Drinking Water Source Assessment

Water System

Sebastopol, City of

Sonoma County

Water Source

WELL 02

Assessment Date

November, 1998

California Department of Health Services Drinking Water Field Operations Branch DHS Sonoma District

District No. 18

System No. 4910011

Source No. 001

PS Code 4910011-001

Assessment	Summary
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District Name	DHS Sonoma District	District No. 18	County	Sonoma	
System Name	Sebastopol, City of			System No.	4910011
Source Name	WELL 02	Source No	001	PS Code49	910011-001
Completed by	Leah Walker		D	ate November, 199	8

According to DHS records, this Source is Groundwater. This Assessment was done using the Default Groundwater System Method.

Description of System and Source

The Sebastopol water system is located in Sonoma County and serves the City of Sebastopol. There are approximately 2,675 service connections serving a population of 7,575.

The City of Sebastopol obtains all of its water from underground wells that draw water from depths between 130 to 690 feet below ground. There are currently five wells, all located within the City limits along a major transportation corridor, Highway 116. The wells are located 1,300 feet or more to the west of a perennial waterway known as the Laguna de Santa Rosa, which is a major tributary to the Russian River.

Well 02, the subject of this assessment, was constructed in 1934, the oldest of the City's wells. It is 600 feet deep and produces approximately 480 gallons per minute.

Previous studies have determined that the principal recharge area for the Sebastopol wells is from the portion of the Wilson Grove Formation (formerly known as the Merced Formation) in the rolling hills west of the City. There is some additional recharge from the east.

Land use in the vicinity of the wells includes municipal, industrial, residential, and commercial activities within the City limits. The protection zones and recharge areas extend into the rural areas just outside the City.

Assessment Procedures

The assessment of the source WELL 02 was conducted by the California Department of Health Services in conjunction with the City of Sebastopol as a demonstration of the Drinking Water Source Assessment and Protection (DWSAP) program. The City was fortunate to have several studies conducted regarding their water supplies and the ground water resources in the area. This information included a map of the recharge area and approximate flow directions. This information was the basis for using the Modified Calculated Fixed Radius delineation method.

Due to the relative proximity of the five wells, the protection zones for the wells overlap. The City and DHS chose to define one set of larger zones that encompasses the protection zones for all five wells. The PCA inventory and vulnerability ranking portions of the assessment were conducted for the larger combined zones, and not for each well separately.

The following sources of information were used in the assessment: DHS water system files, City files, City personnel, CUPA (Certified Unified Program Agency) records, and previous studies.

Procedures used to conduct the assessment included: meetings with the City to conduct the inventory, and file reviews.

Assessment Map

Yes 🛚

Yes 🛚

No 🗌

No 🗌

Assessm	ent Sum	mary				
District Name System Name	DHS Sonoma		District No. 18	County _	Sonoma Systen	n No . 4910011
Source Name	WELL 02	,	Source No.	001	PS Code	4910011-001
Completed by	Leah Walker			Dat	Novembe	r, 1998
Contents of th	is Assessm	ent				
Yes	X No 🗌	Assessment Sumr	mary			
Yes	X No	Vulnerability Sumr	mary			
Yes	□ No X	Source Location F	orm			
Yes	X No	Delineation of Wat	ter Protection Zones			
Yes	X No 🗌	Physical Barrier E	ffectiveness Checklist			
Yes	X No	Source Data Shee	et			
Yes	X No 🗌	Inventory of Possil	ble Contaminating Activ	ities		

Vulnerab	ility Summary			
District Name	DHS Sonoma District	District No. 18	County	Sonoma
System Name	Sebastopol, City of			System No. 4910011
Source Name	WELL 02	Source No	001	PS Code 4910011-001
Completed by	Leah Walker		Da	November, 1998
THE	FOLLOWING INFORMATION MUST B	SE INCLUDED IN THE SY	STEM CON	SUMER CONFIDENCE
	er assessment was conducted for stopol, City of	the WELL 02	water sy	rstem in November, 1998 .

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Automobile - Gas stations

Dry cleaners

Known Contaminant Plumes

Underground storage tanks - Confirmed leaking tanks

The source is considered most vulnerable to the following activities not associated with any detected contaminants:

Chemical/petroleum processing/storage
Historic gas stations
Metal plating/ finishing/fabricating
Plastics/synthetics producers
Septic systems - high density [>1/acre]

Discussion of Vulnerability

One of the five wells (Well 04) in the City's drinking water system has shown very low levels of petroleum products (1,2-DCA, Benzene, and MTBE), but is still on-line though the use is limited. The most likely source of contamination of the well is nearby gas stations and associated underground fuel tanks and contaminant plumes.

Another of the wells (Well 05) is currently shut down due to contamination by tetrachloroethylene (PCE). The most likely source of contamination of this well is a dry cleaning business.

Due to the loss of production capacity, the City recently constructed a new well (07) at substantial cost.

Vulnerab	ility Summary					
District Name	DHS Sonoma District	District No. 18	County	Sonoma		
System Name	Sebastopol, City of			System	No. 4910011	_
Source Name	WELL 02	Source No	001	PS Code	4910011-001	
Completed by	Leah Walker			ate November	⁻ , 1998	
THE	FOLLOWING INFORMATION M	IUST BE INCLUDED IN THE S	YSTEM CO	NSUMER CONFI	DENCE	

A copy of the complete assessment may be viewed at:

DHS Sonoma District Office 50 D Street, Suite 200 Santa Rosa, CA 95404

You may request a summary of the assessment be sent to you by contacting:

District Engineer 707-576-2145

Delineation of Wate	er Protection Zones
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District Name	DHS Sonoma District	District No18	County	Sonoma		
System Name	Sebastopol, City of			Systen	n No . <u>4910011</u>	
Source Name	WELL 02	Source No	001	PS Code	4910011-001	
Completed by	Leah Walker		D	ate Novembe	r, 1998	

Method Used to Delineate Protection Zones

1. Calculated Fixed Radius

X 2. Modified Calculated Fixed Radius (Attach documentation for direction of ground water flow.)

- 3. More Detailed Methods
- 4. Arbitrary Fixed Radius (For use only by or permission of DHS)

Maximum Pumping Rate of Well (Q)	480 774 33,728,160	gallons/minute acre feet/year cubic feet/year
Effective Porosity Screened Interval of Well		Default Value Default Value
Direction of Ground Water Flow	90.00 de	grees

Protection Zone	Calculated Value	Minimum Value	Base Radius	Direction	Modified Distance
Zone A - 2 Year TOT*	731 Feet	600 Feet	731 Feet	upgradient	1,096 Feet
				downgradient	365 Feet
Zone B5 - 5 Year TOT*	1,156 Feet	1,500 Feet	1,156 Feet	upgradient	1,733 Feet
				downgradient	578 Feet
Zone B10 - 10 Year TOT*	1,634 Feet	0 Feet	1,634 Feet	upgradient	2,451 Feet
				downgradient	817 Feet

^{*}TOT = Time of Travel

Physical Barrier Effectiveness (PBE)

District Name DHS Sonoma District	District No18 Count	y Sonoma		
System Name Sebastopol, City of		Sys	stem No	1910011
Source Name WELL 02	Source No001	PS Code	49100)11-001
Completed by Leah Walker		Date Noven	nber, 1998	
Parameter		Possible Points	This Source	Score
Type of Aquifer Confinement				
1. Unconfined, Semi-confined, Fractured Rock, Unknow	vn Aquifer	0	Х	0
2. Confined		50		
Aquifer Material (Unconfined Aquifers) Type of material within aquifer				
Porous Media (Interbedded sands, silts, clays, grave minimum 25' thick above water table within Zone A	ls) with continuous clay layer	20		
2. Porous Media (Interbedded sands, silts, clays, gravel	s)	10	X	10
3. Fractured rock (Low Physical Barrier Effectiveness -	- no further questions required)	0		
Pathways of Contamination (All Aquifers) Presence of Abandoned or Improperly Destroyed V	Vells			
Present within Zone A (2 year TOT distance)	Yes	0		
	No	5		
	Unknown	0	Х	0
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0		
	No	3		
	Unknown	0	X	0
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0		
	No	2		
	Unknown	0	X	0
Static Water Conditions (Unconfined Aquifers)				
	0 to 20 feet	0		
Depth to Static Water (DTW) feet	20 to 50 feet	2		
	50 to 100 feet	6		
	Greater than 100 feet	10	Х	10
	Unknown	0		
Well Operation (Unconfined Aquifers)				
Depth to Uppermost Perforations (DUP)	332 feet			
Maximum Pumping Rate of Well (Q)	480 gallons/minute			
Length of Screened Interval (H)	268 feet			
	Less than 5	0		
[DUP - DTW / Q/H] <u>120.60</u>	Between 5 and 10	5		
	Greater than 10	10	Х	10
	Unknown	0		

Physical Barrier Effectiveness (PBE)

Completed by Leah Walker

District Name	DHS Sonoma District	District No18	County	Sonoma	
System Name	Sebastopol, City of			System No.	4910011
Source Name	WELL 02	Source No.	001	PS Code	910011-001

Parameter		Possible Points	This Source	Score
Well Construction (All Aquifers)				j
Sanitary Seal (Annular Seal) Depth	None or less than 20 feet	0		
0 feet	Between 20 and 50 feet	6		
	50 feet or greater	10		
	Unknown	0	Х	0
Surface Seal (concrete cap)	Not present or improperly constructed	0		
	Watertight, slopes away from well at least 2' laterally in all directions	4	Х	4
	Unknown	0		
Flooding potential at well site	Subject to localized flooding (i.e. in low area or unsealed pit or vault) or within 100 year flood plain	0		
	Not subject to flooding	1	Х	1
	Unknown	0		
Security at well site	Not secure	0		
	Secure	5	Х	5
	Unknown	0		

Score	Effectiveness
0 to 35	Low
36 to 69	Moderate
70 to 100	High

Maximum Score = 70

Score	40
Effectiveness	Moderate

Date November, 1998

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Inventory	of Possible Contam	inating	g Activ	vities (P	CA Inventory)	
District Name	DHS Sonoma District	District N	lo . <u>18</u>	Count	у _	Sonoma		
System Name	Sebastopol, City of					System No.	4910011	
Source Name		So	ource No.	001		PS Code 491	0011-001	
Completed by	Leah Walker				Da	nte May, 1998		
PCA (Risk Rankinç	a)	PCA in Zone A	I .	PCA in Zone B10	*	Comments		
Commercial/Ir	ndustrial Activities							
Automobile - Body s	hops (H)	Υ	N	N				
Automobile - Car wa	shes (M)	Υ	N	N				
Automobile - Gas sta	ations (VH)	Y	N	N	*	1,2-DCA Well 4		
Automobile - Repair	shops (H)	Υ	N	N				
Boat services/repair/	refinishing (H)	Υ	N	N		Inland Marine		
Chemical/petroleum	pipelines (H)	U	U	U				
Chemical/petroleum	processing/storage (VH)	Y	N	N		R&S bulk plant		
Ory cleaners (VH)		Υ	N	N	*	PCE Well 5		
Electrical/electronic	manufacturing (H)	N	Y	N		Depot Street		
-1 . // 1 //		\ \ <u>\</u>	\ <u>\</u>			0 1 1 0		

Electrical/electronic manufacturing (H)	N	Υ	N	Depot Street
Fleet/truck/bus terminals (H)	Υ	Υ	N	Car dealers?
Furniture repair/manufacturing (H)	Υ	N	Υ	
Home manufacturing (H)	N	N	N	
Junk/scrap/salvage yards (H)	Y	N	N	Creekside Industrial
Machine shops (H)	N	N	Υ	
Metal plating/ finishing/fabricating (VH)	Y	Υ	Υ	West Valley welding, P&L, cannery
Photo processing/printing (H)	Y	Υ	N	Seb. Times, 258 Petaluma, South Point, Wine Press
Plastics/synthetics producers (VH)	Υ	N	N	
Research laboratories (H)	N	N	N	
Wood preserving/treating (H)	N	N	Υ	Miller Door
Wood/pulp/paper processing and mills (H)	N	N	N	
Lumber processing and manufacturing (H)	U	U	U	Not on original PCA inventory
Sewer collection systems (H in Zone A, otherwise L)	Υ	Υ	Υ	
Parking lots/malls [>50 spaces] (M)	Υ	Υ	Υ	Burnett, High St, Vet's, Plaza, Theatre
Cement/concrete plants (M)	N	N	N	
Food processing (M)	Υ	Υ	Υ	VacuDry, Speas, Cherry Foods, Barlow
Funeral services/graveyards (M)	Υ	N	N	Parent-Sorenson
Hardware/lumber/parts stores (M)	Υ	Υ	Υ	Columbo, hardware store, lumber yard
Appliance/Electronic Repair (L)	Υ	N	N	
Office buildings/complexes (L)	Υ	Υ	N	
Rental Yards (L)	N	Υ	N	
RV/mini storage (L)	Υ	N	N	mini-storage

^{* =} A contaminant potentially associated with this activity has been detected in the water supply.

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name	DHS Sonoma District	District N	l o . 18	Count	у _	Sonoma
System Name	Sebastopol, City of					System No. 4910011
Source Name	WELL 02	Sc	ource No.	001		PS Code 4910011-001
Completed by	Leah Walker				Da	May, 1998
PCA (Risk Ranking	i)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Residential/Mu	unicipal Activities					
Airports - Maintenan	ce/fueling areas (VH)	N	N	N		
Landfills/dumps (VH)	N	N	N		
Railroad yards/main	tenance/fueling areas (H)	Υ	Υ	Υ		historic
Septic systems - hig otherwise M)	h density [>1/acre] (VH in Zone A,	Υ	Y	Y		Lynch Rd, St. Helena, Pearl Ct
Sewer collection sys	stems (H in Zone A, otherwise L)	Υ	Υ	Υ		
Utility stations - mair	ntenance areas (H)	N	N	N		
Wastewater treatme	nt plants (VH in Zone A, otherwise H)	N	N	N		
Drinking water treatr	ment plants (M)	Υ	Υ	N		chlorinators, Fircrest, Kelly, VacuDry
Golf courses (M)		N	N	N		
Housing - high dens	ity [>1 house/0.5 acres] (M)	Υ	Υ	Υ		
Motor pools (M)		Υ	N	N		
Parks (M)		N	Υ	N		
Waste transfer/recyc	cling stations (M)	Υ	N	Υ		Fircrest, safeway
Apartments and con	dominiums (L)	Υ	Υ	Υ		
Campgrounds/Recre	eational areas (L)	N	N	Υ		
Fire stations (L)		N	Υ	N		
RV Parks (L)		N	N	N		
Schools (L)		N	Υ	N		
Hotels, Motels (L)		U	U	U		Not on original PCA inventory
Agricultural/R	ural Activities					
Grazing [> 5 large as Zone A, otherwise M	nimals or equivalent per acre] (H in 1)	N	N	N		
	l Feeding Operations [CAFOs] as gulation1(VH in Zone A, otherwise	N	N	N		
Animal Feeding Operegulation2 (VH in Z	erations as defined in federal one A, otherwise H)	N	N	N		
Other Animal operat	ions (H in Zone A, otherwise M)	N	N	N		
Farm chemical distri	butor/ application service (H)	Υ	N	N		Frizelle Enos
Farm machinery rep	air (H)	U	U	U		
Septic systems - low otherwise L)	density [<1/acre] (H in Zone A,	Y	Y	Y		

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Inventory of Possible Contaminating Activities (PCA Inventory)

District Name	DHS Sonoma District	District N	l o . 18	Count	у _	Sonoma	
System Name	Sebastopol, City of					System	No. 4910011
Source Name	WELL 02	So	ource No.	001		 _ PS Code	4910011-001
Completed by	Leah Walker				Da	ite _ May, 1998	}
PCA (Risk Ranking	3)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments	
Agricultural/R	ural Activities						
Lagoons/liquid wast	es (H)	N	Υ	N		VacuDry	
Machine shops (H)		N	Υ	N		VacuDry, Renta	al yard
Pesticide/fertilizer/pe	etroleum storage & transfer areas (H)	U	U	U			
Agricultural Drainage	e (H in Zone A, otherwise M)	U	U	U		Not on original	PCA inventory
Wells - Agricultural/	Irrigation (H)	U	U	U			
Managed Forests (N	1)	N	N	N			
	ries, hops, mint, orchards, sod, ards, nurseries, vegetable] (M)	N	N	Y		Cooper Rd	
Fertilizer/Pesticide/H	Herbicide Application (M)	U	U	U			
Sewage sludge/bios	olids application (M)	N	N	N			
	[e.g., Christmas trees, grains, grass [includes drip-irrigated crops] (L)	N	N	Y			
Other Activitie	es						
NPDES/WDR permi	tted discharges (H)	U	U	U			
Underground Injection Discharges (VH)	on of Commercial/Industrial	N	N	N			
Historic gas stations	(VH)	Υ	N	N			
Historic waste dump	s/landfills (VH)	U	U	U			
Illegal activities/unau	uthorized dumping (H)	U	U	U			
Injection wells/dry w	ells/ sumps (VH)	U	U	U			
Known Contaminant	Plumes (VH)	Υ	Υ	N	*	1,2 DCA, PCE	
Military installations	(VH)	N	N	N			
Mining operations -	Historic (VH)	N	N	N			
Mining operations -	Active (VH)	N	N	N			
Mining - Sand/Grave	el (H)	N	N	N			
Wells - Oil, Gas, Ge	othermal (H)	U	U	U			
Salt Water Intrusion	(H)	N	N	N			
Recreational area -	surface water source (H)	N	N	N			
Underground storag (VH)	e tanks - Confirmed leaking tanks	Y	Y	Y	*	1,2-DCA Royal	Petroleum, Shell
Underground storag tanks (L)	e tanks - Decommissioned - inactive	Y	Y	Y			

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Inventory of Possible Contaminating Activities (PCA Inventory)

District Name	DHS Sonoma District	District N	lo. <u>18</u>	Count	y <u>S</u>	Sonoma		
System Name	Sebastopol, City of					System	No. 49	10011
Source Name	WELL 02	So	ource No.	001		PS Code	491001	1-001
Completed by	Leah Walker				Date	May, 1998		
PCA (Risk Rankin	g)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments		
Other Activitie	es							
Underground storag smaller than regulat	ge tanks - Non-regulated tanks [tanks ory limit] (H)	N	N	N				
Underground storag registered tanks (H)	ge tanks - Not yet upgraded or	U	U	U				
Underground storag - active tanks (L)	ge tanks - Upgraded and/or registered	Y	Y	Y				
Above ground stora	ge tanks (M)	N	Υ	N	f	ire station		
Wells - Water supply	y (M)	Υ	Υ	Y				
Construction/demoli	ition staging areas (M)	U	U	U				
Contractor or govern yards (M)	nment agency equipment storage	N	Y	N	ı	olaza (historic)		
Dredging (M)		N	N	N				
Transportation corri	dors - Freeways/state highways (M)	Υ	Υ	Υ				
Transportation corri	dors - Railroads (M)	N	N	N				
Transportation corri (M)	dors - Historic railroad right-of-ways	Y	Y	Y				
Transportation corriuse areas] (M)	dors - Road Right-of-ways [herbicide	Y	Y	Y	k	oike path		
Transportation corri	dors - Roads/Streets (L)	Υ	Υ	Υ				
Hospitals (M)		Υ	Υ	N				
Storm Drain Discha	rge Points (M)	U	U	U				
Storm Water Detent	tion Facilities (M)	U	U	U				
Artificial Recharge F water] (L)	Projects - Injection wells [potable	N	N	N				
Artificial Recharge F water] (M)	Projects - Injection wells [non-potable	N	N	N				
Artificial Recharge F water] (L)	Projects - Spreading Basins [potable	N	N	N				
Artificial Recharge F [non-potable water]	Projects - Spreading Basins (M)	N	N	N				
Medical/dental office	es/clinics (L)	Υ	Υ	N				
Veterinary offices/cl	inics (L)	N	N	Υ				
Surface water - stre	ams/lakes/rivers (L)	Υ	Υ	Υ	(Calder Cr, Witte	r Cr	
Malla manitarina t	tost holos (L)		v	v				

^{* =} A contaminant potentially associated with this activity has been detected in the water supply.

District Name	DHS Sonoma District	District No. 18	County	Sonoma			
System Name	Sebastopol, City of			System No.	4910011		
Source Name	WELL 02	Source No.	001	PS Code	1910011-001		

 Completed by
 Leah Walker

 Date
 November, 1998

			DCA Bias	70	DDE	Vulnorskille
Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
А	Automobile - Gas stations (VH)	*	7	5	3	15
Α	Dry cleaners (VH)	*	7	5	3	15
Α	Known Contaminant Plumes (VH)	*	7	5	3	15
Α	Underground storage tanks - Confirmed leaking tanks (VH)	*	7	5	3	15
B5	Known Contaminant Plumes (VH)	*	7	3	3	13
B5	Underground storage tanks - Confirmed leaking tanks (VH)	*	7	3	3	13
B10	Underground storage tanks - Confirmed leaking tanks (VH)	*	7	1	3	11
Α	Chemical/petroleum processing/storage (VH)		7	5	3	15
Α	Historic gas stations (VH)		7	5	3	15
Α	Metal plating/ finishing/fabricating (VH)		7	5	3	15
Α	Plastics/synthetics producers (VH)		7	5	3	15
Α	Septic systems - high density [>1/acre] (VH in Zone A, otherwise M)		7	5	3	15
Α	Automobile - Body shops (H)		5	5	3	13
Α	Automobile - Repair shops (H)		5	5	3	13
Α	Boat services/repair/refinishing (H)		5	5	3	13
А	Farm chemical distributor/ application service (H)		5	5	3	13
Α	Fleet/truck/bus terminals (H)		5	5	3	13
Α	Furniture repair/manufacturing (H)		5	5	3	13
Α	Junk/scrap/salvage yards (H)		5	5	3	13
Α	Photo processing/printing (H)		5	5	3	13
Α	Railroad yards/maintenance/fueling areas (H)		5	5	3	13
А	Septic systems - low density [<1/acre] (H in Zone A, otherwise L)		5	5	3	13
Α	Sewer collection systems (H in Zone A, otherwise L)		5	5	3	13
Α	Sewer collection systems (H in Zone A, otherwise L)		5	5	3	13
B5	Metal plating/ finishing/fabricating (VH)		7	3	3	13
А	Automobile - Car washes (M)		3	5	3	11
Α	Drinking water treatment plants (M)		3	5	3	11
Α	Food processing (M)		3	5	3	11
А	Funeral services/graveyards (M)		3	5	3	11

^{* =} A contaminant potentially associated with this activity has been detected in the water supply.

District Name	DHS Sonoma District	District No. 18	County	Sonoma			
System Name	Sebastopol, City of			System No.	4910011		
Source Name	WELL 02	Source No.	001	PS Code4	910011-001		

 Completed by _ Leah Walker
 Date _ November, 1998

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
Α	Hardware/lumber/parts stores (M)		3	5	3	11
Α	Hospitals (M)		3	5	3	11
Α	Housing - high density [>1 house/0.5 acres] (M)		3	5	3	11
Α	Motor pools (M)		3	5	3	11
Α	Parking lots/malls [>50 spaces] (M)		3	5	3	11
Α	Transportation corridors - Freeways/state highways (M)		3	5	3	11
Α	Transportation corridors - Historic railroad right-of-ways (M)		3	5	3	11
Α	Transportation corridors - Road Right-of-ways [herbicide use areas] (M)		3	5	3	11
Α	Waste transfer/recycling stations (M)		3	5	3	11
Α	Wells - Water supply (M)		3	5	3	11
B5	Electrical/electronic manufacturing (H)		5	3	3	11
B5	Fleet/truck/bus terminals (H)		5	3	3	11
B5	Lagoons/liquid wastes (H)		5	3	3	11
B5	Machine shops (H)		5	3	3	11
B5	Photo processing/printing (H)		5	3	3	11
B5	Railroad yards/maintenance/fueling areas (H)		5	3	3	11
B10	Metal plating/ finishing/fabricating (VH)		7	1	3	11
Α	Historic waste dumps/landfills (VH)		7	0	3	10
Α	Injection wells/dry wells/ sumps (VH)		7	0	3	10
B5	Historic waste dumps/landfills (VH)		7	0	3	10
B5	Injection wells/dry wells/ sumps (VH)		7	0	3	10
B10	Historic waste dumps/landfills (VH)		7	0	3	10
B10	Injection wells/dry wells/ sumps (VH)		7	0	3	10
Α	Apartments and condominiums (L)		1	5	3	9
Α	Appliance/Electronic Repair (L)		1	5	3	9
Α	Medical/dental offices/clinics (L)		1	5	3	9
Α	Office buildings/complexes (L)		1	5	3	9
Α	RV/mini storage (L)		1	5	3	9
Α	Surface water - streams/lakes/rivers (L)		1	5	3	9

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District Name	DHS Sonoma District	District No. 18	County	Sonoma			
System Name	Sebastopol, City of			System No. 4910011			
Source Name	WELL 02	Source No	001	PS Code4	910011-001		

 Completed by
 Leah Walker

 Date
 November, 1998

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
Α	Transportation corridors - Roads/Streets (L)		1	5	3	9
Α	Underground storage tanks - Decommissioned - inactive tanks (L)		1	5	3	9
Α	Underground storage tanks - Upgraded and/or registered - active tanks (L)		1	5	3	9
Α	Wells - monitoring, test holes (L)		1	5	3	9
B5	Above ground storage tanks (M)		3	3	3	9
B5	Contractor or government agency equipment storage yards (M)		3	3	3	9
B5	Drinking water treatment plants (M)		3	3	3	9
B5	Food processing (M)		3	3	3	9
B5	Hardware/lumber/parts stores (M)		3	3	3	9
B5	Hospitals (M)		3	3	3	9
B5	Housing - high density [>1 house/0.5 acres] (M)		3	3	3	9
B5	Parking lots/malls [>50 spaces] (M)		3	3	3	9
B5	Parks (M)		3	3	3	9
B5	Septic systems - high density [>1/acre] (VH in Zone A, otherwise M)		3	3	3	9
B5	Transportation corridors - Freeways/state highways (M)		3	3	3	9
B5	Transportation corridors - Historic railroad right-of-ways (M)		3	3	3	9
B5	Transportation corridors - Road Right-of-ways [herbicide use areas] (M)		3	3	3	9
B5	Wells - Water supply (M)		3	3	3	9
B10	Furniture repair/manufacturing (H)		5	1	3	9
B10	Machine shops (H)		5	1	3	9
B10	Railroad yards/maintenance/fueling areas (H)		5	1	3	9
B10	Wood preserving/treating (H)		5	1	3	9
Α	Agricultural Drainage (H in Zone A, otherwise M)		5	0	3	8
Α	Chemical/petroleum pipelines (H)		5	0	3	8
Α	Farm machinery repair (H)		5	0	3	8
Α	Illegal activities/unauthorized dumping (H)		5	0	3	8
Α	Lumber processing and manufacturing (H)		5	0	3	8
Α	NPDES/WDR permitted discharges (H)		5	0	3	8
Α	Pesticide/fertilizer/petroleum storage & transfer areas (H)		5	0	3	8

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Completed by Leah Walker Date November, 1998

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
А	Underground storage tanks - Not yet upgraded or registered tanks (H)		5	0	3	8
Α	Wells - Agricultural/ Irrigation (H)		5	0	3	8
Α	Wells - Oil, Gas, Geothermal (H)		5	0	3	8
B5	Chemical/petroleum pipelines (H)		5	0	3	8
B5	Farm machinery repair (H)		5	0	3	8
B5	Illegal activities/unauthorized dumping (H)		5	0	3	8
B5	Lumber processing and manufacturing (H)		5	0	3	8
B5	NPDES/WDR permitted discharges (H)		5	0	3	8
B5	Pesticide/fertilizer/petroleum storage & transfer areas (H)		5	0	3	8
B5	Underground storage tanks - Not yet upgraded or registered tanks (H)		5	0	3	8
B5	Wells - Agricultural/ Irrigation (H)		5	0	3	8
B5	Wells - Oil, Gas, Geothermal (H)		5	0	3	8
B10	Chemical/petroleum pipelines (H)		5	0	3	8
B10	Farm machinery repair (H)		5	0	3	8
B10	Illegal activities/unauthorized dumping (H)		5	0	3	8
B10	Lumber processing and manufacturing (H)		5	0	3	8
B10	NPDES/WDR permitted discharges (H)		5	0	3	8
B10	Pesticide/fertilizer/petroleum storage & transfer areas (H)		5	0	3	8
B10	Underground storage tanks - Not yet upgraded or registered tanks (H)		5	0	3	8
B10	Wells - Agricultural/ Irrigation (H)		5	0	3	8
B10	Wells - Oil, Gas, Geothermal (H)		5	0	3	8

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