USFS BIG SPRINGS CAMPGROUND (PWS 6150026)
SOURCE WATER ASSESSMENT FINAL REPORT

May 8, 2001

State of Idaho
Department of Environmental Quality

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Under the Federal 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 sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality (DEQ) is completing the assessments for all Idaho public drinking water systems. The assessment for the USFS Big Springs Campground drinking water source is based on a land use inventory within a 1,000 foot radius of the spring source, sensitivity factors associated with the source, and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for the USFS Big Springs Campground (PWS # 6150026)* describes the public drinking water system, the associated potential contaminant sources located within a 1,000 foot boundary around the drinking water source, and the susceptibility (risk) that may be associated with any associated potential contaminants. 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 system. **The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the USFS Big Springs Campgroundwater system.**

The USFS Big Springs Campground drinking water system consists of one spring (Figure 1) located approximately 11 miles northeast of Lava Hot Springs. At this time, there appears to be no primary water quality issues associated with the spring source. No potential contaminant sources exist within the delineation capture zone (Figure 2).

The susceptibility of the spring to contamination was ranked as high, moderate, or low risk according to the following considerations: physical integrity of the spring intake structures, 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 the spring is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement.

The *Surface Water Treatment Rule*, a primary drinking water regulation, requires that all groundwater sources be evaluated to determine if they are groundwater under the influence of surface water (GWUDI). Groundwater that is influenced by surface water may travel a relatively short distance in a brief period through aquifer material with large pores or fractures. Under these circumstances, pathogenic micro-organisms may be transported in a viable state to the springs, infiltration gallery, or well intakes. For the USFS Big Springs Campground a final GWUDI evaluation has not been made.

The spring construction score was rated high. The 1997 sanitary survey indicates that the spring is located at the base of a steep slope and the water from the spring is surfacing. Water is collected from this area and transported to the campground by a 3-inch PVC line. The risk to the water system is considered less if the spring intake is constructed in such a fashion as to prevent the infiltration of unwanted water with the potential to carry contaminants. The final susceptibility ranking for the spring is high for microbial contaminants and low for inorganic, volatile organic, and synthetic organic contaminants (Table 1). A copy of the susceptibility

analysis for the USFS Big Springs Campground water system along with a map showing any potential contaminant sources is included with this summary.

Figure 1 - Geographic Location of USFS Big Springs Campground, Caribou County PWS Number: 6150026

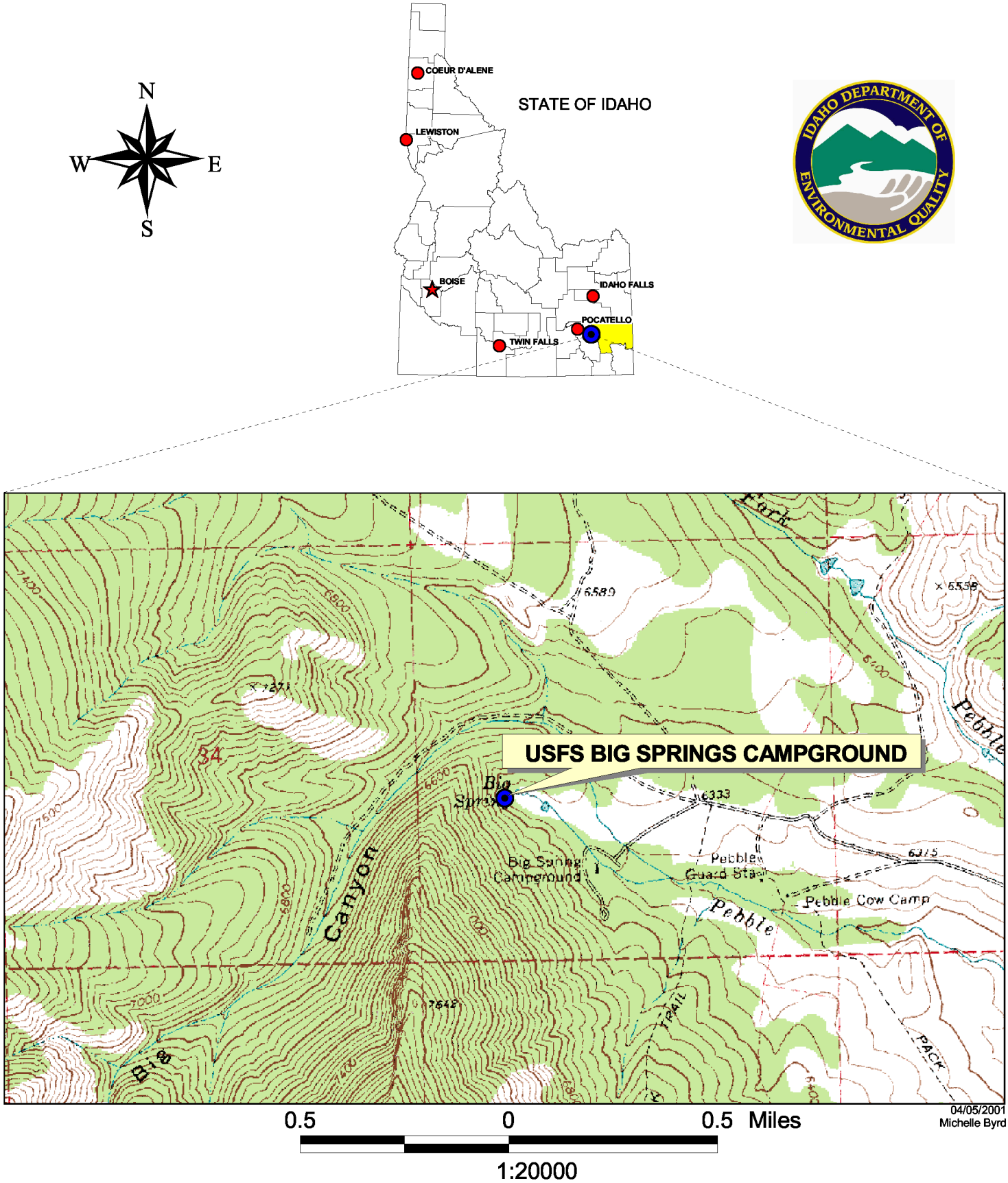
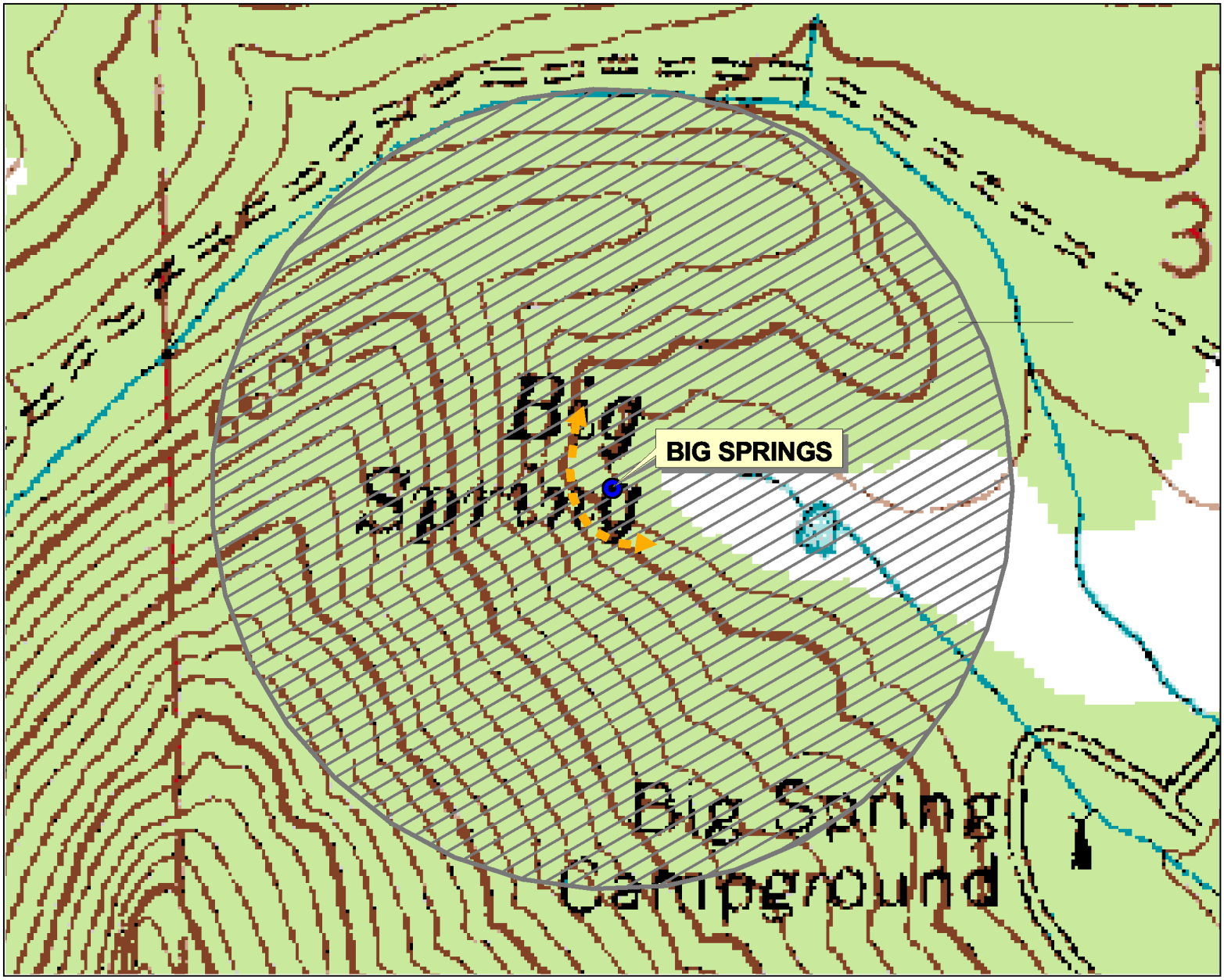


Figure 2 - USFS Big Springs Campground Spring Delineation Map and Potential Contaminant Sources
PWS Number: 6150026



04/23/2001
M. Byrd

N

500 0 500 1000 Feet

1:4500

LEGEND

- Wellhead
- Zone 1B - 1000' Radius
- Hiker/Animal Influence

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Table 1. Summary of USFS Big Springs Campground Susceptibility Evaluation

	Susceptibility Scores[1]									
		Contaminant Inventory				System Construction	**Final Susceptibility Ranking**			
Spring		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
1		L	L	L	L	H	L	L	L	H*

[1]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 access of the spring from hikers and animals (area not properly fenced) and water to the campground is from surface water.

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.

For the USFS Big Springs Campground water system, source water protection activities should focus first on improving the spring source protection strategy. The system will want to perform Groundwater Under the Direct Influence (GWUDI) testing as soon as possible. To improve the system construction score and lower the potential for contamination, the water system should fence off the spring area 100 feet in all directions. The water system should also consider developing a source water protection plan. Source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. For assistance in developing protection strategies please contact the Pocatello Regional Office of the Idaho Department of Environmental Quality at (208) 236-6160.

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 (IDEQ) 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 IDEQ.

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

Spring Source Final Susceptibility Scoring

0-7 = Low Susceptibility

8-15 = Moderate Susceptibility

16-21 = High Susceptibility

Surface Water Susceptibility Report

Public Water System Name : USFS BIG SPRINGS CAMPGROUND : SPRINGS

Public Water System Number 6150026

1. System Construction		SCORE
Intake structure properly constructed	NO	1
Infiltration gallery or well under the direct influence of Surface Water	NO	2
Total System Construction Score		3

2. Potential Contaminant Source / Land Use		IOC Score	VOC Score	SOC Score	Microbial Score
Predominant land use type (land use or cover)	BASALT FLOW, UNDEVELOPED, OTHER	0	0	0	0
Farm chemical use high	YES	0	0	2	
Significant contaminant sources *	YES	not properly fenced to keep out animals or visiting hikers walking trail up to spring lot Final GWUDI evaluation has not been made			
Sources of class II or III contaminants or microbials	present within a 1-mile radius and upstream	0	0	0	0
Agricultural lands within 500 feet	NO	0	0	0	0
Three or more contaminant sources	NO	0	0	0	0
Sources of turbidity in the watershed	YES	1	1	1	1
Total Potential Contaminant Source / Land Use Score		1	1	3	1
3. Final Susceptibility Source Score		4	4	6	4
4. Final Source Ranking		Low	Low	Low	High

* Special consideration due to significant contaminant sources

Source is considered High Susceptibility