

**CITY OF DOVER (PWS 1090193)
SOURCE WATER ASSESSMENT REPORT**

November 22, 2000



**State of Idaho
Department of Environmental Quality**

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Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. This assessment is based on a land use inventory of the designated assessment area and sensitivity factors associated with the watershed characteristics.

This report, *Source Water Assessment for the City of Dover (1090193)*, describes the public drinking water system, the zone boundary of water contribution, and the associated potential contaminant sources located within this boundary. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The City of Dover drinking water system consists of one surface water intake. This relatively new drinking water system has not experienced significant water quality issues. It provides its customers with drinking water that is filtered and treated in accordance with the requirements of the Surface Water Treatment Rule.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

The City of Dover should focus source water protection activities on implementation of practices aimed at reducing the effects of springtime turbidity in the Pend Oreille River and protecting the intake from potential contaminant releases upstream from the intake. As the watershed for the Pend Oreille River is extremely large, most of the designated areas are outside the direct jurisdiction of Dover. Partnerships with state and local agencies and industry groups should be established and are critical to success. Due to the fairly short time associated with the movement of surface waters, source water protection activities should be aimed at short-term management strategies with the development of long-term management strategies to counter any future contamination threats.

A community with a fully developed source water protection program will incorporate many strategies. For assistance in developing protection strategies please contact your regional IDEQ office or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR THE CITY OF DOVER

Section 1. Introduction- Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area, a map showing the entire watershed contributing to the delineated area and the inventory of significant potential sources of contamination identified within the delineated area are attached.

Background

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area and sensitivity factors associated with the intakes and watershed characteristics.

Level of Accuracy and Purpose of the Assessment

Since there are over 2,900 public water sources in Idaho, there is limited time and resources to accomplish the assessments. All assessments must be completed by May of 2003. An in-depth, site-specific investigation of each significant potential source of contamination is not possible. **Therefore, this assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. The Idaho Department of Environmental Quality (IDEQ) recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. IDEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Section 2. Conducting the Assessment

General Description of the Source Water Quality

Dover, Idaho is a community of approximately 250 people, located on the Pend Oreille River near its exit from Lake Pend Oreille (Figure 1). The public drinking water system for Dover is comprised of one drinking water intake.

The City of Dover is not currently facing water quality issues. In recent years the surface water intake has had occasional samples revealing the presence of total coliform bacteria. In addition to routine sampling of finished water, the system operator monitors raw and filtered water for total coliform bacteria monthly to evaluate the source water and determine the effectiveness of the filtration system.

Defining the Zones of Contribution- Delineation

To protect surface water systems from potential contaminants, the EPA required that the entire drainage basin be delineated upstream from the intake to the hydrologic boundary of the drainage basin (U.S. EPA, 1997b). The EPA recognized that an intake on a large water body could have an extensive drainage basin. Therefore, the EPA recommended that large drainage basins be segmented into smaller areas for the purpose of implementing a cost-effective potential contaminant inventory and susceptibility analysis. The delineation process established the physical area around an intake that became the focal point of the assessment. The process included mapping the boundaries of the zone of contribution into stream or river buffer zones that extend from the intake upstream 25 miles or to the 4-hour streamflow time-of-travel boundary, whichever is greater. This 4-hour streamflow is calculated from the 10-year flood event. River or stream buffer zones also extend up tributaries to the remainder of the 25-mile boundary, or the 4-hour streamflow time-of-travel boundary, whichever is greater. And, at a minimum, a buffer zone for lakes, which extends 500 ft. from the shoreline around the circumference of the lake.

In some cases, IDEQ has included a 24-hour emergency response delineation to facilitate emergency-response activities. If a potential contaminant spills directly into a water body, the drinking water utility needs appropriate notification in order to turn off an intake, or switch to an alternative source. The location of the City of Dover intake renders this process unnecessary, as the entire water surface area of the lake along with a 500' buffer around the lake will be included in the delineation.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of surface water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by IDEQ and from available databases.

The dominant land uses outside Dover are undeveloped and rural residential.

It is important to understand that a release may never occur from a potential source of contamination provided they are using best management practices. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination. These involve educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply intake.

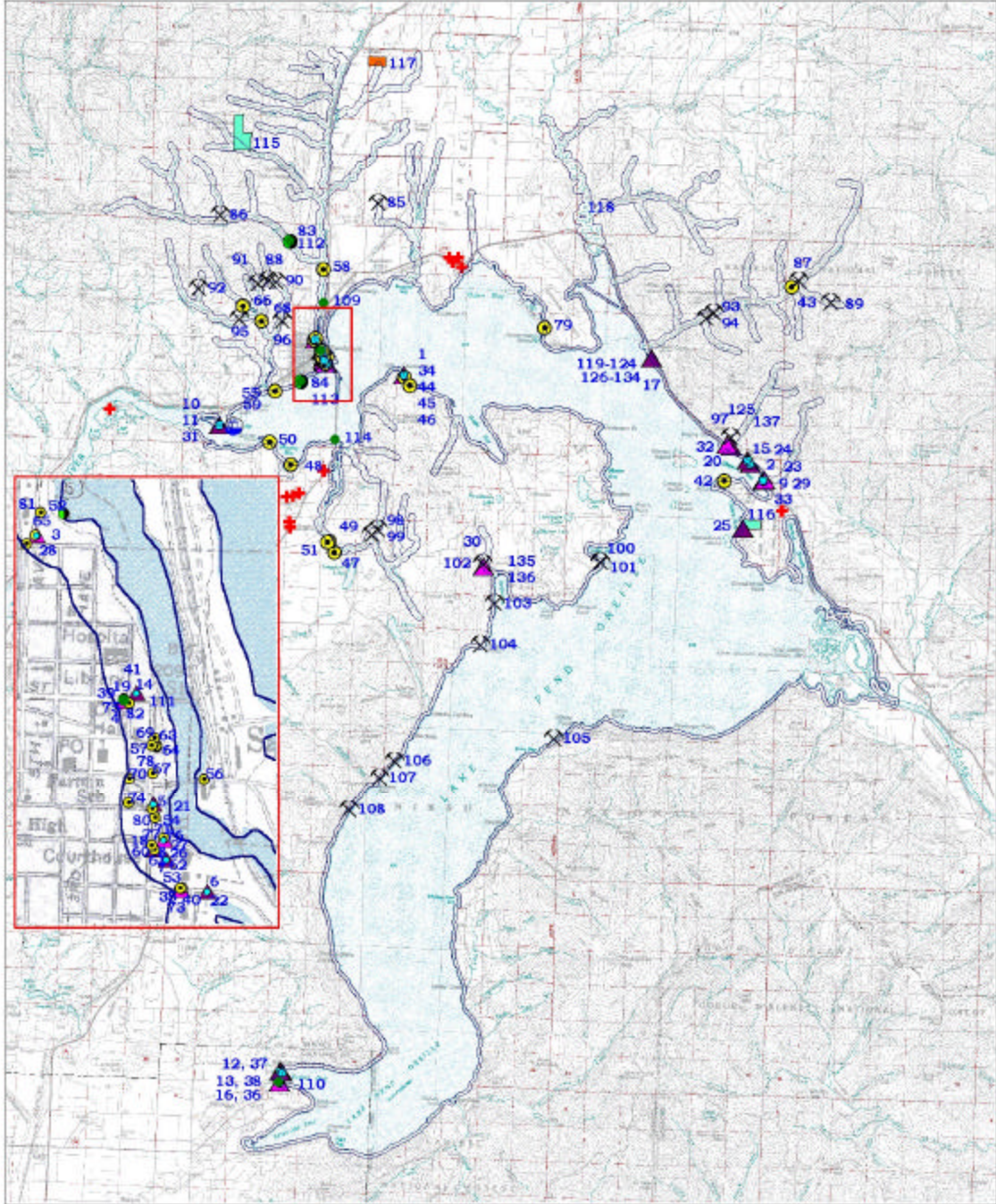
Contaminant Source Inventory Process

A two-phased contaminant inventory of the study area was conducted during the summer of 2000. The first phase involved identifying and documenting potential contaminant sources within the City of Dover source water assessment area through the use of computer databases and Geographic Information System (GIS) maps developed by IDEQ. The second or enhanced phase of the contaminant inventory is voluntary and was not completed by the City of Dover.

A total of 137 potential contaminant sites are located within the delineated source water area (see Table 1). Most of the potential contaminant sources within delineated source water areas are located in or around the city of Sandpoint, Idaho. Significant potential contaminant sources located in the watershed but outside of the buffer zone have also been identified. These are shown in Figure 2 and listed in Table 2. Potential contaminant sources located in the delineated source water area include underground fuel storage tanks, small businesses, National Pollution Discharge Elimination Sites, mines, SARA sites and potential contaminant sites identified by enhanced contaminant inventories completed by other public drinking water systems in the area. IDEQ has made an effort to identify all of the *possible* sources of contamination within the source water area. IDEQ realizes that many of the sites identified in the source water areas for systems drawing from large surface waters are not likely to prove threatening to drinking water intakes outside of the immediate vicinity. (Figure 1).

Contaminants of concern are primarily related to the many small businesses located around Lake Pend Oreille. Table 1 summarizes the potential contaminants of concern and information source.

Figure 1. City of Dover. Buffer Zone Delineation and Potential Contaminant Inventory.



LEGEND

Intake	RFDSD SITE	ICA/IDE
Buffer Zone	LUST Site	UST Site
Detail Area	Economic Making List	Closed
Well	Enhanced Inventory	Open
SARA Title 28 Site (EPCRA)	Enhanced Inventory Coverage	
	Waste Water Land Application Site	

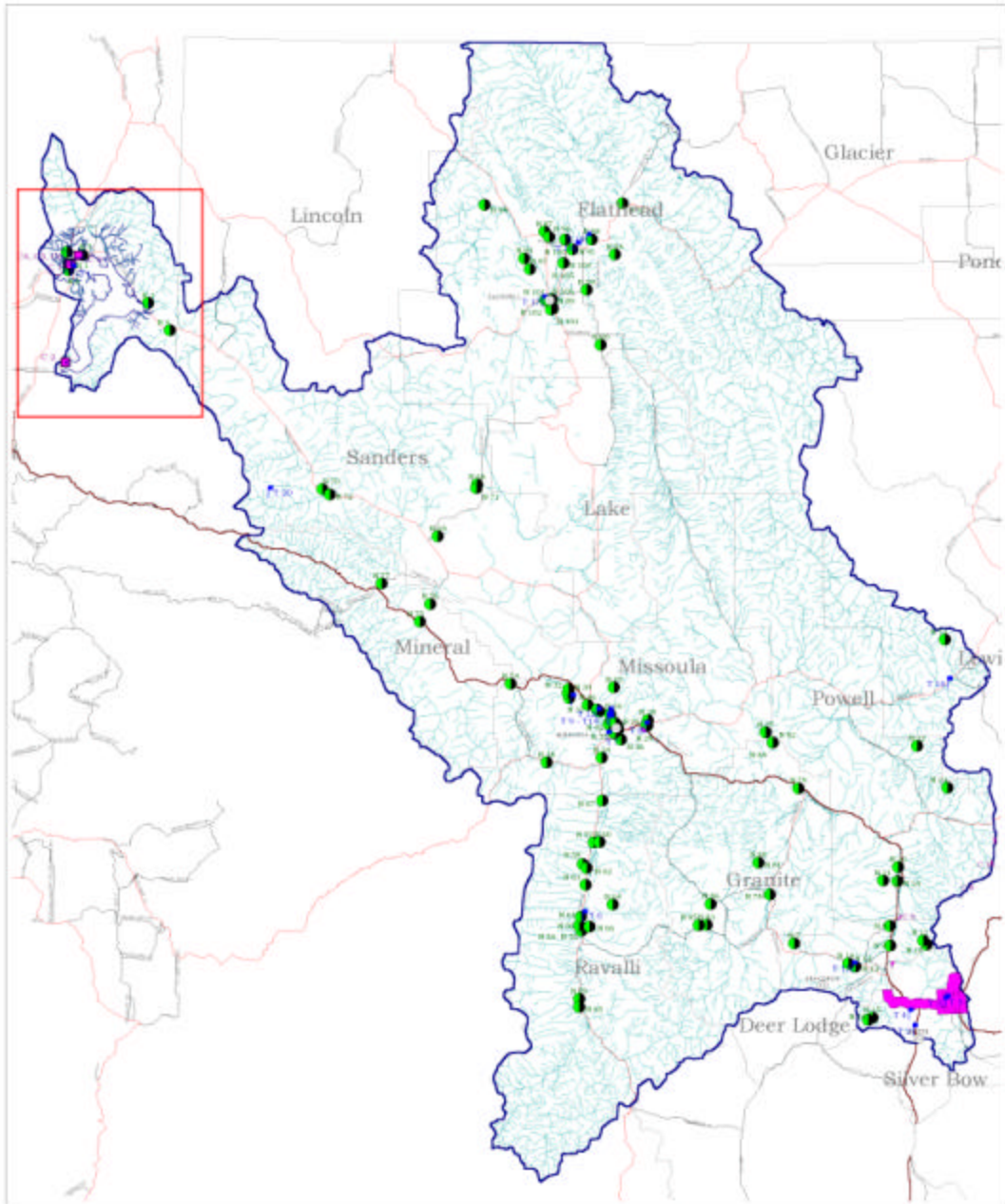
This map and report were prepared by the City of Dover as a result of a grant from the Delaware Department of Environmental Control. The map and report are for informational purposes only and do not constitute a warranty or guarantee of any kind. The City of Dover is not responsible for any errors or omissions in this map and report. The City of Dover is not responsible for any actions taken by any third party based on this map and report.



DATE: 01/13/08



Figure 2. City of Dover. Location of Significant Potential Contaminant Sources in Watershed



0 25 50 75 100 125 150 175 200 Miles

Clark Fork Watershed

LEGEND

Watershed Boundary	Roads	CERCLIS Site
Detail Maps	Primary road with limited access	NPDES Site
Cities and Towns	Primary road	Toxic Release Inventory
Rivers and Streams	Secondary and connecting road	



DNRC Logo 11/09/00
SANS

Table 1. City of Dover Potential Contaminant Inventory

SITE #	Source Description	Source of Information	Potential Contaminants
1	LUST	Database Search	VOC, SOC
2	LUST	Database Search	VOC, SOC
3	LUST	Database Search	VOC, SOC
4	LUST	Database Search	VOC, SOC
5	LUST	Database Search	VOC, SOC
6	LUST	Database Search	VOC, SOC
7	LUST	Database Search	VOC, SOC
8	LUST	Database Search	VOC, SOC
9	LUST	Database Search	VOC, SOC
10	LUST	Database Search	VOC, SOC
11	LUST	Database Search	VOC, SOC
12	LUST	Database Search	VOC, SOC
13	LUST	Database Search	VOC, SOC
14	LUST	Database Search	VOC, SOC
15	LUST	Database Search	VOC, SOC
16	LUST	Database Search	VOC, SOC
17	UST	Database Search	VOC, SOC
18	UST	Database Search	VOC, SOC
19	UST	Database Search	VOC, SOC
20	UST	Database Search	VOC, SOC
21	UST	Database Search	VOC, SOC
22	UST	Database Search	VOC, SOC
23	UST	Database Search	VOC, SOC
24	UST	Database Search	VOC, SOC
25	UST	Database Search	VOC, SOC
26	UST	Database Search	VOC, SOC
27	UST	Database Search	VOC, SOC
28	UST	Database Search	VOC, SOC
29	UST	Database Search	VOC, SOC
30	UST	Database Search	VOC, SOC
31	UST	Database Search	VOC, SOC
32	UST	Database Search	VOC, SOC
33	UST	Database Search	VOC, SOC
34	UST	Database Search	VOC, SOC
35	UST	Database Search	VOC, SOC
36	UST	Database Search	VOC, SOC
37	UST	Database Search	VOC, SOC
38	UST	Database Search	VOC, SOC
39	UST	Database Search	VOC, SOC
40	UST	Database Search	VOC, SOC
41	UST	Database Search	VOC, SOC
42	Construction Contractors	Database Search	VOC, SOC
43	Tree Service	Database Search	VOC, SOC
44	Building Contractors	Database Search	VOC, SOC
45	Concrete Contractors	Database Search	VOC, SOC, Turbidity
46	Factory Built Homes	Database Search	VOC, SOC
47	Concrete Contractor	Database Search	VOC, SOC, Turbidity

SITE #	Source Description	Source of Information	Potential Contaminants
48	Fish Hatchery	Database Search	VOC, SOC, Microbial
49	Landscape Contractor	Database Search	VOC, SOC, Turbidity
50	Roofing Contractors	Database Search	VOC, SOC
51	Building Contractor	Database Search	VOC, SOC
52	Auto Parts and Supplies	Database Search	VOC, SOC
53	Service Station	Database Search	VOC, SOC
54	Grading Contractors	Database Search	VOC, SOC, Turbidity
55	Cranes- Wholesale	Database Search	VOC, SOC
56	Railroads	Database Search	VOC, SOC
57	Concrete Contractors	Database Search	VOC, SOC, Turbidity
58	Bridge Builders	Database Search	VOC, SOC
59	Marine Contractors	Database Search	VOC, SOC
60	Photographers- Commercial	Database Search	IOC, VOC
61	Government	Database Search	IOC
62	Marina	Database Search	VOC, SOC
63	Tile, Ceramic Contractor	Database Search	VOC, SOC, IOC
64	Screen Printing	Database Search	VOC, SOC
65	Service Station	Database Search	VOC, SOC
66	Building Contractor	Database Search	VOC, SOC
67	Candy, Confectionery- Manufacturer	Database Search	VOC, IOC
68	Woodworkers	Database Search	IOC, SOC
69	Photo Finishing- Retail	Database Search	IOC, VOC
70	Printers	Database Search	IOC, VOC
71	Building Contractors	Database Search	VOC, SOC
72	Auto Parts and Supplies	Database Search	VOC, SOC
73	General Contractors	Database Search	VOC, SOC
74	Sign Manufacturers	Database Search	VOC, SOC, IOC
75	Brewers	Database Search	VOC, IOC
76	General Contractors	Database Search	VOC, SOC
77	Photographers- Stock	Database Search	IOC, VOC
78	Fire Department	Database Search	VOC, SOC
79	Excavating Contractors	Database Search	VOC, SOC
80	Newspaper Publishers	Database Search	IOC, VOC
81	Truck Renting and Leasing	Database Search	VOC, SOC
82	Photographers- Portrait	Database Search	IOC, VOC
83	NPDES	Database Search	VOC, SOC, IOC, Turbidity
84	NPDES	Database Search	VOC, SOC, IOC, Turbidity
85	Mine- Gravel and Sand	Database Search	Turbidity
86	Mine- Gravel and Sand	Database Search	Turbidity
87	Mine- Lead	Database Search	IOC
88	Mine- Stone	Database Search	Turbidity
89	Mine	Database Search	IOC
90	Mine- Gold	Database Search	IOC
91	Mine	Database Search	IOC
92	Mine- Gravel and Sand	Database Search	Turbidity
93	Mine- Gold	Database Search	IOC
94	Mine- Gold	Database Search	IOC
95	Mine- Gravel and Sand	Database Search	Turbidity

SITE #	Source Description	Source of Information	Potential Contaminants
96	Mine- Gold	Database Search	IOC
97	Mine	Database Search	IOC
98	Mine- Gravel and Sand	Database Search	Turbidity
99	Mine	Database Search	IOC
100	Mine- Lead	Database Search	IOC
101	Mine- Copper	Database Search	IOC
102	Mine- Lead	Database Search	IOC
103	Mine	Database Search	IOC
104	Mine	Database Search	IOC
105	Mine	Database Search	IOC
106	Mine	Database Search	IOC
107	Mine	Database Search	IOC
108	Mine	Database Search	IOC
109	SARA	Database Search	VOC, SOC, IOC
110	SARA	Database Search	VOC, SOC, IOC
111	SARA	Database Search	VOC, SOC, IOC
112	SARA	Database Search	VOC, SOC, IOC
113	SARA	Database Search	VOC, SOC, IOC
114	SARA	Database Search	VOC, SOC, IOC
115	WLAP	Database Search	VOC, SOC, IOC
116	WLAP	Database Search	VOC, SOC, IOC
117	Transfer Station	Database Search	VOC, SOC, IOC, Microbial
118	Golf Course	Enhanced Inventory	VOC, SOC
119	Septic Drainfield	Enhanced Inventory	Microbial
120	Main Rail Line	Enhanced Inventory	VOC, SOC
121	Hwy 200	Enhanced Inventory	VOC, SOC
122	Septic Drainfield	Enhanced Inventory	Microbial
123	Main Rail Line	Enhanced Inventory	VOC, SOC
124	Hwy 200	Enhanced Inventory	VOC, SOC
125	Forest Road	Enhanced Inventory	VOC, SOC
126	Septic Tank	Enhanced Inventory	Microbial
127	Septic Tank	Enhanced Inventory	Microbial
128	Old Wellhead	Enhanced Inventory	Microbial
129	Septic Tank	Enhanced Inventory	Microbial
130	Septic Tank	Enhanced Inventory	Microbial
131	Grey Water Tank	Enhanced Inventory	Microbial
132	Septic Tank	Enhanced Inventory	Microbial
133	AST	Enhanced Inventory	VOC, SOC
134	Public Restrooms	Enhanced Inventory	Microbial
135	Vault Toilet	Enhanced Inventory	Microbial
136	Vault Toilet	Enhanced Inventory	Microbial
137	Landslide	Enhanced Inventory	Turbidity

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Table 2. Significant Potential Contaminant Sites in Watershed**Table 2a. CERCLA Sites**

SITE #	Source Description	Source of Information	Potential Contaminants
C 1	Wood Treatment	Database Search	IOC, SOC
C 2	Government	Database Search	VOC, SOC
C 3	Mining Sediment	Database Search	IOC, Turbidity
C 4	Industrial	Database Search	VOC, SOC
C 5	Industrial	Database Search	VOC, SOC
C 6	Wood Treatment	Database Search	IOC, SOC
C 7	Mine	Database Search	IOC
C 8	Mine	Database Search	IOC
C 9	Mine	Database Search	IOC
C 10	Mine	Database Search	IOC
C 11	Mining Sediment	Database Search	IOC, Turbidity
C 12	Wood Treatment	Database Search	IOC, SOC
C 13	Mine	Database Search	IOC

Table 2b. NPDES Sites

SITE #	Source Description	Source of Information	Potential Contaminants
N 1	Stormwater	Database Search	IOC, VOC, SOC
N 2	Stormwater	Database Search	IOC, VOC, SOC
N 3	Aquaculture	Database Search	Microbial
N 4	Aquaculture	Database Search	Microbial
N 5	Sewage Lagoon	Database Search	Microbial
N 6	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 7	Placer Mine Settling Ponds	Database Search	IOC, VOC, SOC, Microbial
N 8	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 9	Facultative Sewage Lagoon	Database Search	Microbial
N 10	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 11	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 12	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 13	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 14	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 15	Mining Area Drainage	Database Search	IOC
N 16	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 17	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 18	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 19	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 20	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 21	Feedlots	Database Search	Microbial
N 22	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 23	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 24	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 25	Total Discharge To River	Database Search	IOC, VOC, SOC
N 26	Non-Contact Heat Exchanger	Database Search	IOC, VOC, SOC
N 27	Settling Pond Effluent	Database Search	IOC, SOC

SITE #	Source Description	Source of Information	Potential Contaminants
N 28	Trickling Filter Effluent	Database Search	IOC, SOC
N 29	Activated Sludge Effluent	Database Search	IOC, SOC
N 30	Stone Sediment	Database Search	Turbidity
N 31	Stone Sediment	Database Search	Turbidity
N 32	Stone Sediment	Database Search	Turbidity
N 33	Uncontaminated Cooling Water	Database Search	IOC, VOC, SOC
N 34	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 35	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 36	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 37	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 38	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 39	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 40	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 41	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 42	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 43	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 44	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 45	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 46	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 47	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 48	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 49	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 50	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 51	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 52	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 53	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 54	Boiler Blowdown and Cooling Water	Database Search	IOC, VOC, SOC
N 55	Noncontact Cooling Water	Database Search	IOC, VOC, SOC
N 56	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 57	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 58	Feedlots	Database Search	Microbial
N 59	Facultative Sewage Lagoon	Database Search	Microbial
N 60	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 61	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 62	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 63	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 64	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 65	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 66	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 67	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 68	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 69	Lagoon, Without Significant Industry	Database Search	Microbial
N 70	Lagoon, Without Significant Industry	Database Search	Microbial
N 71	Lagoon, Without Significant Industry	Database Search	Microbial
N 72	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 73	Talc Mine	Database Search	Turbidity
N 74	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial

SITE #	Source Description	Source of Information	Potential Contaminants
N 75	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 76	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 77	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 78	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 79	Facultative Sewage Lagoon	Database Search	Microbial
N 80	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 81	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 82	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 83	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 84	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 85	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 86	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 87	Railroad	Database Search	VOC, SOC
N 88	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 89	Noncontact Cooling Water	Database Search	IOC, VOC, SOC
N 90	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 91	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 92	Water Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 93	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 94	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 95	Water Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 96	Wastewater Treatment Plant	Database Search	IOC, VOC, SOC, Microbial
N 97	Feedlots	Database Search	Microbial
N 98	Facultative Sewage Lagoon	Database Search	Microbial
N 99	Storm Water - Mining, Oil and Gas	Database Search	IOC, VOC, SOC
N 100	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 101	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 102	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 103	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 104	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 105	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 106	Storm Water - Industrial	Database Search	IOC, VOC, SOC
N 107	Storm Water - Industrial	Database Search	IOC, VOC, SOC

Table 2c. Toxic Release Inventory Sites

SITE #	Source Description	Source of Information	Potential Contaminants
T 1	Industrial	Database Search	IOC, VOC, SOC
T 2	Industrial	Database Search	IOC, VOC, SOC
T 3	Concrete and Fuel	Database Search	VOC, IOC, SOC
T 4	Silicon	Database Search	VOC, IOC, SOC
T 5	Industrial	Database Search	IOC, VOC, SOC
T 6	Chemical	Database Search	IOC, VOC, SOC
T 7	Industrial	Database Search	IOC, VOC, SOC
T 8	Textile	Database Search	VOC
T 9	Industrial	Database Search	IOC, VOC, SOC
T 10	Chemical	Database Search	IOC, VOC, SOC

SITE #	Source Description	Source of Information	Potential Contaminants
T 11	Wood Products	Database Search	IOC, SOC
T 12	Air Base	Database Search	VOC, SOC
T 13	Stone	Database Search	IOC, Turbidity
T 14	Industrial	Database Search	IOC, VOC, SOC
T 15	Industrial	Database Search	IOC, VOC, SOC
T 16	Wood Products	Database Search	IOC, SOC
T 17	Wood Products	Database Search	IOC, SOC
T 18	Wood Products	Database Search	IOC, SOC
T 19	Aluminum	Database Search	IOC, VOC, SOC
T 20	Mining	Database Search	IOC

Section 3. Susceptibility Analysis

Significant potential sources of contamination were ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity and construction of the intake, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each intake is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking.

Intake Construction

The construction of the City of Dover public water system intake directly affects the ability of the intake to protect the source from contaminants. The City of Dover drinking water system consists of one intake that produces surface water for domestic use. Water production is monitored and managed by the system operator. The intake system construction score was moderate, reflecting the fact that the intake is constructed in a way that provides protection from potential contaminants, but is not located in an infiltration gallery that would provide an added measure of protection.

The City of Dover intake is located approximately 2 ½ miles southwest of the city of Sandpoint, 1700 feet from the north shore of the Pend Oreille River, just as it exits Lake Pend Oreille.

Potential Contaminant Source and Land Use

The intake rated in the moderate category for the inorganic chemical class, volatile organic chemicals, and synthetic organic chemicals.

In terms of the total susceptibility score, it can be seen from Table 3 that the intake showed a moderate susceptibility for microbial contamination, which is generally related to storm water runoff and a high density of individual septic systems.

Table 3. Summary of City of Dover Susceptibility Evaluation

Intake	Contaminant Inventory				System Construction	Final Susceptibility Ranking			
	IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
1	M	M	M	M	M	M	M	M	M

H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

H* - Indicates source automatically scored as high susceptibility due to presence of either a VOC, SOC or an IOC above the Maximum Contaminant Level in the finished drinking water.

Susceptibility Summary

The City of Dover drinking water system is moderately susceptible to all types of contaminants due to the large size of the watershed contributing to the Pend Oreille River and the number of potential contaminant sources located in that watershed.

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. A community with a fully developed source water protection program will incorporate many strategies. The City of Dover should focus source water protection activities on implementation of practices aimed at reducing the impacts of spring runoff and minimizing the likelihood of a contaminant release from one of the many small businesses upstream from the intake. Due to the large size of the watershed, most of the delineated area is outside the direct jurisdiction of Dover. Partnerships with state and local agencies, industry groups and small business owners should be established and are critical to success. Because of the relatively short time involved with the movement of surface water, source water protection activities should be aimed at short-term management strategies with an emphasis on dealing with long-term future impacts from these same sources.

Assistance

Public water suppliers and others may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Coeur d'Alene Regional IDEQ Office

(208) 769-1422

State IDEQ Office

(208) 373-0502

Website: <http://www.deq.state.id.us>

Attachment A

City of Dover Susceptibility Analysis Worksheet

The final scores for the susceptibility analysis were determined from the addition of the Potential Contaminant Source/Land Use Score and Source Construction Score.

Final Susceptibility Scoring:

0 - 7 Low Susceptibility

8 - 15 Moderate Susceptibility

> 16 High Susceptibility

1. System Construction

SCORE

Intake structure properly constructed	YES	0
Infiltration gallery or well under the direct influence of Surface Water	NO	0

Total System Construction Score 2

2. Potential Contaminant Source / Land Use

IOC Score VOC Score SOC Score Microbial Score

Predominant land use type (land use or cover)		2	2	2	2
Farm chemical use high	NO	0	0	0	
Significant contaminant sources *	NO				
Sources of class II or III contaminants or microbials present within the small stream segment of		4	4	4	4
Agricultural lands within 500 feet	YES No Agricultural Land within this zone	0	0	0	0
Three or more contaminant sources	YES	1	1	1	1
Sources of turbidity in the watershed	NO	0	0	0	0

Total Potential Contaminant Source / Land Use Score 9 9 9 9

3. Final Susceptibility Source Score

11 11 11 11

4. Final Source Ranking

Moderate Moderate Moderate Moderate

* Special consideration due to significant contaminant sources
The source water has no special susceptibility concerns

POTENTIAL CONTAMINANT INVENTORY

LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ASuperfund, is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100-year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System)

– Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25% of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.