE WANTED THE WOLLD WILLIAM SOLVENDON WOUND WO	23. SQUACE CAPACITY 24. SG	12,850,000 DURGE EGCARON 1/4 SEC. TWP	SWIR EVALUATION VOC EVALUATION
STATE FEDERAL 15. SIGH SQUACE RUMBER UST UTELITY'S NAME FO F SQUACE IS PURCH. INTERTIED, UST SELL AND NAME USING FOR	SCHOOL/DAY OTHER (CHUR 16. SQU GAT RI SOURCE ASSED OR ER'S 10# LOWNIG	SAFANGE ON SAFANGE ON	7 . 844 21. THEATMENT 22. WELL DEPTH POULVOIS STATE	23. SQUACE CAPACITY CAPACITY 1/4. SE	12,850,000 DURGE LOCATION WE SEC. TWP	CO SWIN EVALUATION VOCEVALUATION
STATE FEDERAL 17. SQUAGE NAME SQUAGE RUMBER UST UTELITY'S NAME FO F SQUAGE IS PURCH. INTERTIED, UST SELL AND NAME USING FOR PORMAT: XXXXIVE T7050Y/SE 302 WELL 2 T03 WELL 2	SCHOOL/DAY GTHER (CHUR 18. SQL GAY A SOURCE ASSED OR ER'S OP LOWING AME EATTLE ARE ARE A A	SAFANGE ON SAFANGE ON	21. THEATMENT 22. WELL DEPTH WILLIAM SOLVENDON WE WOUND WE WANTED THE WOLLD WILLIAM SOLVENDON WOUND WO	23. SQUACE CAPACITY 24. SG	12,850,000 DURGE EGGATION 1/4 SEC. TWP C. NO. TWP SE 10 24N SE 11 24N	GALLONS SWINGWALLON WOE EVALUATION
STATE FEDERAL 15. SQH SQUACE RUMBER UST UTELTY'S NAME FO F SQUACE IS PURCH. INTERTIED. LIST SELL AND NAME USANG FOR PORMAT: XXXXIVE XXXIVE X	SCHOOL/DAY GTHER (CHUR 16. SOURCE. ASSED OR ER'S DA LOWING: AARE EATTLE A X X X	CHEST 199 UNITED TO THE LEG TO TH	8.844 21. THEATMENT 22. WELL DEPTH MOLIVABOUR BY 10.10 X X I I 3.2	23. SQUACE 24. SC CAPACITY 1/4. SE 500 SA/360 NA/	12,850,000 DURGE LOCATION 1/4 SEC. TWP C. NO. TWP NE 10 24N SE 11 24N SW 34 25N	CO SWIN EVALUATION VOCEVALUATION
STATE FEDERAL 17. SQUAGE NAME SQUAGE RUMBER UST UTILITY'S NAME FO F SQUAGE 85 PURCH INTERTIED, LIST SELL AND NAME USING FOI PORMAT: XXXXXXI XXXIII II II II II XXXIII II II II XXXIII II II XXXIII II II II XXXIII II II II XXXIII II II II XXXIII II II II XXIII II II II II II XXIII II II II II II II XXIII II II II II II II II II XXIII II II II	SCHOOL/DAY GTHER (CHUR 18. SQU GAY 18. SQU GAY 18. SQU GAY 19. SQU	Achieves very country of the country	21. THEATMENT 22. WELL DEPTH WOUNDON'D WANTE	23. SQUACE 24. SQUACITY (GPM) 1/4. SE 360 NH/450 1/4/625 SW/500 NE/	12,850,000 DURCE LOCATION 1/4 SEC. TWP C. MO. TWP NE 10 24N SE 11 24N SE 11 24N SW 34 25N NH 34 25N NH 34 25N	GALLONS SWITE EVALUATION VOE EVALUATION
STATE FEDERAL 17. SQUAGE NAME SQUAGE RUMBER UST UTILITY'S NAME FO F SQUAGE 85 PURCHE INTERTIED, UST SELL AND NAME USING FOL PORMAT: XXXXXXX/N EXAMPLE: 77050Y/SE JOL ALL L JOS WELL Z JOS WELL Z JOS WELL 45 SUO WELL 47	SCHOOL/DAY GTHER (CHUR 16. SQL GAT 18. S	Achieves very country of the country	21. TREATMENT 22. WELL DEPTH WILLIAM W	300 SA/ 360 NA/ 450 NA/ 625 SW/ 500 SE/ 2,000 SE/	12,850,000 12,850,000 144 SEC. TWP C. NO. TWP SE 11 24N SE 11 24N SW 34 25N SW 34 25N SW 34 25N SE 21 24N	GALLONS AND SWIN EVALUATION OPENANCATION OPENANCATION OPENANCATION
STATE FEDERAL 17. SQUAGE NAME SQUAGE RUMBER UST UTILITY'S NAME FO F SQUAGE 85 PURCH INTERTIED, LIST SELL AND NAME USING FOI PORMAT: XXXXXXI XXXIII II II II II XXXIII II II II XXXIII II II XXXIII II II II XXXIII II II II XXXIII II II II XXXIII II II II XXIII II II II II II XXIII II II II II II II XXIII II II II II II II II II XXIII II II II	SCHOOL/DAY GTHER (CHUR 18. SQU GAY 18. SQU GAY 18. SQU GAY 19. SQU	Achieves very country of the country	21. THEATMENT 22. WELL DEPTH WOUNDON'D WANTE	23. SQUACE 24. SQUACITY (GPM) 1/4. SE 360 NH/450 1/4/625 SW/500 NE/	12,850,000 12,850,000 144 SEC. TWP C. NO. TWP SE 11 24N SE 11 24N SW 34 25N NH 14 25N SE 32 25N SE 21 24N	GALLONS GALLONS SWITH EVALUATION VOCEVARUATION
STATE FEDERAL 17. SQUAGE NAME SQUAGE RUMBER UST UTILITY'S NAME FO F SQUAGE 85 PURCHE INTERTIED, UST SELL AND NAME USING FOL PORMAT: XXXXXXX/N EXAMPLE: 77050Y/SE JOL ALL L JOS WELL Z JOS WELL Z JOS WELL 45 SUO WELL 47	SCHOOL/DAY GTHER (CHUR 16. SQL GAT 18. S	Achieves very country of the country	21. TREATMENT 22. WELL DEPTH WILLIAM W	300 SA/ 360 NA/ 450 NA/ 625 SW/ 500 SE/ 2,000 SE/	12,850,000 12,850,000 144 SEC. TWP C. NO. TWP SE 11 24N SE 11 24N SW 34 25N SW 34 25N SW 34 25N SE 21 24N	GALLONS AND SWIN EVALUATION OPENANCATION OPENANCATION OPENANCATION
STATE FEDERAL 17. SQUAGE NAME SQUAGE RUMBER UST UTELY'S NAME FO F SQUAGE IS PURCH. INTERTIED, UST SELL AND NAME USING FOR FORMAT: XXXXXIII AND NAME USING FOR FORMAT: XXXXIII AND NAME USING FOR FORMAT: XXXXIII AND NAME USING FOR FORMAT: XXXIII	SCHOOL/DAY OTHER (CHUR 18. SOURCE ASSED OR ER'S DAY LOWING AARE PATTLE X X X X X X	THE CONTRACT OF THE CONTRACT O	# 844 21. THEATMENT 22. WELL DEPTH ***COLUMN TO SHITE SHIT	23. SQUACE CAPACITY 24. SC (GPM) 1/4. SE (GP	12,850,000 12,850,000 144 SEC. TWP C. NO. TWP SE 11 24N SE 11 24N SW 34 25N SW 34 25N SW 34 25N SE 21 24N	GALLONS AND SWIN EVALUATION OPENANCATION OPENANCATION OPENANCATION
STATE FEDERAL 17. SQUAGE NAME SQUAGE RUMBER UST UTILITY'S NAME FO F SQUAGE IS PURCH. INTERTIED, UST SELL AND NAME USING FOR FORMAT: XXXXXXIII AND NAME USING FOR FORMAT: XXXXXIII AND NAME USING FOR FORMAT: XXXXXIII AND NAME USING FOR FORMAT: XXXXXIII AND NAME USING FOR FORMAT: XXXXIII AND NAME USING FOR FORMAT: XXXXIII AND NAME USING FOR FORMAT: XXXXIII AND NAME USING FOR FORMAT: XXXIII AND NAME USING FOR FORM	SCHOOL/DAY OTHER (CHUR 18. SOURCE ASSED OR ER'S DAY LOWING AARE PATTLE X X X X X X	THE ECONOCE ANTIPER ON A STANDARD AND A STANDARD A STANDARD A STANDARD A STANDARD A STANDARD A STANDARD A STANDARD A STANDARD A STANDARD A ST	21. TREATMENT 22. WELL TREATMENT DEPTH ***********************************	23. SQUACE CAPACITY 24. SC (GPM) 1/4. SE (GP	12,850,000 12,850,000 174 SEC TWP C 10 24N SE 11 24N SW 34 25N SW 34 25N SE 21 24N SE 21 24N	GALLONS AND SWIN EVALUATION OPENANCATION OPENANCATION OPENANCATION
STATE FEDERAL 17. SQUAGE NAME SQUAGE RUMBER UST UTILITY'S NAME FO F SQUAGE IS PURCH. INTERTIED, UST SELL AND NAME USING FOR FORMAT: XXXXXXIII AND NAME USING FOR FORMAT: XXXXXIII AND NAME USING FOR FORMAT: XXXXXIII AND NAME USING FOR FORMAT: XXXXXIII AND NAME USING FOR FORMAT: XXXXIII AND NAME USING FOR FORMAT: XXXXIII AND NAME USING FOR FORMAT: XXXXIII AND NAME USING FOR FORMAT: XXXIII AND NAME USING FOR FORM	SCHOOL/DAY GTHER (CHUR 18. SQU GAY A SOURCE SSED OR PRS DA LOWING AME EATTLE A X X X X MINIM	THE CONTRACT OF THE CONTRACT O	21. THEATMENT 22. WELL THEATMENT PEPTH ***OUNDED***: **OUNDED***: ***OUNDED***: ***OU	300 SA/ 360 NA/ 450 NA/ 450 NA/ 450 NA/ 500 SE/ 3,500 SE/ 3,500 SE/	12,850,000 DURCE LOCATION 1/4 SEC. TWP C. MO. TWP NE 10 24N SE 11 24N SE 11 24N SE 21 24N SE 21 24N SE 21 24N SE 21 24N SE 21 24N	GALLONS AND SWIFEVALUATION SWIFEVALUATION OA DEC OA OA OA OA OA OA OA OA OA OA OA OA OA
STATE FEDERAL 17. SQUAGE NAME SQUAGE RUMBER UST UTILITY'S NAME FO F SQUAGE 85 PURCH INTERTIED, LIST SELL AND NAME USING FOI PORMAT: XXXXXXII SQUAGE UST UTILITY'S NAME FO F SQUAGE 85 PURCH INTERTIED, LIST SELL AND NAME USING FOI FORMAT: XXXXXII SQUAGE FOR SQUAGE	SCHOOL/DAY GTHER (CHUR 16. SOURCE. ASSED OR ENS D. LOWNIG. AME EATTLE X X X X X X X X X X X X X X X X X X	THE ECONOCE ANTIPER ON A STANDARD AND A STANDARD A STANDARD A STANDARD A STANDARD A STANDARD A STANDARD A STANDARD A STANDARD A STANDARD A ST	21. THEATMENT 22. WELL THEATMENT DEPTH NOUTHNOTH WAS 154 X 132 715 714 355 X 150 150 OATE OF LAST SANITAR	23. SQUACE 24. SC CAPACITY 24. SC SW/ 360 NW/ 450 FW/ 500 SE/ 3,500 SE/ 3,500 SE/ 3,500 SE/ 3,500 SE/ 30 30 30 30 30 30 30 30 30 30 30 30 30	12,850,000 DURCE LOCATION 1/4 SEC. TWP C. MO. TWP NE 10 24N SE 11 24N SE 11 24N SE 21 24N SE 21 24N SE 21 24N	GALLONS AND SWIN EVALUATION O O O O O O O O O O O O O O O O O O
STATE FEDERAL 17. SQUAGE NAME SQUAGE RUMBER UST UTILITY'S NAME FO F SQUAGE 85 PURCH INTERTIED, LIST SELL AND NAME USING FOI PORMAT: XXXXXX/N EXAMPLE: 77050Y/St 302 HELL 2 303 WELL 2 304 HELL 4 304 HELL 4 305 HELL 5 306 HELL 5 307 HELL 5 307 HELL 5 307 HELL 5 308 HELL 5 309 HELL 5 300 HELL 5 30	SCHOOL/DAY GTHER (CHUR 16. SOURCE. ASSED OR ENS D. LOWNIG. AME EATTLE X X X X X X X X X X X X X X X X X X	THE RECOURSE PACTERING ON MOMENT A	21. THEATMENT 22. WELL THEATMENT DEPTH NOUTHNOTH WATER X 132 715 714 355 X 150 150 OATE OF LAST SANITAR	23. SOURCE CAPACITY 24. SC (GPM) 1/4. SE (GP	12,850,000 DURCE LOCATION 1/4 SEC. TWP C. MO. TWP NE 10 24N SE 11 24N SE 11 24N SE 21 24N SE 21 24N SE 21 24N SE 21 24N SE 21 24N	GALLONS AND SWIFEVALUATION SWIFEVALUATION OA DEC OA OA OA OA OA OA OA OA OA OA OA OA OA

SAFFARISH FLATEAU RATER & SEWER DISTRICT

KATER SAMPLE INFORMATION FOR INDRGANIC CHEMICAL AMALYSES - 15E9

					7			1 1	
		FELL 1 E/4/69	FE11 2 4/10/69	FELL 4 4/10/E9	NELL 5 4/10/29	WELL 6	KE11 7	8 1134	, גינו
		, , , , , , , , , , , , , , , , , , ,					6377177	4/10/69	
		7.06	7.23	8.22	8,32	7.46	7 48		# 1 1 1 1 1
-	Arsenic	*0.010	.0.010	*D.010	*0.010	010		50.77	:
_	Eerlum	10.25	*0.25	*0.25	•0.25		210.0	0.010	0.05
J	Cecalum	. D. 002	•0.002	600		67.0	0.25	0.25	. .0
Ų	Chreatum			700.0	200.00	•0.002	.0.002	*0.02	0.01
•			. D. 010	*D.010	•0.610	.0.010	.0.010	*D.C10	0.005
	1.60	*0.03	*0.05	0.03	*0.05	*D.05	0.05	40.05	,
	e e d	*P.010	•0.610	.0.010	*0.010	.0.010	*0.630	0.0	
<u>-</u>	Pergenesa	10.010	.0.010	0.041	0.042	0.026			60.0
Ľ	Percury	.00010	.0.0610	*0.0010	*0.0010	0100 0	010.0	010.07	0.05
ű.	Sefen lem	*0.00\$	\$00.00	*0.005	\$ 00 O.		Otan d	0.0010	200.0
(,	Silver	*D.010	•0.010	*0 010	*	Con.a.	500.0	.0.00	0.01
Ş	Sodium	5				010	•0.010	0.010	0.05
:	:		2	10	10	• 10	• 10	•10	
-	. er (ness	60	87	63	61	48	74	<u>«</u>	
ບິ	Conductivity	155	220	160	150	120	900		;
~	Turbldity	1.0.	10.4	•0.2	.0.1	10.1			90/
ů	Color	•5.0	15.0	15.0	45.0	, c	7	- -	5 .
Ī	Fluoride	10.2	40.7			•	0.01	#5·0	15.0
Ξ	Witrete	! <u>-</u>		7.0.	2.0	2.0.	*0.2	¥0.2	2.0
í		<u>:</u>	60.1	.0.2	*0.2	10.2	1.6	* D. 2	10.0
ڌَ	th for ICe	•10	\$10	*10	410	010	110	-	
3,	Sulfete							<u> </u>	067
									250

*PCL is the Fexinum Conteminent Level Allowed

*less Then

SETPS + /1 . h

(Notes Fell 7 was re-tested for Iron & Turbidity and those numbers are listed above.)

WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1990

ITEM WELL 1 WELL 2 9/7/90 4/10/89 PH 6.74° 7.23 Arsenic <0.010° <0.010 Barium <0.25 <0.25 Cadmium <0.002 <0.002 Chromium <0.005 <0.010 Iron <0.05 <0.010 Manganese <0.005 <0.0100 Mercury <0.0010 <0.0010 Belenium <0.05 <0.0010		WELL 4 9/7/90 7.26 <0.010 <0.25	WELL 5 9/7/90	WELL 6	WELL 7	WELL 8	** MCL
9/7/90 6.74 <0.010 <0.25 <0.002 <0.002 <0.002 <0.002 <0.002 <0.002 <0.002 <0.005 <0.005 <0.0010 <0.0010 <0.005		9/7/90 7.26 <0.010 <0.25	06/1/6				
6.74. <0.010 <0.25 <0.002 <0.010 <0.005 e <0.010 <0.0010 <0.0010		7.26 <0.010 <0.25		06/1/6	06/1/6	06/1/6	
6.74. <0.010' <0.025 <0.002 <0.010 <0.005 e <0.0010 <0.0010 <0.0010		7.26 <0.010 <0.25					
<pre><0.010 <0.25 <0.002 <0.002 <0.010 <0.05 <0.010 <0.0010 <0.0010 <0.0010 <0.0010 <0.0010 <0.0010 <0.0010 <0.0010 <0.0010 <0.0010</pre>		<0.010	7.74	7.88	7.29	7.12	
<pre><0.25 <0.002 <0.002 <0.010 <0.005 <0.010 <0.0010 <0.005 <0.0010 <0.0010</pre>		<0.25	<0.010	<0.010	<0.010	<0.010	0.05
<pre><0.002 <0.010 <0.010 <0.005 <0.005 <0.010 <0.010 <0.0010 <0.0010</pre>			<0.25	<0.25	<0.25	<0.25	1.00
<pre>< <0.010 <0.05 <0.005 <0.005 <0.010 <0.0010 <0.0010 <0.0010</pre>		<0.002	<0.002	<0.002	<0.002	<0.002	0.01
<pre><0.05 <0.005 <0.010 <0.010 <0.010 <0.0010 <0.005</pre>		<0.010	<0.010	<0.010	<0.010	<0.010	0.05
<pre><0.005 e <0.010 <0.0010 <0.0010 <0.0010</pre>		<0.05	<0.05	<0,05	<0.05	<0.05	0.3
<pre><pre>< <0.010 <0.0010 <0.0010 <0.05</pre></pre>		<0.005	<0.005	<0.005	<0.005	<0.005	0.05
<0.0010	_	<0.039	<0.037	<0.028	<0.010	<0.010	0.05
<0.05	0	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002
		<0.005	<0.005	<0.005	<0.005	<0.005	0.01
		<0.010	<0.010	<0.010	<0.010	<0.010	0.05
<u> </u>		<10	<10	<10	<10	<11	
Hardness 79 87	8.7	58	58	51	72	72	
Conductivity 85 220		150	154	125	189	188	700
Turbidity <0.2 <0.4000		<0.1	<0.1	<0.2	<0.1	<0.9	1.0
Color <5.0 <5.0		<10.0	<10.0	<5.0	<5.0	<10.	15
Fluoride <0.2 <0.2000		<0.2	<0.2	<0.2	<0.2	<0.2	2.0
Nitrate <1.3 <0.7000		<0.2	<0.2	<0.2	<0.2	<1.3	10.0
Chloride <10 <10		<10	<10	<10	<10	<10	250

PARTS PER MILLION

- Less than Detectable Limits
- ** Maximum Contaminant Level

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1991

I'rem	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WELL 8	** MCL
	7/12/91	7/12/91	7/12/91	7/12/91	7/12/91	7/12/91	16/21/2	
PH	9.9	6.4	7.3	6.7	6.7	7.1	0 7	
Arsenic	<0.010	<0.010	<0.010	<0.010	<0.010	010	0.0	000
Barium	<0.25	<0.25	<0.25	<0.25	<0.25	20.01	VO.010	0.03
Cadmium	<0.002	<0.002	<0.002	<0.002	<0 000	2000	67.05	1.00
Chromium	<0.010	<0.010	<0.010	<0.010	70.07	200.00	200.00	0.0I
Iron	<0.05	<0.05	20 02	20.07	010.0	070.02	<0.010	0.05
Lead	<0.005	200 OV	20.07	50.05	<0.0>	<0.05	<0.05	0.3
Manganeso		500.0	500.05	<0.00>	<0.005	<0.00	<0.005	0.05
De la la la la la la la la la la la la la	\$0.010	<0.010	<0.018	<0.026	<0.023	<0.010	<0.010	0.05
ver cur y	<0.0010	<0.010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0000
selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.00	<0 00 V	200.0
Silver	<0.010	<0.010	<0.010	<0.010	<0.010	010 05	010	10.0
Sod 1 um	7.	.9	9.	8	5	10	12	co.o
Hardness	61	99	52	51	43	61	75	
Conductivity	180	270	120	130	120	190	210	200
Turbidity	0.2	9.0	4.	<0.3	٤.	4.	F 0	200
LOIOF	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	7.	15
Fluoride	<0.2	<0.2	<0.2	<0.2	<0.2	<0 >		CT
Nitrate	1.2	<1.9	1.8	<0.2	<0.2	2.00	1 3	
Chloride	<10	<10	<10	<10.	21	24	410	
								-

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSIS - 1992

TERM	WELL 1	WELL 2	WELL 4	WELL 5	WELL 6	WELL 7	WRIT. 8	1577
	2/14/92	2/14/92	2/14/92	2/14/92	2/14/62		,	1
					7/27/2	76/81/7	1/12/91	
PH	7.0	7.3						
Arsenic	010	, ,	(1.23	8.4	8.4	7.7	6.8	
Bartum	20.00	20.01	<0.01	<0.01	<0.01	<0.01	<0.010	.05
Cadm tom	×0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.25	55.
Circin Line	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	20 00	7.00
	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	20.02	0.01
no.	<0.05	<0.05	<0.05	<0.05	0 17	20.07	010.00	0.05
Lead	<0.002	<0.002	<0.0025	500 00	75.07	50.05	<0.05	0.3
Manganese	<0.01	<0.01	0.043	200.00	20.002	<0.002	<0.005	0.05
Mercury	<0.0002	<0.0002	2000	740.00	0.038	<0.01	<0.010	0.05
Selenium	<0.005	2000	20.00.00	<0.0002	<0.0002	<0.0002	<0.0010	0.002
Silver	100	500.0	50.005	<0.005	<0.005	<0.005	<0.005	0.01
Sodius	10.01	40.01	<0.01	<0.01	<0.01	<0.01	<0.010	0.05
Hardinage	0.0	1.0	8.7	B.4	4.8	10	12	
100 mm	45.	75	62	62	56	79	75	
" " " " " " " " " " " " " " " " " " "	180.	150	140	140	120	170	210	001
Taracter Co.	0.46	0.42	.33	0.32	.90	.32	0 3	
- F 1	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	, ,	20.4
an Tion I	<0.5	<0.5	<0.5	<0.5	CO 5	2 0		CT
Nitrate	1.0	<1.8	<1.0	0 -		20.3	<0.02	2
chloride	<20.	<20	<20	230	2000	0.1.5	1.3	10
Sulfate	10.	<10.	\$10 \$10		750	072	<10	250
Copper	<0.02	<0.03		S IO	<10	11		250
Zinc	<0.05	, O.	20.02	<0.02	<0.02	<0.02		1.0
Aluminum	(5.0	60.00	50.05	<0.05	<0.05	<0.05		5.0
talcium.	, ,	0.6	<.s.u	<5.0	<5.0	<5.0		
	13.	18.	18	18	16	20		

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT Watter Sample information for inorganic chemical analysis - 1993

ITEM	WELL 1	1 WELL'2 WELL'4 WELL 5 WELL 6	WELL 4	WELL 5	WELL 6	WELL 7 WELL 8	WELL 8	WELL 9	· MCL
Ship and the second	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	3-2-93	
Arsenic	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05
Barium Same	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1
Cadmium	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	10.0'
Chromium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Copper	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.3
Iron 💮 🛴	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.17	0.3
Pead St. 18 bead	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.05
Manganese	< 0.01	< 0.01	< 0.043	< 0.041	< 0.092	< 0.01	< 0.01	< 0.01	0.05
Mercury 😤 🎨 💮	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.002
Selenium 💨 🔝	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01
Silver : 1000 1000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05
Sodium 📜 🔝 🛴 🛴	9.1	9.3	9.0	7.7	8.4	9.5	10.	8.5	
Zinc	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	5
l lardness	78.	80	65	65	63	79	5/	99	
Conductivity	190	150	160	150	210	190	190	160	700
Turbidity,	0.10	0.49	0.17	0.15	0.1	0.1	0.14	0.43	1
Color	5,	5.	5.	5.	5.	5.	5.	5.	15
Chloride 💮 💮	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	250
Fluoride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2
Wilrate 👙 💮	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.1	< 1.0	10
Sullate	< 10	< 10	< 10	< 13	< 10	< 10	< 10	< 10	250

LEGEND

< Less Than Detectable Limits

" Maximum Contaminant Level

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.1

[MPORTANT!

Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information
Well owner/manager: SAMMAMISH PLATEAL WATER & SEWER DIST.
Water system name: SAMMAMISH PLATEAU INJATER T SEWER DIST
County: KING
Water system number: 409009 Source number: 507
Well depth: (ft.) (From WFI form)
Source name: WELL 8
WA well identification tag number:
well not tagged
Number of connections: 9000 Population served: 26,000
Township: Z4N Range: OGE
Section:
Latitude/longitude (if available):
How was lat./long. determined?
global positioning device survey topographic map
* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.
PART II: Well Construction and Source Information
1) Date well originally constructed: 8/2984 month/day/year
last reconstruction:/ / month/day/year
information unavailable

Survey Form Ver. 2.1 page :

2) Well driller: FORKAIDO DRILLING T DEV.
P.O. Box 100
GEAHAM WA.
well driller unknown
3) Type of well:
Drilled: rotary bored cable (percussion) Dug
Other: spring(s) lateral collector (Ranney)
drivenjettedother:
Additional comments:
4) Well report available? YES (attach copy to form) NO
If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.
5) Average pumping rate: 3500 (gallons/min)
5) Average pumping rate: 3500 (gallons/min) Source of information: WATER TACILITIES LIVENIDEY
If not documented, how was pumping rate determined?
Pumping rate unknown
6) Is this source treated? $\times ES - will be$
If so, what type of treatment:
disintection tiltration carbon tilter air stripper \(\sumset \text{other}\)
Purpose of treatment (describe materials to be removed or controlled by treatment):
IN 1994 TREATMENT TO BAISE PA USING SODIUM
IN 1994 TREATMENT TO RAISE PA USING SODIUM HYDROXIDE - FOR CORROSION CONTROL TO BE IMPLEMENTE. IN FALL OF 1994
7) If source is chlorinated, is a chlorine residual maintained: YESNO N/A
Residual level: (At the point closest to the source.)

Survey Form Ver. 2.1 page 2

PART III	Hydrogeologic Information
l) Depth t	top of open interval: [check one]
	< 20 ft 20-50 ft 50-100 ft > 200 ft
	information unavailable ('<' means less than; '> ' means greater than)
	ground water (static water level):
X	< 20 ft 20-50 ft 50-100 ft > 100 ft
_	flowing well/spring (artesian)
	w was water level determined?
×	well log other:
_	depth to ground water unknown
3) If sourc	e is a flowing well or spring, what is the confining pressure:
	psi (pounds per square inch)
_	feet above wellhead
4) If source with this so	e is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated, purce: YES NO
5) Wellhea	d elevation (height above mean sea level): $\frac{t}{72}$ (ft)
Ho	w was elevation determined? topographic map \(\frac{}{\chi} \) Drilling/Well Log altimeter
	_ other:
	_ information unavailable
6) Continir report desc	ig layers: (This can be completed only for those sources with a drilling log, well log or geologic ribing subsurface conditions. Please refer to assistance package for example.)
<u> 10</u>	evidence of a confining layer in well log
_	no evidence of a contining layer in well log
lf t of	there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top the open interval? YES NO
	information unavailable
	2

Survey Form Ver. 2.1 page 3

7) Sanitary setback:	
<pre>100 ft* 100-120 ft 120-200 ft > 200 ft if less than 100 ft describe the site conditions:</pre>	
8) Wellhead construction:	
wellhead enclosed in a wellhouse	
Controlled access (describe): GATED/LOCK	ED
<u></u>	
other uses for wellhouse (describe):	
no wellhead control	
9) Surface seal: 18 ft	
< 18 ft (no Department of Ecology approval)	('<' means less than)
< 18 ft (Approved by Ecology, include documentation)	('<' means less than)
× > 18 tt	('> 'means greater than)
depth of seal unknown	
no surface seal	
10) Annual rainfall (inches per year):	
< 10 in/yr 10-25 in/yr \(\sqrt{ > 25 in/y}	vr

PART IV:	Mapping Your Ground Water	Resource	
l) Annual vo	lume of water pumped:	OCO (gallons)	
How	was this determined?		
$\stackrel{\checkmark}{\times}$ "	neter		 ·
es	stimated:pumping rate (
	pump capacity ()	
<u></u> ot	ther:		
2) *Calculated (see In	d Fixed Radius* estimate of ground	i water movement:	
6 mon	nth ground water travel time :	440	The Sammamish Plateau (it) Water + Sewer District
i year	ground water travel time:	620	(tt) Water & SEWS the Lower participated in the Lower (tt) Issaguah Valley Wellhead Protection Plan. The Figures (tt) For lyr., Syr. + 10yr. Capture
5 year	ground water travel time:	1390	Protection Plan. The Figures
10 y e a	ar ground water travel time:	1970	AND COLD RIFE RIPOREX, WE WEN
Inform	nation available on length of screen	ned/open interval?	as figures regarding potential contamination sources. A
	XYES _ NO		complete copy of the report is also included District Well
Length	h of screened/open interval: 5	<u>4</u> (ft)	7 48 are considered combine
3) Is there a ripoundary?	iver lake, pond, stream, or other of YES NO (mark as	obvious surface water bod nd identify on map).	y within the 6 month time of travel
4) Is there a st month time of	tormwater and/or wastewater facility travel boundary? YES	ty, treatment lagoon, or h	olding pond located within the 6 identify on map).
	ents:		
 .			
 			

PART V: Assessment of Water Quality

ı١	Regional	sources	of	risk	to	ground	water
	1102101144	~~~~	~.	7 10 M	•••		

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

More, we used	The			
lyear captur	≤ —→6 month	l year	5 year	unknown
likely pesticide application				
stormwater injection wells				_
other injection wells				_
abandoned ground water well	-,			
landfills, dumps, disposal areas	No	<u>/ L'3</u>	10	
known hazardous materials clean-up site	No	No	<u>Yes</u>	_
water system(s) with known quality problem	s	4.		
population density > 1 house/acre	No.	<u>/U : </u>	<u> </u>	
residences commonly have septic tanks	No	No	Yes	
Wastewater treatment lagoons	<u> '\o</u>	10.		
sites used for land application of waste	100	16 J	<u> </u>	

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

Lindingvound StoRAGE TANKS - See attached Figures	+ table
Cherrical Handlers	
Lube/Oil Change Facilities	
CAR REPAIR STATIONS	
DEY CLEAMERS	

Please indicate the occurrence of any test results since 1986 that meet (Unless listed on assessment, MCLs are listed in assistance package.)	the foll	owing conditions:
A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	<u>NO</u>
Results greater than MCL	1.24	<u></u>
< 2 mg/liter nitrate		· · · =
2-5 mg/liter nitrate		
> 5 mg/liter nitrate		
Nitrate sampling records unavailable		
B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	<u>NO</u>
Results greater than MCL or SAL		-
VOCs detected at least once		$\stackrel{\smile}{\nearrow}$
VOCs never detected	又	
VOC sampling records unavailable		
C. <u>EDB/DBCP</u> :	YES	NO
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)		
EDB/DBCP detected below MCL at least once		
EDB/DBCP detected above MCL at least once		-
EDB/DBCP never detected		
EDB/DBCP tests required but not yet completed		
EDB/DBCP tests not required		
D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected		_
(pesticides and other synthetic organic chemicals)		
Other SOC tests performed but none detected		
(list test methods in comments		
Other SOC tests not performed		
If any SOCs in addition to EDB/DBCP were detected, please, identify and date performed, but no SOCs detected, list test methods here:	e. (f ot	ner SOC tests were
		
		

2) Source specific water quality records:

E. Bacterial contamination:	YES	<u>NO</u>
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	ne ——	$\overline{\lambda}$
Has source (in past 3 years) had a bacteriological contamination prob found in distribution samples that was attributed to the source.	lem	-
Source sampling records for bacteria unavailable		
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution		
The following questions will help identify those ground water system represented by the calculated fixed radius (CFR) method described in CFR areas should be used as a preliminary delineation of the critical source. As a system develops its Wellhead Protection Plan for these delineation method should be considered.	Part IV. time of t	For these sources, the ravel zones for that
1) Is there evidence of obvious hydrologic boundaries within the 10 year tim (Does the largest circle extend over a stream, river, lake, up a steep hillside, ridge?)		
YES NO		
Describe with references to map produced in Part IV:		
ISSAGUAH CREEK		
GRAVEC Pits (Steep Heil) Grand Ridge A	ila	<u>-</u>
2) Aquifer Material:		
A) Does the drilling log, well log or other geologic/engineering repolocated in an area where the underground conditions are identified asterrain?	erts identi Fracture	fy that the well is i rock and/or basalt
YES NO		
B) Does the drilling log, well log or other geologic/engineering repolocated in an area where the underground conditions are primarily idgravel?		
YES NO		

flood plains of large rivers, artesian we springs.)	ith a high horizontal flow ells with high water pressul	rate? (These can re. and/or shallo	include sources w flowing wells	located on and
YES NO)			
4) Are there other high capacity wells (agricultural, municipal and	l/or industrial) lo	ocated within the	CFRs? /
a) Presence of ground water ext	raction wells removing mo	re than approxi	nately 500 gai/m	in within
< 6 month travel time		YES NO	unknown	
6 month-1 year travel time		<u> </u>		
1-5 year travel time 5-10 year travel time	1	<u> </u>		
b) Presence of ground water red	charge wells (dry wells) or	heavy irrigation	within	
< 1 year travel time		YES NO	unknown	
1-5 year travel time			_	
5-10 year travel time			_	
Please identify or describe additional hyd shape of the zone of contribution for thi produced in Part IV.	drologic or geographic con s source. Where possible	iditions that you , reference then	believe may aff to locations on	ect the the map
See Lower 1ssagach	Valley Wellheso	L Protecto	1 Plan	
Datat Wells 7+8	are considered	together		
The Optrot is curre	My applying Fo	ra well	Field design	ation.
				
			<u> </u>	
			<u>.</u>	

Suggestions and Comments

Did you attend one of the susceptibility workshops?	YES	- NO	
Did you find it useful?	YES	NO	
Did you seek outside assistance to complete the assessm	nent? Y	'ES NO	
This form and instruction packet are still in the process of questions will help us upgrade and improve this assessment confusing or problematic please let us know. How could made clearer? Did the instruction package help you find assessment? How much time did it take you to complete assessment without additional/outside expertise? Do you experience? Any other comments or constructive criticises.	ent form. If you this susceptibilit the information returned the form? Were the feel the assessing the second control of the assessing the asset as a second the assessing the assessing the assessing the assessing the assessing the assessing the asset as a second the a	found particular se y assessment be in needed to complete e you able to comp ment was valuable	ections reproved or the plete the as a learning
·			
			-
	<u></u>	· · · · · · · · · · · · · · · · · · ·	-
			_
			_
	······································	, ,, ,, , , , , , , , , , , , , , , , 	_
			_
	······		 ·
			_

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.2

IMPORTANT!Please complete one form for each ground water source (well, wellfield, spring) used in your water system.

Photocopy as necessary.

PART I:	System Informat	tion		
Well owner/r	nanager : <u>Sa</u>	ımmamish Plateau V	Water & Sewer Di	strict
Water system	name : Sa	ımmamish Plateau V	Water & Sewer Di	strict
County:	King			
Water system	number: 40	99009	Source number:	<u>S13</u>
Well depth: _	222 (ft.) (From	m WFI form)		
Source name:	W	ell 9		
WA well iden	tification tag numl	ber: <u>AAD-365</u>		
Number of co	nnections: 14	358	Population serve	d: <u>48,036</u>
Township:	24N		Range:06	E
Section:	27		1/4 1/4 Section: 9	SW1/4 of the NW1/4
Latitude/long How was lat.,	gitude (if available /long. determined	e): <u>47.5397</u> ?	78 / -12	22.03307
<u>x</u> ot	_ global positionii her: <u>Online King (</u>	ng device County imap - http://	_ survey to /www.metrokc.gov/gis/	ppographic map /mapportal/iMAP_main.htm
* Pleas throug		nce Packet for detail	s and explanation	s of all questions in Parts II
PART II:	Well Construction	on and Source Info	rmation	
1) Date well o	riginally construct	ted: <u>07 / 15 / 91</u>	_month/day/yea	r
	last reconstruct	tion:/m	onth/day/year	
	information un	available		

2) Well driller:	Hokkaido Well Drillng and Development Corporation			
	24511 104th Avenue Court East			
	Graham, WA 98338			
_ well driller	r unknown			
3) Type of well:				
<u>x</u> Drilled:	rotarybored <u>X</u> cable (percussion) _ Dug			
Other:	spring(s) lateral collector (Ranney)			
	driven jetted other:			
Additional co	omments:			
	ble? <u>x</u> YES (attach copy to form) <u>NO</u>			
	is available, please attach any other records documenting well construction; e.g. as built" sheets, engineering reports, well reconstruction logs.			
5) Average pumping Reports for Test Well	rate:(gallons/min) Drilling and Completion ls VT-7 and VT-8 and Production Well 9 (Carr/Associates, 1992)			
If not docume	ented, how was pumping rate determined?			
Pumping ra	ate unknown			
6) Is this source treat	ed?			
If so, what ty	pe of treatment:			
<u>x</u> disinfect	ion filtration carbon filter air stripper <u>X</u> other			
Purpose of tre	eatment (describe materials to be removed or controlled by treatment):			
Water is chlorinated, for corrosion control	Fluoridated, and treated with NaOH (Caustic Soda) to increase natural water pH			
7) If source is chlorin	ated, is a chlorine residual maintained: X YES NO			
Residual leve	l: <u>minimum 0.3 ppm free after the filters</u> (<i>At the point closest to the source</i> .)			
PART III: Hydro	ogeologic Information			

1) Depth to top of open interval: [check one]
< 20 ft 20–50 ft 50–100 ft <u>X</u> 100–200 ft>200 ft
information unavailable ('<' means less than; '>' means greater than)
2) Depth to ground water (static water level):
\underline{X} < 20 ft $\underline{\hspace{0.2cm}}$ 20–50 ft $\underline{\hspace{0.2cm}}$ 50–100 ft $\underline{\hspace{0.2cm}}$ >100 ft
flowing well/spring (artesian)
How was water level determined?
well logX_ other:Measured to within 0.01 ft with electronic sounding device
_ depth to ground water unknown
3) If source is a flowing well or spring, what is the confining pressure:
psi (pounds per square inch) or feet above wellhead
4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source:YESNO
5) Wellhead elevation (height above mean sea level): <u>76.99</u> (ft)
How was elevation determined? topographic map Drilling/Well Log altimeter
X other: 1991 Lower Issaquah Valley Concept Engineering Survey
information unavailable
6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)
 X evidence of a confining layer in well log (Note: confining layers are thin and believed to pinch out to the east)
no evidence of a confining layer in well log
If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the bottom of the lowest confining layer ? X YES NO
information unavailable

7) Sanitary setback:				
< 100 ft* X 100-120 ft 120-200 ft > 200 ft				
* if less than 100 ft describe the site conditions:				
B) Wellhead construction:				
X wellhead enclosed in a wellhouse				
X controlled access (describe): The well is locked in a wellhouse that is				
monitored via telemetered security systems				
other uses for wellhouse (describe):				
no wellhead control				
9) Surface seal: 18 ft				
< 18 ft (no Department of Ecology approval) ('<' means less than)				
< 18 ft (Approved by Ecology, include documentation)('<' means less than)				
$\underline{x} > 18 \text{ ft}$ ('>' means greater than)				
depth of seal unknown				
no surface seal				
10) Annual rainfall (inches per year):				
< 10 in/yr 10-25 in/yr X > 25 in/yr				

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: <u>261,984,204</u> (gallons)
How was this determined?
meter
estimated:pumping rate ()
pump capacity ()
X other: Water Rights shared with SPWSD Wells 7 & 8. Annual estimate based on 50% of the additional water rights shared wells 7&8 are pumped from Well 9
2) "Calculated Fixed Radius" estimate of ground water movement: (see Instruction Packet)
6 month ground water travel time : 2,754 (ft)
1 year ground water travel time : 3,895 (ft)
5 year ground water travel time: 8,709 (ft)
10 year ground water travel time: 12,317 (ft)
Information available on length of screened/open interval?
X YES_NO
Length of screened/open interval:(ft)
3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? X YES NO (mark and identify on map).
4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? X YES NO (mark and identify on map).
Comments: A large stormwater infiltration gallery for Issaquah Highlands was recently installed and activated within 600 ft upgradient of District Well 9. The District has challenged a recent NPDES permit submitted by the Issaquah Highlands Developer for this facility. The District is concerned of potential groundwater contamination from this nearby stormwater injection and hopes to work with the City of Issaquah and Port Blakely (Developer) in a cooperative manner to resolve these concerns.

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application	X			
stormwater injection wells	X		_X_	
other injection wells (See Comments)				
abandoned ground water well	X			
landfills, dumps, disposal areas				
known hazardous materials clean-up site				
water system(s) with known quality problems				
population density > 1 house/acre	X	_X_	_X_	
residences commonly have septic tanks	X_	_X_		
Wastewater treatment lagoons				
sites used for land application of waste				

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (*Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.*)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

The Lower Issaquah Valley Wellhead Protection Plan Report was prepared in November 1993 for the City of Issasquah and the Sammamish Plateau Water & Sewer District. Well 9 was not included in this report, but areas identified in the attached contaminant inventory from this report (Section 7) would be included for Well 9. SPWSD will develop a contaminant source inventory that will include Well 9's modeled capture areas and update information found in the 1993 inventory.

2	Source	specific	water o	uality	records:
_	Jourse	Opecinic	TT CALCE	1 autit 1	I CCOI GO

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. <u>Nitrate</u> : (Nitrate MCL = 10 mg/l)	<u>YES</u>	NO V
Results greater than MCL		<u>X</u>
< 2 mg/liter nitrate		
2–5 mg/liter nitrate		
> 5 mg/liter nitrate		
Nitrate sampling records unavailable	••	
B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	<u>YES</u>	<u>NO</u>
Results greater than MCL or SAL		<u>X</u>
VOCs detected at least once		
VOCs never detected	X_	
VOC sampling records unavailable		
C. <u>EDB/DBCP</u> :	<u>YES</u>	<u>NO</u>
(EDB MCL = 0.05 ug/l or 0.00005 mg/l . DBCP MCL = 0.2 ug/l or 0.0002 mg/l .)		
EDB/DBCP detected below MCL at least once		
EDB/DBCP detected above MCL at least once		
EDB/DBCP never detected		
EDB/DBCP tests required but not yet completed		
EDB/DBCP tests not required	_X	
D. Other SOCs (Pesticides):	<u>YES</u>	<u>NO</u>
Other SOCs detected		_X
(pesticides and other synthetic organic chemicals)		
Other SOC tests performed but none detected		
(list test methods in comments)		
Other SOC tests not performed		
If any SOCs in addition to EDB/DBCP were detected, please identify and	date.	If other SOC tests were
performed, but no SOCs detected, list test methods here:		

E. <u>Bacte</u>	erial contamination:		<u>YES</u>	<u>NO</u>
		e past <u>3</u> years in samples taken frong ng records)		_x_
		d a bacteriological contamination hat was attributed to the source		_X_
	Source sampling records for ba	cteria unavailable		
Part VI	: Geographic or Hydrologic F Non-Circular Zone of Con			
	accurately represented by the of these sources, the CFR areas sharvel zones for that source. A	elp identify those ground water sy alculated fixed radius (CFR) methould be used as a preliminary del s a system develops its Wellhead I ation method should be considere	nod descr ineation Protection	ibed in Part IV. For of the critical time of
ĆFR? (ogic boundaries within the 10 year ver a stream, river, lake, up a stee		
	X YES	NO		
	Describe with references to ma	p produced in Part IV:		
		East Fork and Main Stem of Issaq Valley that are identified as bedro		
	•			
2) Aqui	fer Material:			
		og or other geologic/engineering anderground conditions are identified.		
	YES	<u>(</u> NO		
		g or other geologic/engineering r nderground conditions are primar		
	Y VES	NO		

wells and spr	ings.))						
	<u>X</u>	YES	NO					
4) Are there of CFRs? YES	other l	high capad	city wells (agricul	tural, munic	ipal and/or i	ndustri	al) located within the	
a) Pres withir		of ground	d water extraction	wells remov	ving more tha	ın appr	oximately 500 gal/mir	l
					YES	NO	unknown	
< 6 mc	onth tra	avel time				_X_		
6 mont	th–1 y	ear travel t	ime		_X_			
1–5 ye	ar tra	vel time			_X_			
5–10 y	ear tr	avel time			_X			
b) Pres	sence	of ground	water recharge wel	ls (dry wells) o	or heavy irrigat	ion with	iin	
					YES	NO	unknown	
< 1 year	ar trav	el time			_X			
1–5 ye	ear trav	vel time						
5–10 y	ear tr	avel time						
							eve may affect the shape on the map produced in F	
Issaquah and t	the Sa	mmamish		ewer District a	nd the Draft H	ydroged	1993 for the City of blogy of the Grand Ridge arge area for the LIV area	
	Issaqı	uah Highlai	nds) and from the s				c interpretation, recharge ley and from the East Fo	
							quitards. These foreset	

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources

located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing

monitoring data also show direct water level response in deeper well completion zones located west of the more easterly, shallow zone, recharge. **Figure 3** shows this relationship in a cross section (A-A') that runs East-West through groundwater monitoring wells (VT-7 and VT-8), Production Well 9, and the nearby Issaquah Highlands

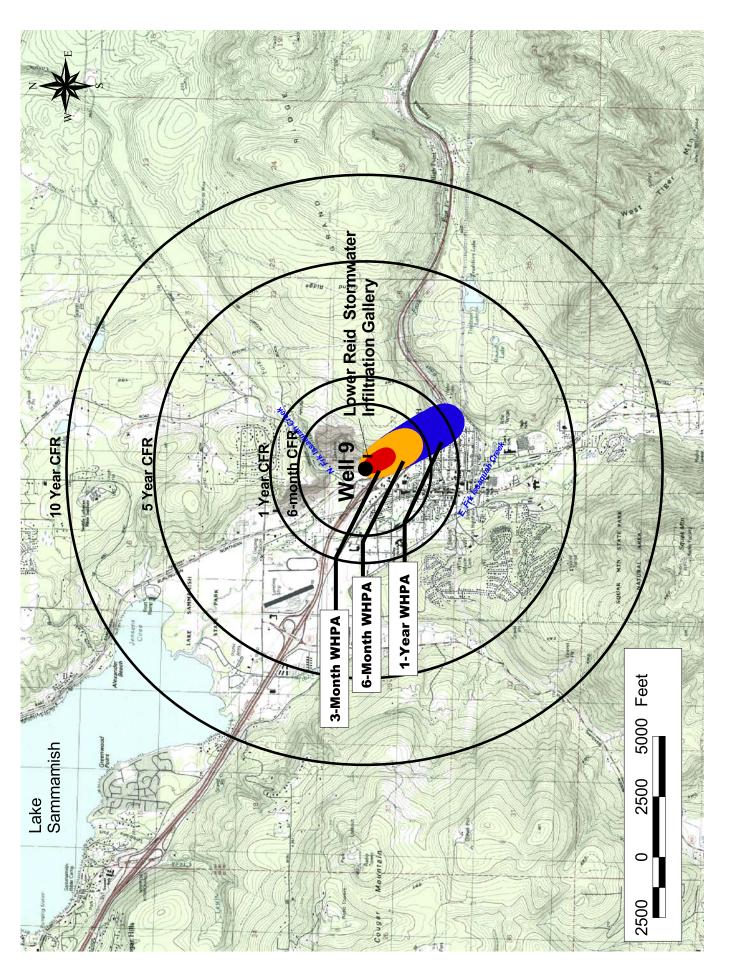
infiltration gallery.

Suggestions and Comments

Did you attend one of the susceptibility workshops?	YES	X NO
Did you find it useful?	YES	NO
Did you seek outside assistance to complete the assessment?	X_YES	NO
This form and instruction packet are still in the process of development questions will help us upgrade and improve this assessment form. If yo problematic please let us know. How could this susceptibility assessminstruction package help you find the information needed to complete the take you to complete the form? Were you able to complete the assess Do you feel the assessment was valuable as a learning experience? A criticisms you have would be appreciated.	ou found partice ent be improve ne assessment ment without a	ular sections confusing or d or made clearer? Did the ? How much time did it dditional/outside expertise?







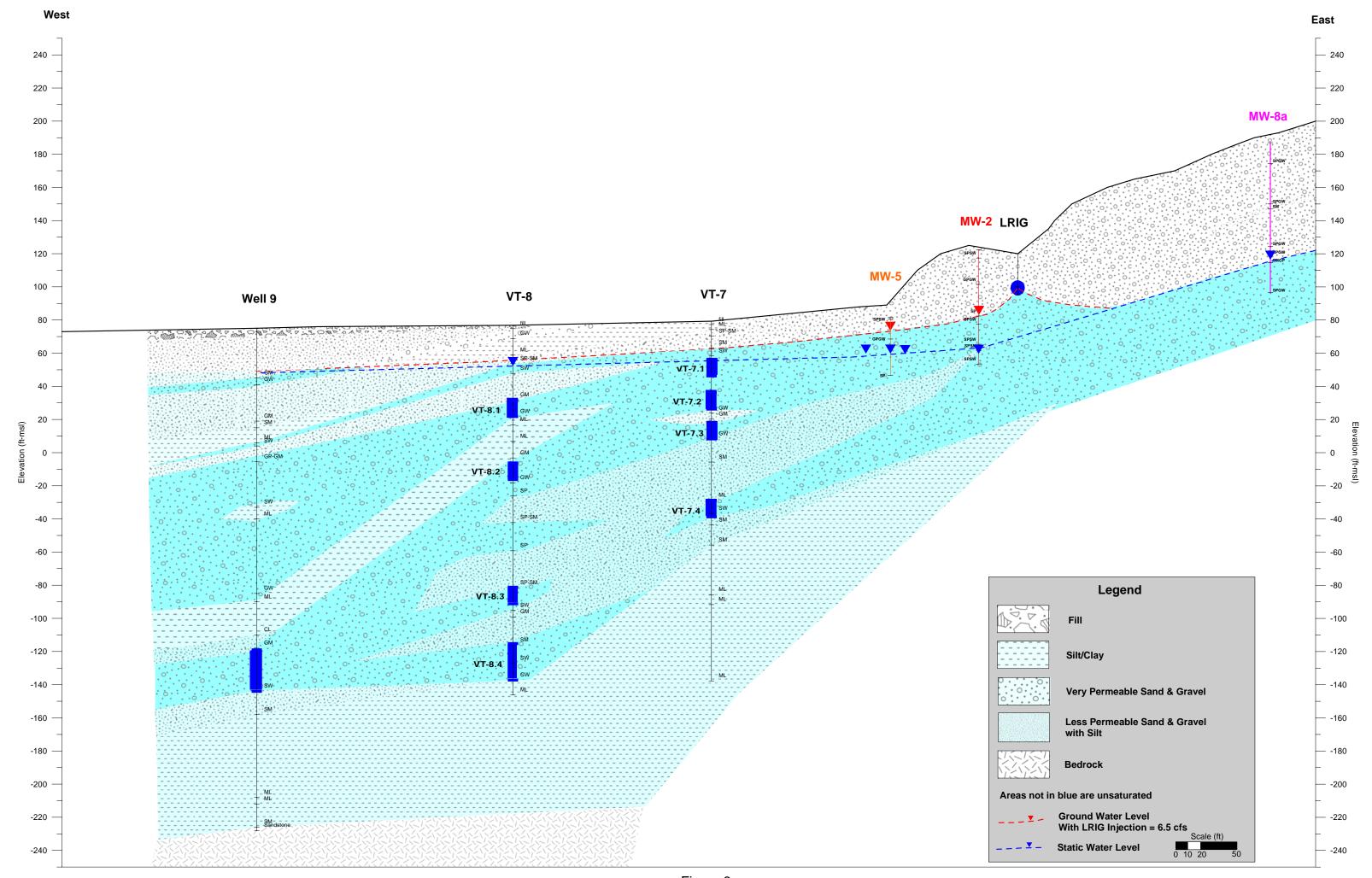


Figure 3

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

SAMMAMISH PLATEAU WATER & SEWER DISTRICT 1510 228th Avenue S.E. Issaquah, Washington

(206) 392-6256

WELL 10

GROUND WATER CONTAMINATION

Susceptibility Assessment Survey Form

TABLE OF CONTENTS

- Susceptibility Assessment Survey Form
- Well Site Location Map
- WHPA Capture Zone Map
- Well Log
- Construction and Testing Report

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.2

IMPORTANT!

Please complete one form for each ground water source (well, weilfield, spring) used in your water system. Photocopy as necessary.

h V.
;]

Survey Form Ver. 2.2 page 1

2) Well driller: AVKISTEENG DEILLING
10715 (il ANENCE ====
Parjoiling like six 11
well driller unknown
3) Type of well:
Drilled: rotary bored cable (percussion) Dug
Other: spring(s) lateral collector (Ranney)
driven jetted other:
Additional comments:
4) Well report available? YES (attach copy to form) NO
If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.
5) Average pumping rate:
Source of information: WATER WILL RIPORT
If not documented, how was pumping rate determined?
If not documented, now will propose a
Pumping rate unknown
6) Is this source treated? YES NO
If so, what type of treatment:
disinfection filtration carbon filter air stripper other
Purpose of treatment (describe materials to be removed or controlled by treatment):
Purpose of treatment (describe materials to be femotion of the
7) If source is chlorinated, is a chlorine residual maintained:YESNO
Residual level: (At the point closest to the source.)
Survey Form Ver. 2.2

Survey Form Ver. 2.2 page 2

PART III: Hydrogeologic Information
1) Depth to top of open interval: [check one]
(less than) 20 ft 20-50 ft 50-100 ft _ 100-200 ft (greater than) 200 ft
information unavailable
2) Depth to ground water (static water level):
(less than) 20 ft 20-50 ft \(\sqrt{50-100 ft} \) (greater than) 100 ft
flowing well/spring (artesian)
How was water level determined?
<u></u>
depth to ground water unknown
3) If source is a flowing well or spring, what is the confining pressure:
psi (pounds per square inch)
or feet above wellhead
4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated product with this source:YESNO
5) Wellhead elevation (height above mean sea level): 420 (ft)
How was elevation determined? topographic map Drilling/Well Log altimeter
other:
information unavailable
6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)
evidence of a confining layer in well log
no evidence of a confining layer in well log
If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the bottom of the lowest confining layer? YES NO

Survey Form Ver. 2.2 page 3

1

7) Sanitary setback:
(less than) 100 ft* 100-120 ft 120-200 ft (greater than) 200 ft
8) Wellhead construction:
wellhead enclosed in a wellhouse
controlled access (describe): \(\frac{\frac{1}{2}}{2} \) \(\frac{1}{2} \) \(\frac{1}{2} \) \(\frac{1}{2} \)
other uses for wellhouse (describe):
no wellhead control
9) Surface seal:
18 ft
(less than) 18 ft (no Department of Ecology approval)
(less than) 18 ft (Approved by Ecology, include documentation) X (greater than) 18 ft
depth of seal unknown
no surface seal
10) Annual rainfall (inches per year):
(less than) 10 in/yr 10-25 in/yr (greater than) 25 in/yr

PART IV: Mapping Your	Ground Water Resource	
1) Annual volume of water pum	ped: <u>26 46U, 36D,</u>	(galions)
How was this determine	d?	
meter	_	
<pre>sestimated:</pre>	ping rate ACCAPH	
pum	p capacity (
other:		<u>.</u>
2) "Calculated Fixed Radius" es (see Instruction Packet)	timate of ground water move	1
6 month ground water to	ravel time: 31	/··> / · · · · · · · · · · · · · · · · ·
l year ground water trav		
5 year ground water trav	 	(A) CAPTURE SCILE WHEN
10 year ground water tr	avel time:	10 (A) IS ATTHEHED. THE
,	length of screened/open inte	IVAL? LECTURION GUESTONS REE ATENERED FOR
YES .	NO	THE CAPTURE ZONES
Length of screened/oper	interval:	30 (ft) WHYA MAD
	tream, or other obvious surfa NO (mark and identify o	ace water body within the 6 month time of travel on map).
4) Is there a stormwater and/or month time of travel boundary?		lagoon, or holding pond located within the 6 (mark and identify on map).
Comments:		
*		
		·

PART V: Assessment of Water Quality

1)	Regional	sources	of	risk 1	Ø	ground	water:
----	----------	---------	----	--------	---	--------	--------

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

6 month	1 year	5 year	unknown
<u> ८८८ -</u>	<u>ئىنى:</u>	<u> </u>	
<u>(CC</u>	17.0	. <u>गिर्म</u>	. _
		. —	
170	<u>100</u>	100	
No	<u> </u>	<u> </u>	. —
10	170	<u>100</u>	
	6 month	6 month 1 year	6 month 1 year 5 year 100 150 150 100 150 100 150

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

(WH	VIR (AS SHE	ewr on	THE 191	tpa ca	PTURE	ZUNE
			SED AS I				
			ndwater				
			WHIER.				·
			<u> </u>	· 			
						-	

Please indicate the occurrence of any test results since 1986 that meet to (Unless listed on assessment, MCLs are listed in assistance package.)	he following conditions:
A. Nitrate: (Nitrate MCL = 10 mg/l)	YES
Results greater than MCL	
(less than) 2 mg/liter nitrate	
2-5 mg/liter nitrate	
(greater than) 5 mg/liter nitrate	
Nitrate sampling records unavailable	
B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES
Results greater than MCL or SAL	
VOCs detected at least once	
VOC test performed but never detected	
VOC sampling records unavailable	
C. EDB/DBCP:	YES
(EDB MCL = 0.05 ug/l or 0.00005 mg/l . DBCP MCL = 0.2 ug/l or 0.0002 mg/l .)	
EDB/DBCP detected below MCL at least once	<u>.</u>
EDB/DBCP detected above MCL at least once	
EDB/DBCP never detected	
EDB/DBCP tests required but not yet completed	
EDB/DBCP tests not required	
D. Other SOCs (pesticides and other synthetic organic chemicals): Other SOCs detected	YES
Other SOC tests performed but none detected *	
Other SOC tests not performed	
*If any SOCs in addition to EDB/DBCP were detected, please identify and date performed, but no SOCs detected, list test methods here: TEST RESULTS VECENTLY DEGREENED.	
THE TEST RESULTS RECEIVED PERFERME	

2) Source specific water quality records:

Survey Form Ver. 2.2 page 7

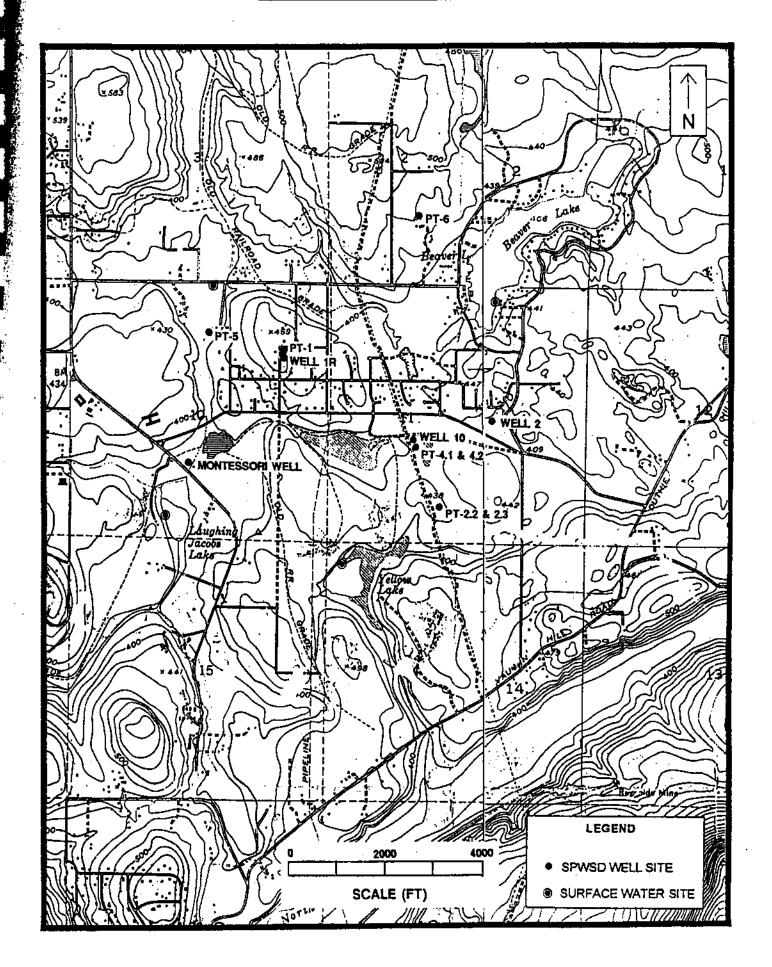
E. <u>Bacterial contamination</u> :	YES
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	CIR
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	
Source sampling records for bacteria unavailable	
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution	
The following questions will help identify those ground water systems which represented by the calculated fixed radius (CFR) method described in Part I CFR areas should be used as a preliminary delineation of the critical time of source. As a system develops its Wellhead Protection Plan for theses source delineation method should be considered.	f travel zones for that es, a more detailed
1) Is there evidence of obvious hydrologic boundaries within the 10 year time of tra (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/o ridge?)	vel zone of the CFR? or over a mountain or
YES NO	•
Describe with references to map produced in Part IV:	
THIEL ARE STREAMS FOREING INTO AND ETT OF YELDT WHICKING IN THE ONE YEAR BOUNDARY. THERE IS A STE KENDLINGED STUTMERN BOUNDARY OF THE FIVE AND TEN	CLAKE EP RAGINE VEHR PLAC!
2) Aquifer Material:	
A) Does the drilling log, well log or other geologic/engineering reports ide located in an area where the underground conditions are identified as fractiterrain?	entify that the well is ured rock and/or basalt
YES X NO	~ .
B) Does the drilling log, well log or other geologic/engineering reports inclocated in an area where the underground conditions are primarily identifications?	dicate that the well is ed as coarse sand and
YES NO	

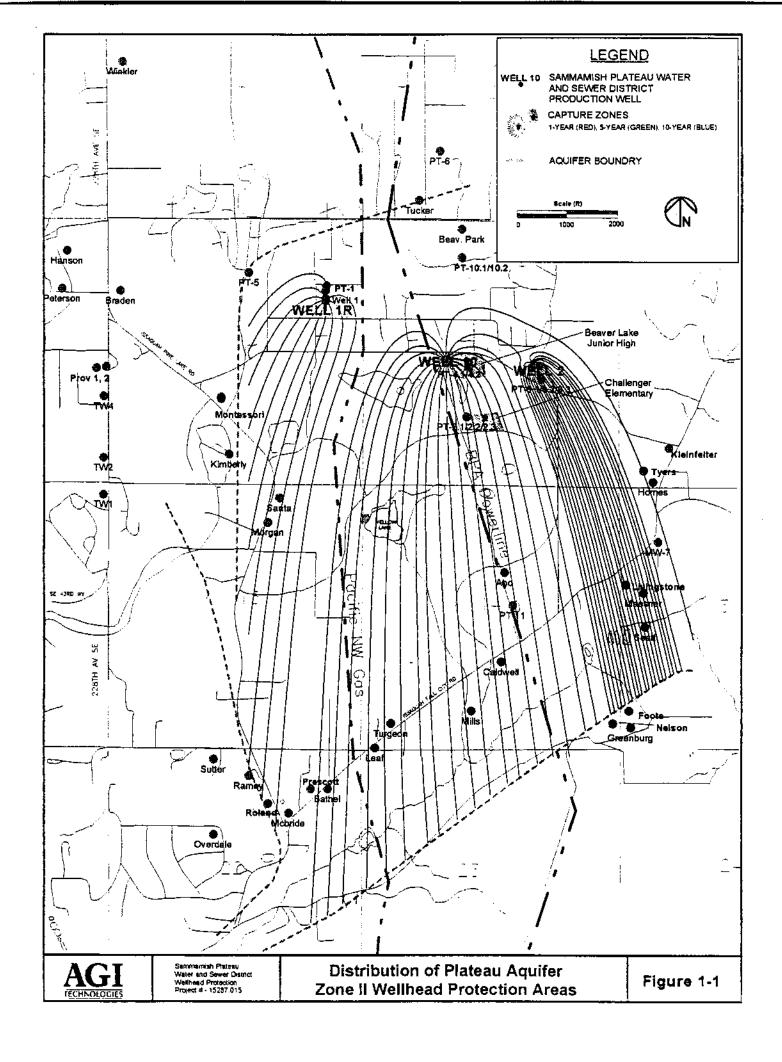
3) Is the source located in an aquifer with a high horizonta flood plains of large rivers, artesian wells with high water springs.)	I flow rate? (The pressure, and/or	se can shallov	include source v flowing well	s located on s and
YES NO				
4) Are there other high capacity wells (agricultural, munici	pal and/or indust	rial) lo	cated within the	ie CFRs?
a) Presence of ground water extraction wells remov				
	YES	NO	unknown	
6 month travel time				
6 month-1 year travel time				
1-5 year travel time				
5-10 year travel time				•
			· ·	
b) Presence of ground water recharge wells (dry w	rells) or heavy in	igation	within	
	YES	NO	unknown	
1 year travel time		_		
1-5 year travel time				
5-10 year travel time				
Please identify or describe additional hydrologic or geograpshape of the zone of contribution for this source. Where produced in Part IV.	phic conditions the constitution of the conditions	nat you e them	believe may to locations	affect the on the map
	<u> </u>		·	
· · · · · · · · · · · · · · · · · · ·				
· ·				
				
		_		•
				
				
				

Suggestions and Comments

Did you attend one of the susceptibility workshops?	YES	NO
Did you find it useful?	YES	NO
Did you seek outside assistance to complete the assessment?	YES	NO
•		
This form and instruction packet are still in the process of devel		
questions will help us upgrade and improve this assessment for confusing or problematic please let us know. How could this se	m. If you found par	ticular sections
made clearer? Did the instruction package help you find the infrassessment? How much time did it take you to complete the fi	ormation needed to	complete the
assessment without additional/outside expertise? Do you feel texperience? Any other comments or constructive criticisms you	he assessment was	valuable as a learning
· ·	u nave would be app	oreciated.
	· · · · ·	
		

SAMMAMISH PLATEAU WATER & SEWER DISTRICT WELL SITE LOCATION MAP





WATER WELL REPORT STATE OF WASHINGTON Water Right Permit No.

Start Card No. 062368

G1-27166

(1)	OWNER Name Sammamish Plateau Water Di	b. Address 1510 228bh Ave SE, Is	saçue	h, ₩ ,
(2)	LOCATION OF WELL: County King	the state of the s	141 1	6E w.m
(2.8)	STREET ADDDRESS OF WELL (or nearest address)		-	LX V
(3)	PROPOSED USE ☐ Domestic Industries ☐ Municipal ☑ Irrigation ☐ DeWater Test Well ☐ ☐ Other ☐ ☐	(10) WELL LOG OF ABANDONMENT PROCEDUI		
(4)	TYPE OF WORK: Owner's number of well	thickness of squifers and the kind and nature of the material is as with at least one entry for each change of information.	ich etzetura	nagaire) -
	1 - Carlotte Company of the Company	A NOTICE OF THE PARTY OF THE PA	FROM.	TO
	ಿಸಲಾದಿ 🚰 Deepened 🔲 Cable 🛣 Driven 🖂	Toosoil	0	+ + 5
_		Sand & Gravel, gray-tan, cmn		34
(5)	DIMENSIONS: Diameter of well 12 Inches.	Sand & Gravel, Loose, dry	34	<u> 36 </u>
<u>, </u>	Drilled 194 feet. Depth of completed well 193 ft.	Till, Cemented Silt & Cbls	36	70
(6)	CONSTRUCTION DETAILS:	Sand, brown, claybound Sand & Grv1, Brn-Gry, W-B	70~,	75
	Casing installed 1 2 Disminum 12	Sand & Grv1, Brn-Gry, W-B Claw w/sand whitelsh-gry, leas.	<u>75 </u>	97
		Sandy Gravel, olive-gry, W-B	123	160
	Liner installed Threaded Dism. from ft. to ft.	Silt w/peat & grbl, olive-gry		169
	Perforations: Yes No.K.k	Grvl w/sand-peat-silt.ol-gry	169	175
::::::::::::::::::::::::::::::::::	Type of perforator used	Sabd w/silt, grvly, olive-blk	175 -	193
- 34	SIZE of perforations in, by			
	perforations from th. to th.	V	:	
		Win da.	9	
· —	— perforations fromπ, toπ,		•	1 4
	Screens: Yes X No.	(a) (b) (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	- 5	!
و مانسو	Menufacturer's Name Type T04 Str4 n1 935 Model No			01 50
	Diam Siot size 0.030 from 135 h, to 155 h.			
	Diam Slot eize from 173 m to 183 m.	11.5 A 12.5 200	(
	Gravel packed: Yea No K Size of gravel			
	Gravel placed from ft. to ft.			· ·
	1 14 10 10 10 10 10 10 10 10 10 10 10 10 10			
	Surface seal: Yes No To what depth? 55 th. Material used in seal Bent/Grv1 65-55; Cmnt 55-0			
, -	· · · · · ·			
	Did any strata contain unusable water? Yes No X Type of water?			
or seg Tipo de	Method of sealing strets off			
(7)	nisso.			
	Company Conference			
***	Lesterden de la Approx 470	James To British San Tiller De te general and and a server and a serve	- Laborator (recognization of the
(8)	67 23 BOO's mean see level			
	Static level 97 + 23 617 0 ft, below top of well Date 97 23 753 Artesian pressure Ibs. per square inch Date			
p + 3	Artesian water is controlled by			
		Work started 7/5/93 t9. Completed 8/	26	., 93
(9)	WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? Yes No If yes, by whom? Carr/AGI			
ij	Yield: 508 gal./min. with 38 tt, drawdown after 24 hrs.	WELL CONSTRUCTOR CERTIFICATION:		
	Company of the second of the s	I constructed and/or accept responsibility for constr and its compliance with all Washington well cons		
	10 Table 1	Materials used and the information reported above a		
	Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	knowledge and belief.		
	Time Water Level Water Level Water Level	NAME Armstrong Drilling, Inc		
- 7	30 80.30 83.27 85.00 15 82.36 60 77.70	10715, 66th Avenue East		R PRINT)
_ 5	84.37 20 81.58 90 76.07	Address Phyallup, MA 92371	1	
	Date of test 8/24-25/93	PD		
•		(Signed) Liçense N	• <u></u> 00	12
	Bailer test gal./min, with ft. drawdown after hrs.	Contractor's		
	Artesian flow on on Date tr. for hrs.	Registration Date 9-16		ين. ين
	Temperature of water Was a chemical analysis made? Yes No			
	TO THE PROPERTY OF THE PROPERT	YUSE ADDITIONAL SHEETS IF NECESS	ARY:	45



PRODUCTION WELL 10 CONSTRUCTION AND TESTING REPORT SAMMAMISH PLATEAU WATER & SEWER DISTRICT

SUMMARY

Sammamish Plateau Water & Sewer District Well 10 is capable of producing 550 gpm continuously from a pumping level of 130 feet below ground surface. The well is completed in the lower part of the Plateau Aquifer. Screens are set from 135 to 155 and 173 to 183 feet below ground surface. Water levels of wells completed in the lower part of the Plateau Aquifer (PT-4.2, PT-5, PT-6, and Montessori School Well) reflected this pumping test of Well 10. Water levels in wells completed in the upper part of the Plateau Aquifer (PT-4.1, PT-1, and Well 2) showed little or no influence from pumping of Well 10. Surface waters in the surrounding area showed no changes in water levels due to the aquifer test.

Water quality samples from Well 10 show all parameters meet Washington State Department of Health water quality standards.

BACKGROUND

Property owner: Issaquah School District

Hydrogeologist: Carr/Associates, a Division of AGI; Eric Semsak

Drilling contractor: Armstrong Drilling, Inc.

Drilling method: Cable tool

Start date: July 5,1993

Completion date: August 26, 1993

AGI 15,287.009 v3 October 14, 1993

1

PERMITS AND APPLICATIONS

Copies of the water right application and preliminary permit are included in the Appendix.

Start card number:

62368

Water right application number:

G1-21766

Application submitted:

May 4, 1993

Instantaneous:

500 gpm

Annual:

200 af/yr

Continuous equivalent:

124 gpm

DRILLING OBJECTIVE

The objective of this project was to supply additional ground water resources to augment the District's existing supply for future demands of a growing community.

Desired yield:

500 gpm

Target aquifer:

Plateau Aquifer

Required quality:

Potable

WELL SITE

The well site, illustrated in **Figure 1**, is located in the northwest corner of Issaquah School District's new middle school property, approximately 115 feet south of Southeast 32nd Street at about 251st Avenue Southeast. The site lies adjacent to the northwestern portion of the school's parking lot and east of the Bonneville Power transmission lines.

Carr/AssociatesA Division of Applied Geotechnology Inc.

Map location/coordinates:

T24N/R6E/NE4SW4, Section 11

County:

King

Top of 12-inch casing elevation: Approximately 420 ft.

Site characteristics:

Flat-lying site bordering the Issaquah Middle

School's parking lot and the Bonneville Power

transmission lines

Ground surface elevation:

418.37

COMPLETION RECORD

Well 10 is completed in accordance with WAC Chapter 173-160, effective May 5, 1988, and meets all requirements for a State of Washington, Group A public supply well.

The well completion record is illustrated in Figure 2 and described in the Water Well Report (Form ECY 050-1-20) in the Appendix.

Total depth drilled:

194 ft.

Completion depth:

193 ft.

Surface Seal

Depth of seal:

65 ft.

Type of seal:

0 to 55 ft., cement; 55 to 65 ft., alternating layers

of bentonite & gravel

Casing Record

Casing Depth

Diameter

Description

0 to 135 ft.

12-inch

mild-steel casing

Screen Assembly

Continuous wrap, wire-wound, welded, type 304 stainless-steel, well screens manufactured by Johnson Division were installed as listed below:

Screen Depth	Dlameter	Description
130 to 135 ft.	10-inch ID	riser, mild-steel casing with two Figure 'K' Neoprene packers
135 to 155 ft.	10-inch ID	type 304 stainless-steel screen (0.030-inch slot)
155 to 173 ft.	10-inch ID	blank mild-steel casing
173 to 183 ft.	10-inch ID	type 304 stainless-steel screen (0.030-inch slot)
183 to 193 ft.	10-inch iD	talipipe, mild-steel casing

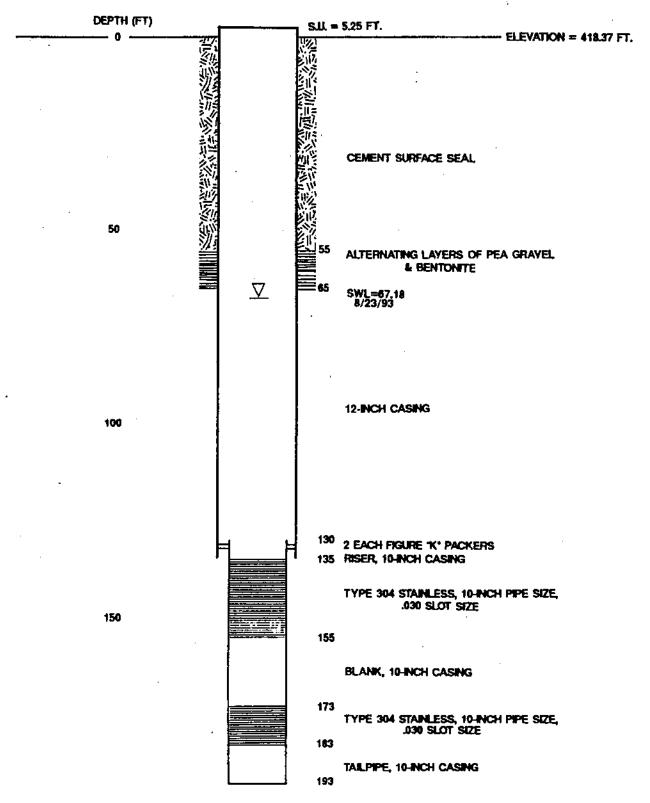
HYDROGEOLOGIC LOG

The hydrogeologic log is illustrated in Figure 3 and described in the Water Well Report in the Appendix.

At Well 10, the upper 70-foot layer of sediments is glacial till comprised of low permeable, gray-tan silt, sand, and gravel. Between depths of 34 and 36 feet, a thin glacial outwash unit consisting of dry, loose sand and gravel bisects the upper 70 feet of till. A brown, claybound sand unit separates the overlying till from the upper water-bearing zone of the Plateau Aquifer. This zone lies between depths of 75 and 97 feet and consists of brown to gray, coarse sand and gravel with some silt. Beneath this aquifer zone, an impermeable, bluish-gray clay unit was encountered between depths of 97 and 123 feet. This sandy clay separates the upper and lower water-bearing zones of the Plateau Aquifer. At this site, the lower Plateau Aquifer (123 to 193 feet) is bisected by a 9-foot layer of silt and peat (160 to 169 feet). Above this silt, the lower aquifer appears to be more permeable. Below it, permeabilities tend to decrease with depth.

SAMMAMISH PLATEAU WATER & SEWER DISTRICT WELL 10

COMPLETION DETAILS



Carr/Associates

Project: SPWSD Well 10

Lab No. 34339 Page 3 of 4

September 7, 1993

Lab Sample No. 34339-1

Client ID: Well 10

EPA Method 524.2 (continued)

TRIHALOMETHANES (THM)				
EPA Code No.	Compound Name	Concentration ug/L	PQL	Flags
2941 2943 2944 2942	Chloroform Bromodichloromethane Dibromochloromethane Bromoform	ND ND ND ND	0.5 0.5 0.5	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
4-Bromofluorobenzene	96	80 - 120
1,2 Dichlorobenzene d4	93	70 - 130

Continued

The report is issued solely for the use of the person or company to whom it is addressed. This laboratory accepts responsibility only for the due performance of many is in accordance with

in try acceptable practice, In no event shall Sound Analytical Services, Inc. or its employees be responsible for consequential or special damages in any sind or in any amount.

Carr/Associates

Project: SPWSD Well 10 Lab No. 34339

Lab No. 34339 Page 4 of 4 September 7, 1993

Lab Sample No. 34339-1

C1	ian	+	TD.	Well	10
L-1	161		ID:	MATT	Tυ

INORGANIC PARAMETERS	RESULT	MCL.
Antimony(GFAA), mg/L Arsenic (GFAA), mg/L Barium, mg/L Beryllium, mg/L Cadmium, mg/L Chromium, mg/L Copper, mg/L Iron, mg/L Lead (GFAA), mg/L Manganese, mg/L Mercury (CVAA), mg/L Nickel, mg/L Selenium (GFAA), mg/L Silver, mg/L Sodium, mg/L Thallium (GFAA), mg/L Zinc, mg/L	< 0.006 < 0.01 < 0.005 < 0.004 < 0.005	0.006 0.05 2.0 0.004 0.005 0.1 1.0 0.3 0.05 0.05 0.002 0.1 0.05 0.1 N/A 0.002 5.0
Fluoride, mg/L Nitrate Nitrogen, mg/L Chloride, mg/L Sulfate, mg/L Cyanide, mg/L Turbidity, NTU Hardness (as CaCO ₃) mg/L Conductivity, umhos/cm Color, Color Units Total Dissolved Solids, mg/L	< 0.1 0.05 1.4 2.8 < 0.05 < 0.1 30 77 < 5 49	2.0 10.0 250 250 0.2 1 N/A 700 15.0 500

MCL - Maximum Contaminant Level

N/A - Not Applicable

< - Less than practical quantitation limit

The report is issued solely for the use of the person or company to whom it is addressed. This laboratory accepts responsibility only for the due performance of adarvsis in accordance with try acceptable practice, in no event shall Sound Analytical Services, line, or its employees be responsible for consequential or special damages in any kind or in any amount.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

General Chemistry

Client:

Carr/Associates

Lab No:

34339qc1

Matrix:

Water mg/L

Units: Date:

September 7, 1993

METHOD BLANKS

Parameter	Result	PQL
Fluoride, mg/L	ND	0.1
Chloride, mg/L	ND	1.0
Nitrate Nitrogen, mg/L	ND	0.05
Nitrite Nitrogen, mg/L	ND	0.05
Sulfate, mg/L	ND	1.0
Cyanide, mg/L	ND	0.05
Total Dissolved Solids, mg/L	ND	2
Turbidity, NTU	ND	0.1
Hardness (as CaCO3), mg/L	ND	2
Conductivity, umhos/cm	ND	10
Color, color units	ND	5

ND - Not Detected

PQL - Practical Quantitation Limit

DUPLICATE

Dup No. 34339-1

Parameter	Sample(S)	Duplicate(D)	RPD
Total Dissolved Solids	49	46	6.3

RPD = Relative Percent Difference

 $= [(S - D) / ((S + D) / 2)] \times 100$

The eport is issued solely for the use of the person or company to whom it is addressed. This laboratory accepts responsibility only for the due performance of analysis in accordance with try acceptable practice. In no event shall Sound Analytical Services, line, or its employees be responsible for consequential or special damages in any kind or in any amount.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS
4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-3047

QUALITY CONTROL REPORT

ORGANIC COMPOUNDS IN DRINKING WATER EPA METHOD 524.2

Page 1 of 3

Client:

Carr/Associates

Lab No:

34339qc2

Units:

ug/L

Date:

September 7, 1993

METHOD BLANK

REGULATED COMPOUNDS EPA PQL Flags Code No. Compound Name Result 1.0 ND 2976 Vinyl Chloride 0.5 ND 2977 1,1-Dichloroethene 0.5 1,1,1-Trichloroethane 2981 ND 0.5 2982 Carbon Tetrachloride ND ND 0.5 2990 Benzene 0.5 ND 1,2-Dichloroethane 2980 0.5 2984 Trichloroethene ND ND 0.5 2969 1,4-Dichlorobenzene 0.5 2964 Methylene Chloride ND ND 0.5 2979 trans-1,2-Dichloroethene Cis-1,2-Dichloroethene 0.5 2380 ND 0.5 ND 2983 1,2-Dichloropropane 0.5 2991 ND Toluene ND 0.5 2985 1,1,2-Trichloroethane ND 0.5 Tetrachloroethene 2987 0.5 2989 Chlorobenzene ND 2992 Ethylbenzene ND 0.5 ND 0.5 2995 Meta-Xylene, para-Xylene 0.5 ND 2997 ortho-xylene 0.5 2996 ND Styrene 0.5 2968 1,2-Dichlorobenzene ND 0.5 2378 1,2,4-Trichlorobenzene ND

ND - Not Detected

PQL - Practical Quantitation Limit

The report is issued solely for the use of the person or company to whom it is addressed. This laboratory accepts responsibility only for the due performance of analysis in accordance with

it atry acceptable practice. In no event shall Sound Analytical Services, Inc. or its employees be responsible for consequential or special damages in any kind or in any amount.

QUALITY CONTROL REPORT

ORGANIC COMPOUNDS IN DRINKING WATER EPA METHOD 524.2

Page 2 of 3

Client:

Carr/Associates

Lab No:

34339qc2

Units:

ug/L

Date:

September 7, 1993

METHOD BLANK

UNREGULATED COMPOUNDS **EPA** POL Flags Result Compound Name Code No. 1.0 ND 2212 Dichlorodifluoromethane 1.0 Chloromethane ND 2210 1.0 ND 2214 Bromomethane ND 1.0 Trichlorofluoromethane 2218 ND 1.0 2216 Chloroethane 0.5 ND 2978 1,1-Dichloroethane 0.5 2,2-Dichloropropane ND 2416 ND 0.5 2430 Bromochloromethane 0.5 ND 2410 1,1-Dichloropropene 0.5 ND 2408 Dibromomethane 0.5 ND 2412 1,3-Dichloropropane 0.5 2986 1,1,1,2-Tetrachloroethane ND ND 0.5 2994 Isopropylbenzene 0.5 ND 2993 Bromobenzene 0.5 1,1,2,2-Tetrachloroethane ND 2988 0.5 ND 2414 1,2,3-Trichloropropane 0.5 ND 2998 n-Propylbenzene 0.5 ND 2-Chlorotoluene 2965 0.5 ND 2966 4-Chlorotoluene 0.5 2424 1,3,5-Trimethylbenzene ND ND 0.5 t-Butylbenzene 2426 0.5 ND 1,2,4-Trimethylbenzene 2418 0.5 ND 2428 sec-Butylbenzene 0.5 ND 2967 1,3-Dichlorobenzene 0.5 ND 4-Isopropyltoluene 2030 0.5 ND n-Butylbenzene 2422 0.5 ND Hexachlorobutadiene 2246 0.5 ND 2248 Naphthalene 0.5 1,2,3-Trichlorobenzene ND 2420

ND - Not Detected

POL - Practical Quantitation Limit

report is issued solely for the use of the person or company to whom it is addressed. This laboratory accepts responsibility only for the due performance of analysis in accordance with dustry acceptable practice. In no event shall Sound Analytical Services, Inc. or its employees be responsible for consequential or special damages in any kind or in any amount.

QUALITY CONTROL REPORT

ORGANIC COMPOUNDS IN DRINKING WATER EPA METHOD 524.2

Page 3 of 3

Client:

Carr/Associates

Lab No:

34339qc2

Units:

ug/L

Date:

September 7, 1993

METHOD BLANK

TRIHALOMETHANES (THM)

EPA Code No.	Compound Name	Result	PQL	Flags
2941 2943 2944 2942	Chloroform Bromodichloromethane Dibromochloromethane Bromoform	ND ND ND ND	0.5 0.5 0.5 0.5	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
4-Bromofluorobenzene	97	80 - 120
1,2 Dichlorobenzene d4	92	70 - 130

The report is usued solely for the use of the person or company to whom it is addressed. This laboratory accepts responsibility only for the due performance of analysis in accordance with

try acceptable practice. In no event shall Sound Analytical Services, Inc. of its employees be responsible for consequential or special damages in any find or in any amount.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

Total Metals

Client:

Carr/Associates

Lab No:

34339qc3

Units:

mg/L

Date:

September 7, 1993

Parameter	METHOD BLAN Result	PQL
Parameter	Result	PQL
Antimony	ND	0.006.
Arsenic	ND	0.01
Barium	ND	0.005
Beryllium	ND	0.004
Cadmium	ND	0.005
Chromium	ND	0.01
Copper	ND	0.025
Iron	ND	0.1
Lead	ND	0.003
Mercury	ND	0.0002
Manganese	ND	0.015
Nickel	ND	0.04
Selenium	ND	0.005
Silver	ND	0.01
Sodium	ND	0.50
Thallium	ND	0.002
Zinc	ND	0.2

ND - Not Detected

POL - Practical Quantitation Limit

This import is issued solely for the use of the person or company to whom it is addressed. This laboratory accepts responsibility only for the due performance of analysis in accordance with ry acceptable practice. In no event shall Sound Analytical Services, Inc. or its employees be responsible for consequential or special damages in any xind or in any amount.

E HEAVY PENCIL

STATE OF WASHINGTON DEPARTMENT OF HEALTH PUBLIC HEALTH LABORATORIES OFFICE OF RADIATION LABORATORIES



WATER SAMPLE INFORMATION FOR RADIATION ANALYSES

		ER SAMPI				YSTEMI	D. NO.	SYSTEM CLASS SOURCE NUMBER	A
B NUMBER SYSTEM NAME:							(circle one)	1,1	
		o Later/	/Sewer C	işu.	4 0	<u> </u>	A B E		
is follow up of a prev					No				
e, what was the labo			amole?				_	MIRC	NTC 1
	FACE .X		IF SOURCE IS	LAKE OR STRE	AM, ENTE	R NAME		IF SAMPLE WAS DRAWN FROM DISTRIBUTION SYS IT WAS COLLECTED FROM SYSTEM AT: (ADDRE	SS)
E.		i	1.00	-261	n		li l		
2. SPF	RING	4. PURCHASE	WE	46	<u></u>		—- -		
	E OF FINAL						SEND REPO	RT TO: (PRINT FULL NAME & ADDRESS)	
KEP	ORI	21_ 21	152				0100	& AUSCCIATES	
L		<u> </u>	<u> </u>		_		USINA C	NAME	
DATE	COLLECTE	D DATE RE	CEIVED						
					_		6 2	3.5M 1.4 C S	
1 0 5	<u>/ 2 5 / 9</u>	<u> </u>	<u> 5/9 3</u>		_		<u>F. U.</u>	3/17 1193 STREET	
_						ğí		r 98329	
					_		CITY	ZIP CODE	
					TI	ELEPHONE	AREA CODE	851-0362	
							AUEN GODE		
	LESS THAN	RESULTS		O NOT WRITE	COM	LIANCE	CHEMIST INITIALS		
ANALYSES	THAN	oCi/L	0	pCi/L	YES	NO.	1//	LABORATORY SUPERVISOR (Name of Initials)	
ross Alpha		<u> </u>	. (/		4		7	360	
ranium	 -		<u> </u>			<u> </u>	 		
iross Alpha ninus Uranium	<u> </u>		<u> </u>	15		 -	 	QUALITY ASSURANCE SUPERVI	ISO
adium-226			<u> </u>	3_			 -	(Name or Initials)	
adium-228				<u> </u>	<u> </u>	<u> </u>		- Marie Carlotte	
adium-226 Plus ladium-228				5		<u> </u>		CHARGE: # 70, 00	
radon-222						<u> </u>	ļ <u>.</u>	REMARKS:	
····	1			7					
•••		regional de la Terre. Transportation	** * ******	-	1				
iross Bela	┼ ╱├⁼		7	50			de		
		<u>, 111 (111)</u> 111 (111) (111) 111 (111) (111) 111 (111) 111 (111) 111 (111) 111 (111) 111 (111) 111 (111) 111 (111) (11	<u></u>	80	<i>-</i>		1		
Strontium-89			<u> </u>	 	†	†			
Strontium-90	. .==-			8	 	1	 		
Cesium-134		: 	•	80.	├	-			
odine-131				3-	 		- 	·	
Tritium				20,000	 -	 	-		
				<u> </u>	 	-			
					<u> </u>		 		
	TT					1			

WATER MANAGEMENT LABS 1515 80TH STREET E TACOMA, WA 98404 (206) 531-3121 WATER BACTERIOLOGICAL ANALYSIS

SAMPLE COLLECTION: READ INSTRUCTIONS ON BACK OF GOLDENROD COPY If instructions are not followed, sample will be rejected.

DITT A	A							
	OLLECT		TIME CO	LLECTED	Con	NTY	NAM	E
MONTH	DAY /	YEAR	_ 	: 25	1 V	ائد		
8/2	5/	93	28 AM	☐ PM	-	1	7	
TYPE OF SY	STEM	IF PUBL	IC SYSTE	M. COMPL	ETF:			
XX PUBLIC					1			1 _
individu	JAL	I.D. N	.		l			CTROLE GROUP
(serves only 1 re	sidence)	1.154 14	~ _		T			(A) B
NAME OF SYS	TEN	L		<u> </u>	<u> </u>			
_	_							
SPW:	S D							
			***	T ===				
SPECIFIC LOCATION (ie. kitchen tap @	un minere school, fir	: SAMPLE e station, f	CULLECTED Cuntaint	TELEPHO				
well le			•	DAY (20	6) 8	۱۵	-55	762
V - U · · ·								
discharg	e +	mbe		EVENING	17	1		
SAMPLE COLL	ECTÉD E	Y: (Name	9)	SYSTEM		R/MC	3A.: (I	Name)
412			1	-			. '	,
		450c1		Kon		<i>#</i> /.		
SOURCE TYPE	GR	W GNUC						
SURFACE		L or L FIELD	SPRING		CHAS	ED o	r 🗆	COMBINATION
					EATIE			or OTHER
SEND REPORT	TO: (Pri	nt Full Na	ime, Addre	ss and Zip	Code)			
Carr	<u> </u>	OCIA	res					
Po B	ا م (-
<u> </u>	ox.	115	ರ					
Corn	<u>farb</u>						_	98335
TYPE OF SAME	1 C /abas	de andre an	- 1- 45/		WASH	INGT	ON _	70335
The or same	re (cuec	at only on	ie in (nasc	oinwy)				
Ŭ ROUTIA	4E	[☐ Chlorid	ated (Resid	tual:	To	ta)	Erne)
	NG WAT	ER [
check to	reatment	→ ;	Filtered					
		Ļ	Untrea	ted or Othe	r			
☐ REPEAT	T SAMPL	F						
		- Presenci	e Lab#					
Previous	s colliform	presence		1				
		presence						
A RAW SO	DURCE Y	YATER	e Date Source	# S [□.	Total	Coliform
FIAW SO NEW CO	OURCE Y	VATER CTION or	Date	* S		_		Coliform Coliform
FIAW SO NEW CO	DURCE Y	VATER CTION or	e Date Source	, s		_		
FAW SO NEW CO OTHER	OURCE Y	VATER CTION or	e Date Source	* S		_		
FIAW SO NEW CO	OURCE Y	VATER CTION or	e Date Source	* S		_		
FAW SO NEW CO	OURCE Y	VATER CTION or	e Date Source	* S		_		
FAW SO NEW CO	OURCE V ONSTRU (Specify)	VATER CTION or	e Date Source REPAIRS					
FAW SO NEW CO	OURCE V ONSTRU (Specify)	VATER CTION or	e Date Source REPAIRS	S (FOR LA	J USE C			
FAW SO NEW CO	OURCE V ONSTRU (Specify)	VATER CTION or	e Date Source REPAIRS	S (FOR LA	J USE O			
FAW SO NEW CO	OURCE V ONSTRU (Specify)	VATER CTION or	Source REPAIRS	S (FOR LA	J. J. Suse o			
FAW SO NEW CO	OURCE V ONSTRU (Specify)	VATER CTION or ORATOR	Source REPAIRS	S (FOR LAI				
HAW SO NEW CO OTHER REMARKS	DURCE Y ONSTRUC (Specify)	VATER CTION or ORATOR	Source Source REPAIRS Y RESULT	S (FOR LAI	J USE O			
HAW SC NEW CO OTHER REMARKS	DURCE Y ONSTRUC (Specify)	VATER CTION or ORATOR	Source Source REPAIRS Y RESULT METHOD	S (FOR LA)	íMO .		Fecal	Coliform
HAW SO NEW CO OTHER HEMARKS	DURCE Y ONSTRUC (Specify)	VATER CTION or ORAYOR	Source REPAIRS Y RESULT METHOD	S (FOR LA)	MMO COLL_	MLY)	Fecal	Coliform Oo mi
HAW SC NEW CO OTHER REMARKS	DURCE Y ONSTRUC (Specify)	ORATOR	Source REPAIRS Y RESULT METHOD	S (FOR LAI	OLL_	MLY)	Fecal	Coliform Oo mt
HAW SO NEW CO OTHER HEMARKS	DURCE Y ONSTRUC (Specify)	ORATOR	Source REPAIRS Y RESULT METHOD	S (FOR LA)	OLL_	MLY)	Fecal	Coliform Oo mi
HAW SO NEW CO OTHER REMARKS MF TOTAL COLIFOR FECAL COLIFOR	DURGE Y ONSTRUC (Specify)	VATER CITION or ORATOR N _/100 ml _/100 ml	SOURCE REPAIRS Y RESULT METHOD PA	S (FOR LA) USED E. HE	COLL_TEROT	ROP	/1 HIC	Coliform 00 mt/per ml
MF TOTAL COLIFOR	CURCE YOUNGER OF THE CONSTRUCTION OF THE CONST	VATER CITION or ORATOR N _/100 ml _/100 ml	SOURCE REPAIRS Y RESULT METHOD PA	S (FOR LA) USED E. HE	COLL_ TEROT	INLY)	/1 HHC	Coliform 00 mt/per ml
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE	DURCE Y ONSTRUC (Specify) LAB MP RM ARM ESTEO B	VATER CITION or ORATOR N _/100 ml _/100 ml	SOURCE REPAIRS Y RESULT METHOD PA	S (FOR LA) USED E. HE	COLL_TEROT	ROP NSUI	/1 HHC	Coliform 00 mt/per ml
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too	DURCE V ONSTRUC (Specify) LAB MP RM AM STED B old siner	VATER CITION or ORATOR N _/100 ml _/100 ml	SOURCE REPAIRS Y RESULT METHOD PA	S (FOR LA) USED E. HE	COLL_TEROT	ROP	/1 /1 TABL	OO mt/per ml
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE	DURCE V ONSTRUC (Specify) LAB MP RM AM STED B old siner	VATER CITION or ORATOR N _/100 ml _/100 ml	SOURCE REPAIRS Y RESULT METHOD PA	S (FOR LA) USED E. HE	COLL_TEROT	NEY)	/11	Coliform OO mt/per ml E BECAUSE: with
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too	DURCE V ONSTRUC (Specify) LAB MP RM AM STED B old siner	VATER CITION or ORATOR N _/100 ml _/100 ml	SOURCE REPAIRS Y RESULT METHOD PA	S (FOR LA) USED E. HE	COLL_TEROT	NEY)	/1 /1 TABL	Coliform OO mt/per ml E BECAUSE: with
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Wrong cont	LAB MP RM ESTED B old siner form	ORATOR N _/100 ml _/100 ml ANOTH	SOURCE REPAIRS Y RESULT METHOD PA	S (FOR LAI USED E. HE	COLL_TEROT	NSUI nflues TC rbid coss	/11	Coliform OO mt/per ml E BECAUSE: with
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too	LAB MP RM ESTED B old siner form	ORATOR N _/100 ml _/100 ml ANOTH	SOURCE REPAIRS Y RESULT METHOD PA	S (FOR LA) USED E. HE	COLL_TEROT	NSUI nflues TC rbid coss	/11	Coliform OO mt/per ml E BECAUSE: with
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Wrong cont	LAB MP RM SSTED B old ainer form	OFATOR OFATOR 100 ml 100 ml ANOTH	Y RESULT METHOD PA HER SAMP	S (FOR LAI USED E. HE	COLL_TEROT	NSUI nflues TC rbid coss	/1 HIC_ TABL Table Table Table Table Table Table Table Table	Coliform OO mt/per ml E BECAUSE: with
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Wrong cont Incomplete UNSATISF	MP RM ARM ESTED B Old ainer form	ORATOR ORATOR N	Y RESULT METHOD PA HER SAMP	S (FOR LAI USED) E. HE LE REQUII	COLL_TEROT Co	NSUI nflues TC rbid coss	/11 HIC TABL nt gro	OO mt/per ml
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Wrong cont incomplete	MP RM ARM ESTED B Old ainer form	OFATOR OFATOR 100 ml 100 ml ANOTH	Y RESULT METHOD PA HER SAMP	S (FOR LAI USED E. HE	COLL_TEROT Co	NSUI nflues TC rbid coss	/11 HIC TABL nt gro	Coliform O0 ml/per ml E BECAUSE: with
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Wrong cont incomplete UNSATISF REPEAT	LAB MP RM SSTED B Old GACTORY,	ORATOR ORATOR N	Y RESULT METHOD PA HER SAMP	S (FOR LAI USED) E. HE LE REQUII	COLL_TEROT Co	NSUI nflues TC rbid coss	/11 HIC TABL nt gro	Coliform O0 ml/per ml E BECAUSE: with
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Wrong cont incomplete UNSATISF REPEAT SAMPLES REQUIRED	MP CAB MP CAB CACTORY.	ORATOR ORATOR N 100 ml 100 ml ANOT: ECAUSE: RINKING Coliforms Coli presses	Y RESULT METHOD PA HER SAMP WATER S present sent	S (FOR LAI USED) E. HE LE REQUII	COLL_TEROT Co	NSUI nflue	/1 HIC TABL nt gro	Coliform OO mt/per ml E BECAUSE: with SFACTORY, rms absent
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Virong cont incomplete UNSATISF REPEAT SAMPLES	MP CAB MP CAB CACTORY.	ORATOR ORATOR N 100 ml 100 ml ANOT: ECAUSE: RINKING Coliforms Coli presses	Y RESULT METHOD PA HER SAMP WATER S present sent ::	E. Coli abser	COLL_TEROTORED Co.	NSUI nflue	/1 HIC_ TABL TABL TABL TABL TABL TABL TABL TABL	Coliform OO ml
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Wrong cont incomplete UNSATISF REPEAT SAMPLES REQUIRED SEE REVER	MP CAB MP CAB CACTORY.	ORATOR ORATOR N 100 ml 100 ml ANOT: ECAUSE: RINKING Coliforms Coli presses	Y RESULT METHOD PA HER SAMP WATER S present sent ::	S (FOR LAI USED) E. HE LE REQUII	COLL_TEROTORED Co.	NSUI nflue	/1 HIC_ TABL TABL TABL TABL TABL TABL TABL TABL	Coliform OO mt/per ml E BECAUSE: with SFACTORY, rms absent
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Wrong cont incomplete UNSATISF REPEAT SAMPLES REQUIRED SEE REVER	MP CAB MP CAB CACTORY.	ORATOR ORATOR N 100 ml 100 ml ANOT: ECAUSE: RINKING Coliforms coal press	Y RESULT METHOD PA HER SAMP WATER S present sent ::	E. Coli abser	COLL_TEROTORED Co.	NSUI nflue	/1 HIC_ TABL TABL TABL TABL TABL TABL TABL TABL	Coliform OO ml
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Wrong cont incomplete UNSATISF REPEAT SAMPLES REQUIRED SEE REVER	MP CAB MP CAB CACTORY.	ORATOR ORATOR N 100 ml 100 ml ANOT: ECAUSE: RINKING Coliforms coal press	Y RESULT METHOD PA HER SAMP WATER S present sent ::	E. Coli abser	COLL_TEROTORED Co.	NSUI nflue	/1 HIC_ TABL TABL TABL TABL TABL TABL TABL TABL	Coliform OO ml
MF TOTAL COLIFOR FECAL COLIFOR SAMPLE NOT TE Sample too Wrong cont incomplete UNSATISF REPEAT SAMPLES REQUIRED SEE REVER	MP RM ARM ESTED B old ainer form ACTORY	ORATOR ORATOR N 100 ml 100 ml ANOT: ECAUSE: RINKING Coliforms coal press	Y RESULT METHOD PA HER SAMP WATER S present sent ::	E. Coli abser	COLL_TEROTORED Co.	NSUI nflue	/1 HIC_ TABL TABL TABL TABL TABL TABL TABL TABL	Coliform OO mt /per ml E BECAUSE: with SFACTORY, rms absent ESULTS GEIVED BY

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

SAMAMISH PLATEAU WATER & SEWER DISTRICT 1510 228th Avenue S.E. Issaquah, Washington 98029

(425) 392-6256

WELL 11.1

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

Well 11.1

TABLE OF CONTENTS

- Susceptibility Assessment Survey Form
- Location Map
- Well 11.1 Wellhead Protection Area
- Aquifer Zone III Potentiometric Surface Map
- Well Log
- Construction Details
- Construction and Testing Report
- Water Sample Results

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.2

IMPORTANT!

Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information Well owner/manager: SAMMAMISH PLATER WATER & SEWER Water system name: <u>SAUMALISH</u> DLATEAU WATER & SEWEZ County: LING Water system number: <u>U09009</u> Source number: _____ Well depth: 491 (ft.) (From WFI form) Source name: WEW 11. WA well identification tag number: A A D - 3 8 1 ____ well not tagged Number of connections: 11,080 Population served: 33, 240 Township: 25 N Range: OOE Section: 34 1/4 Section: NE/NW How was lat./long. determined? ___ global positioning device ___ survey ___ topographic map * Please refer to Assistance Packet for details and explanations of all questions in Parts II through V. PART II: Well Construction and Source Information 8/9/9month/day/year 1) Date well originally constructed: last reconstruction: ___/__ month/day/year ____ information unavailable

Survey Form Ver. 2.2 page i

Well driller: FOLT Delling
10621 TODD ROAD EAST
PUYALUUP, WA. 98372
well driller unknown
i) Type of well:
Drilled: rotary hored cable (percussion) Dug
Other: spring(s) lateral collector (Ranney)
driven jetted other:
Additional comments:
Well report available? YES (attach copy to form) NO
If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.
i) Average pumping rate: 500gpM (gallons/min)
Source of information: CONSTRUCTION & TESTING REPORT
If not documented, how was pumping rate determined?
Pumping rate unknown
i) Is this source treated?YES $ ot ot NO$
If so, what type of treatment:
disinfection filtration carbon filter air stripper other
Purpose of treatment (describe materials to be removed or controlled by treatment):
7) If source is chlorinated, is a chlorine residual maintained:YESNO
Residual level: (At the point closest to the source.)

Survey Form Ver. 2.2 page 2

PART III: Hydrogeologic Information
1) Depth to top of open interval: [check one]
(less than) 20 ft 20-50 ft 50-10 ft 100-200 ft \(\sqrt{ (greater than) 200 ft} \)
information unavailable
2) Depth to ground water (static water level):
(less than) 20 ft 20-50 ft 50-100 ft (greater than) 100 ft
tlowing well/spring (artesian)
How was water level determined?
<u> well log other:</u>
depth to ground water unknown
3) If source is a flowing well or spring, what is the confining pressure: N/A
psi (pounds per square inch)
feet above weilhead
4) It source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: YES NO
5) Wellhead elevation (height above mean sea level): 360 (ft)
How was elevation determined? topographic map Drilling/Well Log altimeter
other:
information unavailable
5) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)
evidence of a confining layer in well log
no evidence of a confining layer in well log
If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the hottom of the lowest confining layer? YESNO
information unavailable

Survey Form Ver. 2.2 page-3

7) San	itary sethack:
	(less than) 100 ft* 100-120 ft 120-200 ft (greater than) 200 ft if less than 100 ft describe the site conditions:
8) We	Hhead construction:
	wellhead enclosed in a wellhouse
	controlled access (describe):
•	other uses for wellhouse (describe):
	Other uses for wernings (describe).
	no wellhead control
9) Su	rface seal:18 ft
	(less than) 18 ft (no Department of Ecology approval)
	(less than) 18 ft (Approved by Ecology, include documentation)
	(greater than) 18 ft
	depth of seal unknown
	no surface seal .
10) A	Annual rainfall (inches per year):
	(less than) 10 in/yr 10-25 in/yr (greater than) 25 in/yr

PART IV: Mapping Your Ground Water Resource	
1) Annual volume of water pumped: 262,800,000 (gallons)	
How was this determined?	
meter estimated: pumping rate (500G)M)	
pump capacity ()	
other:	
2) "Calculated Fixed Radius" estimate of ground water movement: (see Instruction Packet) The Company of the c	le CFZ
(see Instruction Packet) 6 month ground water travel time: 1 year ground water travel time: 1 year ground water travel time: 1 790 (ii) The DISTERT ADDITIONAL 2110 (CASTURE 300	de pari
1 year ground water travel time: 1790 (ft) The DISTERCT	LHPA
5 year ground water travel time: 3110 (ft) CAPTURE Zon FOR THIS WE	
10 year ground water travel time: 4400 (ft) [S ATTACHED	-
Information available on length of screened/open interval?	
YES NO	
Length of screened/open interval: (ft)	
3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of boundary? YES NO (mark and identify on map).	travel
4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the month time of travel boundary? YES NO (mark and identify on map).	: 6
Comments:	

PART V: Assessment of Water Quality

1) KENDUAL SOURCES OF FISH TO BLOSING THE	1) Regional	sources	οť	risk	to	ground	wate
---	-------------	---------	----	------	----	--------	------

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

6 month	i year	5 year	unknown
. 1 -	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	$\frac{\chi}{\lambda}$	
<u>NO</u>	<u> </u>	100	
No.	\rightarrow		
			<u> </u>
		·	-/- -
			. <u>-</u> /
<u>×</u>	$\overline{\times}$	<u>×</u>	· ·
	_\(<u> </u>	
No	\mathcal{N}^{D}	Vo.	
No	Us	<u> </u>	
		× × × × × × × × × × × × × × × × × × ×	X X X X X X X X X X X X X X X X X X X

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form.

Please locate and mark any of the following.)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

R WEW 5	(AS SHOWN	on the Loc	ATION MAP)
	USED AS AN		
PLOT OF	THE GROUN	DNATER X	ECHARGE
PEODECT.	The Carrier		
+ custer.			·
		<u> </u>	

(Unless listed on assessment, MCLs are listed in assistance package	et the following conditions:
A. Nitrate: (Nitrate MCL = 10 mg/l)	YES
Results greater than MCL	
(less than) 2 mg/liter nitrate	
2-5 mg/liter nitrate	
(greater than) 5 mg/liter nitrate	
Nitrate sampling records unavailable	 .
8. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES
Results greater than MCL or SAL	
VOCs detected at least once	_
VOC test performed but never detected	<u></u>
VOC sampling records unavailable	
C. EDB/DBCP:	YES
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/	1.)
EDB/DBCP detected below MCL at least once	
EDB/DBCP detected above MCL at least once EDB/DBCP never detected	
	* ·
EDB/DBCP tests required but not yet completed EDB/DBCP tests not required .	·
EDOIDDCF tests not required	
D. Other SOCs (pesticides and other synthetic organic chemicals):	YES
Other SOCs detected	
Other SOC tests performed but none detected *	
Other SOC tests not performed	
*If any SOCs in addition to EDB/DBCP were detected, please identify and performed, but no SOCs detected, list test methods here:	date. If other SOC tests were
THE TEST RESULTS FOR TESTS PO	
LDE FIMICKED	

2) Source specific water quality records:

Survey Form Ver. 2.2 page 7

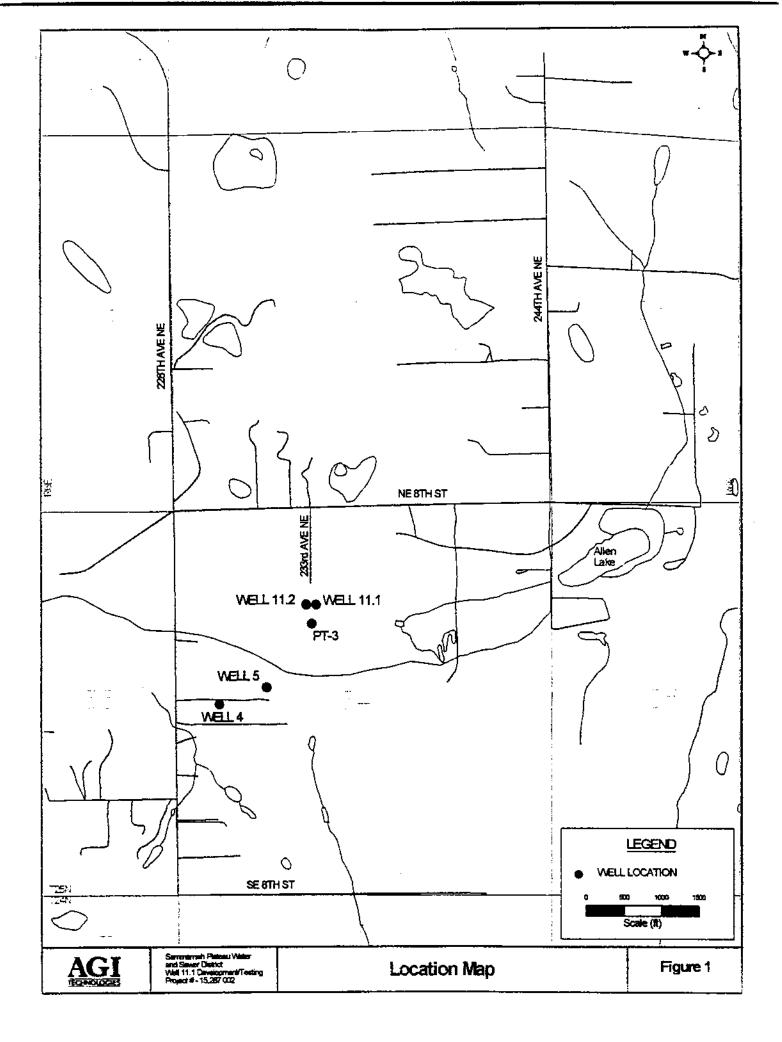
E. <u>Bacterial contamination</u> :	YES
Any bacterial detection(s) in the past 2 years in samples taken from the source (not distribution sampling records).	N/A
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	
Source sampling records for bacteria unavailable	
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution	
The following questions will help identify those ground water systems which a represented by the calculated fixed radius (CFR) method described in Part IV. CFR areas should be used as a preliminary delineation of the critical time of to source. As a system develops its Wellhead Protection Plan for theses sources, delineation method should be considered.	For these sources, the ravel zones for that
1)Is there evidence of obvious hydrologic boundaries within the 10 year time of travel (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or oridge?)	zone of the CFR? ver a mountain or
YES NO	
Describe with references to map produced in Part IV:	
INGLEWOOD CREEK IS LOCATED WITHIN THE	<u></u>
ONE YEAR BOUNDARY. VARIOUS WELLANDS ARE	<u>-</u>
LISO LOCATED IN THE FIVE & TEN YEAR PLAN.	
2) Aquifer Material:	
A) Does the drilling log, well log or other geologic/engineering reports identi- located in an area where the underground conditions are identified as fracture terrain?	fy that the well is I rock and/or basalt
YES X NO	
B) Does the drilling log, well log or other geologic/engineering reports indicated in an area where the underground conditions are primarily identified a gravel?	te that the well is s coarse sand and
X VES NO	

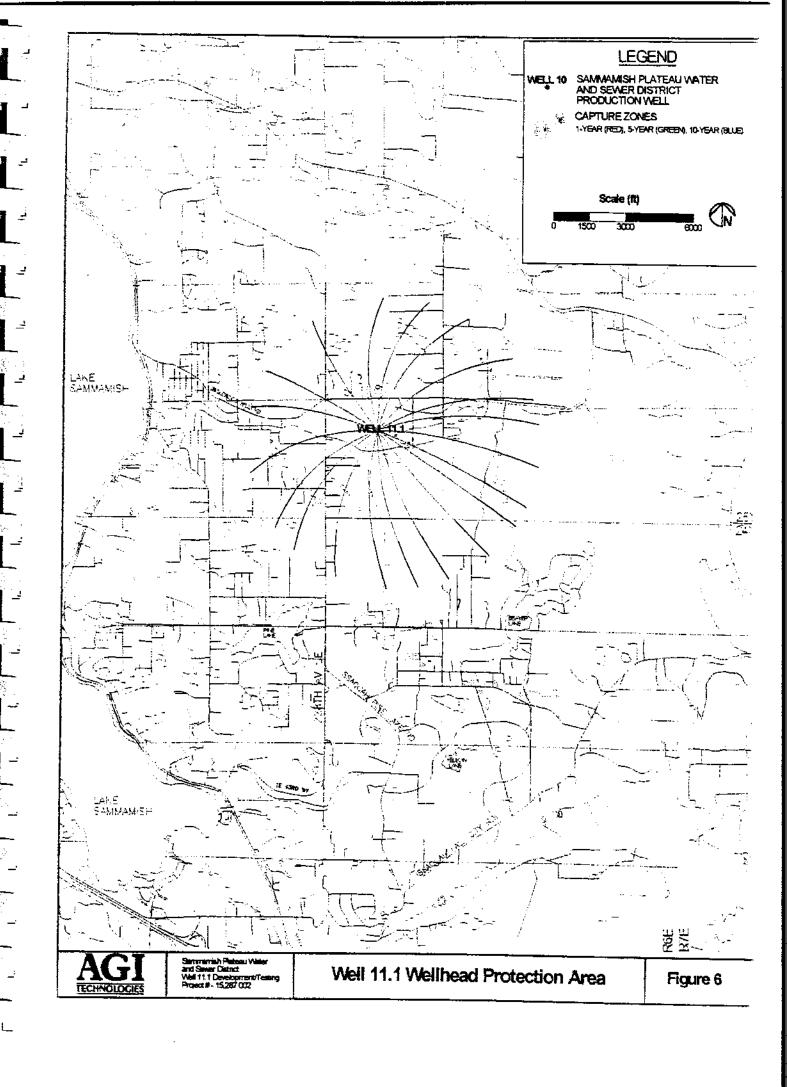
Survey Form Ver. 2.2 page \$

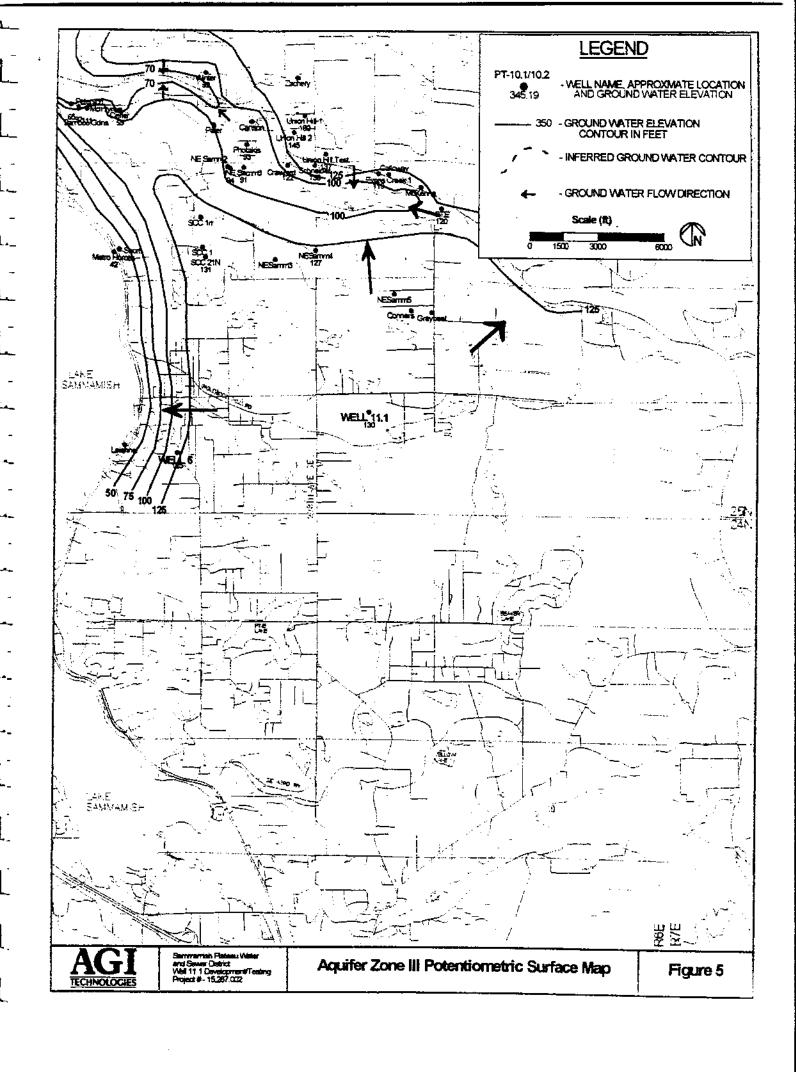
3) Is the source located in an aquifer with a high horizontal flood plains of large rivers, artesian wells with high water p springs.)		
YES \(\lambda \ NO		
4) Are there other high capacity wells (agricultural, municip	oal and/or industrial) loc	cated within the CFRs?
a) Presence of ground water extraction wells remov	ing more than approxim	ately 500 gal/min within
	YES NO	unknown
6 month travel time		
6 month-1 year travel time		
1-5 year travel time		 .
5-10 year travel time		
b) Presence of ground water recharge wells (dry w	rells) or heavy irrigation	within
	YES NO	unknown
1 year travel time		
1-5 year travel time		· .
5-10 year travel time		
Please identify or describe additional hydrologic or geographics of the zone of contribution for this source. Where produced in Part IV.		
•		
	 	
	<u> </u>	
	<u> </u>	
		

Suggestions and Comments

Did you seek outside assistance to complete the assessment?YESNO This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning experience? Any other comments or constructive criticisms you have would be appreciated.	Did you attend one of the susceptibility workshops?	YES	NO
This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning	Did you find it useful?	YES	NO
This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning	Did you seek outside assistance to complete the assessment?	YES	NO
This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning			
This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning			
questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning	·		
made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning	questions will help us upgrade and improve this assessment form.	. If you found pa	rticular sections
assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning			
	•		
			
			7
			·
•			
·			
		•	
		<u> </u>	







gnal and First Copy with epartment of Ecology Ind Copy—Owner's Copy Copy—Oriller's Copy

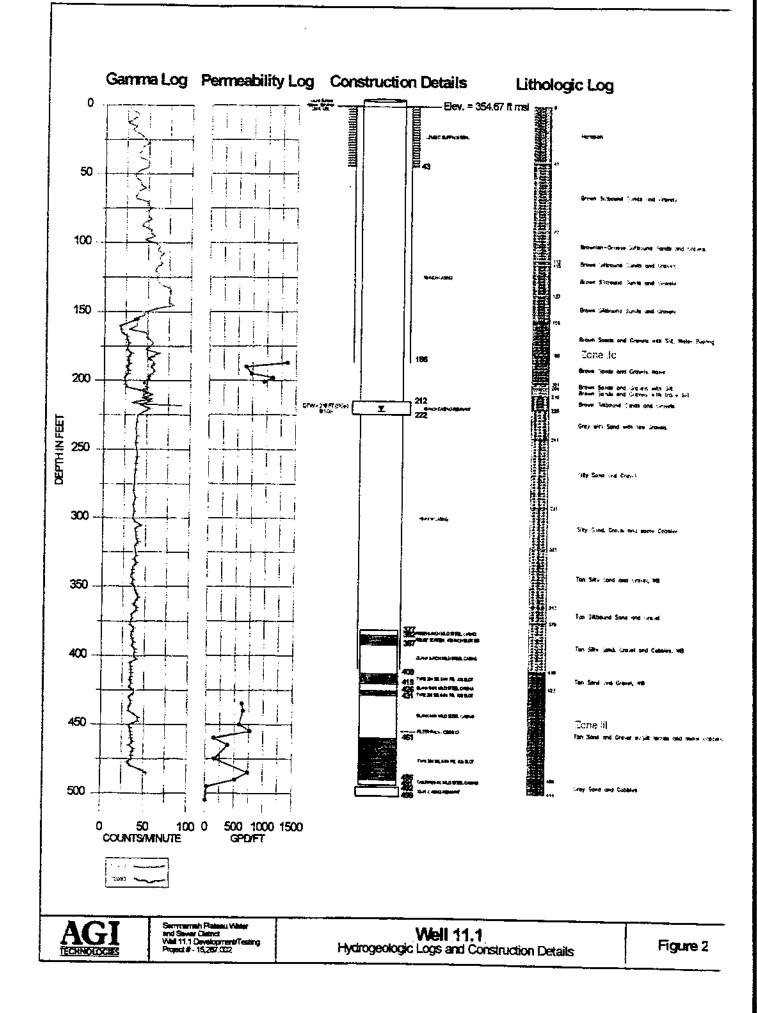
CATER WELL REPORT

Simi	T Care	NO	 -	
		••	 - 337120	,

. STATE OF WASHINGTON

UNIQUE WELL I.D. #AND381

• _		Water Right Permit No. GL-200/3	——.				
•••	OWNER: Name Sammamish Platesu Water and Sever District	± Address 1510 228th Ave SE, Issaquah, WA	. 9 8 027				
1	LOCATION OF WELL: County Kirt . NW & NW & Sec. 34 T 25 N; R 6E W.M.						
,2a)	STREET ADDORESS OF WELL (or nearest address) Lake Washington	School Dist.#414, Reduced, WA					
₹.	PROPOSED USE: Domestic Industrial Municipal Aunicipal Test Well Other D	(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION Formation: Describe by color, character, size of material and structure, and show					
্ন ব	TYPE OF WORK: Owner's number of well 11.1	thickness of aquifers and the kind and neture of the material in an with at least one entry for each change of information.	tch stratur	e, and anov			
<u> </u>	Abendoned Newwell X Method: Dug D Bored	MATERIAL	FROM	TO			
-	Despensed Cable 20 Driven Reconditioned Rotary Jetted	Hard-pan	0_	41			
<u> </u>	DIMENSIONS:	Brown Siltburd San's and Gravels	41	90			
3	400	Brownish-Oranne Silthurd sands and Gravels		112			
· -	iteat. Depili di Compieteo Well 19	Rown Silthard Saris and Caupls Brown Silthard Saris and Gavels with	112	115_			
(61 ∰	CONSTRUCTION DETAILS:	Cibles	115	137			
\$	Casing installed: 16 Diam, from 0 ft. to 185 ft.	Prove Silthard San's and Gravels	1.37	156			
•	Liner installed Union Diam. from the to 219 th.	Brown sands and Gravels with Silt. WR	156	180			
7		Province sands and Gravels, Water Rearing	180	201			
1	Perforations: Yeal Holy	Brown Sands and Gravels with Silt:	201	204			
. 1	Type of perforator used	Brown san's and Grave's with trace Sitt	204	210			
	SIZE of perforationsin, byin,	Brown (Silffront Sarts and Carple	210	220			
	periorations fromtt, tott,	Gray Silty Sands with few Gravels	220	241			
•	perforations from ft. to ft.	Silty Saris and Gravels	241	251			
	perforations from(1. to(1.			1			
Fi	Screens: Yes No No						
.\$	Manufacturer's Name 1871911	Brownish Gray Silty Soris and Gravels	251	291			
	Type 3.9 Scalingers Model No. P.S.	Silty sads, Gravels and Orbbles	291	305			
7	Diam 6 inth Stoi size 0.35 from 409 n. to 419 n.	Silty Sands, Gravels and with few Orthles	305	321			
,4	5101 8128 /rom 76 /l. 10 /H	Tan Silty San's and Graves Water Bearing	321	351			
	Size of gravel 05 8-12	Han Siltar Sands and Gravels	-351_	363			
¥.	Gravel placed from 377 R. to 491 n.	Tan Silthood sands and Gravels	363	375			
ł	Surface seal: Yes No To what depth? 43	III Pan Stithurd Saris and Gravels with Orbbies 375 3		.390			
	Material used in seal Causant	j		 			
7	Did any strate contain unusable water? Yes No X	Tan Silty sanis, Gravels and Orbbies; WB	_330_	410			
1	Type of water? Depth of strata	Tanish Sarks ad Gavels	410_	423			
	Method of sealing strate oil	Tan Silty san's ani Gravels	423_	429			
7	PUMP: Manufacturer's Name	Tanish Sads and Gravets	479	434			
]	_	Tan Silty Sans, Gavels and Othles	434	464			
		Taonish Sands and Gravels	464	489			
(8) T	Above mean sea level	Gray Saris and Critiles	_489_	499			
1	Static level 230 It. below top of well Date 7/21/93	Note: Final development and testing has n	t been	cone			
	Artesian pressure	as of the completion date.		 			
-	Artesian water is controlled by (Cep, valve, etc.))	400000		L			
I	WELL TESTS: Drawdown is amount water level is lowered below static level	Work started 4/28/93 , 19. Completed 8/9/	<u> </u>	, 19			
-	Was a pump lest made? Yes 🖾 No 🛄 If yes, by whom?	WELL CONSTRUCTOR CERTIFICATION:					
,	Yield:get./min, with ft. drawdown effor hrs.	I constructed and/or accept responsibility for cons					
	60 10 10 10 10 10 10 10 10 10 10 10 10 10	# and its compliance with all Washington well construction # Materials used and the information reported above are true					
ĭ.	Recovery data (time taken as zero when pump turned off) (water level measured knowledge and belief.						
_	from well top to water level) Time Water Level Time Water Level Time Water Level		•				
	TELEF LOTEL	NAME FAIR LETTING, TIC-					
• _		(PERSON, FIRM, OR CORPORATION)	•	OR PRINT)			
		Address 10521 Total Road East, Ruyalluo, W	98372	<u> </u>			
	Onle of test	·					
-	34Her taet	(Signed) Ligense /	10				
		Contractor s					





PRODUCTION WELL 11.1 SHALLOW COMPLETION CONSTRUCTION AND TESTING REPORT SAMMAMISH PLATEAU WATER AND SEWER DISTRICT

SUMMARY

On June 1, 1993, Hoit Drilling of Puyaliup, Washington finished the first completion of Well 11.1. For this completion, the 16-inch well was screened above sea level in a brown sand and gravel aquifer between 186 and 210 feet below ground surface (bgs). A 6-hour test at 130 gallons per minute (gpm) caused 14.5 feet of drawdown for a specific capacity of 9 gallons per minute per foot of drawdown (gpm/ft-dd).

The optimum yield for the Well 11.1 shallow completion is calculated at 200 gpm. This is below the District's target aquifer criteria for a production well. As a result, Well 11.1 was drilled to and completed in the deeper Aquifer Zone III. Zone III is a below-sea level aquifer and was also tested at Well 11.1. The results of the Zone III test are found in the February 2, 1996 Production Well 11.1 Construction and Testing Report. Details of the shallow completion test are described below:

SHALLOW COMPLETION DETAILS

Screened zone:

Plateau Aquifer Zone II

Screen depth:

186 to 210 ft. (bgs)

Screen elevation:

169 to 145 ft. (msl)

Initial water level:

158.99 ft. (below measuring point)

Date:

June 3, 1993

Measuring point stickup:

2.17 ft. (above ground surface)

Ground surface elevation:

354.67 ft. (msl)

Pumping Test Results

Results of the Well 11.1, Zone II pumping test are illustrated in Figures 1 and 2. To conduct the test, a 50-horsepower submersible pump was installed in the well to a depth of 182 feet. The results of this 6-hour pumping test are:

AGI 15,287,002 February 2, 1996

1

OPTIMUM YIELD CALCULATION

Well No .:

Production Well 11.1

Owner:

Sammamish Plateau Water and Sewer District

OPTIMUM YIELD = USABLE DRAWDOWN x LONG-TERM SPECIFIC CAPACITY

LONG-TERM SPECIFIC CAPACITY

45 gpm/ft. of drawdown at stabilization or

at maximum pumping term

= 45 gpm/ft.

USABLE DRAWDOWN = TOTAL AVAILABLE DRAWDOWN - ALLOWANCES

TOTAL AVAILABLE DRAWDOWN is:

Max. Pump Setting

370 ft. (Below Ground Surface)

Static Water Level
Total Available Drawdown

220 ft. (Below Ground Surface)

150 ft.

ALLOWANCES include:

Pump Submergence

24 ft.

Interference

4 ft.

Seasonal Fluctuations

10 ft. (Estimated)

Other (Tidal, Barometric)

<u>1</u> ft.

Total Allowances

39 ft.

USABLE DRAWDOWN

150 ft. - 39 ft. = 111 ft.

For Well 11.1.

OPTIMUM YIELD

= 111 ft. x 4.5 gpm/ft. - drawdown

= 500 gpm (Estimated)

4 14 o Print Platty JE HEAVY PENCIL

STATE OF WASHINGTON DEPARTMENT OF HEALTH PUBLIC HEALTH LABORATORIES



WATER SAMPLE INFORMATION FOR RADIATION ANALYSES

		SYSTEM NAME:				2000-	1144				
0 1 0	5127					37516	M I.D. NO.	 -	SYSTEM CLASS (chele one)	SOURCE	NUMBE
<u> </u>	5127	SAMMAN of compliance sample			W/S.	<u> </u>	<u> 4090</u>	09	A 1	в	_
				. 🗆	N	• 🗆			COUNTY		 -
		mber of the previous			<u> </u>	<u> </u>			KING	3	
ICE	SURFACE _	3. WELL	IF SOURCE	S LAKE GR S	TREAM, E	ITER NAM	4E	IF SA	MPLE WAS ORAWN F VAS COLLECTED FRO	BON DIGITARIA	ON SYST
1.	SPRING _	1. PURCHASE								matalem XI; (ADORESS
i c	DATE OF FINAL							<u> </u>			
,	REPORT						SEND RI	EPORT TO:	(PRINT FULL NAME #	Linnacees	
		28/28/	1_95		•		•			,	
				•	•	P	GI TEC	HNOL			·
1 04	TE COLLECT	ED DATE RE	CEIVED			S	AMMAN	aish i	LATEAU W	ATER	
10	<u> </u>	95 08/_1	11/_95				· · · · · · · · · · · · · · · · · · ·				
			<u>^</u>				O. BOX		STREET		 _,
		•				G	IG HAR	BOR		3335	
					•	ELEPHONE	206	. 85	1-5562	IN COOK	
			•		,	=vePr iON	AREA CODE) 33.			
							•			•	
				LARORA	TORY B	EPORT	ericia.		<u>.</u>		
				7110010			40.40				
Nati veen	1,ESS		(0)	O NOT WAN	E BELO	V THIS L	.INE)				
	1522	RESULTS #G/L	(0)	O NOT WAS	E BELO	LIANCE (NO	CHEMAT PATIALS]			-
a Alpha	₹ Æ	RESULTS PCILL	. 0	O NOT WAT	COMP	V THIS L	CHEMS!	}	** .	Y SUPERVIS	OR
s Alpha ium	15538	RESULTS SCOTE	, <i>Q</i>	O NOT WAT	COMP	V THIS L	CHEMS!		** .	RY SUPERVIS	OR)
a Alpha ium a Alpha	1522	ASSUTS ACTU	, 0	'WELL	COMP	V THIS L	CHEMS!		** .		OR)
is Alpha ium is Alpha a Uranium	1522	RESULTS SCHL		"Wci ptirt	COMP	V THIS L	CHEMS!	_	J. CA	m/FBR) <u>) </u>
s Alpha ium s Alpha s Uranium um-226	1533	ASSUTS POINT	. 0	'WELL	COMP	V THIS L	CHEMS!	4	UALITY ASSUR	m/FBR) <u>) </u>
is Alpha ium s Alpha s Uranium um-226 um-226 um-226	15522	AESULTS ACUL	. 0	"Wci ptirt	COMP	V THIS L	CHEMS!		QUALITY ASSUR	IANCE SUPE	RVISO
s Alpha s Alpha s Uranium um-226 um-226 um-226 Plus um-228 Plus		3		"Wci ptirt	COMP	V THIS L	CHEMST HOTALS		QUALITY ASSUR	IANCE SUPE	RVISO
s Alpha s Alpha s Uranium um-226 um-226 um-226 Plus um-228 Plus		3	, Q 	ONOT WAS	COMP	V THIS L	CHRIMATI MITIALS	CHA	QUALITY ASSUR (Name)	IANCE SUPE	RVISO
s Alpha s Alpha s Uranium um-226 um-226 um-228 Plus um-228 Plus		3		ONOT WAS	COMP	V THIS L	CHEMBI MILLS	CHA	QUALITY ASSUR (Name)	IANCE SUPER	RVISO
ium 3 Alpha 8 Uranium um-226 um-228 um-228 Plus um-228		3		ONOT WAS	COMP	V THIS L	CHEMST HOTALS	CHA	QUALITY ASSUR (Name 1) 2007 ARGE: 2/20	ANCE SUPER	RVISO
s Alpha s Alpha s Alpha b Uranium um-226 um-226 um-228 Plus um-228 m-227		3		ONOT WAS	COMP	V THIS L	CHRIMATI MITIALS A 1 (PC) (C) (C) (C) (C) (C) (C) (C) (C) (C) (CHA	QUALITY ASSUR (Name 1) 2007 ARGE: 2/20	ANCE SUPER	RVISO
s Alpha s Alpha s Alpha a Uranium um-226 um-226 um-228 Plus um-228 sh-222		3		15 3	COMP YES	V THIS L	CHEMBI MILLS	CHA	QUALITY ASSUR (Name 1) 2007 ARGE: 2/20	IANCE SUPER	RVISO
s Alpha s Alpha s Alpha a Uranium um-226 um-226 um-228 Plus um-228 sh-222		3		15 3 50	COMP YES	V THIS L	CHRIMATI MITIALS A 1 (PC) (C) (C) (C) (C) (C) (C) (C) (C) (C) (CHA	QUALITY ASSUR (Name 1) 2007 ARGE: 2/20	ANCE SUPER OF INCIDENT AND AND AND AND AND AND AND AND AND AND	RVISO
ium ium is Alpha a Uranium ium-226 ium-226 ium-226 ium-228 ium-228 ium-228 ium-228 iium-89		3		16 3 50 80 8	COMP YES	V THIS L	CHRIMATI MITIALS A 1 (PC) (C) (C) (C) (C) (C) (C) (C) (C) (C) (CHA	CHALITY ASSURE (Name (Na	ANCE SUPER OF INITIAL STREET	RVISO
s Alpha s Alpha s Alpha a Uranium um-226 um-226 um-226 um-227 um-228 sh-222 s Beta lium-89 m-134		3		15 3 50 80 8 80 80	COMP YES	V THIS L	CHEMAI MILLS	CHA	DUALITY ASSURE (Name) RGE: 200 RGE: 100 REW BILL TO Sammamish	ANCE SUPER OF INCIDENT AND INCI	RVISOR
s Alpha s Alpha s Alpha burn-226 urn-228 urn-228 urn-228 urn-228 urn-228 urn-228 urn-228 urn-228 urn-228 urn-238 urn-2		2 2 2 3 2 3 5 2 5	. O	15 3 3 50 80 8 80 3	COMP YES	V THIS L	CHRIMATI MITIALS 11, PC) 111	CHA	New BILL TO Sammamish ATTN: RC	Well #11 Plateau W. N'LITTLE h'Ave, S.E	RVISOR
s Alpha s Alpha s Alpha burn-226 urn-228 urn-228 urn-228 urn-228 urn-228 urn-228 urn-228 urn-228 urn-228 urn-238 urn-2		2 2 2 3 2 3 5 2 5	. O	15 3 50 80 8 80 80	COMP YES	V THIS L	CHEMAI MILLS	CHA	DUALITY ASSURE (Name) PROF. / 2027 PROF.	Well #11 Plateau W. N'LITTLE h'Ave, S.E	RVISO
s Alpha lium s Alpha a Uranium um-226 um-226 um-226 um-228 bh-222 s Beta lium-89 lium-90 m-134	<u> </u>	2 2 2 2 2 2 4	. O	15 3 3 50 80 8 80 3	COMP YES	V THIS L	CHRIMATI MITIALS 11, PC) 111	CHA	New BILL TO Sammamish ATTN: RC	Well #11 Plateau W. N'LITTLE h'Ave, S.E	RVISOR
ium Is Alpha Ium Is Alpha Ium Is Alpha Ium-Ium Ium-Ium-Ium Ium-Ium-Ium Ium-Ium-Ium Ium-Ium-Ium Ium-Ium-Ium-Ium-Ium-Ium-Ium-Ium Ium-Ium-Ium-Ium-Ium-Ium-Ium-Ium-Ium-Ium-	<u> </u>	2 2 2 2 2 2 4	. O	15 3 3 50 80 8 80 3	COMP YES	V THIS L	CHRIMATI MITIALS	CHA	New BILL TO Sammamish ATTN: RC 1510 - 228t	Well #11 Plateau W. N. LITTLE h'Ave. S.E VA 98027	RVISOF
<u> </u>	<u> </u>	2 2 2 2 2 2 4	. O	15 3 3 50 80 8 80 3	COMP YES	V THIS L	CHEMAI MILLS	CHA	New BILL TO Sammamish ATTN: RC 1510 - 228t	Well #11 Plateau W. N. LITTLE h'Ave. S.E VA 98027	RVISOF

. .

1515 80th St. E. Tacoma, WA 98404 531-3121

VOLATILE ORGANIC CHEMICAL REPORT

Results by Analysis by EPA Method 524.2 Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry

Send Report To:

AGI Technologies P.O. box 1158

Gig Harbor, WA 98335

Bill:

Sämmamish Plateau Water and Sewer Distr

1510 228th Ave. E. Issaquah, WA 98027

COUNTY

: King

SYSTEM NAME

SOURCE TYPE

: SPWSD well 11.1

SYSTEM ID NO. : NA Engineering

DATE COLLECTED: 08/09/95

DATE ANALYZED : 08/15/95

SOURCE NUMBER : SO1

: Well

LABORATORY NO.

1 089

· DATA FILE

: 08972485

analyst

1 Martin L Okiro

DATE OF REPORT

: August 18, 1995

SUPERVISOR'S INITIALS : LIME

					Poi. /	
EPA	NAME OF COMPOUND	MCL*	AMOUNT		<u> </u>	A
CODE		ug/L	1	11	NAME OF COMPOUND	AMOUN
	REGULATED COMPOUNDS	i ugic	ug/L	CODE	<u> </u>	ug/L
<u> 2976</u>	IVINYL CHLORIDE	7 2	N. D.	- <u></u> -	UNREGULATED COMPOUNDS	- 09/2
2977	11.1-DICHLOROFTHYLENE		ND NO	2210	ICHLOROMETHANE	ND
2981	11.1.1-TRICHLOROFTHANE	200	ND	2214	(RHOWOMETHANE	ND
2982	ICARBON TETRACHI ORIDE	5	ND ND	<u> 2216</u>	ICHLOROETHANE	ND
2990	IRENZENE	5	ND	2978	1.1-DICHLOROETHANE	ND
2980	1,2-DICHLOROETHANE	5	ND	<u> 2416</u>	12.2DICHLOROPROPANE	ND
2984	TRICHLOROETHYLENE		ND_	2410	11,1-DICHLOROPROPANE	ND
2969	ID-DICHLORORENZENE	- <u>5</u> 75	ND	<u> </u>	IDIBROMOMETHANE	ND
2979	It-1, 2-DICHLOROETHY! ENE		ND	L2412	11.3-DICHI OROBBODANC	ND
2380	TO 1.7-DILBI ODOETUVI ENE	100	ND	<u> 2986 -</u>	1.1.1.2-TETRACHLOROFTHAN	ND
<u> 2983</u>	11.2-DICHLOROPROPANE		ND	1.4333	BALIGUAENZENE	ND ND
<u> 4331</u>	TIOCOENE ———	1000	ND ND	1 2414	1.2.3-TRICHI OPOPRODANE	ND
2987	TETRACHLOROFTHYLENE	1 1000	ND	<u> </u>	U. I.Z.Z-I ETRACHI ODOSTUAXI I	ND ND
2969	TCHLOROBENZENE	100	ND ND	2000	IO-CHLURU HICHENE	ND
<u> </u>	JETHYL BENZENE	700	OND	<u> 2966</u>	p-CHLOROTOLUENE	ND
<u> 2995</u>	Im/p-XYLENES	 	ND ND	<u> 2967 </u>	m-DICHLOROBENZENE	ND
<u> 29</u> 97	10-XYLENE Itotal vylene MCLL	10000	ND ND	4414	DICHLORODIELLIOPOMETUANE	ND
2330	1914KENE	100	ND	<u> 4410 </u>	THIUHLUROFI HOROMETUANET	ND
2968	O-DICHLOROBENZENE	600	ND	<u> </u>	POUNDCHLOROMETHANE	ND
<u> 2364</u>	METHYLENE CHLORIDE	5	ND		IQUPHUPYLHENZENE ""	ND
<u> 2985 .</u>	1.1.2-TRICHLOROETHANE	5	D	2998	N-PROPYLBENZENE	ND
<u> 2418</u>	LL.Z.4-LRIMETHYLBENZENE	70	ND I	<u>2424</u> _2426	1.3.5-TRIMETHYLBENZENE	ND
	TRIHALOMETHANES ITHM totall a	100			TERT-BUTYLBENZENE	ND
	CHLOROFORM	1 - 3	ND I		SEC-BUTYLBENZENE	ND
	BROMODICHLOROMETHANE	 -	ND		D-ISOPROPYLTOLUENE	ND
	CHLORODIBROMOMETHANE		ND		n-BUTYLBENZENE	ND
	BROMOFORM		ND		1,2,4-TRICHLOROBENZENE	ND
	Meximum Contaminant Level				NAPTHALENE	ND
NOTE:	An amount of ND Indicates that the true	•	- ⊩	2420	HEXACHLOROBUTADIENE	ND
	concentration is less than the method		} -	2228	1.2.3-TRICHLOROBENZENE	ND
OTE-DIE	Gelection Imit at A.E		· [-	_4440	CIS-1S-DICHI OPODDODODENE	ND
7 1 4:DIB	ROMOETHANE(EDB) AND DIBROMOCHLORO	PROPANEID	CO WEDE AT	2224	rans-1.3-DICHLOROPROPENE	ND

DETECTION LIMITS. THIS DOES NOT CONSTITUTE AN ADEQUATE ANALYSIS FOR THESE COMPOUNDS. "Composite results are locate." RE ALSO ANALYZED FOR AND WERE AT CONCENTRATIONS BELOW AGI Technologies August 30, 1995 Page 3

All results are in milligrams per liter except color which is in color units, pH which is in pH units, specific conductivity which is in micro-mho per cm and turbidity which is in nephelometric turbidity units. Bicarbonate, carbonate and total hardness are in milligrams per liter as calcium carbonate. Total Coliform results are per 100 mls.

Microbiology Lab Number: 08996350 Chemistry Lab Number: 08922147

Sample was analyzed according to Standard Methods for the Examination of Water and Wastewater, 18th Edition.

Chain of Custody record and results of Voc analysis are enclosed.

Sincerely,

Diane DuMond Lab Coordinator

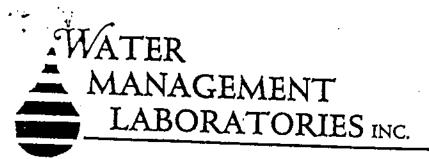
DD:jlp enclosure

c:\comm\ag18-10

< is less than

1

Test	Result
Iron	0.09
Lead	< 0.002*
Magnesium	5
Manganese	0.048
Mercury	< 0.0005*
Nickel	. < 0.04*
Nitrate Nitrogen	< 0.2*
Nitrite Nitrogen	< 0.2*
Potassium	1.3
Selenium	< 0.005*
Silica	21
Silver	< 0.01*
Sodium	7
Specific Conductivity	162
Hq	7.4
Sulfate	1.
Thallium	< 0.001*
Total Dissolved Solids	98
Total Hardness	71
Turbidity	0.5
Zinc	< 0.05*
Total Coliform .	Absent (MMO-MUG Negative)



1515 80th St. E. Tacoma, WA 98404 531-3121

August 30,1995

AGI Technologies PO Box 1158 Gig Harbor, WA 98335 Attn: Scott Coffey

Dear Sir:

Results of analysis of one ground water engineering sample taken by yourself on 08-09-95 at 10:19 a.m. and received 08-10-95 at 10:00

Sample Identification: Sammamish Plateau Water and Sewer District, Well 11.1

Test	Result
Antimony	< 0.002*
Arsenic	< 0.01*
Barium	< 0.1*
Beryllium	<.0.002*
Bicarbonate	82
Cadmium	< 0.002*
Calcium	20
Carbonate	0
Chloride	2
Chromium	< 0.01*
Color	< 5*
Copper	< 0.02*
Cyanide	< 0.1*
Fluoride	< 0.2*

ISE HEAVY PENCIL

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
PUBLIC HEALTH LABORATORIES
OFFICE OF RADIATION LABORATORIES
1610 N.E. 150TH ST., SEATTLE, WA 98155-7224



WATER SAMPLE INFORMATION FOR RADIATION ANALYSES

AB. NUMBER	1	SYSTEM NAME:				SYSTEM	1.D. NO.		SYSTEM CU	33	SOURCENU	IMBER
	1 1 1	SPWSD	:			409009			(circl	e one)	N	e.a
	<u> </u>				No		<u> </u>	<u> </u>	COUNTY		<u> </u>	
s this follow up of a pr					,,,,				King	}		
If yes, what was the la			# SOURCE IS	LAKE OR STRI	EAM, ENT	ER NAME		# SA	MPLE WAS DR	AWN FROM	DISTRIBUTION	SYSTEM
OURCE1. 8 YPE:		3. WELL						11 7	VAS COCCEGII		STEMAT: (ADC	THE 991
	PRING	4, PURCHASE								New	well	
	ATE OF FINAL				-		SEND RE	PORT TO	: (PRINT FULL	NAME & ADO	(RESS)	
		061291	23									
					-	(coi	lected	T pa	CR/Ca	rr As	sociat	2
DA	TE COLLECT	TED DATE REC	EIVED		_	Carr	/Assoc1a	ates				
1 0	5/0 4/	9 3 0 6/0	8/9 3			P.O.	Box 115	is.		:		
<u> </u>	<u> </u>	<u> </u>	<u> </u>		_			<u></u>	STREET	<u> </u>		
					-	61g /	Harobr		- WA	<u>98335-</u>	0168 ze coo€	
					, I	ELEPHONE	c 206	່ 8	51-556	2		·
							AREA COOE			-		
•										٠		
			₍₀	LABORAT O NOT WRIT	FORY R E BELO	EPORT W THIS L	INE)			;;	······································	
1	LESS	RESULTS		*MCL		LIANCE	QÆMST	ד ^י				
ANALYSES	THAN .	7	. 7	pCirL	YES	NO	MATTALS	\dashv	LABO		SUPERVISO	OR
Gross Alpha		<u> </u>	. 0		1		19	┨		(Name or	initials)	
Uranium Gross Alpha	-} -}-		*		 	<u> </u>	//	┥ -		11/1		
minus Uranium	 		<u> • </u>	15	-	 		┨	QUALITY	ASSURA	NCE SUPER	RVISOR
Radium-226	 		•	3_		 -	<u> </u>	-		(Name or	initiale)	
Radium-228	 -		• —	<u> </u>			 	- ∤	J. 24. W	, J.Z.	CD 27. C.	istate
Radium-225			4	5	 	ļ <u>-</u>	 	- -	HARGE:	70	00	
Radon-222	 				-	 	ļ		EMARKS:	÷ .		
					 -	ļ	. 					
·					ļ		<u> </u>	_				
Gross Bela	<u> </u>	<u> </u>	.0	50	1/	ļ	111	4				
Strontium-89				60	· .	ļ	//	4				
Strontlum-90	<u> </u>	<u> </u>	•	8		ļ <u>'</u>		4				
Cesium-134				80	·	<u> </u>	<u> </u>	_				
lodine-131	_ <u> </u> _		· · · · · · · · · · · · · · · · · · ·	3	<u> </u>	 	 	4				r
Tritium		,. ·		20,000			<u> </u>	4	4 S		•	
		forms that committees made					ļ	_	•			
·			······································				1	_	•			
		· ,				1	1	_ _			•	
	[· - · · ·-		l .	1	1	1					

WATER BACTERIOLOGICAL ANALYSIS SAMPLE COLLECTION: READ INSTRUCTIONS ON BACK OF GOLDENROD COPY

.till instructions are not followed, sample will be rejected.

DATE COLLECTED TIME COLLEC	TED I COUNTY NAME
EMONTH CO DAYS AYEARS	35 I
□ M P	K-1
TYPE OF SYSTEM IF PUBLIC SYSTEM, CO	MPLETE:
Z PUBLIC 🤺	CIRCLE GROUP
☐ INDIVIDUAL PONO	高麗 图 (A) B
(serves only 1 residence)	(1498) (1995) [145] (145)
NAME OF SYSTEM	ting file in the second
SPWSD -	
de hitches ton the school flee making foundated	EPHONE NO
i loa	1(706) 951-5562
well it shallow.	
	ENING () STEM OWNER/MGR.: (Name)
	SIEM OTTICIONOIL. (IMBIR)
(2) raic/Associates =	,
SOURCE TYPE GROUND WATER UNDER S	TURFACE INFLUENCE PURCHASED OF COMBINATION
WELL FIELD	INTERTIE TO THERE
SEND REPORT TO: (Print Full Name, Address and	Zip Code)
CHEC / ASSOCIATES	Crais Parsell
PO POX 1155	<u> </u>
(-14 1/1.150 C-10)	Westmann 75335
	TANDLINAGI (CAS
TEO SAMPLE (check only one in the column	
MEN ROUTHER BEACHTIME	The Control of the Co
Topic Transport	
The same	One
· 表面及6000000000000000000000000000000000000	
PARTY COMPTIONS OF LACES	
Previous prepare presence at Date See	
	Collombat E
	The control of the co
THE RESIDENCE OF THE PARTY OF T	
	5.4.4.4.4.4.1.5.4.4.4.1.1.1.1.1.1.1.1.1.
REMARKS	The way to
MMO-MUG NEG	
ABORATORY RESULTS	PORTAR USE ONLY
TOTAL COLEON AND THE SECOND	20 CO 100 CO 100 CO
ELCYCOMPOSIT MERCHANICAL STREET	HETEHOTHOPHIC MACONTOO IN TO
Service Control of th	
	《西京教》
NEW CONST DRINKING WATER SAI	
REPEAT SAMPLE REQUIRED, Collorms pres	والمراجع والمراجع المراجع والمراجع والم
	E Collaborat
☐ Fecal present	☐ Fecal absent
SEE REVERSE SIDE OF GREEN COPY I	OR EXPLANATION OF RESULTS
是是多种的 经现代的 经	
SVEN ANG GIVE	
一致以外的人的人的人的人的人的人的人的人的人的人的人的人的人的人的人的人的人的人的人	
MATERIAL THEORY LABORATORY	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PARKE DE
AEMARKS	INCOART ST
DOH 305-002 (RIEV 7/91)—P	WATER SUPPLIER COPY
to the second second	THIER SUFFLIER COPT

DKINKING WATER REQUEST FOR ANALYSIS

1

CONTACT Com, Russell
(wrc //
SAMPLED BY CR. Carr /Associates
REQUESTED ANALYSIS INORGANICS ORGANICS MICROBIOLOGY
1 9P 06D 43/43 1335 CI PI SI PV VOC EDB PST HRB TC FC FS EC
3
to THER ANALYSIS
SPIECIAL INSTRUCTIONS:
ANALYSIS CODE:
INORGANICS: COMPLETE INORGANICS = CI PRIMARY INORGANICS = PI SECONDARY INORGANICS = SI PHASE II & V = PV
ORGANICS: VOLATILE ORGANIC COMPOUNDS (VOC) EDB/DBCP = EDB' PESTICIDES = PST HERBICIDES = HRB MICHOBIOLOGY: TOTAL COLIFORM = TC FECAL COLIFORM = FC FECAL STREP = FS E COLI = EC
Date/Time 1/19e/130
Received by / Date/Time Date/Time Date/Time

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS
4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-3047

DATA QUALIFIER FLAGS

Indicates that the analyte was analyzed for but was not detected. The associated numerical value is the practical quantitation ND: limit, corrected for sample dilution. The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity. J: C: The identification of this analyte was confirmed by GC/MS. BI: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final extract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank). B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank). E: The concentration of this analyte exceeded the instrument calibration range. D: The reported result for this analyte is calculated based on a secondary dilution factor. A: This TIC is a suspected aldol-condensation product. M: Quantitation Limits are elevated due to matrix interferences. S: The calibration quality control criteria for this compound were not met. The reported concentration should be considered an estimated quantity. X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification. X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended. X4: RPD for duplicates outside QC limits. Sample was re-analyzed with similar results. Sample matrix is nonhomogeneous. RPD for duplicates outside QC limits due to analyte concentration near the method practical quantitation limit/detection limit. X4a: XS: Matrix spike was diluted out during analysis. X6: Recovery of matrix spike outside QC limits. Sample was re-analyzed with similar results. X7: Recovery of matrix spike outside QC limits. Matrix interference is indicated by blank spike recovery data. X7a: RPD value for MS/MSD outside QC limits due to high contaminant levels. X8: Surrogate was diluted out during analysis. X9: Surrogate recovery outside QC limits due to matrix composition. X10: Surrogate recovery outside QC limits due to high contaminant levels.

QUALITY CONTROL REPORT

ORGANIC COMPOUNDS IN DRINKING WATER EPA METHOD 524.2

Page 3 of 3

Client:

Carr/Associates

Lab No:

32506qc

Units: Date: ug/L June 17, 1993

METHOD BLANK

TRIHALOMETHANES (THM) **EPA** Code No. Compound Name Result PQL Flags 2941 Chloroform ND 0.5 2943 Bromodichloromethane ND 0.5 2944 Dibromochloromethane ND 0.5 2942 Bromoform ND 0.5

ND - Not Detected PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Surrogates	Percent Recovery	Control Limits
4-Bromofluorobenzene	98	80 - 120
1,2 Dichlorobenzene d4	88	70 - 130

QUALITY CONTROL REPORT

ORGANIC COMPOUNDS IN DRINKING WATER EPA METHOD 524.2

Page 2 of 3

Client:

2410

2408

Carr/Associates

Lab No:

32506gc

Units:

uq/L

Date:

June 17, 1993

1,1-Dichloropropene

Dibromomethane

METHOD BLANK

	UNREGULATED COMPOUNDS								
EPA Code No.	Compound Name	Result	PQL	Flags					
2212	Dichlorodifluoromethane	ND	1.0						
2210	Chloromethane	ND	1.0						
2214	Bromomethane	ND	1.0						
2218	Trichlorofluoromethane	ND	1.0						
2216	Chloroethane	ND	1.0						
2978	1,1-Dichloroethane	ND	0.5						
2416	2,2-Dichloropropane	ND	0.5						
2430	Bromochloromethane	ND	0.5						

UNREGULATED COMPOUNDS EPA Code No. Compound Name Result POL Flags 2412 1,3-Dichloropropane ND 0.5 2986 1,1,1,2-Tetrachloroethane ND 0.5 2994 Isopropylbenzene ND 0.5 2993 Bromobenzene ND 0.5 2988 1,1,2,2-Tetrachloroethane ND 0.5 2414 1,2,3-Trichloropropane. ND 0.5 2998 n-Propylbenzene ND 0.5 2965 2-Chlorotoluene ND 0.5 2966 4-Chlorotoluene ND 0.5 2424 1,3,5-Trimethylbenzene ND 0.5 2426 t-Butylbenzene ND 0.5 2418 1,2,4-Trimethylbenzene ND 0.5 2428 sec-Butylbenzene ND 0.5 2967 1,3-Dichlorobenzene ND 0.5 2030 4~Isopropyltoluene ND 0.5 2422 n-Butylbenzene ND 0.5 2246 Hexachlorobutadiene ND 0.5 2248 Naphthalene ND 0.5 2420 1,2,3-Trichlorobenzene ND 0.5

ND

ND

0.5 0.5

0.5

ND - Not Detected

PQL - Practical Quantitation Limit

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS
4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

ORGANIC COMPOUNDS IN DRINKING WATER EPA METHOD 524.2

Page 1 of 3

Client:

Carr/Associates

Lab No:

32506gc

Units:

ug/L

Date:

June 17, 1993

METHOD BLANK

REGULATED COMPOUNDS

EPA Code No.	Compound Name	Result	PQL	Flags
2976	Vinyl Chloride	ND	1.0	
2977	1,1-Dichloroethene	ND	0.5	
2981	1,1,1-Trichloroethane	ND	0.5	
2982	Carbon Tetrachloride	ND	.0.5	
2990	Benzene	ND	0.5	
2980	1,2-Dichloroethane	ND	0.5	
2984	Trichloroethene	ND	0.5	
2969	1,4-Dichlorobenzene	ND	0.5	
2964	Methylene Chloride	6.8	0.5	
2979	trans-1,2-Dichloroethene	ND	0.5	1
2380	Cis-1,2-Dichloroethene	ND	0.5	
2983	1,2-Dichloropropane	ND	0.5	
2991	Toluene	ND	0.5	
2985	1,1,2-Trichloroethane	: ND	0.5	
2987	Tetrachloroethene	ND	0.5	
2989	Chlorobenzene	ND	0.5	
2992	Ethylbenzene	ND	0.5	
2995	Meta-Xylene, para-Xylene	ND	0.5	ļ
2997	ortho-xylene	ND	0.5	
2996	Styrene	ND	0.5	
2968	1,2-Dichlorobenzene	ND	0.5	
2378	1,2,4-Trichlorobenzene	ND	0.5	

ND - Not Detected

PQL - Practical Quantitation Limit

Carr/Associates Lab No. 32506 Page 6 of 6 June 17, 1993

Lab Sample No. 32506-2

Client ID: FIELD BLANK

EPA Method 524.2 (continued)

TRIHALOMETHANES (THM) Flags Concentration PQL EPA ug/L Compound Name Code No. 1.0 ND Chloroform 2941 ND 1.0 Bromodichloromethane 2943 1.0 ND Dibromochloromethane 2944 .1.0 ND Bromoform 2942

ND - Not Detected PQL - Practical Quantitation Limit

Volatile Surrogates

,-3

;3

Surrogate	Percent Recovery	Control Limits
4-Bromofluorobenzene	9 <i>7</i>	80 - 120
1,2 Dichlorobenzene d4	93	70 - 130

Carr/Associates Lab No. 32506 Page 5 of 6 June 17, 1993

Lab Sample No. 32506-2

Client ID: FIELD BLANK

EPA Method 524.2 (continued)

UNREGULATED COMPOUNDS							
EPA Code No.	Compound Name	Concentration ug/L	PQL	Flags			
2212	Dichlorodifluoromethane	ND	2.0				
2210	Chloromethane	ND	2.0				
2214	Bromomethane	ND	2.0				
2218	Trichlorofluoromethane	ND	2.0				
2216	Chloroethane	ND .	2.0				
2978	1,1-Dichloroethane	ND	1.0				
2416	2,2-Dichloropropane	ND	1.0				
2430	Bromochloromethane	ND	1.0				
2410	1,1-Dichloropropene	מא	1.0				
2408	Dibromomethane	מא	.1.0				
2412	1,3-Dichloropropane	ND	1.0				
2986	1,1,1,2-Tetrachloroethane	ИD	1.0				
2994	Isopropylbenzene	ИD	1.0				
2993	Bromobenzene	ND	1.0				
2988	1,1,2,2-Tetrachloroethane	ND	1.0				
2414	1,2,3-Trichloropropane	ND	1.0	:			
2998	n-Propylbenzene	ND	1.0				
2965	2-Chlorotoluene	ND	1.0				
2966	4-Chlorotoluene	ND	1.0				
2424	1,3,5-Trimethylbenzene	: ND	1.0				
2426	t-Butylbenzene	ND	1.0				
2418	1,2,4-Trimethylbenzene	ND	. 1.0				
2428	sec-Butylbenzene	ND	1.0				
2967	1,3-Dichlorobenzene	ND	1.0	ì			
2030	4-Isopropyltoluene	ND	1.0	1			
2422	n-Butylbenzene	ND	1.0				
2246	Hexachlorobutadiene	ND	1.0	1			
2248	Naphthalene	ND	1.0	1			
2420	1,2,3-Trichlorobenzene	ND	1.0	·			

ND - Not Detected PQL - Practical Quantitation Limit

Continued

Carr/Associates Lab No. 32506 Page 4 of 6 June 17, 1993

Lab Sample No. 32506-2

Client ID: FIELD BLANK

Organic Compounds in Drinking Water EPA Method 524.2 Date Analyzed: 6-9-93

REGULATED COMPOUNDS

EPA Code No.	Compound Name	Concentration ug/L	PQL	Flags
2976	Vinyl Chloride	ND	2.0	
2977	1,1-Dichloroethene	ND	1.0	
2981	1,1,1-Trichloroethane	ND	1.0	
2982	Carbon Tetrachloride	ND I	1.0	
2990	Benzene	מא	1.0	
2980	1,2-Dichloroethane	ND	1.0	
2984	Trichloroethene	ND	1.0	
2969	1,4-Dichlorobenzene	ND	1.0	
2964	Methylene Chloride	11	1.0	B1
2979	trans-1,2-Dichloroethene	ND	1.0	
2380	Cis-1,2-Dichloroethene	ND.	1.0	
2983	1,2-Dichloropropane	ND	1.0	
2991	Toluene	ND	1.0	
2985	1,1,2-Trichloroethane	ND	1.0	
2987	Tetrachloroethene	. ND	1.0	
2989	Chlorobenzene	ND	1.0	
2992	Ethylbenzene	ND	1.0	
2995	Meta-Xylene, para-Xylene	ND	1.0	ŀ
2997	ortho-xylene	ND	1.0	
2996	Styrene	ND	1.0	
2968	1,2-Dichlorobenzene	NTD	1.0	
2378	1,2,4-Trichlorobenzene	ND	1.0	

ND - Not Detected

PQL - Practical Quantitation Limit

Continued

Carr/Associates Lab No. 32506 Page 3 of 6 June 17, 1993

1

Lab Sample No. 32506-1

Client ID: SPWSD

EPA Method 524.2 (continued)

TRIHALOMETHANES (THM) EPA Concentration PQL Flags Code No. Compound Name ug/L 2941 Chloroform ND 0.5 2943 Bromodichloromethane ND 0.5 2944 Dibromochloromethane ND 0.5 2942 Bromoform 0.5 ND

ND - Not Detected PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate	Percent	Control
	Recovery	Limits
4-Bromofluorobenzene	94	80 - 120
1,2 Dichlorobenzene d4	80	70 - 130

Continued

Carr/Associates Lab No. 32506 Page 2 of 6 June 17, 1993

Lab Sample No. 32506-1

Client ID: SPWSD

EPA Method 524.2 (continued)

UNREGULATED COMPOUNDS						
EPA Code No.	Compound Name	Concentration ug/L	PQL	Flags		
2212	Dichlorodifluoromethane	ND	1.0			
2210	Chloromethane	ND	1.0			
2214	Bromomethane	מא	1.0			
2218	Trichlorofluoromethane	ND	1.0			
2216	Chloroethane	ND	1.0			
2978	1,1-Dichloroethane	ND	0.5			
2416	2,2-Dichloropropane	ND	0.5			
2430	Bromochloromethane	ND	0.5			
2410	1,1-Dichloropropene	ND	0.5			
2408	Dibromomethane	ND	0.5			
2412	1,3-Dichloropropane	ND	0∵5			
2986	1,1,1,2-Tetrachloroethane	ND	0.5			
2994	Isopropylbenzene	ND	0.5			
2993	Bromobenzene	ND	0.5			
2988	1,1,2,2-Tetrachloroethane	מא ו	0.5			
2414	1,2,3-Trichloropropane	תא	0.5			
2998	n-Propylbenzene	ND	0.5			
2965	2-Chlorotoluene	DND	0.5			
2966	4-Chlorotoluene	ND	0.5			
2424	1,3,5-Trimethylbenzene	ND	0.5			
2426	t-Butylbenzene	ND	0.5			
2418	1,2,4-Trimethylbenzene	ND	0.5			
2428	sec-Butylbenzene	ND	0.5			
2967	1,3-Dichlorobenzene	I D	0.5			
2030	4-Isopropyltoluene	ND	0.5			
2422	n-Butylbenzene	ND	0.5			
2246	Hexachlorobutadiene	ND	0.5			
2248	Naphthalene	ND	0.5			
2420	1,2,3-Trichlorobenzene	ND	0.5			

ND - Not Detected PQL - Practical Quantitation Limit

Continued . . .

DOR' IS issued solely for the use of the person or commony to whom d is addressed. This laboratory scorets remonstribly only for the due performance of analysis in accordance with two accordance practice, in no event shall Sound Analysis in accordance with

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS
4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Carr/Associates

Date: June 17, 1993

Report On: Analysis of Water

Lab No.: 32506

Page 1 of 6

IDENTIFICATION:

Sample Received on 06-03-93

ANALYSIS:

Lab Sample No. 32506-1

Client ID: SPWSD

Organic Compounds in Drinking Water EPA Method 524.2 Date Analyzed: 6-9-93

REGULATED COMPOUNDS

· · · · · · · · · · · · · · · · · · ·	TE COSTITUTE COST	4 0 0 1 1 D D		•
EPA Code No.	Compound Name	Concentration ug/L	PQL	Flags
2976	Vinyl Chloride	ND	1.0	
2977	1,1-Dichloroethene	ND	0.5	
2981	1,1,1-Trichloroethane	ND	0.5	
2982	Carbon Tetrachloride	ND	0.5	
2990	Benzene	ND	0.5	
2980	1,2-Dichloroethane	ND	0.5	
2984	Trichloroethene	ND	0.5	
2969	1,4-Dichlorobenzene	ND	0.5	
2964	Methylene Chloride	1.2	0.5	В1
2979	trans-1,2-Dichloroethene	ND	0.5	
2380	Cis-1,2-Dichloroethene	ND	0.5	
2983	1,2-Dichloropropane	ND	0.5	
2991	Toluene	ND	0.5	
2985	1,1,2-Trichloroethane	ND	0.5	
2987	Tetrachloroethene	ND	0.5	İ
2989	Chlorobenzene	ND	0.5	ł
2992	Ethylbenzene	ND	0.5	
2995	Meta-Xylene, para-Xylene	ND	0.5	!
2997	ortho-xylene	ND	0.5	
2996	Styrene	ND	0.5	
2968	1,2-Dichlorobenzene	מא	0.5]
2378	1,2,4-Trichlorobenzene	ND	0.5	

ND - Not Detected

PQL - Practical Quantitation Limit

Continued . . .

DRINKING WATER REQUEST FOR AWALYSIS

CONTACT (ray East COMPANY Care /Associates) COMPANY Care /Associates ADDRESS CITY/STATE (206) 922-2310	acific Hwy East ia, WA 98424 (206) 922-2310
SAMPLE INFORMATION	LOGY EC
ANALYSIS CODE: INURGANICS: COMPLETE INORGANICS = (C) PRIMARY INORGANICS = PI , SECONDARY INORGANICS = SI PHASE II & V = PV UNGANICS: VOLATILE ORGANIC COMPOUNDS = VOC EDB/DBCP = EDB PESTICIDES = PST HERBICIDES = HRB MICROBIOLOGY: TOTAL COLIFORM = TC FECAL COLIFORM = FC FECAL STREP = FS E COLI = EC	
Relinquished by Company Date/Time 6/3/13 Received by 10/04 (12/15 Date/Time 6/3/13/13/13/13/13/15) Received by Objectione	02:1784

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS
4613 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

WATER SAMPLE INFORMATION FOR INORGANIC CHEMICAL ANALYSES
TO NOT WRITE IN SHADED AREAS PLEASE FILL BOXES NUMBERED 1 THRU 14. SEE BACK FOR INSTRUCTIONS

DO NOT WRITE	IN SHADED A	KEAS. PLEA	<u>α≈ ει</u>	LL BOX	-2 WOW	REERED I TARO 14. S	DEE BAC	<u> </u>	71215	.001101
107:±32	5e4-/			•	<u>ل.</u> ۵۵ م	BORATORY REPO	RT IS BOX			
QG -O	3-93	TEST	S	MCL ^I	H	RESULTS	UKITS	CD-0	זטארנז נודאנז	CKERIST
1.0ATE COLLECTED:	3-93	Antimony	<i>5</i> 5	0.006	1	.005	5q/l	/		PB
E.STSTEM NAME:	······································	Arsenica	As	0.05	<	0.010	ra/t	/		PB
5PW51	11 SHALLOW	Barium P	Ba		<	0.005	per/l	/		50
		Bavilium	Be	0.004	<	.002	mq/l	/		56
		Cadmium		0.005	<	.005	sq/(/		PB
istilen to #:	A B	Chronium		-	/	0.01	re/l	/		SP
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Copper	Cu	1.02	1	0.025	ng/l			58
F.COURTE:		Iron	Fe	0.3		0.25	mg/1	/		SP
2.50/ACE 1775:		LeadP	Pb	0.05 2	<	0.003	re/l			PB
	DVELL DOTCKASE	Manganes		0.05	.2	0.015	sq/t	7		50
:KELAT BACKAS.	uronemae	Marcur	He	0.002		0002	ang/i	1		20
EJ BEFORE	C AFTER		Nī.			0.04	na/l			SP
TRENTARS T 1.00 EDRUGELE	TREATMENT 19.SCURCE HAME:	Nickel	~~~~	0.1	<	0.01	ro/t			PB
		Selenium P	- 1	0.05	7	0.01				5P
10.000010120 87:	<u>!</u>	Silver	<u> </u>	0.1	2	0 , 5	ma/t			SP
10.000010150 311		Sodiumi ^P	i		2	.0 0 2	<u>rg/l</u>			PB
TILIF TAKEN AFTER	#1#4/P2#1	Thallium	<u> 77 </u>	0.002		0.33	** 89/L			51
CHECK TREATMENT:	INEVINENT,	Zinc	Zn	5.0	<u> </u>	65	ind/l			LE
KOLTAGIROUJA [] KOLTAKIROJKO []		Hardness	ļ				17/ <u>1</u> 23			
C) FILTRATION C) WATER SOFTENS	z.	Conductivi	9	700		150	tapás/ca			42
:3411 : x3k10 []		Turbicire	1	1.0		<u>0.3</u>	utu			LE
12.15 TAKEN FROM O	ISTRIBUTION,	Color		15.0	<		Calar			GA
		Chloride	CI	250		<u>z . 0</u>	FQ/\			RK
		Cvanide	CN	0.2	<	0.05	ra/l			5H
0) 145 DI 11545.[[R ISSTING:	Flugride	٦	20	<	0.1	ra/l_			PK
	ŀ	1 -	ar M	10.0	<u> </u>	0.54	rg/l			RK.
fighaiure: Name:			5 N	1.0	< 1	0.05	re/(7		PK
			50.	250		. 3.0	mg/t	7		RK
WORESS:	-		30 /	500	- i	100	sq/l	기		CA
· . 		<i>TDS</i> LABORAT	0026		1	<u></u>	<u> </u>			
		LABORA	UKIC	Optiviza	13:					
	[;									
TELEPHONE: ()	741179 2000 000					;				}
ideress for extra c	opies, etc.)									ļ
		CHARGE:			LLBOR	ATORY SUPERTIEGE	11	_	OF RE	
						. C - Sharp	7	6	1//_	73
		ELIPTARE CLEAN	Contac Lead	erce l'i est	!"[tis is the State MCL A PO coper; Primitary Standard	ins-lotal	31 11017	ed Soi :	- -

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS
4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

Total Metals

Client:

Carr Associates

Lab No:

32505qc2

Units:

mg/L

Date:

June 11, 1993

METHOD BLANK

 	METHOD BLA	NK
Parameter	Result	PQL
Antimony	מא	0.005
Arsenic	ND	0.010
Barium	ND	0.005
Beryllium	ND	0.002
Cadmium	ND	0.004
Chromium	ND	0.01
Copper	ND	0.025
Iron	ND	0.10
Lead	ND	0.003
Manganese	ND	0.015
Mercury	ND	0.0002
Nickel	ND	0.04
Selenium	ND	0.010
Silver	ND	0.01
Sodium	ND	0.50
Thallium	ND	0.002
Zinc	סא	0.02

ND - Not Detected

PQL - Practical Quantitation Limit

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS 4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (266) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

General Chemistry

Client:

Carr/Associates

Lab No:

32505qc1

Matrix: Units:

Water

mg/L

Date:

June 11, 1993

METHOD BLANKS

Parameter	Result	Detection Limit
Turbidity, NTU	ND	0.1
Hardness (as CaCO3), mg/L	ND	2
Conductivity, umhos/cm	ND	10
Color, color units	ND	5
Total Dissolved Solids, mg/L	ND	10
Fluoride, mg/L	ND	0.1
Chloride, mg/L	ND	1.0
Nitrate Nitrogen, mg/L	ND	0.05
Nitrite Nitrogen, mg/L	ND	0.05
Sulfate, mg/L	ND	1.0

ND - Not Detected

DUPLICATE

Dup No. 32505-1

Parameter	Sample(S)	Duplicate(D)	RPD
Total Dissolved Solids	100	110	9.5

RPD = Relative Percent Difference

 $= [(S - D) / ((S + D) / 2)] \times 100$

most is usued solely for the use of the person or company to whose it is addressed. This inhoratory accomplishes only for the use of the person or company to whose it is addressed. This inhoratory accomplishes only for the use of the person or company to whose it is addressed. This inhoratory accomplishes only for the use of the person or company to whose it is addressed. This inhoratory accomplishes only for the use of the person or company to whose it is addressed. This inhoratory accomplishes only for the use of the person or company to whose it is addressed. Ty acceptable practice, In no event shall Sound Applytical Services, (no. or its employees be responsible for consequential or receas damages in line and in its investment.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS 4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2110 - FAX (206)922-5047

Report To: Carr/Associates Date: June 11, 1993

Report On: Analysis of Water Lab No.: 32505

IDENTIFICATION:

Sample received on 06-03-93

ANALYSIS:

Lab Sample No. 32505-1 Client ID: SPWSD 11 Shallow

INORGANIC PARAMETERS	RESULT	MCL
Antimony(GFAA), mg/L	< 0.005	0.006
Arsenic (GFAA), mg/L	< 0.010	0.05
Barium, mg/L	< 0.005	2.0
Beryllium, mg/L	. < 0.002	0.004
Cadmium, mg/L	< 0.005	0.005
Chromium, mg/L	< 0.01	0.1
Copper, mg/L	< 0.025	1.0
Iron, mg/L	0.25	0.3
Lead (GFAA), mg/L	< 0.003	0.05
Manganese, mg/L	< 0.015	0.05
Mercury (CVAA), mg/L	< 0.0002	0.002
Nickel, mg/L	< 0.04	0.1
Selenium (GFAA), mg/L	< 0.010	0.01
Silver, mg/L	< 0.01	0.05
Sodium, mg/L	< 0.50	N/A
Thallium (GFAA), mg/L	< 0.002	0.002
Zinc, mg/L	0.33	5.0
Fluoride, mg/L	< 0.1	2.0
Nitrate Nitrogen, mg/L	0.54	10.0
Nitrite Nitrogen, mg/L	< 0.05	. 1.0
Chloride, mg/L	2	250
Sulfate, mg/L	2 3	250
Cyanide, mg/L	< 0.05	0.2
Turbidity, NTU Hardness (as CaCO ₃) mg/L	0.3 65	1 N/A 700
Conductivity, umhos/cm	150	
Color, Color Units	< 5	15.0
Total Dissolved Solids, mg/L	100	500

MCL - Maximum Contaminant Level

N/A - Not Applicable

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

SAMMAMISH PLATEAU WATER & SEWER DISTRICT 1510 228TH Avenue S.E. Issaquah, Washington 98029

(425) 392-6256

WELL 11.2

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

Well 11.2

TABLE OF CONTENTS

- Susceptibility Assessment Survey Form
- Production Well Location Map
- Well 11.2 Wellhead Protection Area
- Aquifer Zone IV Potentiometric Surface Map
- Topography Map Plateau Area
- Surface Water Features Plateau Area
- Well Log
- Construction Details
- Water Facilities Inventory Form
- Water Sample Results

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.2

IMPORTANT!

Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information
Well owner/manager: SAMMALISH PLATERU WATER AND SEWER DIST
Water system name: SAMMAHISH PLATERY WATER & SEWER DISTRICT
County: KING
Water system number: 409009 Source number: 512
Well depth: 884 (ft.) (From WFI form)
Source name: WEW 11-2
WA well identification tag number: $A D - 3 8 Z$
well not tagged
Number of connections: 11,080 Population served: 33,240
Township: 25 N Range: 00E
Section: <u>34</u> 1/4 Section: <u>NE/NIN</u>
Latitude/longitude (if available):/
How was lat./long. determined?
global positioning device survey topographic map other:
* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V
PART II: Well Construction and Source Information
1) Date well originally constructed: $8/6/9$ month/day/year
last reconstruction: / / month/day/year
information unavailable

Survey Form Ver. 2.2 page 1

well driller unknown Type of well: Dirilled:	2) Well driller: HOLT DEILLING	
well driller unknown 3) Type of well: Drilled:	10621 TODD DEAD EAST	
3) Type of well: Dritted:	PUYALLUP, WA. 95372	
Drilled:	well driller unknown	
Other:spring(s)lateral collector (Ranney)	3) Type of well:	
	✓ Drilled: ✓ rotary bored ✓ cable (percussion) Dug	
Additional comments:	Other: spring(s) lateral collector (Ranney)	
4) Well report available? YES (attach copy to form) NO If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs. 5) Average pumping rate: Z_OCO	driven jetted other:	
If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs. 5) Average pumping rate:	Additional comments:	
If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs. 5) Average pumping rate:		
logs, "as built" sheets, engineering reports, well reconstruction logs. 5) Average pumping rate:	4) Well report available? YES (attach copy to form) NO	
Source of information: WATER FACILITIES LINEATORY If not documented, how was pumping rate determined? Pumping rate unknown 6) Is this source treated? YES		oring
If not documented, how was pumping rate determined? Pumping rate unknown 6) Is this source treated? YES NO If so, what type of treatment: disinfection filtration carbon filter air stripper other Purpose of treatment (describe materials to be removed or controlled by treatment): 7) If source is chlorinated, is a chlorine residual maintained: YES NO	5) Average pumping rate: 2,000 (gallons/min)	
Pumping rate unknown 6) Is this source treated? YES NO If so, what type of treatment: disinfection filtration carbon filter air stripper other Purpose of treatment (describe materials to be removed or controlled by treatment): 7) If source is chlorinated, is a chlorine residual maintained: YES NO	Source of information: WATER FACILITIES INVENTORY	
6) Is this source treated? YES NO If so, what type of treatment: disinfection filtration carbon filter air stripper other Purpose of treatment (describe materials to be removed or controlled by treatment): 7) If source is chlorinated, is a chlorine residual maintained: YES NO	If not documented, how was pumping rate determined?	
6) Is this source treated? YES NO If so, what type of treatment: disinfection filtration carbon filter air stripper other Purpose of treatment (describe materials to be removed or controlled by treatment): 7) If source is chlorinated, is a chlorine residual maintained: YES NO		
If so, what type of treatment: disinfection filtration carbon filter air stripper other Purpose of treatment (describe materials to be removed or controlled by treatment): 7) If source is chlorinated, is a chlorine residual maintained: YES NO	Pumping rate unknown	
disinfection filtration carbon filter air stripper other Purpose of treatment (describe materials to be removed or controlled by treatment): 7) If source is chlorinated, is a chlorine residual maintained: YES NO	6) Is this source treated? YES NO	
Purpose of treatment (describe materials to be removed or controlled by treatment): 7) If source is chlorinated, is a chlorine residual maintained:YES	If so, what type of treatment:	
7) If source is chlorinated, is a chlorine residual maintained:YESNO	disinfection filtration carbon filter air stripper other	
	Purpose of treatment (describe materials to be removed or controlled by treatment):	
	7) If source is chlorinated, is a chlorine residual maintained:YESNO	

Survey Form Ver. 2.2 page 1

PART III:	Hydrogeologic Information
1) Depth to to	p of open interval: [check one]
(le	ss than) 20 ft 20-50 ft 50-10 ft 100-200 ft (greater than) 200 ft
in	formation unavailable
2) Depth to gr	ound water (static water level):
(le	ss than) 20 ft 20-50 ft 50-100 ft (greater than) 100 ft
flo	wing well/spring (artesian)
How v	vas water level determined?
× we	ell log other:
de	pth to ground water unknown
3) If source is	a flowing well or spring, what is the confining pressure: N/A
	psi (pounds per square inch)
	or feet above wellhead
	a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated ee: YES NO
5) Wellhead el	evation (height above mean sea level); 360 (ft)
How v	vas elevation determined? topographic map X Drilling/Well Log altimeter
0	ther:
ir	formation unavailable
	ayers: (This can be completed only for those sources with a drilling log, well log or geologicing subsurface conditions. Please refer to assistance package for example.)
X	evidence of a confining layer in well log
	no evidence of a confining layer in well log
	e is evidence of a confining layer, is the depth to ground water more than 20 feet above the of the lowest confining layer? YES NO
int	ormation unavailable

Survey Form Ver. 2.2 page 3

7) Sanitary sethack:
(less than) 100 ft* \(\sum \) 100-120 ft \(\sum \) 120-200 ft \(\sum \) (greater than) 200 ft \(\pi \) if less than 100 ft describe the site conditions:
8) Wellhead construction:
wellhead enclosed in a wellhouse
controlled access (describe):
other uses for wellhouse (describe):
no weilhead control
9) Surface seal: 18 ft
(less than) 18 ft (no Department of Ecology approval)
(less than) 18 ft (Approved by Ecology, include documentation)
(greater than) 18 ft
depth of seal unknown
no surface seal
10) Annual rainfall (inches per year):
(less than) 10 in/yr 10-25 in/yr (greater than) 25 in/yr

PART IV: Mapping Your Ground Water Resource	e			
1) Annual volume of water pumped: 511, UOS 8	(gallons)			
How was this determined?				
meter				
x estimated: v pumping rate (913)	gp <u>M</u>			
pump capacity (
other:				
2) "Calculated Fixed Radius" estimate of ground water movement: (see Instruction Packet) THESE ARE THE CFES				
6 month ground water travel time :	PER THIS PACKET. THE (A) DISTRICT HAS ADDITIONA			
1 year ground water travel time :	1140 WHPA CAPTURE ZONE (#) INFO FOR THIS WELL			
5 year ground water travel time:	2540 MHICH IS ATTACHED.			
10 year ground water travel time:	3590 (ft) QUESTIONS ARE ANSWER			
Information available on length of screened/open	FOR THE CAPTURE ZONE IDENTIFIED ON THE			
YES NO	WHPA MAP			
Length of screened/open interval:	77 (ft)			
3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? YES NO (mark and identify on map).				
4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary?YESNO (mark and identify on map).				
Comments:				
				

PART V: Assessment of Water Quality

۱ı	Regional	sources	υť	risk	to	ground	water:
	1/051///	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	••			B	

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application		×	X	
stormwater injection wells	No	No	Nio	
other injection wells \$\forall SEE COMMENTS	No			
abandoned ground water well				<u> </u>
landfills, dumps, disposal areas				
known hazardous materials clean-up site			· —	
water system(s) with known quality problems				
population density (greater than) 1 house/acre	1 <u>7,0</u>	Ť	X	
residences commonly have septic tanks	<u> </u>	<u> X</u>	. <u>X</u>	
Wastewater treatment lagoons	<i>No</i> -	<u> </u>	. <u>Wo</u>	
sites used for land application of waste	No_	No_	<u> 100</u>	

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form.

Please locate and mark any of the following.)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

S AN INJEKTION WELL AS PART OF THE
PROUNDWATER RECHARGE DROSECT.

Please indicate the occurrence of any test results since 1986 that meet the (Unless listed on assessment, MCLs are listed in assistance package.)	following conditions:
A. Nitrate: (Nitrate MCL = 10 mg/l)	YES
Results greater than MCL	
(less than) 2 mg/liter nitrate	
2-5 mg/liter nitrate	
(greater than) 5 mg/liter nitrate	
Nitrate sampling records unavailable	<u> </u>
B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	<u>YES</u>
Results greater than MCL or SAL	
VOCs detected at least once	
VOC test performed but never detected	
VOC sampling records unavailable	
C. EDB/DBCP:	<u>YES</u>
(EDB MCL = 0.05 ug/l or 0.00005 mg/l . DBCP MCL = 0.2 ug/l or 0.0002 mg/l .)	
EDB/DBCP detected below MCL at least once	
EDB/DBCP detected above MCL at least once	
EDB/DBCP never detected	
EDB/DBCP tests required but not yet completed	
EDB/DBCP tests not required	
D. Other SOCs (pesticides and other synthetic organic chemicals):	YES
Other SOCs detected .	
Other SOC tests performed but none detected *	
Other SOC tests not performed	
*If any SOCs in addition to EDB/DBCP were detected, please identify and date, performed, but no SOCs detected, list test methods here:	
THE TEST RESULTS FOR TEST PERFORMED WIEW 11.2 AT THE TIME OF CONSTRUCTION ENCLOSED.	ON M ARE

2) Source specific water quality records:

Survey Form Ver. 2.2 page 7

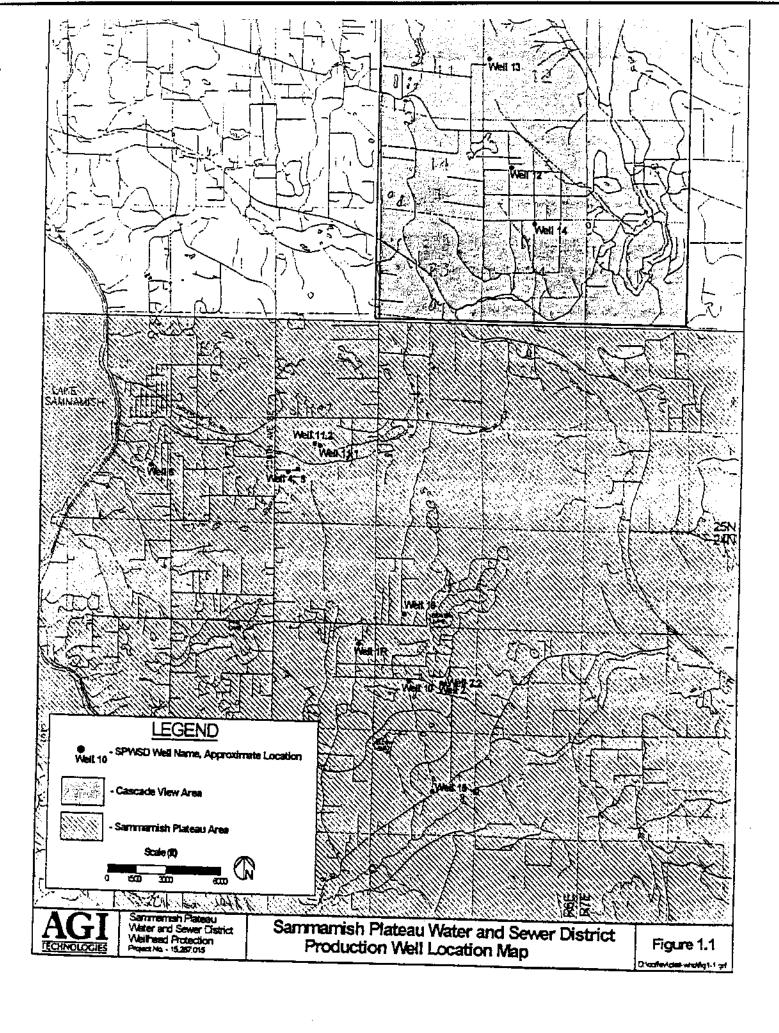
E. <u>Bacterial contamination</u> :	YES /
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	~/A
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	
Source sampling records for bacteria unavailable	
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution	
The following questions will help identify those ground water systems which represented by the calculated fixed radius (CFR) method described in Part IV CFR areas should be used as a preliminary delineation of the critical time of source. As a system develops its Wellhead Protection Plan for theses source delineation method should be considered.	. For these sources, the travel zones for that
1)Is there evidence of obvious hydrologic boundaries within the 10 year time of trave (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or ridge?)	el zone of the CFR? over a mountain or
YES NO	
Describe with references to map produced in Part IV:	
INGLEWICO CREEK IS LOCATED WITHIN T	te
ONE YEAR BOUNDARY. VARIOUS WETLANDS ARE	
LOCATED IN THE FIVE AND TEN YEAR BOUND,	AEIES.
2) Aquifer Material:	
A) Does the drilling log, well log or other geologic/engineering reports iden located in an area where the underground conditions are identified as fractur terrain?	tity that the well is ed rock and/or basalt
YES YO	
B) Does the drilling log, well log or other geologic/engineering reports indic located in an area where the underground conditions are primarily identified gravel?	cate that the well is as coarse sand and
YES NO	

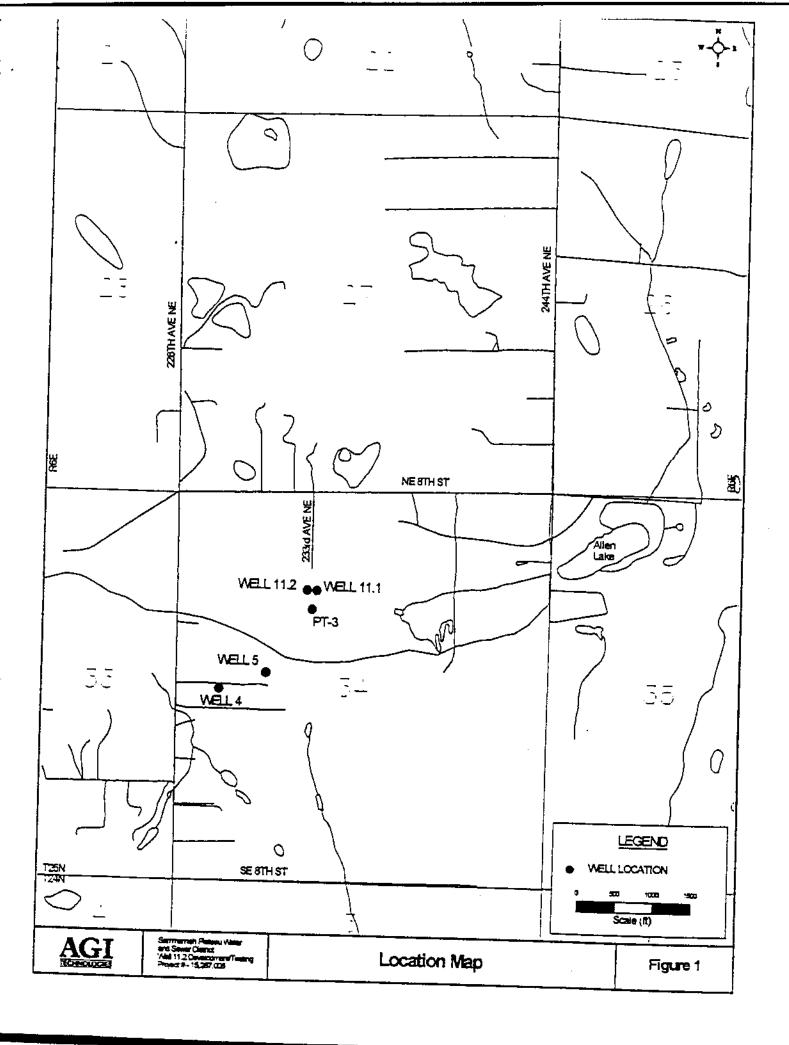
Survey Form Ver. 2.2 page 3

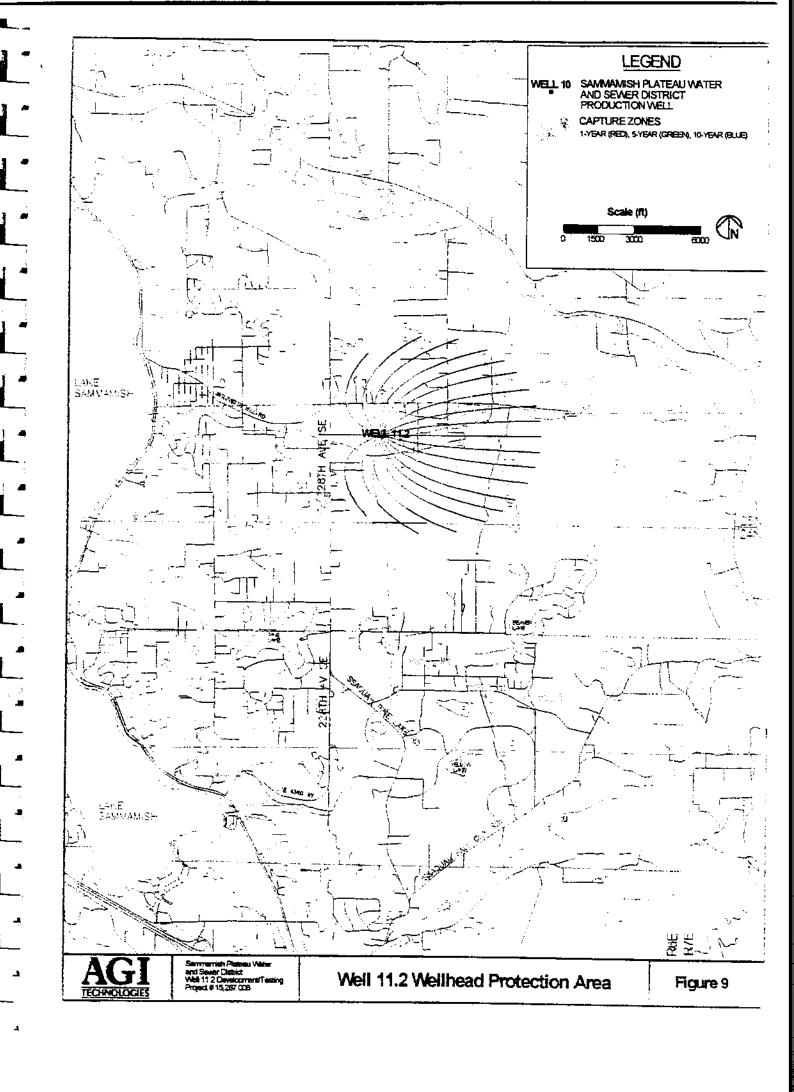
3) Is the source located in an aquifer with a high horiz flood plains of large rivers, artesian wells with high w springs.)	contal flow rate? (These can include sources located on ater pressure, and/or shallow flowing wells and
YESNO	
4) Are there other high capacity wells (agricultural, mo	unicipal and/or industrial) located within the CFRs?
a) Presence of ground water extraction wells re	emoving more than approximately 500 gal/min within.
	YES NO unknown
6 month travel time	_
6 month-1 year travel time	
1-5 year travel time	
5-10 year travel time	— — —,
	
b) Presence of ground water recharge wells (c	dry wells) or heavy irrigation within
	YES NO unknown
1 year travel time	
1-5 year travel time	
5-10 year travel time	
	— _
Please identify or describe additional hydrologic or get shape of the zone of contribution for this source. Whe produced in Part IV.	ographic conditions that you believe may affect the lere possible, reference them to locations on the map
•	
	<u> </u>

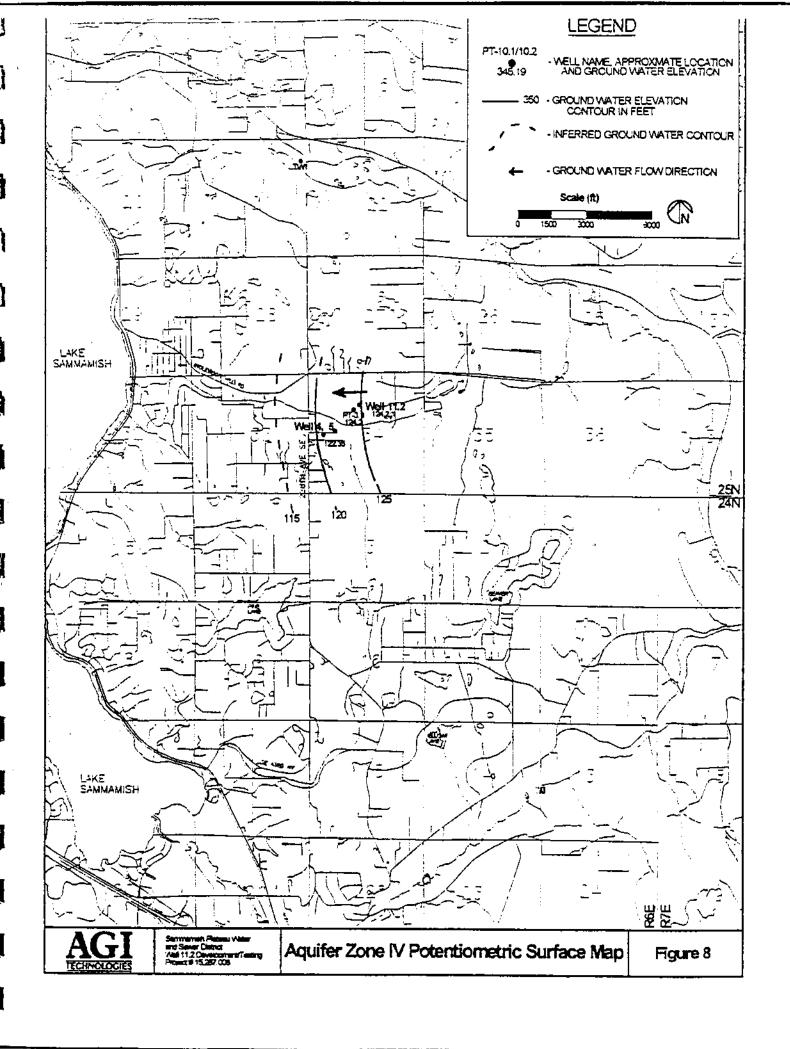
Suggestions and Comments

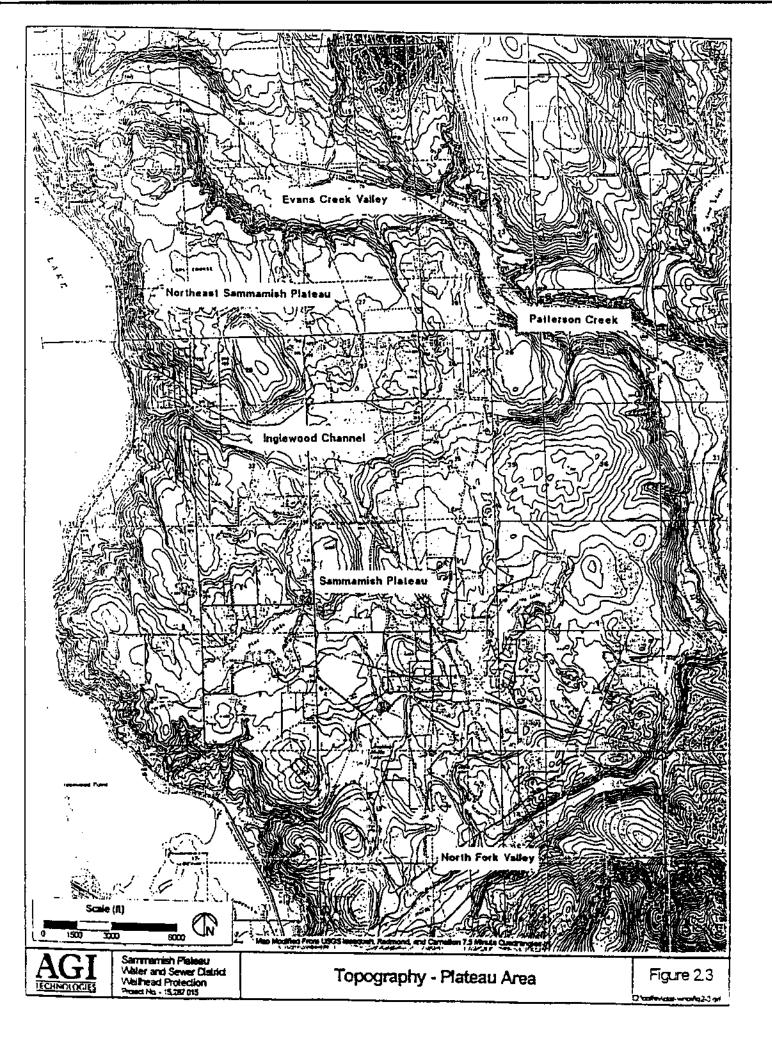
Did you attend one of the susceptibility workshops?	YES	NO	
Did you find it useful?	YES	NO	
Did you seek outside assistance to complete the assessment?	YES	NO	
This form and instruction packet are still in the process of develor questions will help us upgrade and improve this assessment form confusing or problematic please let us know. How could this sust made clearer? Did the instruction package help you find the informassessment? How much time did it take you to complete the formassessment without additional/outside expertise? Do you feel the experience? Any other comments or constructive criticisms you	pment. Your con. If you found paceptibility assesting mation needed m? Were you are assessment w	nmments, suggesting articular sections is ment be improve to complete the ble to complete that as valuable as a le	ed or ne
		<u> </u>	
		· · · · · · · · · · · · · · · · · · ·	

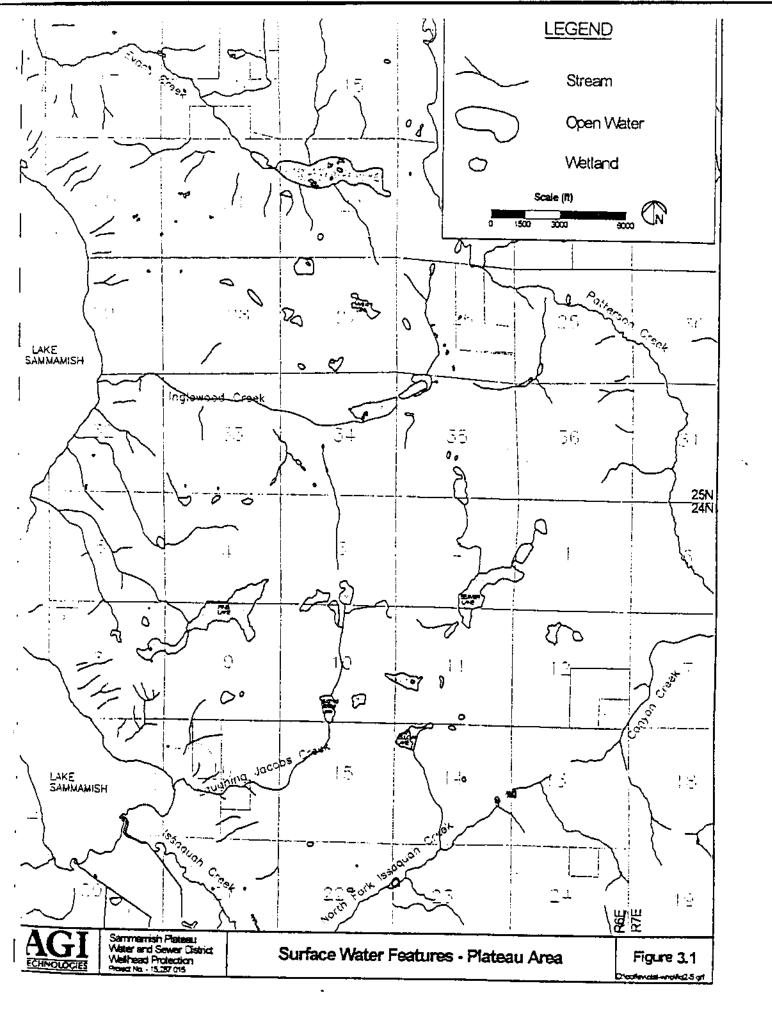












Fite Ortgloat and First Copy with Department of Ecology Second Copy—Owner's Copy Third Copy—Orliter's Copy

WATER WELL REPORT

Start Card No. W-16284

STATE OF WASHINGTON

Third Copy.—Driller's Copy	STATE OF	WASHINGTON UNIQUE WELL 1.1 Water Right Permit NoG1-26572	o. # <u>. NAD</u>	382
1) OWNER: Name Sammamish Plateau Water and S	exer Distric	± Address 1510 28th Ave SE, Issagen, V	A 980Z	7
(2) LOCATION OF WELL: County King		357 Mr. 24		
2a) STREET ADDDRESS OF WELL (or nearest address) Lak	e Weshingto	1 Sthool Dist. No. 414, Rechard, WA	<u></u> м., я_	<u>06.</u>
(3) PROPOSED USE: Oomestic Industrial Original Industrial Original Dewater Test Well	Municipal (X	(10) WELL LOG or ABANDONMENT PROCEDU	RE DESC	CRIPTION
4) TYPE OF WORK: Owner's number of well 11.2	Other 🗆	Formation: Describe by color, cherecter, size of material at thickness of squifers and the kind and nature of the material in a with at least one entry for each change of information.		
Abandoned 🗆 New well 🖾 Method: Dug 🗆	Bored 🗆	MATERIAL,	FROM	ТО
Reconditioned Rotary X	Driven 🗍 Jetled 🗍	Hardpan	0	4
5) DIMENSIONS	4660	Silthound Gravels, Brown	41	6
	inches,	Silthound Sands and Gravels.		
teat: Depth of completed well CO	<u>4n.</u>	Brown	61	8:
6) CONSTRUCTION DETAILS:		Sillthurd Sark and Gravels, Relish From	82_	117
Casing installed: 24 · Diam. from 0 it. to	352n.	Silthard Smis and Gravels, Bron	112	170
Welded 20 Diam. from 0 It. to	630 _{R.}	Silthori Saris and Gravels, Bron: WB	_170	185_
11. 10 Diam. from +2.0 II. 10	705n.	Icose Sanis and Gravels, WB	185	_200_
Perforations: Yes No X		San's and Gravels with trace Silt	_200	205_
Type of perforator used		Sads and Gravels with Silt.	_205	212_
SIZE of perforationsin, by		Sards, Gravels, and Othles	212	219_
perforations fromit, to	n,	Silty Clay with Pest and Gravels Silthord Sads	_219	_228
perforations fromft. to	a,	Silthurd Saris and Gravels	_228	_233
tt. to		Silthum Gravels and Othlies	_233	_ 278
Screens; Yes No.		Silthord Saris, Gazels and Othles	278_	_296_
Manufacturer's Name NOTEN Type 304 Stainless		Silthuri Smis and Gravels	_296	323
Model	No_PS	Silfburd Saris, Gravels and Orbbles	_323 _358	358
D 1		Silthurd Sark and Gravels	369	369 394
Gravel anchest, v. Y	_880n.	Silty Sads, Gravels and Orthles	394	417_
Size of grevel CAD C-12	·	Sads and Gravels with trace of Silt	417	434
Gravel placed from 648 tt. to 884	п.	Silty Sark, Graphs and Orbbies	434	_ 4 55_
Surface seal: Yes No To what depth? 43	"	San's and Grave's	465	_
Material used in seal Cameric		Silthurd Saris and Gravels	471	_ 4 75
Did any strata contain unusable water? Yes No	···	Icose San's with trace Gravels	475	494
Type of water?Depth of sir	n)a_	Fine San's with Trace Gravels and Orbbles	494	505
Method of seasing strets off		Fine Silty Saris with trace Gravels and	-45-4	
') PUMP: Manufacturer's Name		Othles	95	_520_
		Silthami Smis, Grey	520	_560
	<u> </u>	Continued on next, form pages		
above mean sea level	L	Note: Final development and testing has not	: been d	TP
	3.) I	as of complexion date.		
Artesian water is controlled by (Cap, valve, etc.)	 [
(Cap, valve, etc.	<u>» </u>	4770		
WELL TESTS: Drawdown is amount water level is lowered bet	ow static level	Work started 4/7/93 , 19. Completed 8/6/5	3	19
NOCH Year by whom?		WELL CONSTRUCTOR CERTIFICATION:		
Yleid:gat./min. with It. drawdown after	hre.	constructed and/or accept responsibility for constr		thin
		and its compliance with all Washington well come	leuction at	andards.
Recovery data (lime taken as zero when pump turned oil) (water level from well top to water level)	measwed	Materials used and the information reported above a knowledge and belief.	re true to	my best
Time WaterLevel Time WaterLevel Time	Water Level	** ** = 1.00		
		NAME Hit Drilling, Inc.		
		PERSON, FIRM, OR CORPORATIONS	(TYPE OR	
		Address 10621 Took Road East, Ruyallup, Wa	. 98372	
Oate of test	~ I	(Stomart) Rah HAA	100	. //
Bailer lestgat./mis. with It, drawdown after _	hre.	LICENSE NO	, 109	9
Airteat gal./min, with stem set at 3, for	bra	Contractor (
Arlesian light 3.9.m. Date		No. 3UIII +13606		7
"emperature of water Was a chemical analysis made? Yest	*	THE POTENT PARTY I COTTO		

Tile Original and First Copy with repertment of Ecology econd Copy-Owner's Copy Third Copy-Driller's Copy

Water Level

Date of lest_

Temperature of water ____

Baller test _

Water Lovel

___ 3.0.m. Dete _

... Wee a chemical analysis made? Yea No

___ ft. drawdows after __

Water Level

These

__ g4L/min, with __

...... det/min. with stem set at

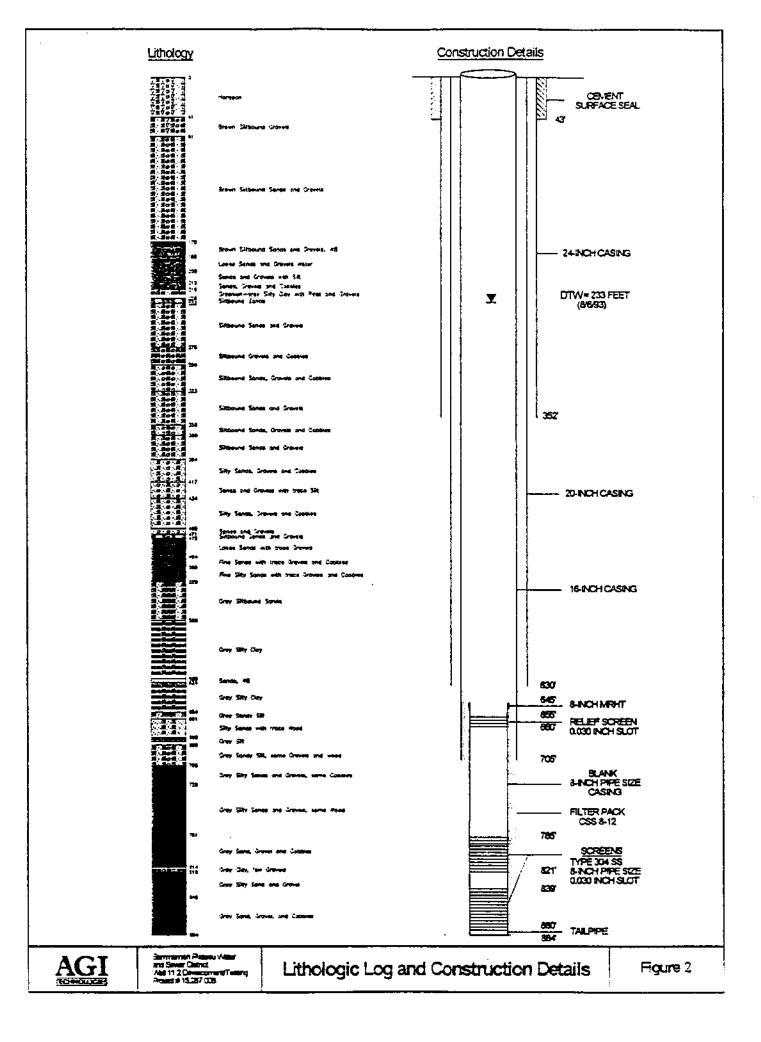
1)

(2)

WATER WELL REPORT Start Card No. STATE OF WASHINGTON Water Right Permit No. G1-26572 OWNER: Name Sammanish Platers Water and Sewer District Address 1510 278th Ave St., Issagrah, WA LOCATION OF WELL: County_ King , W <u> 25 _{N. 8}6E</u> 2a) STREET ADDDRESS OF WELL (or nearest address) Lake Washington Sircol District No. 414, Pedanid, Washington Domestic Irrigation (3) PROPOSED USE: Industrial 🔲 Municipal 🕍 (10) WELL LOG OF ABANDONMENT PROCEDURE DESCRIPTION Irrigation O DeWater Test Well 🔲 Other Formation: Describe by color, character, size of material and structure, and show thickness of squifers and the kind and nature of the material in each stratum penetral ed with at least one entry for each change of information. TYPE OF WORK: Owner's number of well 11.2 A Method: Dug MATERIAL ☐ benobradA New well Bored 🔲 Continued from previous form Cable 5 Deepened Driven 🔲 Reconditioned [] Jetted 🗍 .5) DIMENSIONS: Diameter of well___ Silty, Clay Greyinches. 560 620 Drilled 885 feet. Depth of completed well. 884 Sands, WB. .n. 620 574 Silty, Clay, Gray CONSTRUCTION DETAILS: <u> 624</u> 654 Sandy Silt, Gray 654 661 Casing installed: _____ * Olam. from.... Silty Sands with trace Wood 661 580 ____ * Olem. from____ ____tt. to Silt, Gray 680 688 Threaded Diam. trom Sandy Silt, some Gravels and wood, Gray 688 709 Perforations: Yes No 🗌 Silty Sands and Gravels, some Offiles, Gray 709 729 Type of perforator used _ Silty sands and Gravels, Gray 729 740 SIZE of perforations _ Silty Sands, some Gravels and wood, Gray 740 749 ... perforations from N. 1o _ Silty Samis, and Gravels, Gray 749 781 _perforations from _ n to Sands and Gravels, Gray 790 781 perforations from ___ n. Sands, Gravels and Odbbles, Gray 790 814 Screens: Yes Clay, few Gravels, Gray 814 819 Manufacturer's Name Silty sants, some Gravels and wood, Gray 819 825 Type _ Model No. Silty Sads and Gravels, Grav 825 845 Diam..... __ Slot size_ 5 ands, Gravels and Orbles, Grav 884 Slot size_ Gravel packed: Yes No 🗀 Gravel placed from. Surface seal: Yes 🛄 No To what depth?_ Material used in seal ___ Did any strata contain unusable water? Yes No 🗀 Depth of strata Method of seating strate off..... PUMP: Manufacturer's Name . Land-surface slevation '8) WATER LEVELS: above mean see level Static level_ ... It. below top of well. Date ... Artesian pressure ... _ lbs. per square inch_Date _ Artesian water is controlled by ____ 4/7/93 WELL TESTS: Orawdown is amount water level is lowered below static level Work started. Was a pump test made? Yes ... No ... If yes, by whom? _ WELL CONSTRUCTOR CERTIFICATION: Yleid: ... get./min. with ... _ fl. drawdown eiter _ hrs. I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

knowledge and bellet.

NAME HOLE DESILE OF CORPORATION	(TYPE OF PRINT)
PERSON, FROM, OR CORPORATIONS	(LANE ON NEWL)
Address 10621 Todd Road East	t, Puvalluo,
0 1 11 11	98372
(Signed) King Doll	ense No. 1099
(WELL DANLLER)	
Registration DULIDI-13000 ,	71 <i>0</i>
No. HILT TI DETOT Date	



AGI

PRODUCTION WELL 11.2 CONSTRUCTION AND TESTING REPORT SAMMAMISH PLATEAU WATER AND SEWER DISTRICT

SUMMARY

Weil 11.2 is located on the north side of the Eastlake High School campus, approximately 25 feet from Sammanish Plateau Water and Sewer District (District) Well 11.1. It is completed at a depth of 884 feet in a sand and gravel aquifer designated Zone IV of the Plateau Aquifer System. Water quality is excellent and meets all Washington State Department of Health (DOH) requirements for a potable water source.

Test pumping results indicate Well 11.2 is capable of producing 2,000 gallons per minute (gpm). At a pumping rate of 973 gpm for 24 hours, the drawdown was 51 feet for a specific capacity of 19 gallons per minute per foot (gpm/ft). The aquifer transmissivity is about 38,000 gallons per day per foot (gpd/ft).

Water level monitoring during the 24-hour pumping test showed no interference on water levels in monitoring Wells PT-3.1 and 3.2, Well 11.1, or other nearby wells completed in zones above the Zone IV Aquifer. The Washington State Department of Ecology (Ecology) has issued a permit for 500 gpm and 565 acre feet per year (af/yr) from this well. Currently, the District is monitoring water levels to record possible interference from other wells and the seasonal water level changes in this aquifer.

BACKGROUND

Property owner:

Lake Washington School District

Well owner:

Sammamish Plateau Water and Sewer District

Hydrogeologist:

AGI Water Resources Group, Scott Coffey

Drilling contractors:

Holt Drilling, Inc.; Schneider Drilling Co., Inc.

Drilling method:

Cable-tool, fluid-rotary

Start date:

April 7, 1993

Completion date:

August 6, 1993

Pumping test date:

August 30, 1995

AGI 15,287,008 v8 February 2, 1996

PERMITS AND APPLICATIONS



Copies of the water right application and preliminary permit are included in the Appendix.

Unique Well ID number:

AAD382

Start card number:

16284

Water right permit number:

G1-26572P

Instantaneous:

500 gpm

Annual:

565 af/yr

Continuous equivalent:

· 350 gpm

OBJECTIVES

The objectives of constructing this well were to:

- Create additional supply for the District with a 16-inch production well capable of sustained yields of 500 gpm or more from the deep aquifer identified during the drilling of Test Well PT-3.
- Characterize the deep aquifer and aquitard zones encountered and determine potential interference with other District production wells.

Desired yield:

500 gpm or more

Target aquifer:

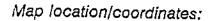
Plateau Aquifer Zone IV

Required quality:

Potable

WELL SITE

The well site, illustrated in Figure 1, is located 50 feet south of the dead end on 233rd Avenue NE. Access to the site is through the Eastlake High School parking lot to the baseball fields.



T25N/R6E/NW4NW4/Section 34



County:

King

Ground surface elevation:

355.86 ft. msl

COMPLETION RECORD

Well 11.2 is completed in accordance with WAC 173-160, effective May 5, 1988, and meets all requirements for a State of Washington Group A public supply well. The well completion record is illustrated in Figure 2 and described on the Water Well Report (Form ECY 050-1-20) in the Appendix.

Total depth drilled:

885 ft.

Completion depth:

884 ft.

Surface Seal

Depth of seal:

43 ft.

Type of seal:

Cement

Casing Record

Cable-tool drilling began in April, 1993 with a temporary 30-inch surface seal casing to a depth of 43 feet. Drilling continued with 24-inch casing to 352 feet, 20-inch casing to 630 feet, and 16-inch casing to 705 feet. Below 705 feet, 16-inch drilling advanced to a total depth of 885 feet using fluid-rotary drilling methods. An 8-inch pipe-size, 0.030-inch slot, stainless-steel screen assembly was sand packed into position adjacent to water-bearing sediments encountered between depths of 785 and 880 feet.

Casing Depth	Diameter	Description
0 to 352 ft.	24-inch	mild-steel
0 to 630 ft.	20-inch	mild-steel
+2.0 to 705 ft.	16-inch	mild-steel



Screen Assembly

ī

ì

I

A continuous wrap, wire-wound, welded well screen manufactured by Johnson Division of Wheelabrator Corporation was installed as listed below:

Screen Depth	Diameter	Description
645 to 646 ft. 646 to 655 ft. 655 to 660 ft. 660 to 785 ft. 785 to 821 ft. 821 to 839 ft. 839 to 880 ft. 880 to 884 ft.	8-inch, PS 8-inch, PS 8-inch, PS 8-inch, PS 8-inch, PS 8-inch, PS 8-inch, PS	right-hand threaded nipple blank, mild-steel casing type 304, 0.030-inch slot, stainless-steel relief screen blank, mild-steel casing type 304, 0.030-inch slot, stainless-steel well screen blank, mild-steel casing type 304, 0.030-inch slot, stainless-steel well screen blank, mild-steel casing with plate bottom

Filter Media

Filter pack: Colorado Silica Sand (CSS) 8-12 placed from 645 to 884 ft.

HYDROGEOLOGIC LOG

The hydrogeologic log is illustrated in Figure 3 and described in the Water Well Report in the Appendix. Three significant water-bearing zones were encountered at Well 11.2.

The shallowest water-bearing zone encountered is at a depth of 170 feet, where tight sand and gravel grades to loose, clean sand and gravel at 185 feet. These clean sands and gravels persist to a depth of 200 feet, where they become slightly silty with increased cobble content. Between 219 and 394 feet, the sediments are not water-bearing. They consist primarily of silt-bound sand and gravel. A layer of thin, silty clay with peat is found between depths of 219 and 228 feet.

At 394 feet, another water-bearing sand, gravel, and cobble zone is present to a depth of 520 feet. One thin, silt-bound layer is present from 471 to 475 feet. Well 11.1 is 25 feet east of Well 11.2 and is completed between depths of 409 and 489 feet in that zone.

The third, most significant water-bearing zone was encountered between depths of 709 and 884 feet. This zone consists of sand, gravel, and cobbles with varying amounts of silt content.

GEOPHYSICAL LOG(S)

Geophysical logs are a useful tool for indicating potential water-bearing zones. However, they neither assure the presence of water or quantify the amount of water available. The electric log, illustrated in Figure 3, shows the measured amount of electrical resistance caused by various strata as electrical current passes through them. This log is a useful tool for comparison with the lithologic log and field notes in determining screen placement. Resistivity values greater than 1,000 ohm-feet generally indicate good aquifer material. In Well 11.2, electrical resistance was measured at 2.5-foot intervals in the lower water-bearing zone found between depths of 709 to 885 feet. Resistivity values averaging 1,000 ohm-feet indicated potentially good water-bearing materials between depths of 790 and 813 feet. From 840 to 873 feet, the resistivity values increased to an average of 1,200 ohm feet, indicating greater water-bearing potential.

STATIC WATER LEVELS

Static water level data from Zone IV wells indicate a ground water gradient of about 0.002 to the west. The static water level is measured below ground surface (bgs) and shown in **Table 1** below:

Screen depth:

785 to 880 ft.

Measuring point stickup:

2.15 ft.

Measuring point elevation:

358.01 ft. (TOC 16")

Table 1
Measured Static Water Levels at Well 11.2

Dates	Static Water Level (ft. bgs)	*Water Level Elevation (ft. msl)
August 24, 1995	234.42	123.59
August 25, 1995	237.72	120.29
August 28, 1995	236.65	121.36
August 29, 1995	232.85	125.16



PUMPING TEST

A pumping test was conducted at Well 11.2 on August 29 and 30, 1995. The purposes of this test were to:

- Determine the performance characteristics and optimum yield of the well.
- Confirm the well completion in Aquifer Zone IV by noting interference to pumping in nearby wells in the same aquifer.
- Determine the water quality and evaluate the lateral extent of Aquifer Zone IV by monitoring water level changes in the Plateau wells.

Pre-test Development

After the completion of Well 11.2 in August 1993, final development was delayed due to the start of the school year. Because of the short period of time allotted for final development and the long period since the completion of the well, the entire screen section of Well 11.2 was water jet developed prior to testing.

Two days of water jet/pump development accompanied by short pumping tests did not significantly increase the well's specific capacity of 22 gpm/ft of drawdown (gpm/ft-dd). The following day a line-shaft turbine pump was installed in Well 11.2 for a 24-hour pumping test. The results of this test are shown below.

Pumping Test Results

Results of the pumping test in Aquifer Zone IV at Well 11.2 are illustrated in Figures 4, 5, 6, and 7. To conduct the test, a line shaft turbine pump was installed in the well to a depth of 343 feet. The results of this 24-hour pumping test are:

Screened zone:

785 to 880 ft.

Test date:

August 29-30, 1995

Initial water level:

232.85 ft. below measuring point

Discharge rate (Q):

973 gpm

Pumping duration:

24 hrs

AGI 15,287.008 v8 February 2, 1996

6



Drawdown:

51.01 ft.

Specific capacity:

19 gpm/ft.-dd

Transmissivity

Transmissivity is a measure of permeability for the full aquifer thickness. It is the amount of water that flows through a vertical, one-foot wide strip of the aquifer in one day (under unit gradient). The average transmissivity can be calculated from the drawdown, recovery, T/t', and distance drawdown data shown in Figures 4 and 5. Aquifer Zone IV at Well 11.2 has an average transmissivity of 38,000 gpd/ft.

Interference

To note interference with nearby production and monitoring wells, Production Well 5 (Zone IV) and the three completions in Well PT-3 (Zones i, II, and IV) were monitored during the 24-hour test.

Figures 6 and 7 show hydrographs of the nearby wells during and after the 24-hour pumping test at Well 11.2. The hydrographs in Figure 6 indicate no interference in Aquifer Zones I, II, and III at PT-3.1, PT-3.2, and Well 11.1 during the 24-hour test. The lack of response in any of these wells during the test indicates Well 11.2 is hydraulically isolated from water-bearing Zones II and III monitored during the test at PT-3.1, PT-3.2, and Well 11.1.

Wells whose water levels were impacted by pumping are shown in Figure 7. Well 5, approximately 4,000 feet to the southwest in Aquifer Zone IV, responded to the test with a total of 16 feet of drawdown. PT-3.3, 180 feet to the south and also completed in Aquifer Zone IV, responded to the test with a total of 27.5 feet of drawdown. The response at the observation wells in Zone IV suggests Well 11.2 is completed in Zone IV.

WATER QUALITY

During testing, water pumped from Well 11.2 was sand free, clear, odorless, and tasteless. Water samples were collected for both field and laboratory analyses.



Field Analyses

Field analyses of selected water quality parameters were performed during the 24-hour pumping test. These results are summarized below:

Date	Specific Conductance (µmhos/cm)	pH (°F)	Temperature (NTU)	Turbidity (mg/L)	Hardness (mg/L)	iron
8/30/95	156.6	7.15	53.6	0.45	65	0.02

Laboratory Analyses

Samples for laboratory analysis were collected after pumping 23 hours at 973 gpm. Laboratory reports are included in the **Appendix**.

Inorganic Test Results

A sample for inorganic chemical analysis was collected August 30, 1995 after pumping 23 hours. The analysis, performed by Water Management Laboratories Inc., shows all primary and secondary parameters to be under maximum contaminant levels.

The complete results are summarized on **Table 2**. **Table 2** compares the inorganic results with those of Wells 4 and 5, completed in Aquifer Zone IV. The comparison shows the water quality results from the three wells to be nearly identical, suggesting Well 11.2 is completed in Aquifer Zone IV.

Volatile Organic Test Results

The results of the volatile organic analysis, completed by Water Management Laboratories inc., revealed no detectable levels of either regulated or non-regulated volatile organic compounds.

Bacteriological Test Results

The bacteriological test, completed by Water Management Laboratories Inc., showed coliform bacteria present. The bacteria sample was taken at the open discharge orifice at the end of approximately 1,000 feet of lay-flat pipe. The lay-flat pipe was not sterilized before testing and most likely caused the sample to become contaminated.



Table 2 Comparison of inorganic Test Results

Parameter	Well 4	Well 5	Well 11.2		
Date Received	3/2/93	3/2/93	8/30/95		
Arsenic mg/L	<0.01	<0.01	<0.01		
Barium mg/L	<.10	<.10	<.10		
Cadmium mg/L	<0.002	<0.002	<0.002		
Chromium mg/L	<0.05	<0.05	<0.02		
fron mg/L	<0.05	<0.05	<0.03		
Lead mg/L	<0.002	<0.002	<0.002		
Manganese mg/L	<0.043	<0.041	<0.036		
Mercury mg/L	<0.0002	<0.0002	<0.0005		
Selenium mg/L	<0.005	<0.005	<0.005		
Silver mg/L	<0.01	<0.01	<0.003		
Sodium mg/L	9	7.7			
Hardness mg/L as CaCo ³	65	65	6		
Conductivity µmhos	160	150	70		
Turbidity NTU	0.17	0,15	147		
Calor Units	5	5	0.4		
Fluoride mg/L	<0.50		<5		
Nitrate mg/L	<1.0	<0.50	<0.02		
Chloride mg/L	<20	<1.0	.20		
Sulfate mg/L		<20	2		
TDS mg/L	<10	<13	1		
	-	_	105		
Copper mg/L	<0.02	<0.02	<0.02		
Zinc mg/L	<0.05	<0.05	<.05		

Radionuclide Test Results

Analysis of radionuclides by the State of Washington Department of Health Radiation Laboratories shows the radiation and radon levels are well below the maximum contaminant levels (mcls).



Parameter

Level

MCL

Gross Alpha:

<3.0 pCi/L

none

Gross Beta:

<4.0 pCi/L

50 pCl/L

Radon-222:

115 +/- 20 pCi/L

300 pCI/L (recommended mcl)

OPTIMUM YIELD

Optimum yield is the maximum amount of water a well can safely produce. It is the product of the long-term specific capacity and safe drawdown. Safe drawdown allows for pump submergence requirements and seasonal and other natural water level changes, including interference from other sources.

Details of the optimum yield calculation for Well 11.2 are included in the Appendix.

Safe drawdown:

105 ft.

Long-term specific capacity (SC):

19 gpm/ft-dd

Safe yield (s x SC):

2.000 gpm

CAPTURE ZONE

Wellhead Protection Area (WHPA)

A WHPA is defined as the surface and subsurface area surrounding a public water supply well through which potential contaminants are likely to pass before reaching a production well. In Washington, WHPAs are defined by the time of travel (TOT) for ground water to move from its point of infiltration to its point of discharge at the well. The 10-year TOT boundary forms the boundary of the WHPA and defines the area to be inventoried and managed to reduce the risk of potential contamination.

The purpose of a WHPA delineation is to describe the size and shape of that portion of the aquifer contributing ground water to the well. This area is known as the well's Capture Zone. Data are usually insufficient to completely and accurately define the exact size and shape of the capture zone. The Washington State Department of Health (DOH)



has adopted four methods to delineate a WHPA. In order of increasing complexity, they are:

- Calculated Fixed Radius
- Analytical Models
- Hydrogeologic Mapping
- Numerical Flow/Transport Models

A preliminary delineation is now required for all new public water supply wells. The calculated fixed radius method is normally used before the well is constructed and tested.

Because it has more than 1,000 service connections, the District must use an analytical model or better to delineate its WHPA. Data are available to the District to allow this level of delineation for Well 11.2.

Capture Zone Analysis

The EPA has developed a set of analytical models that utilize aquifer properties to calculate the boundaries of the capture zones for a well based on continuous pumping at a particular rate. The pumping rate input to the model is reduced from Weil 11.2's instantaneous rate of 2,000 gpm to the continuous rate required (350 gpm) to pump the annual water right of 565 acre feet. DOH requires determination of capture zones for 1-, 5-, and 10-year TOT for each well. The EPA WHPA analytical model GPTRAC was used to calculate the capture zones for Well 11.2.

The shape of the capture zone is determined by the aquifer's hydrologic properties and the direction and gradient of the ground water flow in the aquifer. The flow direction in aquifer Zone IV at Well 11.2 is to the west, as shown on Figure 8. The gradient of 0.002 in the Zone IV aquifer is estimated from limited water level data. The 1-, 5-, and 10-year TOT capture zones for Well 11.2 are illustrated on Figure 9. The capture zone is elongated to the east, indicating that the well draws its water primarily from the upgradient direction.

Although the capture zone covers a significant area around Well 11.2, its susceptibility to contamination is very low due to its depth and the low permeability sediments overlying the aquifer (see Figure 2).

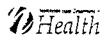


ATER FACILITIES INVENTORY (WY

Read instructions on back before completing

	Head that detroits on	back before completing	un in the later than the
SYSTEM IO NO. 2. COUNTY 4000000 \$2000	GROUP TYPE WRIA	YE CETEJAMOD PAY:	ਰਜ਼ਵ
1. SYSTEM NAME SASMAMISH PLATE	AC WATER & SEWER	DAY TELEPHONE	DATE:
STREET ADDRESS 1519 225TM AVE 3	i t	1. SUBMITTED NEW SYSTEM FOR SYSTEM NAME CHAN	NO CHANGE REACTIVATE
10. BOX (IF APPLICABLE)		OLD SYSTEM NAME - ENTER ONLY IF CHA	
OTTY 155AQUAH	STATE ZP CODE	SYSTEMS SERVING ANY RESID DWELLING SERVED BY THE SYSTE	ENTS (PEOPLE LIVING IN A M), COMPLETE THIS SECTION
OWNER'S NAME (LAST, FIRST) SAMMAM [SH PLATE]	AU WATER & OWNER NO.	9. NUMBER ACTIVE RESIDENTIAL CONNECTIONS	10. NUMBER ACTIVE RESIDENTIAL POPULATION
STREET ADDRESS 1510 223TH AVE S	Sé	11080	33.240
O. BOX (#F APPLICABLE)		SYSTEMS SERVING ANY NON-R EMPLOYEES, STUDENTS, ETC.), CO	ESIDENTS (LE, TRAVELERS,
HAUGAREI	STATE ZIP CODE WA 98027	11. NUMBER NON-RESIDENTIAL CONNECTION	
A SYSTEM CONTACT PERSON RONALD E. LITTLE	TITLE - MANAGER	12 ENTER AVERAGE DAILY MON-RESID SERVED FOR EACH MONTH, MAKE ENTE	ENTIAL POPULATION LY FOR EACH MONTH
AY TELEPHONE 425-392-6356	EVENING TELEPHONE	MAX.	ALY OUT.
G. OWNERSHIP	7. PREDOMINANT CHARACTERISTIC (CHECK ONE ONLY)	13. DOES THE SYSTEM SERVE AT LEAST 25	OF THE SAME NON-BESIDENTS
PRIVATE: NON-PROFIT PRIVATE: FOR-PROFIT LOCAL GOVERNMENT COUNTY/CITY/PUD/	RESIDENTIAL RECREATIONAL BUSINESS / INDUSTRIAL / AGRICULTURAL / COMMERCIAL	FOR 4 OR MORE DAYS PER WEEK FOR A	AT LEAST 180 DAYS PER YEAR?
WATER DISTRICT) STATE	LOOGING/FOOD SERVICE SCHOOL/DAY CARE	14. TOTAL NUMBER CONNECTIONS METERED	15. DISTRIBUTION RESERVOIR(S) TOTAL CAPACITY
PEDERAL	OTHER (CHURCHES, ETC.)	11.080	13.125.000 GALLONS
IS DOH 17. SOURCE NAME	18. SQUECE 13. USE 7	22 WELL 22 SQUECE	24 SOURCE LOCATION

DOH URCE MDER	17. SOURCE NAME		QUECE ATEGO	ïY	19. 05	E 20.		TMENT	22. WELL DEPTH		DURCE WACITY	24. SOURC	E LOCATIO	an.	
	LIST UTILITY'S NAME FOR SOURCE, IF SOURCE IS PURCHASED OR INTERTIED, UST SELLER'S ID# AND NAME USING FOLLOWING FORMAT: XXXXXX/NAME EXAMPLE: 77050Y/SEATTLE	WELL WALL FREID	SUFFACE SIFUND FARMEY FUE GAL.	PUNCHASE THEATED MAND WATER THEATED	PERMANENT SEASONAL	SOURCE INCIDENCE	HONE OR OPENATION	FELICANDATION CLICANDATION CLICAS	(FEET)	,	GPM)	1/4, 1/4 SEC.	SEC. NO.	TWP	RNG
20 T	NELL L	1-4	\Box	П		1	17	1	 15-	+	-300	SW/NE		2+#	360
502	WELL 2					Y		x	130	2	360	NW/SE	11	2+N	VOE
03	VELL = 3	🗓				(7		:	714	k		NW/SW	/ 3÷	25N	062
0+	¥ELL ≠ ∔	14				Y	X		714	L)	750	SW/NW	,	25N	068
05	VELL 6					: [Y			366	L		ME.'SE	32	25N	06E
05	WELL ≠7	124				İΥ	-	X	150	ł .	.000	SE/SE		24N	ÜőE
υ T	WELL #3			11	3	1::		X	130	-		SE/SE	2:	24N	06E
03	WELL #13	1.4			X	1:			100	1	200	NW/SW	:	25N	J-F
0.9	WELL #13				X	1	[]	x	955		200	SW/NW	1	25N	06E
		MIN	MUM RE	OWNE	D BACT	ERIGL	OGICA	L SAMP	l UNG SCHED	,		1	· ·	1	
₹XN	ote Trevere incodifo		26.	JAN	ļ Æ	B	RAM	APR	MAY	AUL	31			CT NO	
	19,	YYZ.		<u></u>	140	<u>' </u>	10	+0	140	+0	10	+0	40}	+0 -	10
	ED SERVICES (PER PLANS)		- •	•					AST SANITAR	Y SURV			3Y 0	он і	1 040 1
	RITICAL WATER SUPPLY SERVICE AREA?	YES	۱ ۱	10	GW	MGMT	AREAT	<u>'</u>	YES	NC	FOR U				



"ATER FACILITIES INVENTORY (VY

, , ,

Envi	ironmental Health		Read I	nstruc	tions o	n b	ack	befo	re ci	omple	ting					
EVETELLIA			, , ,												-	
O: MSTRYS () · · · · · · ·			GRCUP	TYPE		١	WE	COMP	LETED	34				ที่เทียร		•
SYSTEMNA SHITTING	AME AMISH PLATRAU	WATER	x 32	WER		┑	DAY	r TELE	PHONE				DATE		·· -	
ITREET ADDR	RESS					┪		SUBMIT	וְמַבַּדוֹ	NEV	W SYSTEM	!N(O CHANGE	1	REACTIVA	ATE
	<u> </u>					_]	<u>L</u>		Γ	SYS	TEM NAME CHANG	ie. Ur	POATE	-	DELETE	i
O. BOX (IF A)	PPLICABLE)						, Or	D 242.	TEM NA	ME - EN	TER ONLY IF CHAN	GING WITH TI	HIS WF)	······································		
CITY			STATE	ZIP GO	CÉ		SY	STEM	S SEF KG SE	IVING / RVED B	ANY RESIDE	NTS (PEO	PLE LIVII TE THIS :	GIN A		
OWNER'S	IAME (LAST, FIRST)			OWNER	I NO.	┪	9. /		я асп	VE RESID		10. NUMBI	ER ACTIVE :			4.291
STREET ADDR	eess			<u> </u>		7										
.O. 30X (IF A	PPLICABLE)					1	SY	STEM	S SER	VING.	ANY NON-RI NTS, ETC.), CON	 =S D =NT	S (LE, TR	AVIELER	is, 😘	
П			STATE	ZIP CO	D€	\dashv					NTIAL CONNECTION		S SECTIO	ire.		
SYSTEM CO	ONTACT PERSON			πιε		-	12	ENTER SERVE	AVEF D FOR	LAGE DA	AJLY NON-RESIDE	NTIAL POPUL	ATION IONTH	 .		
AY TELEPHO	ONE	EVENING TEL	LEPHONE			1			<u> </u>			14.4		oct.		
							FEE	en e com		HAY		40.		NOV.	•	
CHECK (HIP DNE GNEY)		MNAMT CH ONE ONLY		RISTIC		wa			we		14°		066	· ·	
PRIVATI	E: NON-PROFIT	RESIDE	ENTIAL			7	13.	DOES 1 FOR 4 (THE SY	STEM SE RE DAYS	AVE AT LEAST 25 PER WEEK FOR A	OF THE SAME TLEAST 180 S	NON-RESID DAYS PER Y	ENTS EAR?		Ì
	E: FOR-PROFIT		ATIONAL			ł			Г	YE:	s No					
	GOVERNMENT		ESS/INDUS						L.		٠ ــــا ٠٠					
•	Y/CITY/PUD/ DISTRICT)	1 6	ULTURAL/(NG/FOOD)				14	TOTAL	NUMBI	R		15. DISTR	BUTTON RE	SERVOIA(:	5)	
STATE		SCHOO	OL/DAY CA	ARE				CONNE	CTION	S METER	RÉD	TOTAL	CAPACITY		•	1
FEDERA	u.	ОТНЕЯ	(CHURCH	es. etc.)											GALL	ONS
6. DQH		i e				_						·-				
MBER 1	7. SOURCE NAME		18. SOURC		19. USE	20.		TMENT		DELLH MEST	23. SOURCE CAPACITY	24. SOURCE	E LOCATIO	N		
	UST UTILITY'S NAME FOR SOURCE IS PURCHASED OR INTERTIED, UST SELER'S ID# AND NAME USING FOLLOWING FORMAT: XXXXXX/NAME EXAMPLE 77050Y/SEATTLE		WILL WELL PRIO SIMPACE SPINNS	NIEHTA HAGGASETAKATED HARGASETAKATED HARGASEAHIEATED	PENMANENT DEAGONAL LINEHGERICY	SOMPLE METERALD	UDNE CALONIMATION	HETNATION FLUCKEDATION UTHER	(I	FEET)	(СРМ)	1/4, 1/4 SEC.	SEC. NO.	TWP	RNG.	SWTR EVALUATION VOC EVALUATION
SII	#ELL =1+ WELL =10 VELL =11.2		X		x	Y	7	N	ĺ	3-6 193 300	500	NE/NW NE/SW NE/NW	11	24X 25X	05E 05E	
		İ		111										1		{

æ AUG OCT DEC NOV J. APPROVED SERVICES (PER PLANS) LHO · DATE OF LAST SANITARY SURVEY HOO YS SYSTEM IN CRITICAL WATER SUPPLY SERVICE AREA? YES YES NO GW MGMT AREA? FECTIVE DATE RETROL CHANGES CATE SIGNATURE OF DOH REVIEWER

SHEAVY PENGIL

ICL :- the maximum contamment Level Allowed

Section (1974) Shifts on I showstone I feel a fire

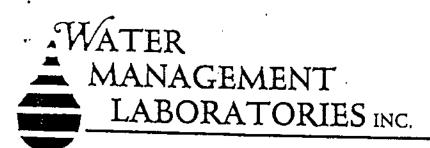
STATE OF WASHINGTON
DEPARTMENT OF HEALTH
PUBLIC HEALTH LABORATORIES
OFFICE OF RADIATION LABORATORIES
1810 M.E. 180TH ST., SEATTH MARKET THE

(a)
CH
XX
A SET

WATER SAMPLE INFORMATION FOR RADIATION ANALYSES

_	. NUMBER		SYSTEM NAME:						ION	ANALYSES	9
	0 1	05137					373	TEM LO, NO,		BYSTEM CLASS	SOURCE NUMBER
 I			7 SAMMAM					40900	9	(circle one)	well to
11.5				-	• 🗆	,	40 Li	•		COUNTY	Well 11,2
<u> </u>			number of the previous	if SOURCE!	·			<u> </u>	ļ	KING	to changed by
t	b.		3, WELL	00011.02).	3 CARE ON 3	THEAM, E	NTER NA	AME .	IF 9Å 11 ₩	MPLE WAS ORAWN FROM AS COLLECTED FROM SY	DISTRIBUTION SYSTEL
	-	2. SPAING	4. FURCHASE	<u> </u>	<u> </u>						
		DATE OF FR	NAL		Ī		-				
			09114	195				send re	PORT TO:	(PRINT FULL NAME & ADD	AESS)
	,			<u> </u>	l		F	RON LITT	LE		
		DATE COLL	ECTED DATE RE	CEIVED			S	SAMMAM	ISH P	LATEAU WATI	ER
		08 / 30	/95 09 /01	/95			1	510 - 2287	TH AV	'E. S.E.	······································
			•			•		SSAQUAH		98027	··
			,			•		GJTY	·-··		COOE
						1	ELEPHO	AREA CODE	1		
							٠	3000			
_	-				LABORA	TORY E	# B ^ B	Ŧ			
_		1000		(D)	O NOT WAI	TE BELO	BIHT W	LINE)			
_	NALYSES	1.653 IHAM	MESULTS pCirt		PGI L		LIANCE NO	CHEMIST MITIALS	ì		
-	res Alpha		3	. 0		1/	1.	1.41	•	LABORATORY SE	JPERVISOR
ال 	tium					 "-	 -	1		(Hame or Init	Hefe)
n	us Uranium			_		 -	 	 _		<i>YDP</i> \	·
Ra	dlum-226			<u> </u>		 		- 	,	NACES AND AND AND AND AND AND AND AND AND AND	
F	ium-225			•		 		- 		NALITY ASSURANC	E SUPERVISOR
A. H	dium-226 Ph dium-226	98		•		 	<u> </u>	 	<u>ب</u>	Menine Sh	ventodo
F	on-222		US tall	7:77	5				CUA	RGE: 1/20	00
_			-n2-3-71 1	LUI/L		 	·	YK.	REMA		
	-						·	<u> </u>	nem.	403	•
G	sa Bela	- - 			·						
	ilium-89	- 5		. 0	50			11			
_	-dium-90	- 			80					SEND COPY	ro:
_	Mum-134				8				AGI	WATER RESO	URCES
_					50				GIG	P.O. BOX	1158
_	1-131				3					HARBOR, WA	70333
Trill	Vm				20,000						
_		<u></u>	·	. '			·)		•	
_											
							[

44. O. A.



1515 80th St. E. Tacoma, WA 98404 531-3121

September 21, 1995

AGI Technologies PO Box 1158 Gig Harbor, WA 98335 Attn: Scott Coffee

Dear Sir:

Results of analysis of one ground water engineering sample taken by yourself on 08-30-95 at 10:26 a.m. and received 08-31-95 at 9:45 a.m. are as follows:

Sample Identification:	Sammamish Plateau Water and
	Sewer District Well 11.2

Test Antimony		Result
•		< 0.002*
Arsenic		< 0.01*
Barium		< 0.1*
Beryllium		< 0.002*
Bicarbonate		75
Cadmium		< 0.002*
Calcium		18
Carbonate		0
Chloride		2
Chromium		< 0.01*
Color	•	< 5*
Copper		< 0.02*
Cyanide		< 0.1*
Fluoride		< 0.2*

AGI Technologies September 21, 1995 Page 2

Test Iron	Result < 0.03*
Lead	< 0.002*
Magnesium	6
Manganese	0.036
Mercury	< 0.0005*
Nickel	< 0.04*
Nitrate Nitrogen	< 0.2*
Nitrite Nitrogen	< 0.2*
Potassium	2.0
Selenium	< 0.005*
Silica	35
Silver	< 0.01*
Sodium	6
Specific Conductivity	147
Н	8.1
Sulfate	1
Thallium	< 0.001*
Total Dissolved Solids	105
Total Hardness	70
Turbidity	0.4
Zinc	< 0.05*
Total Coliform	Present
E. Coli	Absent

AGI Technologies September 21, 1995 Page 3

* < is less than

All results are in milligrams per liter except color which is in color units, pH which is in pH units, specific conductivity which is in micro-mho per cm and turbidity which is in nephelometric turbidity units. Bicarbonate, carbonate and total hardness are in milligrams per liter as calcium carbonate. Total Coliform results are per 100 mls.

Microbiology Lab Number: 08997646 Chemistry Lab Number: 08922385

Sample was analyzed according to Standard Methods for the Examination of Water and Wastewater, 18th Edition:

Chain of Custody record and results of Voc analysis are enclosed.

Sincerely,

Diane DuMond Lab Coordinator

DD:jlp enclosure

cc: Ron Little, SPWSD

c:\comm\aq18-31

1515 80th St. E. Tacoma, WA 98404 531-3121

VOLATILE ORGANIC CHEMICAL REPORT

Results by Analysis by EPA Method 524.2 Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry

Send Report To:

Scott Coffey P.O. Box 1158

Gig Harbor, WA 98335

Bill: Ron Little

. Sammamish Plateau Water and Sewer District

1510 228th Ave. SE issaquah, WA 98027

COUNTY

| King

SYSTEM NAME

SYSTEM ID NO. : New

1 Sammamish Plateau Water and Sewer District; Well 11.2 LABORATORY NO.

: 089

DATE COLLECTED: 08/30/95

DATA FILE

: 08972539

DATE ANALYZED : 09/05/95

ANALYST

: William Adams

SOURCE NUMBER : SO1 SOURCE TYPE : Well

DATE OF REPORT

: September 7, 1995

SUPERVISOR'S INITIALS : WML

					COMMP	
EPA	NAME OF COMPOUND	MCL*	1 0 140 110			A
CODE			AMOUNT	EPA	NAME OF COMPOUND	AMOUNT
	REGULATED COMPOUNDS	ug/L	ug/L	CODE	<u></u>	ug/L
<u>. 2976</u>	VINYL CHLORIDE	 _			UNREGULATED COMPOUNDS	1 ugic
2977	11.1-DICHLOROETHYI FAE	2 7	ND_	2210	CHLOROMETHANE	ND
" <u>2981</u>	17.7.7-TRICHLOROFTHANE	200	ND	2214	BROMOMETHANE	ND
2982	CARBON TETRACHLORIDE		ND	2216	CHLOROETHANE	ND
<u> </u>	TRENZENE	<u>5</u>	ND_	<u> 29</u> 78	11.1-DICHI OROFTHANE	ND
2980	1.2-DICHLOROFTHANE		ND	<u> </u>	12.2DICHI OROPBOPANE	ND
<u> 2984</u>	LIRICHLOROETHYLENE	5	ND	L_ 44 10	11.1-DICHI OROPRODANE	ND
<u> </u>	ID-DICHLOROBENZENE	75	ND	<u> </u>	DIBROMOMETHANE	ND
2979	It-1,2-DICHLOROETHYLENE	100	ND ND	L 2412	11.3-DICHI OROPROPANE	ND
L_4380	IC-1, 2-DICHLOROFTHYI ENG	70	ND	2986	1.1.1.2-TETRACHLOROFTHAN	ND
_2303	11.2-DICHLOROPROPANE	5	ND	2333	TRHUMORENZENE	ND
<u> </u>	I I ULUENE	1000	ND ND	2414	1.2.3-TRICHLOROPROPANE	ND
2987	TETRACHLOROETHYLENE	5	ND ND	2988	L1. 1.2.2-TETRACHI OROFTHAN	ND
" <u> </u>	CHLOROBENZENE	100	ND	<u> </u>	IO-CHLUROTOLUENE	ND
_2992	ETHYL BENZENE	700	<u>DN</u>	<u> 2966</u>	p-CHLOROTOLUENE	ND
2995	m/n-XYI FNES	 ''' 	ND ND	<u> 2967 </u>	m-DICHLOROBENZENE	AID
L_2997	0-XYLENE Itotal vylana MCLL	10000	ND	<u> 22</u> 12	DICHLORODIFI HOROMETHANE	ND
	131 I DENE	100	ND ND	_44+0	H KIUHLURDEI HOROMETHANE I	ND
<u>2968</u>	o-DICHLOROBENZENE	600	ND	<u> 2430</u>	IBROMOCHLOROMETHANE	ND
2964	METHYLENE CHLORIDE	5	ND DN	<u> </u>	ISOPROPYLBENZENE	ND
<u> </u>	1.1.2-TRICHLOROFTHANE	5	ND	2998	N-PROPYLBENZENE	ND
2418	1.2.4-TRIMETHYLBENZENE	70	NO	2424	1,3,5-TRIMETHYLBENZENE	ND
2044	TRIHALOMETHANES ITHM TOTAL	100		<u> </u>	LIERI-BUTYLBENZENE	ND
2941	CHLUROFORM	1 700	ND ND	2428	SEC-BUTYLBENZENE	ND
2943	BROMODICHLOROMETHANE		ND	2422	p-ISOPROPYLTOLUENE	ND
2.344	COLURUDIBROMOMETHANE		ND		n-BUTYLBENZENE	ND
<u> </u>	DRUMUFURM		ND	2248	1.2,4-TRICHLOROBENZENE NAPTHALENE	ND
NOTE:	Maximum Contaminant Level		 }	2246	HEYACUL ORGANIZARIA	ND
	An amount of ND Indicates that the true		j -	2420	HEXACHLOROBUTADIENE	ND
	concentration is less than the method		· }-		1,2,3-TRICHLOROBENZENE	ND_
JOTEOIGE	detection limit of 0.5 ug/L		} }	7274	cis-1,3-DICHLOROPROPENE	ND
DETECTION	ROMOETHANE(EDB) AND DIBROMOCHLORO N LIMITS. THIS DOES NOT CONSTITUTE AN	PROPANEIDI	BCP) WERE AL	SO ANAL	ZEO FOR AND WESE AT ASSET	NO
إلى الساسية السا	M MANUS. THIS DOES NOT CONSTITUTE AND	ADCOUATE			HER CONCENTRATI	CNS BELLIN

DETECTION LIMITS. THIS DOES NOT CONSTITUTE AN ADEQUATE ANALYSIS FOR THESE COMPOUNDS. "Composite results are locals

GROUND WATER CONTAMINATION

Susceptibility Assessment Survey Form

SAMMAMISH PLATEAU WATER & SEWER DISTRICT 1510 228TH Avenue S.E. Issaquah, Washington

(206) 392-6256

WELL 12

GROUND WATER CONTAMINATION Susceptibility Assessment Survey Form

TABLE OF CONTENTS

- Susceptibility Assessment Survey Form
- Well Site Location Map
- Construction and Testing Report

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.2

IMPORTANT!

Please complete one form for each ground water source (well, wellfield, spring) used in your water system.

Photocopy as necessary.

PART I: System Information	
Well owner/manager: AHNLIANISH REP	TEAD WHERT SEWER DISTRICT
Water system name: DENCHUSH TERTS	FALL LEWIERT SENER DISTRICT
County:	
Water system number: 109009	
Well depth: (ft.) (From Source name: CASCROE VIEW WELL	WFI form) OPIGINALLY CAECADE VIEW SOE DISTRICT - WELL #1) WELL #12
WA well identification tag number:	
	Population served: 26 000
Township: 25 N	Range: CTE
Section: 13	1/4 1/4 Section: <u>NW/SW</u>
Latitude/longitude (if available):	
How was lat./long. determined?	
global positioning device survey	topographic map
	ls and explanations of all questions in Parts II through V.
PART II: Well Construction and Source Info	
	month/day/year
last reconstruction: 6/30A	month/day/year
information unavailable	
Survey	Form Ver. 2.2 page 1

2) Well driller: H.O. DEVER DEVER CO
well driller unknown
3) Type of well:
Drilled: rotary bored cable (percussion) Dug
Other: spring(s) lateral collector (Ranney)
driven jetted other:
Additional comments:
4) Well report available? YES (attach copy to form) X NO
If no well log is available, please attach any other records documenting well construction; e.g. bor logs, "as built" sheets, engineering reports, well reconstruction logs.
5) Average pumping rate: (gailons/min)
5) Average pumping rate: 100 (gallons/min) Source of information: WHER TACILITIES TRUENTORY
If not documented, how was pumping rate determined?
Pumping rate unknown 6) Is this source treated? YES NO
If so, what type of treatment:
disinfection filtration carbon filter air stripper other
Purpose of treatment (describe materials to be removed or controlled by treatment):
7) If source is chlorinated, is a chlorine residual maintained:YESNO
Residual level: (At the point closest to the source.)
W 0.0

Survey Form Ver. 2.2 page 2

PART III:	Hydrogeologic Information
1) Depth to	top of open interval: [check one]
1	(less than) 20 ft 20-50 ft 50-100 ft 100-200 ft (greater than) 200 ft
	information unavailable
	ground water (static water level):
	(less than) 20 ft 20-50 ft 50-100 ft (greater than) 100 ft
_	flowing well/spring (artesian)
He	well log other: Marked wiscost FTM 1901 420 MENET depth to ground water unknown
3) If source	te is a flowing well or spring, what is the confining pressure:
<u>'</u>	psi (pounds per square inch) or feet above wellhead
4) If source with this	ce is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated source:YESNO
5) Wellhe	ad elevation (height above mean sea level): (ft)
Н	ow was elevation determined? topographic map Drilling/Well Log altimeter
_	other:
>	information unavailable
6) Confin	ing layers: (This can be completed only for those sources with a drilling log, well log or geologic scribing subsurface conditions. Please refer to assistance package for example.)
_	evidence of a confining layer in well log
_	no evidence of a confining layer in well log
I:	ortiom of the lowest confining layer? is the depth to ground water more than 20 feet above the YES NO
2	information unavailable

Survey Form Ver. 2.2 page 3

7) Sanitary setback:
(less than) 100 ft* 100-120 ft 120-200 ft (greater than) 200 ft * if less than 100 ft describe the site conditions:
WELL IS COLLETED BY DEVENDED ESSIVE SITE WITH
THESTRUCK THRITTEN ADMINISTRET CTETCE IS VOLU USED
STORKINGHUY FUR FILL OF OF FILLS & WANTENANCE
COURT CONES
8) Wellhead construction:
wellhead enclosed in a wellhouse
× controlled access (describe): \(\frac{1000000}{10000000000000000000000000000
other uses for wellhouse (describe):
no wellhead control
9) Surface seal:18 ft
(less than) 18 ft (no Department of Ecology approval)
(less than) 18 ft (Approved by Ecology, include documentation)
(greater than) 18 ft
depth of seal unknown
no surface seal
10) Annual rainfall (inches per year):
(less than) 10 in/yr 10-25 in/yr \ (greater than) 25 in/yr

PART IV: Mapping Your Ground Water Res	ource
1) Annual volume of water pumped: 10000000	(gallons)
How was this determined?	
meter	
stimated:pumping rate ((1) Ki
pump capacity ()
other:	
Calculated Fixed Radius" estimate of ground was (see Instruction Packet)	ter movement:
6 month ground water travel time:	100 (n) These HRE THE CFE'
1 year ground water travel time:	GIST (A) THE THIS THEIR HELL
5 year ground water travel time:	22CC (ft)
10 year ground water travel time:	3110 (ft)
Information available on length of screened/o	open interval?
YES \(\sigma'\) NO	
Length of screened/open interval:	(ft)
3) Is there a river, lake, pond, stream, or other obviboundary? YESNO (mark and i	ious surface water body within the 6 month time of travel identify on map).
4) Is there a stormwater and/or wastewater facility, month time of travel boundary? YES	treatment lagoon, or holding pond located within the 6 NO (mark and identify on map).
Comments:	

PART V: Assessment of Water Quality

 Re 	gional	sources	of	risk	to	ground	water:
------------------------	--------	---------	----	------	----	--------	--------

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	ı year	5 year	unknown
likely pesticide application				-
stormwater injection wells	1.0	120	No	
other injection wells	Mo	No	NL	
abandoned ground water well				
landfills, dumps, disposal areas	70	<u>/// 5</u>	<u> </u>	
known hazardous materials clean-up site	<u>Cid</u>	No:	<i><u>W</u></i> :	
water system(s) with known quality problems	31==	۸ ، د ۶		7
population density (greater than) 1 house/acre	+126	A 15 2	CILL	
residences commonly have septic tanks	<u> 4,5</u>	JE2	<u> 785</u>	
Wastewater treatment lagoons	70	7:0	No	
sites used for land application of waste	<u> </u>	MC	MO	.

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

AREK 15 POINED RESIDENTIAL HOURAL -	
EXCEPT FOR FIRE STATION LOCKTED	
ACEOSS STEEET FEORI WELL	
	······································

Please indicate the occurrence of any test results since 1986 that meet the (Unless listed on assessment, MCLs are listed in assistance package.)	he following conditions:
A. Nitrate: (Nitrate MCL = 10 mg/l)	YES
Results greater than MCL	_ #
(less than) 2 mg/liter nitrate	X "
2-5 mg/liter nitrate	·
(greater than) 5 mg/liter nitrate	
Nitrate sampling records unavailable	
B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES
Results greater than MCL or SAL	
VOCs detected at least once	·
VOC test performed but never detected	
VOC sampling records unavailable	
MFORMATION WHAVAILABLE	
C. <u>EDB/DBCP</u> :	<u>YES</u>
(EDB MCL = 0.05 ug/l or 0.00005 mg/l . DBCP MCL = 0.2 ug/l or 0.0002 mg/l .)	
EDB/DBCP detected below MCL at least once	
EDB/DBCP detected above MCL at least once	
EDB/DBCP never detected	
EDB/DBCP tests required but not yet completed	
EDB/DBCP tests not required INFORMATION WHAVENABLE	
D. Other SOCs (pesticides and other synthetic organic chemicals):	YES
Other SOCs detected	
Other SOC tests performed but none detected *	
Other SOC tests not performed INFORMATION WHAVAILABLE	
*If any SOCs in addition to EDB/DBCP were detected, please identify and d	ate. If other SOC tests were
performed, but no SOCs detected, list test methods here:	<u></u>
	<u></u>
A PLEASE NOTE: IN GOING THROUGH THE VIEW FILES, WE WERE GRIN ABLE TO LOCA TOST OF THIS TIME THE TEST RESULTS A	CASCADE TE A 1988 DE ENCLOSED

2) Source specific water quality records:

E. Bacterial contamination:			YES
Any bacterial detection(s) in the pa source (not distribution sampling re		rs in samples taken from the	
Has source (in past 3 years) had a found in distribution samples that v	bacterio was attri	logical contamination problem buted to the source.	
Source sampling records for bacter	ia unava	ailable	\times
Part VI: Geographic or Hydrologic Fac Non-Circular Zone of Contri	tors Co bution	ntributing to a	
The following questions will help is represented by the calculated fixed CFR areas should be used as a presource. As a system develops its delineation method should be cons	radius (diminar) Wellhea	(CFR) method described in Part delineation of the critical time	of travel zones for that
1)Is there evidence of obvious hydrologic (Does the largest circle extend over a street ridge?) YES	am, rive	r, lake, up a steep hillside, and/	avel zone of the CFR? or over a mountain or
× YES	_ NO	(Arechol)	
Describe with references to map p	roduced	in Part IV:	
			·
	-		
2) Aquifer Material:			
A) Does the drilling log, well log located in an area where the unde terrain?	rground	conditions are identified as frac	lentify that the well is tured rock and/or basalt
YES	_ NO	Cinknown	
B) Does the drilling log, well log located in an area where the unde gravel?	rground	conditions are primarily identify	led as coarse sand and
X YES _	_ NO	EVALUATION T &	EHABILITATION !

Survey Form Ver. 2.2 page 8

3) Is the source located in an aquifer v flood plains of large rivers, artesian w springs.)	vith a high horizontal fi ells with high water pr	ow rate? (Thes essure, and/or s	e can i shallow	nclude sources flowing wells	located on and
YES	NO				
4) Are there other high capacity wells	(agricultural, municipa	l and/or industr	ial) lo	cated within th	e CFRs?
a) Presence of ground water e	xtraction wells removin	g more than ap	proxin	nately 500 gal/	min within
		YES	NO	unknown	
6 month travel time			_		
6 month-1 year travel time					
1-5 year travel time					
5-10 year travel time			_		
b) Presence of ground water	recharge wells (dry we	lls) or heavy in	igation	within	
		YES	NO	unknown	
1 year travel time					
1-5 year travel time		_		 .	
5-10 year travel time			_		
Please identify or describe additional shape of the zone of contribution for produced in Part IV.	hydrologic or geograph this source. Where po	nic conditions to	hat yo	u believe may m to locations	affect the on the map
					
					
		·····			

Suggestions and Comments

Did you attend one of the susceptibility workshops?	YES	NO
Did you find it useful?	YES	NO
Did you seek outside assistance to complete the assessment?	YES	NO
This form and instruction packet are still in the process of devices questions will help us upgrade and improve this assessment for	orm. If you found part	ticular sections
confusing or problematic please let us know. How could this made clearer? Did the instruction package help you find the i	nformation needed to	complete the
assessment? How much time did it take you to complete the assessment without additional/outside expertise? Do you feel	the assessment was	valuable as a learning
experience? Any other comments or constructive criticisms y	ou have would be app	reciated.
<u> </u>		
	·	
		<u></u>
		
		
	· · · · · · · · · · · · · · · · · · ·	

CASCADE VIEW WATER DISTRICT CU LOCATION 508 ALL RESIDENCES ARE SERVED BY SEPTIL TANKS.

EVALUATION AND REHABILITATION OF CASCADE VIEW WELL 1

INTRODUCTION

Cascade View Water District Well 1 was drilled and completed in 1961. The well penetrates a very permeable sand and gravel aquifer, but its yield is limited by the relatively low water level. Since 1982, the well has been operated with the aid of a vacuum pump to increase production.

Recently, the District has been forced to reduce the pumping rate from Well 1 to prevent air entrainment in the discharged water. Since the well's flow meter has not worked for some time, its actual pumping rates are unknown. This report describes AGI's evaluation of the current condition of the well and provides recommendations for continued operation.

FINDINGS

Static Water Level Decline

Static water levels measured in Well 1 have shown a decline of approximately 10 feet since 1961. The water levels shown on Figure 1 were measured at approximately the same time of year and therefore suggest long-term water level decline rather than seasonal fluctuations. In similar local aquifers, high water levels generally occur in the spring when winter precipitation reaches the aquifer. Table 1 shows a seasonal rise in water level of 1.67 feet between the time the pump was removed in mid-April until testing was completed at the end of June.

Table 1

A Mossured	Water Eevels
Date	Depth to Water
3/27/61	120.00 ft
4/30/82	122.82 ft
4/18/94	130.35 ft
5/12/94	129.57 ft
6/30/94	128.68 ft

More extensive water level records are needed to chart the actual seasonal change of water levels in this aquifer. Figure 1 shows an increased rate of water level decline between 1982 and 1994. This decline may be caused by any or all of the following factors:

- Lower than normal precipitation, resulting in reduced recharge to the aquifer
- Increased pumping from the aquifer
- Decreased recharge area from local development

If the indicated rate of decline is constant, the static water level could reach the pump intake of 134.5 feet in about six years. Use of the well may have to be curtailed before then.

A current yield of about 200 gpm is dependent on the vacuum system, used to maintain a higher than natural pumping level in the well. Without the vacuum, the long-term pumping yield would be less than 100 gpm.

Well Performance

Since the well was drilled, AGI Technologies (Carr/Associates Inc.) has conducted two pumping tests of Well 1 for Cascade View (King County Water District 122). As shown on Figure 2, the 8-inch well was completed in 1961 by H.O. Meyer Drilling Company with 10 feet of 0.040-inch slot Cook well screen, set between depths of 135 and 145 feet. Table 2 compares the results of the original 1961 test to the more recent tests.

Table 2

Well jest times comberledn							
Date	Pumping Rate (gpm)	Drawdown (ft)	Specific Capacity (gpm/ft)				
3/27/61	258	5	51.6				
4/30/82	104.5	1.11	94				
6/30/94	103.5	1.31	79				

The original 1961 test showed a lower specific capacity than later tests, because it was conducted at a much higher pumping rate.

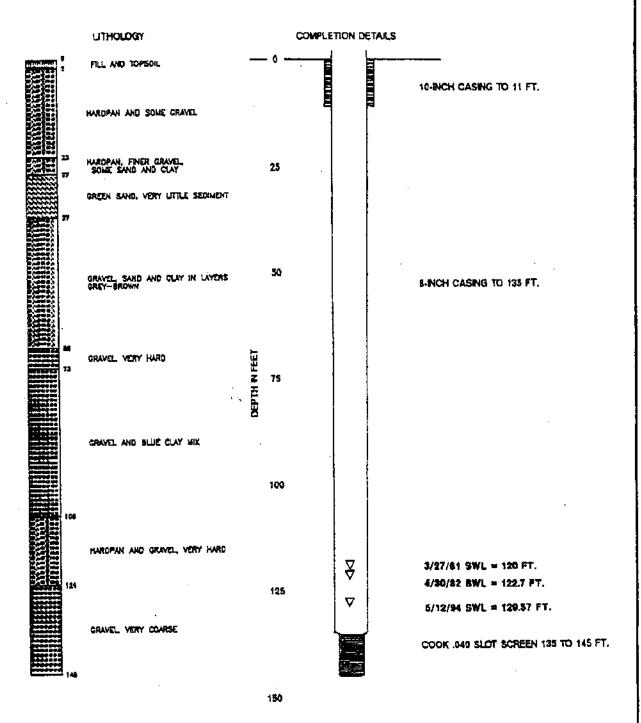
- Resealed the wellhead for vacuum pump operation.
- Installed a new well seal that allows access for periodic water level measurements without vacuum and maintains an airtight seal for the vacuum pump.

OTHER RECOMMENDATIONS

For the District to receive the maximum benefit from Well 1, we recommend:

- Measuring static water levels monthly and recording the results
- Conserving the good quality water found in this aquifer by pumping only the amount required for blending with other District water of lessor quality
- Recording the quantities pumped
- Pumping Well 1 only with the vacuum pump in operation
- > Exploring for this shallow aquifer in other parts of the service area
- Reevaluating the monthly water level data within two years

88 DATA SWL = 120 FT. SWL = 122.82 FT. SWL = 130.35 FT. 2002 5995 3/27/61 4/30/82 4/18/94 i ı 1 ı 1990 1 1 ı 1980 1985 TIME IN YEARS 1 t 1 ţ 1975 135 FEET - TOP OF WALL SCREEN 1070 134.5 FEET - PUMP INTAKE 8 <u>8</u> ₹ 8 43 <u>\$</u> 138 8 124 8 <u>\$</u> ă 8 DEPTH TO WATER **CASCADE VIEW - WELL 1** FIGURE 1 STATIC WATER LEVEL DECLINE

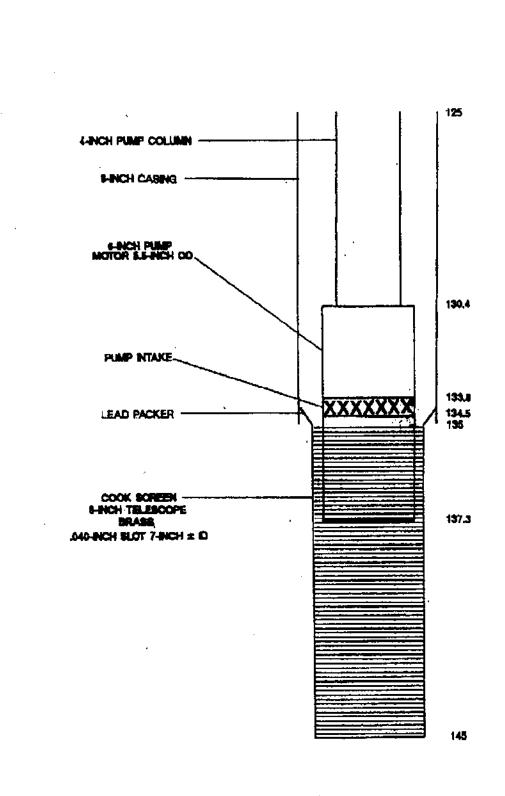


ADAPTED FROM H2O MEYER WELL LOG T25N R6E 13F



CASCADE VIEW - WELL 1
EITHOLOGIC LOG AND COMPLETION DETAILS

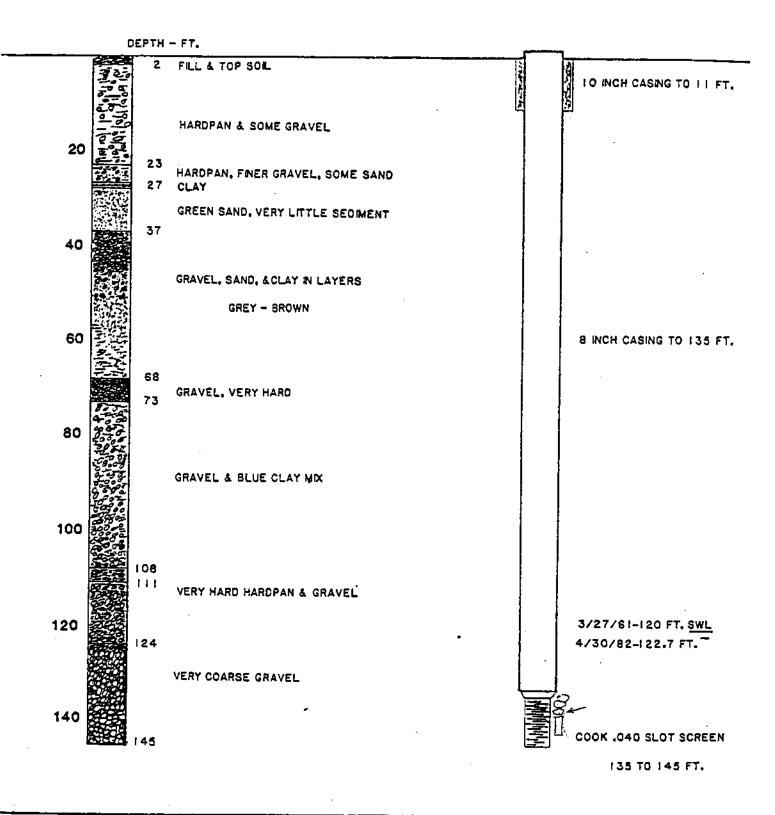
FIGURE 2



AGI

CASCADE VIEW - WELL 1
PUMP INSTALLATION

FIGURE 3



J.R. CARR / ASSOCIATES	K. C. W. D. 122	ADAPTED FROM,
APR& 1982		H2O MEYER WELL LOG
PROJ. # 254 - 2	WELL 1	T25N RGE 13F

(A. mail

WATER FACILITIES INVENTORY (WFI)

AUG 2 1 1995

Environmenta Health

Read Instructions on back before completing

CHITE HID MO COLODURTS		TYPE WRIT	WFI COMPLE	TEI B+			TITLE
<u> </u>	<u>. A</u> .	CME .	<u>- j i</u>				
E. SYSTEM NAME TO MODERATE OF THE FEBRUARY STEEL	. & SEWE	i.	DAY TELEPH	ONE	-	DATE	· · · · · · · · · · · · · · · · · · ·
STREET ADDRESS			E SUBMITT			NO CHANGE	REACTIVATE
15.0 21.Tm AVE SE.			⅃	SYSTE	M NAME CHANGE	! UPDATE	DELETE
P.O. BOX (IF APPLICABLE			OLD SYSTE	m name - Enter	RONLY IF CHANGING	i WITH THIS WFI	
OITY LASSAQUAB	STATE ZI	P CODE	SYSTEMS DWELLING	SERVING AN SERVED BY	IY RESIDENT THE SYSTEM), C	S (PEOPLE LIVIN OMPLETE THIS S	IG IN A ECTION
4. OWNER'S NAME (LAST, FIRST) 1. A TINAMISH FLATEAU PATEF	I =	WNER NO. 3.0.1.7	S. NUMBER CONNEC	ACTIVE RESIDEN TIONS	ITIAL	O. NUMBER ACTIVE R POPULATION	ESIDENTIAL
STREET ADDRESS 1510 228Th AVE. S.E.				#641		27.89	98
P.O. BOX (IF APPLICABLE)			SYSTEMS EMPLOYE	SERVING AN	IY NON-REST S, ETC.), COMPLI	DENTS (LE, TR	AVELERS, N
CITY 155AQUAH	STATE ZE	9 9 0 2 T	11. NUMBÉR	NON-RESIDENT!	AL CONNECTIONS		
5. SYSTEM CONTACT PERSON PUNALD E. LITTLE - MANA		TLE			Y NON-RESIDENTIA		
DAY TELEPHONE EVENING 206-392-5256	TELEPHONE		yar.	APRI		<u>.</u>	OCT NOV
	OMINANT CHAR	ACTERISTIC	MAE	.04	9	_	OEC.
PRIVATE: NON-PROFIT PRIVATE: FOR-PROFIT LOCAL GOVERNMENT PRIVATE: NON-PROFIT RES BUS BUS BUS BUS BUS BUS BUS BUS BUS BU	EK ONE OMLY) SIDENTIAL CREATIONAL SINESS/INDUSTRI RICULTURAL/CON					HE SAME NON-RESID AST 180 DAYS PER YI	
WATER DISTRICT)	IGING / FOOD SER			TIONS METERED		5. DISTRIBUTION RES TOTAL CAPACITY	·
FEDERAL OT	IER (CHURCHES, (ETC.)		9.641		12,850),000 Gallons
46. DOH SOURCE 17. SOURCE NAME NUMBER	18. SOURCE CATEGORY	19. USE	20. 21. TREATMENT	22. WELL 2: DEPTH	3. SOURCE 24 CAPACITY	SOURCE LOCATION	z

L DOH DURCE JMBER	17. SOURCE NAME	18. SOURCE CATEGORY	19. USE		ATMENT	22 WELL DEPTH	23. SOURCE CAPACITY	24. SOURCE	LOCATION	
	UST UTILITY'S NAME FOR SOURCE. IF SOURCE IS PURCHASED OR INTERTIED, UST SELLER'S ID> AND NAME USING FOLLOWING FORMAT: XXXXXX / NAME EXAMPLE: 77050Y / SEATTLE	WELL WELL STUND STUND STUND STUND MERTE NIERIE NIERIE NIERIE HANDWELMITATEO	PEPUAANENT SEASKINAL EMERGENCY	SOUNCE METERED NORE	CIRCINATION FLUORIDATION OFFER	(FEET)	(GPM)	1/4, 1/4 SEC.	SEC. TW NO.	P ANG.
5. (s. j.	WELL 1	74	A	1 3		154	500	SWINE	10 24	FN USE
802	WELL 2			$X \mid X$		132	360	NW/SE	11 24	N OSE
503	WELL # 5			X = X	4	716	450	NW/SW	34 25	N 06E
804	WELL # 4			Y	x	714	625	SW/NW	34 25	1
505	WELL 6				d	366		NE/SE	32 25	
506 B	WELL #7			Y		150		SE/SE	21 24	, ,
s o =	WELL #8	\mathbf{x}		\mathbf{y}		150		SE/SE	21 24	
202	CASCADE VIEW WEL		N	$\Sigma \mid \Sigma \mid$	İΙΓ	100		NW/SW	13 25	
809	CASCADE VIEW WELL	- 1-11111	[[[$\frac{\lambda}{2}$	Ы	955		SW/NW	12 25	
		MINISTER REQUES	=010AG1ES	NOLOGIC	AL SAME	<u> </u>			<u> </u>	.:
		26. JAN	.	MAR	1	MAY	JUN JUL	AUG 5	EP OCT	NOV D
		30	30	30	30	30	30 30	30	30 30	30
APPROV	VED SERVICES (PER PLANS)				DATE OF L	AST SANITAR			8Y DOH	LHD ;
STEM IN (CRITICAL WATER SUPPLY SERVICE AREA?	YES NO	GW M	SMT ARE	A?	YES	NO USE C	HC		



WATER FACILITIES INVENTORY (WFI)

Environmental Health

Read instructions on back before completing

								Ð	ATE U	PDATE	D: 0	8/0:	379
5YSTEMID NO. Z. COUNTY 1 409009 S. I.N.G.		GROUP	TYPE	WRIA		WFI COMPUS	TED BY		•		TITLE	į	
1 409009 KING 3. SYSTEM NAME			COM	1	<u> </u>	DAY TELEPH							
SAMMAMISH PLATEAU	WATER	& SE	WER			UAT TELEPT	IUNE			DATE			
STREET ADDRESS					\dashv	8. SUBMIT	ED NE	W SYSTEM	l NO	CHANGE	1 1/	REACTIVE	ATE
						FOA	SY	STEM NAME CHANG	ie. Ur	PDATE	}	DELETE	
P.C. SOX (IF APPLICABLE)					\neg	*OLD SYSTE	M NAME - EN	TER ONLY IF CHAN	GING WITH TH	tis WFI			
CITY					_								
CITY		STATE	ZIP CODE			SYSTEMS	SERVING	ANY RESIDE	NTS (PEO	PLE LIVII	KG IN A		
4. OWNER'S NAME (LAST, FIRST)			OWNER N	10.	-		ACTIVE RESI			ER ACTIVE			
						CONNEC	TIONS			LATION			
STREET ADORESS					7								
					╛				<u> </u>				
P.O. BOX (IF APPLICABLE)						SYSTEMS	SERVING	ANY NON-RE	SIDENT	S (LE., TR	AVELER	s,	
CITY		STATE	ZIP CODE		-			NTIAL CONNECTION		SSECTR)NI	نبست	
		0.4.2	EII 0000	•		TI. NOWBEN	4014-F310E	NIME CONNECTION	45				
5. SYSTEM CONTACT PERSON			TITLE		┪	12. ENTER A	VERAGE D	AILY NON-RESIDE	NTIAL POPULA	ATION			
						SERVED	FOR EACH M	ONTH, MAKE ENTRY	FOR EACH M	ONTH			
DAY TELEPHONE	EVENING TELL	EPHONE				ian.	APR.		447		ост.		
G. OWNERSHIP	7. PREDOM	MANT CH	ARACTER	ISTIC		75. 	MAY		AUG.		MOV		
(CHECK ONE CNLY)	(CHECK					13, DOES TH	E SYSTEM SE	RVE AT LEAST 25 (DE THE SAME	NON-RESID	DENTS		
PRIVATE: NON-PROFIT	RESIDE	NTIAL						PER WEEK FOR AT					
PRIVATE: FOR-PROFIT		TIONAL					YE	S NO				•	
LOCAL GOVERNMENT	AGRICU		COMMERCI	AĻ									
WATER DISTRICT)	 		SERVICE		ļ	14. TOTAL N	JMBER TIONS METER	RED		BUTION RE	SERVOIR(S	\$}	
FEDERAL	! 	L/DAY C (CHURCH											
	U DIMEN	CHONCH	E3, E1Ç.;		Ì	}						GALL	ONS
	· · · · · · · · · · · · · · · · · · ·					1							
16 DOH: SOURCE 17. SOURCE NAME	1	B. SOURCE		19. USE	20c	21_	22. WELL	23. SOURCE	24. SOURCE	ELOCATIO	N		
NUMBER CARACTER		CATE				THEATMENT	DEPTH	CAPACITY	ļ		i		ξ. 0 x
UST UTILITY'S NAME FOR SOURCE IS PURCHASED OR	Æ		CAL. HEATED HEATED		9								MATION
INTERTIED, LIST SELLER'S ID# AND NAME USING FOLLOWING				= 5	=	TECH	(FEET)	(GPM)	1/4, 1/4	SEC.	TWP	ANG.	
FORMAT: XXXXXX / NAME EXAMPLE: 77050Y / SEATTLE	1	14 PE	2 4 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TERRANERI Seastana Unebiology	±CE №	Alleria Alleria			SEC.	NO.			E
		1 2 2 2	3 - 2 -	# ¥ # # # # # # # # # # # # # # # # # #	SOUTHUE	PANAL CHANG FILINA HISCHI					! L	<u> </u>	ãŞ
(10) CASCADE VIEW	WELL	4		-4	3		.5 ± n	110	NEVNA	2+	23%	ع دون ا	
												-	.
								1		:	1		
											!	i	: }
į	Ì] !	i i		:	:	
:										 	:	; •	
!												i	· ;
Trackets (September 2) popular ett. 199			10201 1.2	(12) (1412	; ;:[]}: 1	re pared to	IPECH A	l NE '		·	*. · · <u>· · · · · · · · · · · · · · · · ·</u>		
13			5. JAN	# £ 8		MAR APR	MAY	JUN : JUL	AUG :	SEP J	CT .¥K	2۷ :	EÇ
				!				ļ	! !	į	1		!
ISMALE REG REQUESE CEVORER.						DATE OF L	RLTINLE TEL			3Y 00	}H	1-0	
SOMES AND SELECT OF THE SELECT		ES	'\C	24A (1)	GMT	AREA?	. YES	10 35 T	'nL '				
FFECT LE CATE PETRO, CHANGES	SIGNATURE	ರ್ವ೨೮% :	REMENSA.						SA	<u>-</u>			

гои од		E IN SHADEI	D AREAS	Redmond WA 98052	PUBLIC HEAL	h St., , Sautt	ORATORIES (FOR INSTRUCTIONS IC CHEMICAL ANALYSES
	LAB.	NUMBER	U:	SE THIS FORM FOR		MPLETED		AL ANALYSIS ONLY 38294 ECTED BY: C.L/L/C=70/L/)
	5	1	المعولم	172 08,20,	88 DE	5,{5	7.80	(206) 227-7003
	343	TEM 1.0. NO	9	58 CHSCADE	VIEW	WAT	en USTI	2 1 2 3 4 COUNTY
	Surfac	. Z.,		SOURCE NO. IF SOURCE IS LAKE OR (Well No.)	STREAM ENTER N	AME		HARGED FOR CHEMICAL TESTING
THIS SA	Before	WAS TAKEN Treatment	urchase	IF SAMPLE WAS CRAWN FROM DISTRICT WAS COLLECTED FROM SYSTEMAT	BUTION SYSTEM	· · · · · · · · · · · · · · · · · · ·	PARTY TO	
- TAKE		realment	TMENT	WAS ITFILTERED	FLUORIDATED		Jens	results (Required) (Print Full Name & Address)
		NATED (Water or		WATER SOFTENER: TYPE USED roblems, address for additional			CAS	EADE VIEW WATER DIS
					-		P.C	Bax 97
				1.0.0.00	OTELIO IN		FACE	C174 WA 98024
		<u> </u>	(STEMS, IN -1027	Մ .	City	Zip Code
Z/	7	01.7 0	/	,	, WA 9802	4	Telephone:	206 ZZZ-7003
				· · · · · · · · · · · · · · · · · · ·	LABORAT			Section 1 to the first the section of the
TESTS	-	'MCL	RATE N	RESULTS	UNITS	Compl		
rsenic	44	0.05		0.011	mg/1		7/2	2 8-31-88.
mui	-	1.0 *	<	0.25	mg/1		14	
admium	м	0.01°	<u>S</u>	0.002	mg/1		KF	LABORATORY SUPERVISOR
omium		0.06*	\leq	0.0/0	mg/l		KF	1 ALTINO
1	10	0.3	<	0.05	mg/l		KF	CUADOT
ead	~	0.05 '	<u>S</u>	0.010	mg/1		Till	CHARGE:
ngariese	-	0.05	<u>S</u>	0.010	mg/1		سهمرا	REMARKS:
ercury	Pig.	0.002	<u> </u>	· <u>0 0 · / 0</u>	mg/l			pH=8.17
enium	<u>\$0</u>	, Q.Q1°	\leq	0.005	mg/1		K=	
iver	4	0.05	\leq	0.010	mg/l		- K=	
lium	16.		\leq		mg/l		V-	
ardness					mg/I AS CaCo3		145	•
<u>1ductivit</u>	y	700		170	Micromhos/cm 25° C	/	Kī	
bidity		1.0	<u> </u>		NTU		<u>Kī</u>	-
nier		15.0	<u></u>	5.0	Golor Units		KT	
oride	ŗ	20.			mg/l		EC	<u> </u>
itrate		10.07			mg/f		40	
oride	et.	250	\leq		mg/i		9	<u></u>
ulfate	30 ,	250			mg/l			·
;		500			mg/l			
opper	3	1.0			mg/f		<u> </u>	
	že !	5.0	:		mg/l	į	•	

Ground Water Contamination Susceptibility Assessment Survey Form Version 2.2

IMPORTANT! Please complete one form for each ground water source (well, wellfield, spring) used in your water system.

Photocopy as necessary.

PART I:	System Information	
Well owner/	manager : <u>Sammamish Pl</u>	ateau Water & Sewer District
Water system	n name : Sammamish Pl	ateau Water & Sewer District
County:	King	
	n number: 409009 I 13 source number SO9	Source number: New Replacement Well (Replaces
Well depth: _	949 (ft.) (From WFI form)	
Source name:	Well 13R	
WA well ider	ntification tag number: AAS-17	<u>74</u>
Number of co	onnections: 14358	Population served: 48,036
Township:	25N	Range: 06E
Section:	12	1/4 1/4 Section: <u>SW1/4 of the NW1/4</u>
	gitude (if available):/	47.667_/121.990
		survey topographic map - http://www.metrokc.gov/gis/mapportal/iMAP_main.htm
* Plea throu		details and explanations of all questions in Parts II
PART II:	Well Construction and Sourc	e Information
1) Date well o	originally constructed: $01/3$	1 / 06 month/day/year
	last reconstruction:/	/ month/day/year
	information unavailable	

2) Well driller:	Stephen J Schneider – Schneider Equipment Inc.
	21881 River Road NE
	St. Paul, Oregon 97137
well drille	er unknown
3) Type of well:	
<u>x</u> Drilled:	<u>x</u> rotary <u>bored</u> <u>cable (percussion) Dug</u>
Other:	spring(s) lateral collector (Ranney)
	drivenjettedother:
Additional c	omments:
4) Well report availa	able? <u>x</u> YES (attach copy to form) NO
	g is available, please attach any other records documenting well construction; e.g. "as built" sheets, engineering reports, well reconstruction logs.
5) Average pumping	g rate:
Source of inf	Formation: Replacement Well 13R Construction and Testing Report (CDM, 2006)
If not docum	nented, how was pumping rate determined?
_ Pumping	rate unknown
6) Is this source trea	ted?
If so, what ty	vpe of treatment:
<u>x</u> disinfec	tion <u>x</u> filtration <u>carbon filter air stripper</u> other
Purpose of t	reatment (describe materials to be removed or controlled by treatment):
Water is chlo	orinated and filtered to remove Manganese and Arsenic
7) If source is chlori	nated, is a chlorine residual maintained: X YES NO
,	el: minimum 0.3 ppm free after the filters (At the noint closest to the source)

PART III: Hydrogeologic Information

1) Depth to top of open interval: [check one]
< 20 ft 20–50 ft 50–100 ft 100–200 ft <u>X</u> >200 ft
information unavailable ('<' means less than; '>' means greater than)
2) Depth to ground water (static water level):
< 20 ft 20-50 ft 50-100 ftX >100 ft
flowing well/spring (artesian)
How was water level determined?
well logX_ other:Measured to within 0.01 ft with electronic sounding device
_ depth to ground water unknown
3) If source is a flowing well or spring, what is the confining pressure:
psi (pounds per square inch) or feet above wellhead
4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source:YESNO
5) Wellhead elevation (height above mean sea level): 640 (ft)
How was elevation determined? $\underline{\mathbf{X}}$ topographic map $\underline{}$ Drilling/Well Log $\underline{}$ altimeter
other:
information unavailable
6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)
X evidence of a confining layer in well log
no evidence of a confining layer in well log
If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the bottom of the lowest confining layer ? X YES NO
information unavailable

7) Sanitary setback:
<u>X</u> < 100 ft*100-120 ft120-200 ft> 200 ft
* if less than 100 ft describe the site conditions:
Well site is about 90 feet from the north fence line that is 10 feet within the property boundary. The
proposed 90 ft protective radius was allowed by King County Health Department
due to the deep (810 ft) surface seal 8) Wellhead construction:
<u>X</u> wellhead enclosed in a wellhouse
<u>X</u> controlled access (describe): <u>The well will be locked in a wellhouse that is</u>
monitored via telemetered security systems. The wellhouse will be inside a locked fence.
other uses for wellhouse (describe):
no wellhead control
9) Surface seal: 18 ft
< 18 ft (no Department of Ecology approval) ('<' means less than)
< 18 ft (Approved by Ecology, include documentation)('<' means less than)
$\underline{\mathbf{X}} > 18 \text{ ft}$ ('>' means greater than)
depth of seal unknown
no surface seal
0) Annual rainfall (inches per year):
$_{-}$ < 10 in/yr $_{-}$ 10-25 in/yr \underline{X} > 25 in/yr

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: 73,000,000 (ga	allons)		
How was this determined?			
meter			
estimated:pumping rate ()		
pump capacity ()		
X other: Water Right			
2) "Calculated Fixed Radius" estimate of ground wa (see Instruction Packet)	ater movement:		
6 month ground water travel time:	332	(ft)	
1 year ground water travel time :	470	(ft)	
5 year ground water travel time:	809	(ft)	
10 year ground water travel time:	1,144	(ft)	
Information available on length of screened	/open interval?		
X YES_NO			
Length of screened/open interval:	95 (ft)		
3) Is there a river, lake, pond, stream, or other obvious travel boundary?YES _X NO (mark and is		ody within the 6 month time of	
4) Is there a stormwater and/or wastewater facility the 6 month time of travel boundary?YES		or holding pond located withir d identify on map).	
Comments:			

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

6 month 1 year 5 year unknown

likely pesticide application	_X_	
stormwater injection wells		
other injection wells (See Comments)XX_		
abandoned ground water well		
landfills, dumps, disposal areas		
known hazardous materials clean-up site		
water system(s) with known quality problems		
population density > 1 house/acre		
residences commonly have septic tanks		
Wastewater treatment lagoons		
sites used for land application of waste		
Mark and identify on map any of the risks listed above which are located to time of travel boundary? (<i>Please include a map of the wellhead and time of trafform. Please locate and mark any of the following.</i>)		
If other recorded or potential sources of ground water contamination exist time of travel circular zone around your water supply, please describe:	within	the ten year
The Wellhead Protection Program for Plateau and Cascade View wells Report prepared in	<u>ո June 2</u>	<u>4, 1998</u>
for the Sammamish Plateau Water & Sewer District discussed the ground water flow for the	<u>ne Platea</u>	u area wells
which includes original Well 13 in Zone IV. The top of Zone IV occurs at elevations of appreced below sea level.	roximate	<u>ly 340 to 500</u>
The Risk assessment for Well 13 in this report was identified as low due to the depth of the thickness of the confining layers above the top of this aquifer (>500 ft).	<u>e aquifer</u>	rand the
The District may pursue UIC registration for original Well 13 to be used as a reci	harge w	<u>ell as</u>
part of the Cascade View Aquifer System ASR project. Potable system groundwa injection source.	<u>ıter is us</u>	sed for the

2)	Source	specific	water c	mality	records
-	Jource	Specific	water	₁ uanty	iccoras

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. <u>Nitrate</u> : (Nitrate MCL = 10 mg/l)		NO V
Results greater than MCL		<u>X</u>
< 2 mg/liter nitrate		
2–5 mg/liter nitrate		
> 5 mg/liter nitrate		
Nitrate sampling records unavailable		
B. <u>VOCs</u> : (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	<u>YES</u>	<u>NO</u>
Results greater than MCL or SAL		<u>X</u>
VOCs detected at least once		<u>X</u>
VOCs never detected	X_	_
VOC sampling records unavailable		<u>X</u>
C. <u>EDB/DBCP</u> :	<u>YES</u>	<u>NO</u>
(EDB MCL = 0.05 ug/l or 0.00005 mg/l . DBCP MCL = 0.2 ug/l or 0.0002 mg/l .)		
EDB/DBCP detected below MCL at least once		
EDB/DBCP detected above MCL at least once		
EDB/DBCP never detected		
EDB/DBCP tests required but not yet completed		
EDB/DBCP tests not required	_X	
D. Other SOCs (Pesticides):	<u>YES</u>	
Other SOCs detected		
(pesticides and other synthetic organic chemicals)		
Other SOC tests performed but none detected		
(list test methods in comments)		
Other SOC tests not performed	_X	
If any SOCs in addition to EDB/DBCP were detected, please identify and	date.	If other SOC tests were
performed, but no SOCs detected, list test methods here:		

E. <u>Bacterial contamination</u> :	<u>YES</u> <u>NO</u>
Any bacterial detection(s) in the past <u>3</u> years in samples source (not distribution sampling records)	
Has source (in past 3 years) had a bacteriological contar found in distribution samples that was attributed to the	
Source sampling records for bacteria unavailable	
Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution	
The following questions will help identify those ground accurately represented by the calculated fixed radius (C these sources, the CFR areas should be used as a prelim travel zones for that source. As a system develops its W sources, a more detailed delineation method should be	CFR) method described in Part IV. For hinary delineation of the critical time of Wellhead Protection Plan for theses
1) Is there evidence of obvious hydrologic boundaries within the CFR? (Does the largest circle extend over a stream, river, lake, mountain or ridge?)	
YESX_ NO	
Describe with references to map produced in Part IV:	
2) Aquifer Material:	
2) riquirer iviateriai.	
A) Does the drilling log, well log or other geologic/englocated in an area where the underground conditions are basalt terrain?	
YESXNO	
B) Does the drilling log, well log or other geologic/engi	
located in an area where the underground conditions as and gravel?	0 1

located	ne source located in an aquifer Id on flood plains of large rivers and springs.)				
	YES	X NO			
4) Are CFRs?	there other high capacity well YES	s (agricultural,	municipal and/	or industr	ial) located within the
	a) Presence of ground water of within	extraction wells	removing more	e than app	roximately 500 gal/min
			•	YES NO	unknown
	< 6 month travel time		-	X_	
	6 month-1 year travel time		-	X_	
	1-5 year travel time			X_	
	5–10 year travel time		-	X_	
	b) Presence of ground water rec	harge wells (dry	wells) or heavy in	rigation witl	hin
			,	YES NO	unknown
	< 1 year travel time		-	_X	
	1-5 year travel time		-		
	5–10 year travel time		-		
	identify or describe additional hydee of contribution for this source.				

Suggestions and Comments

Did you attend one of the susceptibility workshops?	YES	X NO
Did you find it useful?	YES	NO
Did you seek outside assistance to complete the assessment?	X_YES	NO
This form and instruction packet are still in the process of development questions will help us upgrade and improve this assessment form. If yo problematic please let us know. How could this susceptibility assessminstruction package help you find the information needed to complete the take you to complete the form? Were you able to complete the assess Do you feel the assessment was valuable as a learning experience? A criticisms you have would be appreciated.	ou found partic ent be improve he assessment ment without a	ular sections confusing or ed or made clearer? Did the ? How much time did it dditional/outside expertise?

