

WORKSHEET 1
SUMMARY SCORE SHEET

July 5, 2001

Site was assessed for the August 28, 2001, Update.

Site Name/Location (Street, City, County, Section /Township/Range, ID Number):

Pope & Talbot Mill Site	Township:	27N
View Drive	Range:	2E
Port Gamble, WA 98364	Section:	7
	Longitude:	122° 34' 58"
	Latitude:	47° 51' 18"

Facility Site ID: 93937775

Site Description (Include management areas, substances of concern, and quantities):

The Pope & Talbot Mill Site is located on the eastern side of the town of Port Gamble in rural Kitsap County. The Mill Site is located on a filled sand spit area on the shoreline of Port Gamble Bay and Hood Canal. A sawmill operated at the site between 1853 and 1995. In 1995, mill operations ceased and in 1996-1997 the mill was dismantled and removed. The historic sawmill activities included surface wood treatment, mechanical equipment use and maintenance, and PCB transformers were also located on site. The property is currently owned by Pope & Talbot Inc., with a transfer of ownership pending cleanup to Pope Resources, a separate corporation.

Currently, the site is in use as a lumber stockyard and a pellet mill is now on site. Heavy equipment is maintained and operated at the site as part of these operations. There is a fueling area for the equipment on site as well. The site is approximately 80% paved with stormwater drains in the area leading to Port Gamble Bay.

This site was listed on the Washington State Department of Ecology's (Ecology) Integrated Site Information System (ISIS) list on April 11, 2001, based on the initial investigation performed by Ecology in January 1997 and site assessments performed for Pope & Talbot (P&T) in 1998-2000.

The initial investigation performed by Ecology in January, 1997, sampled stormwater catch basin sediment at the site. The samples were contaminated by petroleum products, metals, and polycyclic aromatic hydrocarbons (PAHs) above MTCA Method A cleanup levels. The first P&T site assessment was performed in June, 1999, to determine the extent of soil contamination at the site. This assessment revealed soil contamination by petroleum products, polycyclic aromatic hydrocarbons, metals, and wood preservatives. The second assessment was performed in October, 1999, to assess impacts to ground and surface waters at the site. This assessment revealed impacts to shallow groundwater from PAHs, metals, volatile organic compounds (VOCs) and petroleum products. The third assessment performed April, 2000, was to address

the metals contamination found in surface and ground waters at the site. A sediment chemistry reconnaissance investigation was also performed by P&T for this shoreline site. Sediment samples revealed contamination by PCBs, metals, and PAHs. Copies of all the assessment reports are on file with Ecology's Northwest Regional Office.

Port Gamble Bay and the Hood Canal are shellfish harvesting areas, salmon habitat, and highly productive marine environments. Located across the mouth of the bay from the mill site is the Port Gamble S'Klallam Tribal land. Within 2 miles of the site there are both Group A and B public water supply systems and many private wells. The Group A and B systems serve an estimated 477 persons, and the private wells serve an additional 96 persons.

Special Considerations (Include limitations in site file data or data which cannot be accommodated in the model, but which are important in evaluating the risk associated with the site, or any other factor(s) over-riding a decision of no further action for the site):

Analytical data from sediment at the mill site revealed elevated levels of contaminants. Because there was confirmed contamination in the sediment at the site it is considered that a release to surface waters has occurred.

PATHWAY SCORES:

Surface Water/Human Health:	<u>16.06</u>	Surface Water/Environ:	<u>30.25</u>
Air/Human Health:	<u>14.42</u>	Air/Environmental:	<u>24.20</u>
Groundwater/Human Health:	<u>28.78</u>		

OVERALL RANK: 2

**WORKSHEET 2
ROUTE DOCUMENTATION**

1. SURFACE WATER ROUTE -

List those substances to be considered for scoring: Source: 1

Lead, cadmium, phenanthracene, pyrene, benzo[a]pyrene, indeno(1,2,3,c,d)pyrene, pentachlorophenol, PCBs

Explain basis for choice of substance (s) to be used in scoring.

Analytical results from soil and sediment samples and physical characteristics of site.

List those management units to be considered in scoring: Source: 1

Contaminated soils and sediment.

Explain basis for choice of unit to be considered in scoring.

Analytical results from soil and sediment sampling.

2. AIR ROUTE

List those substances to be considered for scoring: Source: 1

Lead, cadmium, copper, benzo[a]pyrene, TPH-D, pentachlorophenol

Explain basis for choice of substance (s) to be used in scoring.

Analytical results from soil and sediment samples and physical characteristics of site.

List those management units to be considered in scoring: Source: 1

Contaminated soil.

Explain basis for choice of unit to be considered in scoring.

Analytical results from soil sampling and historic activities.

WORKSHEET 2 (CONTINUED)
ROUTE DOCUMENTATION

3. GROUND WATER ROUTE

List those substances to be considered for scoring:

Source: 1

1,2-dichloroethane, m,p-xylene, naphthalene, lead, cadmium, phenanthracene, pyrene, benzo[a]pyrene, indeno(1,2,3,c,d)pyrene, pentachlorophenol, PCBs

Explain basis for choice of substance (s) to be used in scoring.

Analytical results from soil and groundwater investigation.

List those management units to be considered in scoring:

Source: 1

Contaminated soils / groundwater

Explain basis for choice of unit to be considered in scoring.

Analytical results from soil and groundwater investigation.

**WORKSHEET 4
 SURFACE WATER ROUTE**

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard	Val.	Acute Toxicity	Val.	Chronic Toxicity	Val.	Carcinogenicity		
	(ug/l)		(mg/kg-bw)		(mg/kg/day)		WOE	PF	Val.
lead	5	8	-	ND	-	ND	B2	-	ND
cadmium	5	8	225	5	0.0005	5	B1	6.1	7
phenanthracene	0.2	10	-	ND	-	ND	-	-	ND
pyrene	0.2	10	2700	3	0.03	1	-	-	ND
benzo[a]pyrene	0.2	10	50	10	-	ND	B2	12	7
Indeno(1,2,3,c,d)pyrene	0.2	10	-	ND	-	ND	B2	-	ND
Pentachlorophenol	0.1	10	-	ND	0.03	1	B2	0.12	4
PCBs	0.5	10	1315	3	-	ND	B2	7.7	6

Source: 1, 4
 Highest Value: 10
 2 Bonus Points? 2
 Final Toxicity Value 12

1.2 Environmental Toxicity

() Freshwater
 (X) Marine

Substance	Acute Criteria	Val.	Non-human Mammalian Acute Toxicity		Source	Value:
	(ug/l)		(mg/kg)	Val.		
lead	140	4	-		<u>1, 4</u>	<u>8</u>
cadmium	43	6	-			
phenanthracene	300	4	-			
pyrene	300	4	-			
benzo[a]pyrene	300	4	-			
Indeno(1,2,3,c,d)pyrene	300	4	-			
Pentachlorophenol	13	6	-			
PCBs	10	8	-			

1.3 Substance quantity

Explain basis: unknown amounts of sediment and upland contamination

Source 1 Value: 1

**WORKSHEET 4 (CONTINUED)
 SURFACE WATER ROUTE**

2.0 MIGRATION POTENTIAL

- 2.1 Containment Source 1, 3 Value: 4
Explain basis: spills and discharges at the surface with unmaintained run-on/run-off controls
- 2.2 Surface Soil Permeability: paved, and piped to surface water Source 1, 3, 8 Value: 7
- 2.3 Total Annual Precipitation: 19 inches/year Source 5A Value: 2
- 2.4 Max. 2-Yr/24-hour Precipitation: 1.3 inches Source 5a Value: 2
- 2.5 Flood Plain: Not in a flood plain Source 1, 6 Value: 0
- 2.6 Terrain Slope: piped to surface water Source 6 Value: 3

3.0 TARGETS

- 3.1 Distance to Surface Water: (<1,000 feet) Source 1 Value: 10
- 3.2 Population Served within 2 miles: None. Source 6 Value: 0
- 3.3 Area Irrigated within 2 miles: None. Due to heavy rainfall in the area Source 1 Value: 0
- 3.4 Distance to Nearest Fishery Resource: <1,000 ft Source 7 Value: 12
- 3.5 Distance to, and Name (s) of, nearest Sensitive Environment (s) : 1,000 ft for fisheries resource Source 7 Value: 12

4.0 RELEASE

- Explain basis for scoring a release to surface water: confirmed release to surface waters Source 1 Value: 5

**WORKSHEET 5
AIR ROUTE**

1.0 SUBSTANCE CHARACTERISTICS

1.1 Introduction (WARM Scoring Manual) - Please review before scoring.

1.2 Human Toxicity

Substance	Air Standard	Acute Toxicity		Chronic Toxicity		Carcinogenicity			
	(ug/m3)	Val.	(mg/kg)	Val.	(mg/kg/day)	Val.	WOE	PF	Val.
lead	0.5	10	-	ND	-	ND	-	-	ND
cadmium	0.00056	10	25	10	-	ND	-	-	6
copper	3.3	9	-	ND	-	ND	-	-	ND
benzo[a]pyrene	0.0006	10	-	ND	-	ND	-	-	ND
TPH-D	166.5	4	-	ND	-	ND	-	-	ND
Pentachlorophenol	1.7	9	-	ND	-	ND	-	-	ND
						Source:	<u>4</u>		
						Highest Value:	<u>10</u>		
						2 Bonus Points?	<u>2</u>		
						Final Toxicity Value	<u>12</u>		

1.3 Mobility (Use numbers to refer to above listed substances)

1.3.1 Gaseous Mobility

Henry's Law Constant:	TPH-D	8.20E-02	Source <u>3</u>	Value: <u>3</u>
	Pentachlorophenol	1.10E-04	3	
			2	

1.3.2 Particulate Mobility

Soil type:	gravelly sand	Source <u>3</u>	Value: <u>0</u>
Erodibility:	22		
Climactic Factor:	1-10		

1.4 Highest Human Health Toxicity/Mobility Matrix Value (from Table A-7)

equals **Final Matrix Value:** 18

1.5 Environmental Toxicity/Mobility

Source: 4

Non-human Mammalian

Substance	Toxicity (mg/m3)	Value	Mobility	Value	Matrix Value
lead	-	ND			
cadmium	25	10	0	0	3
copper	-	ND			
benzo[a]pyrene	-	ND			
TPH-D	-	ND			
Pentachlorophenol	-	ND			

WORKSHEET 5 (CONTINUED)
AIR ROUTE

1.5 Highest Environmental Toxicity/Mobility Matrix Value (from Table A-7) equals

Final Matrix Value: 3

Pope Talbot Mill site

July 5, 2001

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1.6 Substance Quantity: 325-540 square feet of surface staining
Explain basis

Source 1 Value: 3

2.0 MIGRATION POTENTIAL

2.1 Containment: spills directly to ground surface with minimal cover and no vapor collection system

Source 3 Value: 10

3.0 TARGETS

3.1 Nearest Population: Under 1,000 feet

Source 3,7 Value: 10

3.2 Distance to, and Name (s) of, Nearest Sensitive Environment (s) habitat for endangered species wetlands <1,000 feet

Source 1,3,7 Value: 7

3.3 Population within 0.5 miles: 20 homes at 3 people per home = 60 persons

Source 7 Value: 8

4.0 RELEASE

Explain basis for scoring a release to air:

Source 1,3 Value: 0

WORKSHEET 6 GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Drinking
Water

Acute

Chronic

Carcinogenicity

Substance	Standard (ug/l)	Val.	Toxicity (mg/kg-bw)	Val.	Toxicity (mg/kg/day)	Val.	WOE	PF	Val.
1,1-dichloroethane	-	ND	725	5	0.1	1	C	0.091	3
m,p-xylene	10000	2	5000	3	2	1	-	-	ND
naphthalene	20	6	490	5	0.004	3	-	-	ND
lead	5	8	-	ND	-	ND	B2	-	ND
cadmium	5	8	225	5	0.0005	5	B1	6.1	7
phenanthracene	0.2	10	-	ND	-	ND	-	-	ND
pyrene	0.2	10	2700	3	0.03	1	-	-	ND
benzo[a]pyrene	0.2	10	50	10	-	ND	B2	12	7
Indeno(1,2,3,c,d)pyrene	0.2	10	-	ND	-	ND	B2	-	ND
Pentachlorophenol	0.1	10	-	ND	0.03	1	B2	0.12	4
PCBs	0.5	10	1315	3	-	ND	B2	7.7	6

Source: 1,3,4
 Highest Value: 10
 2 Bonus Points? 2
Final Toxicity Value: 12

1.2 Mobility (Use numbers to refer to above listed substances) Source 3,4 Value: 3

Solubility 1,1-dichloroethane 3
 Cations/Anions cadmium 3
 zinc 3

1.3 Substance Quantity 1,3 Value: 1
 Explain basis: unknown, no estimate

2.0 MIGRATION POTENTIAL

2.1 Containment contaminated soils scored as landfill with low perm Source 1,3 Value: 6
 Explain basis: cover (1) no liner (3) or leachate control (2)

2.2 Net Precipitation: Rainfall (N-A) (14) - ET (N-A) (6) = 8 inches Source 2,3,5C Value: 1

2.3 Subsurface Hydraulic Conductivity: gravelly sand, silty sand Source 3,8 Value: 3

2.4 Vertical Depth to Ground Water: >0-25 Source 3,9 Value: 8

**WORKSHEET 6
 GROUND WATER ROUTE (CONTINUED)**

3.0 TARGETS

3.1 Ground Water Usage: Public and private supplies with alternates available Source 3,7,9 Value: 4

3.2 Distance to Nearest Drinking Water Well: >1,300 -2,640 feet Source 3,7,9 Value: 3

3.3 Population Served within 2 Miles: square root of 549 = 23 Source 3,7,9 Value: 24

Pope Talbot Mill site

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(153+180 people) + 48 connections at 3 persons per connection = 477 people on public water

32 private wells at 3 persons per well = 96 people on private water

3.4 Area Irrigated by (Groundwater) Wells NO AREA IRRIGATED Source NA Value: 0
within 2 miles:

4.0 RELEASE

Explain basis for scoring a release to ground water:

Source 1,3 Value: 5

Confirmed release in groundwater samples

Sources Used in Scoring

1. Pope & Talbot Mill Site Phase I Soil and Phase I and II Surface Water and Groundwater Sampling Reports - Parametrix 1999 and 2000
2. Kitsap County Stormwater Management Ordinance and Design manual, April 1997.
3. Washington Department of Ecology, WARM Scoring Manual, April, 1992.
4. Washington Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January, 1992.
- 5A. Kitsap County Groundwater Management Plan, Volume I, July 1989.
- 5B. Kitsap County Groundwater Management Plan, Volume II, April 1991.
- 5C. Kitsap County Groundwater Management Plan, Volume III, April 1996
6. BKCHD GIS system for Kitsap County topographic information
7. EPA Site Info, April 2001
8. Soil Survey of Kitsap County Area, WA, United States Department of Agriculture, Soil Conservation Service, September 1980
9. Bremerton-Kitsap County Health District Well Log Database, 2001
10. Washington State Department of Ecology, Model Toxics Control Act Cleanup Levels and Risk Calculations Update February 1996.

Pope and Talbot Mill Site

SHA Investigation

Lat: 47 51 17.5 Long: 122 34 50
KITSAP County, WA.

This computer representation has been compiled by the U.S. Environmental Protection Agency (EPA) from sources which have supplied data or information that has not been verified by the EPA. This data is offered here as a general representation only, and is not to be used for commercial purposes without verification by an Independent professional qualified to verify such data or information. The EPA does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any loss or injury resulting from reliance upon the information shown.

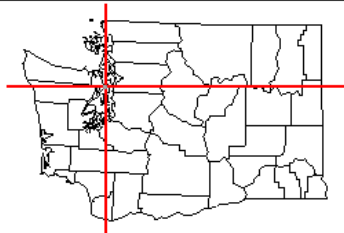
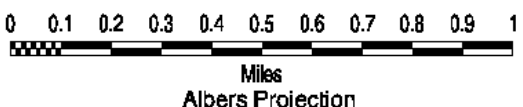
LEGEND

Note: Facility labeling turned off for categories with more than 50 points. Some facilities without good addresses may plot at zip code centroids. Facility points have been restricted to user specified area.

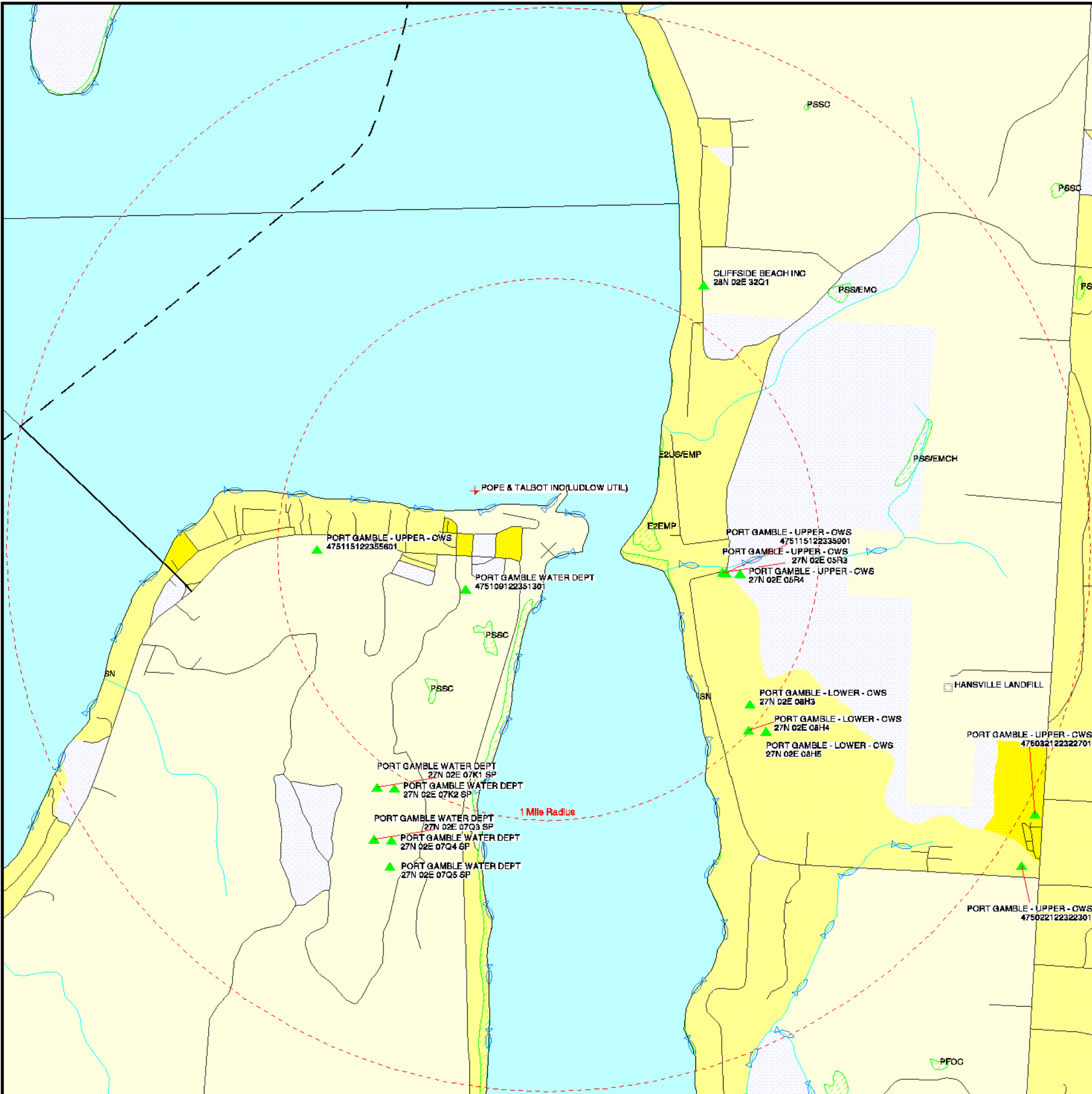
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|--|-----------------------------------------------|--|---------------------------------------------------------|
| | CERCLIS NPL Site | | National Park/Recreation Area |
| | CERCLIS NPL Site (Proposed) | | Wetlands / Washington Area (National Wetland Inventory) |
| | CERCLIS Deleted From NPL Final Site | | Stream - Not Classified |
| | CERCLIS Part of NPL Final Site | | Stream - Low Value For Resident Fish Area |
| | CERCLIS Non-NPL Site Many located by zipcode! | | Stream - Moderate Value For Resident Fish Area |
| | Archived from CERCLIS | | Stream - Substantial Value For Resident Fish Area |
| | RCRA TSD or LQG Site (Others Excluded) | | Stream - Outstanding Value For Resident Fish Area |
| | EPCRA TRI Site (Toxics Release Inventory) | | Stream - Critical Species or Spawning Area |
| | PCS Facility Site | | Stream - Anadromous Fish Presence |
| | AFS/AIRS Site | | County Boundary |
| | Public Ground Water Supply Well | | |
| | Public Surface Water Supply Intake | | |
| | Major Roads and Highways | | |
| | Other Roads | | |

1990 Population Density Per Sq Mi

- | | | | |
|--|---------------|--|-----------------|
| | Under 10 | | 3,000 - 6,000 |
| | 10 - 100 | | 6,000 - 10,000 |
| | 100 - 1,000 | | 10,000 - 20,000 |
| | 1,000 - 3,000 | | Over 20,000 |



Produced 05/16/01
By SITEPLUS (Req #60630b)



Pope and Talbot Mill Site

SHA Investigation

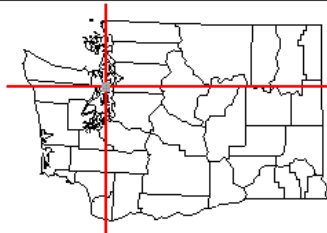
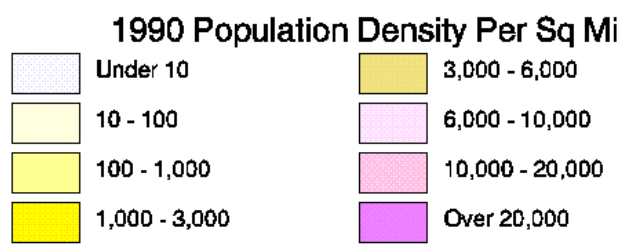
Lat: 47 51 17.5 Long: 122 34 50
KITSAP County, WA.

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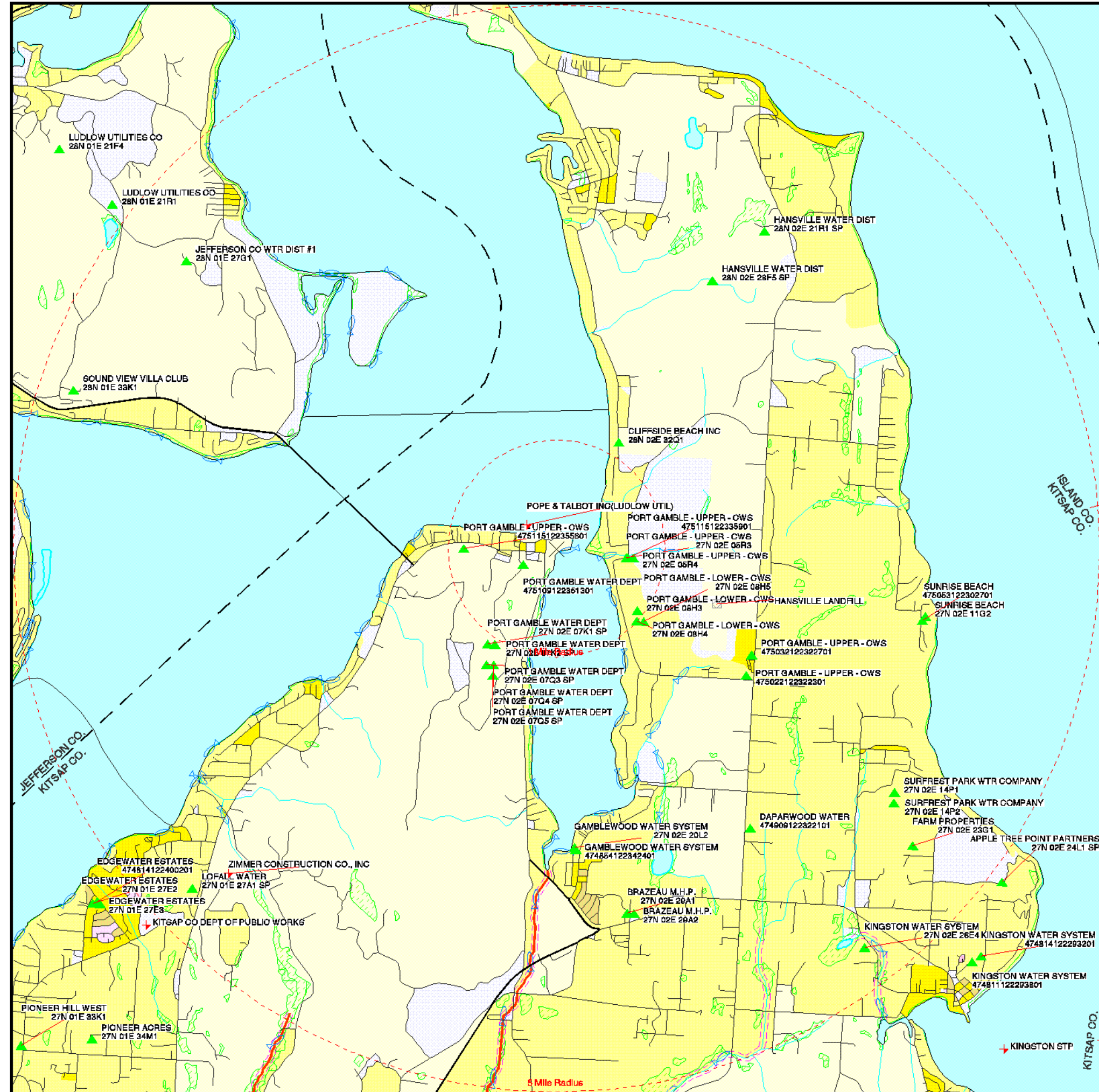
LEGEND

Note: Facility labeling turned off for categories with more than 50 points. Some facilities without good addresses may plot at zip code centroids. Facility points have been restricted to user specified area.

- CERCLIS NPL Site
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- Stream - Substantial Value For Resident Fish Area
- Stream - Outstanding Value For Resident Fish Area
- Stream - Critical Species or Spawning Area
- Stream - Anadromous Fish Presence
- County Boundary



Produced 05/16/01
By SITEPLUS (Req #60630)



Name: Pope & Talbot Mill Site

Location: Port Gamble

Photo #: 1

Date: 5/31/01

Time: 1045

Taken by: Grant Holdcroft

Witness: Jan Brower

Film: None

Camera: Olympus D-320L
Digital Camera



Description: Overview of the Pope & Talbot Mill site from the west hill looking southeast.

Name: Pope & Talbot Mill Site

Location: Port Gamble

Photo #: 2

Date: 5/31/01

Time: 1045

Taken by: Grant Holdcroft

Witness: Jan Brower

Film: None

Camera: Olympus D-320L
Digital Camera



Description: Overview of the Pope & Talbot Mill site from the west hill looking east.

Name: Pope & Talbot Mill Site

Location: Port Gamble

Photo #: 3

Date: 5/31/01

Time: 1045

Taken by: Grant Holdcroft

Witness: Jan Brower

Film: None

Camera: Olympus D-320L
Digital Camera



Description: Overview of the Pope & Talbot Mill site from the west hill looking northeast.

Name: Pope & Talbot Mill Site

Location: Port Gamble

Photo #: 4

Date: 5/31/01

Time: 1100

Taken by: Grant Holdcroft

Witness: Jan Brower

Film: None

Camera: Olympus D-320L
Digital Camera



Description: East monitoring well

Name: Pope & Talbot Mill Site

Location: Port Gamble

Photo #: 8

Date: 5/31/01

Time: 1107

Taken by: Grant Holdcroft

Witness: Jan Brower

Film: None

Camera: Olympus D-320L
Digital Camera



Description: Concrete bunker in fueling area. note waste oil and fuel on the ground mixed with water.

Name: Pope & Talbot Mill Site

Location: Port Gamble

Photo #: 9

Date: 5/31/01

Time: 1107

Taken by: Grant Holdcroft

Witness: Jan Brower

Film: None

Camera: Olympus D-320L
Digital Camera



Description: Stained soil at the base of the fuel area concrete bunker. Note staining of fuel/oil up the side wall of the concrete bunker.