

**Idaho Snake-Payette Rivers  
Hydrologic Unit Ground Water  
Quality Assessment**

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Idaho Department of Health and Welfare  
DIVISION OF ENVIRONMENTAL QUALITY  
WEST CENTRAL IDAHO REGIONAL OFFICE  
JULY 1993

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**IDAHO SNAKE-PAYETTE RIVER  
HYDROLOGIC UNIT GROUND WATER  
QUALITY ASSESSMENT**

**WEST CENTRAL IDAHO**

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Prepared by

Robert Steed, Gerry Winter, and John Cardwell  
1410 North Hilton Street  
Boise, Idaho 83706

Idaho Department of Health and Welfare  
Division of Environmental Quality  
1410 N. Hilton Street  
Boise, Idaho 83706

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# Table of Contents

|                                                                            |            |
|----------------------------------------------------------------------------|------------|
| <b>List of Illustrations.....</b>                                          | <b>ii</b>  |
| <b>Abstract.....</b>                                                       | <b>iii</b> |
| <b>Introduction.....</b>                                                   | <b>1</b>   |
| <b>Purpose and Objectives .....</b>                                        | <b>2</b>   |
| <b>Past Project and Literature Review .....</b>                            | <b>2</b>   |
| <b>Study Area .....</b>                                                    | <b>3</b>   |
| Climate .....                                                              | 3          |
| Geology .....                                                              | 6          |
| Hydrology .....                                                            | 7          |
| Land Use .....                                                             | 7          |
| Water Use.....                                                             | 9          |
| <b>Materials and Methods.....</b>                                          | <b>9</b>   |
| Sources of data.....                                                       | 9          |
| <i>Idaho Farm Bureau Reconnaissance Ground Water Quality Surveys .....</i> | <i>9</i>   |
| <i>Idaho Division of Environmental Quality Special Projects.....</i>       | <i>11</i>  |
| <i>United States Geological Survey Water Resource Division .....</i>       | <i>12</i>  |
| Preparation .....                                                          | 12         |
| <b>Results and Discussion.....</b>                                         | <b>13</b>  |
| Pesticides .....                                                           | 13         |
| Nitrate .....                                                              | 14         |
| Vulnerability .....                                                        | 16         |
| <b>Conclusions.....</b>                                                    | <b>21</b>  |
| <b>Acknowledgments .....</b>                                               | <b>25</b>  |
| <b>Selected References.....</b>                                            | <b>26</b>  |
| <b>Glossary of Terms and Acronym List.....</b>                             | <b>29</b>  |
| <b>Appendix .....</b>                                                      | <b>32</b>  |
| Description of Data Fields .....                                           | 33         |

# List of Illustrations

## Figures

|                   |                                                                            |    |
|-------------------|----------------------------------------------------------------------------|----|
| <b>Figure 1.</b>  | Location of the hydrologic unit within Idaho .....                         | 1  |
| <b>Figure 2.</b>  | Major communities in the hydrologic unit.....                              | 5  |
| <b>Figure 3.</b>  | The general soil regions of the hydrologic unit .....                      | 6  |
| <b>Figure 4.</b>  | The general geology of the hydrologic unit.....                            | 7  |
| <b>Figure 5.</b>  | The major aquifer types of the hydrologic unit .....                       | 8  |
| <b>Figure 6.</b>  | General land use within the hydrologic unit .....                          | 10 |
| <b>Figure 7.</b>  | Distribution of pesticide concentrations in hydrologic unit.....           | 15 |
| <b>Figure 8.</b>  | Sample location of pesticide detection within the hydrologic unit.....     | 17 |
| <b>Figure 9.</b>  | Sample location and nitrate concentrations within the hydrologic unit..... | 18 |
| <b>Figure 10.</b> | Contour map of nitrate concentrations measure in ground water .....        | 19 |
| <b>Figure 11.</b> | Percentile distribution of nitrate concentrations exceeding 5 mg/l.....    | 20 |
| <b>Figure 12.</b> | Distribution of nitrate concentrations in hydrologic unit.....             | 21 |
| <b>Figure 13.</b> | Ground water vulnerability of the hydrologic unit .....                    | 22 |
| <b>Figure 14.</b> | Critical ground water quality areas .....                                  | 24 |

## Tables

|                   |                                                           |    |
|-------------------|-----------------------------------------------------------|----|
| <b>Table I.</b>   | Major agricultural crops within the hydrologic unit ..... | 8  |
| <b>Table II.</b>  | Pesticide data distribution .....                         | 13 |
| <b>Table III.</b> | Pesticide maximum contaminant levels.....                 | 14 |
| <b>Table IV.</b>  | Nitrate data distribution .....                           | 15 |
| <b>Table V.</b>   | Pesticide data table.....                                 | 34 |
| <b>Table VI.</b>  | Nitrate data table .....                                  | 36 |
| <b>Table VII.</b> | Water table elevation .....                               | 55 |

## Abstract

### Idaho Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment, West Central Idaho

The Idaho Snake-Payette Water Quality Hydrologic Unit Project is one of the 74 projects funded nationally by the United States Department of Agriculture (USDA). The purpose of these 5-year, federally funded projects is to accelerate the transfer of technology necessary to protect ground water and surface water quality while maintaining farm profitability. This report contributes to the first phase of this project which is to determine the nature of ground water quality problems in the study area.

The objectives of this report are to identify the extent of non-point source pollution of ground water from pesticides and nutrients and to pinpoint problem areas and to quantify nutrients and/or pesticides present in ground water by analyzing available data.

The Snake-Payette Rivers Hydrologic Unit area is located primarily in the west central part of Idaho, with the exception of a small portion that is located in eastern Oregon. The Snake-Payette Rivers Hydrologic Unit contains over 840,000 acres, within portions of five Idaho counties, Adams, Canyon, Gem, Payette, and Washington, and a portion of Malheur County, Oregon. Generally the soils found in the hydrologic unit are derived from **basaltic** volcanic rocks, or sediments of **lacustrine**, **fluvial**, and **eolian** origin. There are two different geologic regimes within the hydrologic unit. The first, which is extensively used for agricultural land, is dominated by lacustrine and fluvial deposits. The second which is sparsely populated and left as open range, is dominated by volcanic deposits. The principle aquifers in the basin are in the Miocene basaltic rocks, the overlying Tertiary sediments (Glenns Ferry Formation), and Quaternary sediments. Ground water occurs under artesian and water table conditions in these aquifers. Shallow water table conditions exist throughout the hydrologic unit.

The data used in this hydrologic unit ground water assessment were generated from three sources. These sources are the Idaho Farm Bureau Federation reconnaissance ground water quality surveys (**IFBF/RGWQS**), IDEQ special projects, and the **USGS/WRD** data base. There were a total of 436 samples considered.

The preparation of this assessment required construction of a data base from existing data. Once this data base was completed, the data were used for Geographic Information System (**GIS**) analysis and other statistical analysis.

Within the hydrologic unit there have been 63 ground water samples analyzed for pesticides. Of these 63 ground water samples, there have been 41 detections of five different pesticide compounds from 30 different locations. Of these 41 detections, 29 are Dacthal (or acid metabolite), nine are Pentachlorophenol, one is 2,4-D, one is Diazinon, and one is Metribuzin.

From the results generated by this study of the pesticide, nitrate, and vulnerability data, the critical areas of the non-point source pollution of ground water within or proximal to the hydrologic unit are located in the western portion of the lower Payette River valley, most of the portion of Canyon County that is within the hydrologic unit, and the Sunnyside area, south of Weiser.

## Introduction

Several reconnaissance level studies have been conducted within the Snake-Payette Hydrologic Unit. The following section briefly summarizes these studies.

The Idaho Snake-Payette Water Quality Hydrologic Unit Project is one of the 74 projects funded nationally by United States Department of Agriculture (USDA). The purpose of these 5-year, federally funded projects is to accelerate the transfer of technology necessary to protect ground water and surface water quality while maintaining farm profitability. The project has five phases: (1) determination of ground water problems in the study area, (2) development of nonpoint source pollution control mechanisms (best management practices, BMPs), (3) implementation of developed nonpoint source pollution control mechanisms, (4) develop an economic evaluation of BMP effectiveness in relation to social acceptability, and (5) develop an information and education plan evolving from information used and gathered from the project. (Mahler, 1991).

This assessment addresses the first phase of the Idaho Snake-Payette Water Quality Hydrologic Unit Project; it provides a determination of nonpoint source agricultural impacts on ground water quality located in the Snake-Payette Rivers Hydrologic Unit. It defines the water quality critical areas that may have been impacted by agricultural activities. In turn, these critical areas provide direction and focus to participating agencies involved in implementing nonpoint source pollution control mechanisms to prevent further impact.

Previously, the Idaho Division of Environmental Quality (IDEQ) had

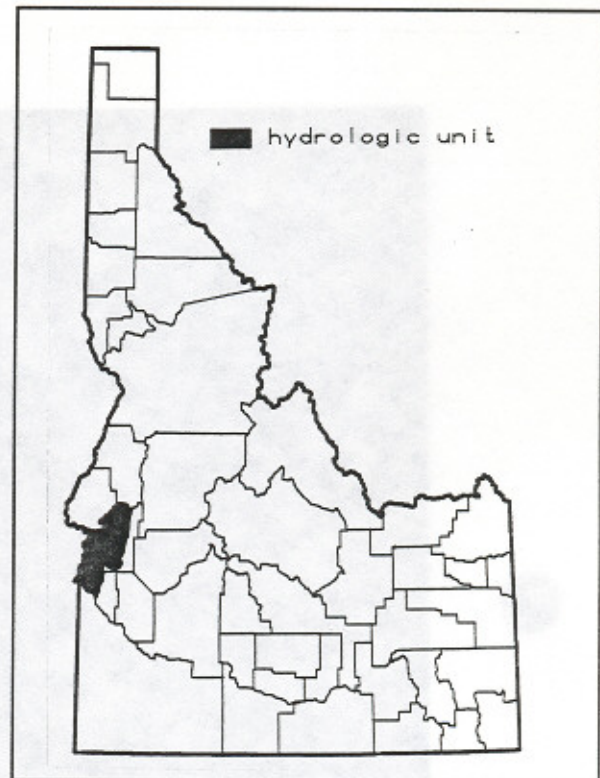


**Figure 1.** Location of the hydrologic unit within Idaho.

identified the area now known as Snake-Payette Rivers Hydrologic Unit in the *Non-point Source Pollution Assessment Report* (IDEQ, 1988) as being one of the most water quality sensitive areas in Idaho. The pollutants were identified as **nutrients** and **pesticides**.

This assessment only addresses agricultural nonpoint source contamination. Agricultural point source contamination caused by inadequate well head protection, septic, or mixing pad problems are not differentiated from nonpoint sources; data are insufficient to differentiate. Identified point sources of contamination can be addressed by established enforceable pollution control mechanisms. On the other hand, agricultural nonpoint sources of contamination do not have precise pollution control mechanisms.

Agriculture in Idaho has a chance to demonstrate that voluntary nonpoint source pollution control mechanisms are successful. The success of these nonpoint source pollution control mechanisms may decrease regulatory activity by already concerned federal and state legislators.

## Purpose and Objectives

The purpose of this report is to meet Idaho Division of Environmental Quality's (IDEQ) commitment to the Idaho Snake-Payette Rivers Hydrologic Unit Project (ISPRHUP).

One objective is to identify the extent of non-point source pollution of ground water from pesticides and nutrients (ISPRHUP (b), 1991: p. 22). Another objective is to pinpoint problem areas and to quantify nutrients and/or pesticides present in ground water, by analyzing and characterizing available well survey data (ISPRHUP (b), 1991: p. 22).

## Past Project and Literature Review

A study conducted in the Weiser River basin, by the U.S. Geologic Survey (1977) was part of a continuing cooperative program of water-resources investigations with the Idaho Department of Water Resources (IDWR). The study was designed to meet the needs of the IDWR in planning for water-resources development and in administering water rights and the needs of water users. Most of this study area is northwest of the hydrologic unit area with some overlap in the Weiser area. Ground water samples were collected and analyzed from 35 wells throughout the

study area. Nitrite plus nitrate as nitrogen concentrations ranged from 0 to 9 mg/l. The higher nitrogen concentrations within the 0 to 9 mg/l range were attributed to organic wastes or excessive fertilization.

The Oregon Department of Environmental Quality (ODEQ) sampled 107 wells, during the period from 1987 through 1989, in the Ontario area for contaminants. This water sampling project was initiated because routine public water supply system sampling, by EPA, revealed concentrations of **nitrate-N** above the federal drinking water maximum contaminant level (MCL) of 10.00 mg/l and the presence of Dacthal (or its acid metabolite). The first EPA sampling results, from 1983, indicated nitrate concentrations as high as 49.00 mg/l. The Snake-Payette Rivers Hydrologic Unit area is located immediately east across the Snake River, and both areas are located in the same regional ground water basin. The Ontario area sampling revealed concentrations of nitrate-N, sodium, arsenic, selenium, and lead above the EPA MCLs. Concentrations of nitrate-N for the Ontario area exceeded the MCL in 35 of 107 wells tested, ranging from 11.00 to 39.20 mg/l. It is not known if the samples were analyzed for pesticides.

An investigation of the quality of the Fruitland area ground water was conducted by IDEQ (unpublished). Sixteen ground water samples were collected and analyzed for nitrate and pesticides. Wells sampled for this investigation included municipal, industrial, and private domestic wells. Nitrate concentrations ranged from less than 0.01 mg/l to 12.9 mg/l. Nine of the 16 samples contained nitrate in excess of 5 mg/l; two of the 16 wells exceeded the MCL (10 mg/l). Dacthal (or its acid metabolite) concentrations ranged from

0.04  $\mu\text{g}/\ell$  to 10  $\mu\text{g}/\ell$  in 12 of the 16 samples.

A study of the quality of the Weiser area's ground water was conducted by IDEQ (unpublished). Seventeen ground water samples were collected from domestic and irrigation wells. The water samples were analyzed for nitrate and pesticides. Nitrate concentrations ranged from 0.6 to 22  $\text{mg}/\ell$ , with 14 of the 17 samples containing greater than 5.0  $\text{mg}/\ell$  nitrate. Eight of the 17 wells exceeded the MCL for nitrate. Dacthal or its acid metabolite concentrations ranged from 0.09 to 73.2  $\mu\text{g}/\ell$  in 12 of the 17 sampled wells.

A study of the quality of the lower Payette area's ground water was conducted by IDEQ (Baldwin and Wicherski, in prep.). The purpose of this study was to collect information for the Payette Soil and Water Conservation District on ground water and soil conditions within the study area to be used in identifying critical areas for planning and other tasks. The scope of work included area-wide ground water sampling of 80 wells to determine general water quality within the project area. A subset of 30 wells was selected for quarterly sampling over a one year period to examine seasonal variations in water quality parameters. The report concludes that "ground water impacts from nitrates have been detected over the entire study area, based on comparison to an assumed background nitrate concentration of less than 0.005  $\text{mg}/\ell$ . Area wide and quarterly sampling indicate that impacts are more severe on the west side of the study area." (Baldwin and Wicherski, in prep.)

## Study Area

The Snake-Payette Rivers Hydrologic Unit area is located primarily in the west central part of Idaho, with the exception of a small portion that is located in eastern Oregon. The Snake-Payette Rivers Hydrologic Unit contains over 840,000 acres, within portions of five Idaho counties, Adams, Canyon, Gem, Payette, and Washington, and a portion of Malheur County, Oregon. There are 13 communities ranging in population from approximately 300 to 5,400; these communities are shown in Figure 2. The larger communities of Payette, Emmett, and neighboring Weiser average approximately 5,000 in population. Within the area there are 3,400 farms covering 60,000 acres. The four major rivers are the Snake River, the Payette River, the Boise River, and the neighboring Weiser River. The hydrologic unit is approximately 1,350 square miles in area and ranges in elevation from 2,100 to 4,026 feet above mean sea level.

## Climate

The data used to describe the climate of the hydrologic unit was acquired from the Climatological Data Annual Summary, Idaho (NOAA, 1990). This reference is the basis for much of the following discussion.

The climate of the hydrologic unit is **semiarid**, and is bordered by a subhumid climate in the higher mountains to the north and to the northeast. In general, the weather of the basin is characterized by warm, dry summers and cool, wet winters. The weather for the last six years has been dryer than normal with precipitation levels

of about 77 percent of normal. Mean annual temperatures are 51.9°F at Emmett, 50.6°F at Parma and 54.1°F at Payette.

The freeze-free growing season is approximately 154 days. Mean annual precipitation near Weiser is 11.9 inches, with the highest mean monthly precipitation occurring in December and January; the lowest precipitation occurs in July and August. Average soil temperature for 1990, based on measurements taken four inches below surface, for Emmett was 66.1°F and for Parma was 59.3°F. There were very few days that the soil temperatures fell below freezing (32°F).

## Soils

The soils found in the hydrologic unit are described in the *Soil Survey of Payette County, Idaho* (SCS, 1976), the *Soil Survey of Canyon Area, Idaho* (SCS, 1972), and the *Soil Survey of Adams/Washington Co.* (unpublished). These references are the basis for much of the discussion below.

Generally the soils found in the hydrologic unit are derived from **basaltic** volcanic rocks, or sediments of **lacustrine**, **fluvial**, and **eolian** origin.

There are five general soil regions within the hydrologic unit. The first soil region, soil region 1, is the northernmost and is derived from basalt residuum. It is well drained and occurs on gently to steeply sloping uplands. A prominent characteristic of the soils of this region is a well developed clayey subsoil with high shrink-swell potential. Soils in region 1 are generally deep. Typical soils in soil region 1 include the Gem, Glasgow,

Newell, and Brownlee Series.

The next region (soil region 2) is located southwest of the first and inter-fingers with soil regions 3 and 4 further southwest. Soils in region 2 are generally **loams** derived from alluvial sediments. Soils are well drained and are very deep. Typical soils in soil region 2 include the Haw, Payette, Power, Purdam, and Van Dusen Series.

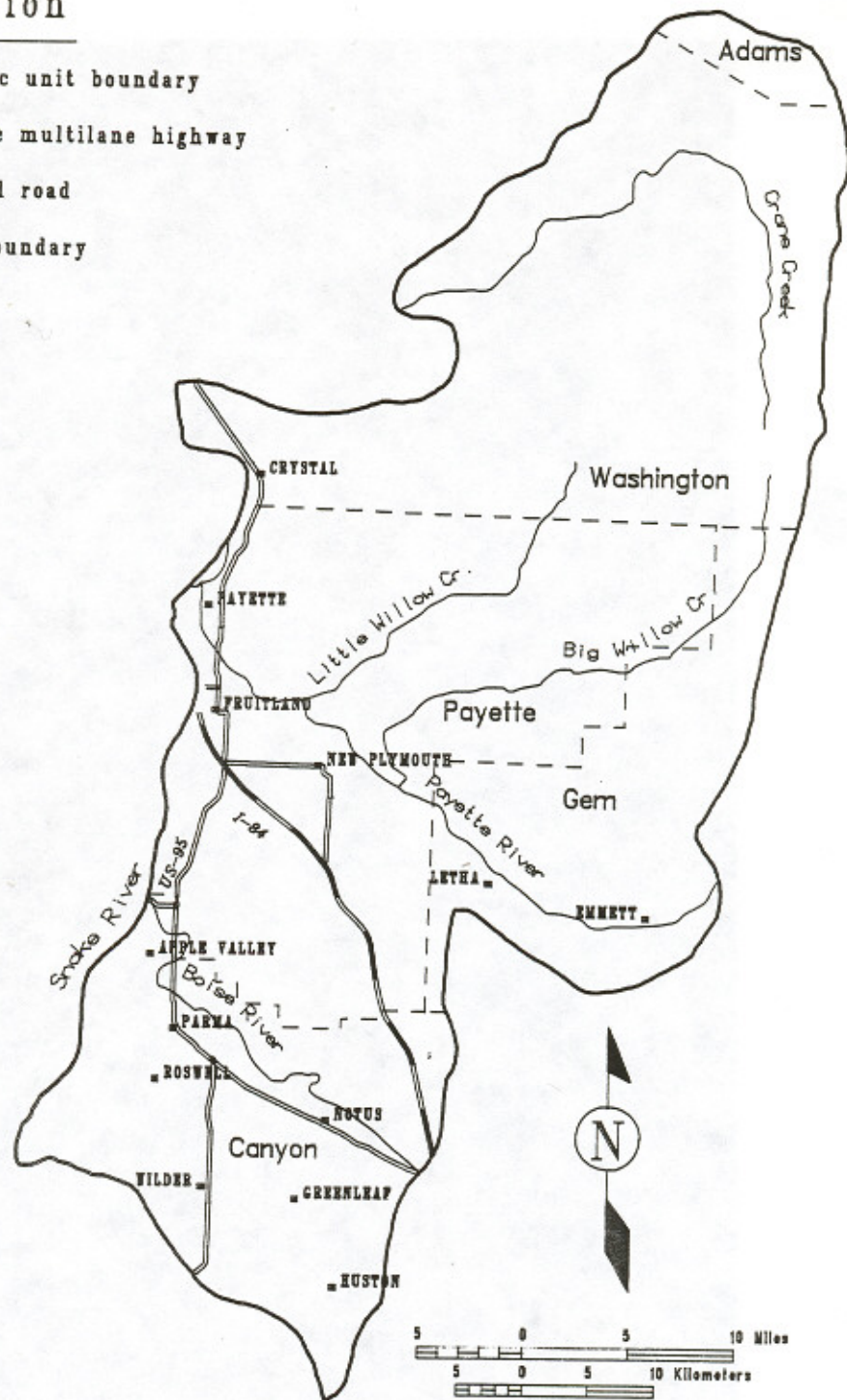
Soil region 3 is located further to the southwest and is proximal to two of the major rivers in the hydrologic unit area: the Payette River and the Snake River. The soils in this region are derived from lacustrine sediments and mixed **alluvium** and are typically silt loams and silty clay loams. Drainage class ranges from poorly to well drained. Typical soils in soil region 3 include the Moulton, Baldock, Chilcoat, and Greenleaf Series.

Soil region 4 is located on either side of soil region 3, along the upper terraces of the Payette River. This soil region is derived from alluvium and **loess**. The soils in the region are distinguished from the other soil regions by the dominance of fragmented **duripans**. Soil profiles are shallow to moderately deep and these soils are of the well drained classification in the areas without the duripan horizon. Typical soils in soil region 4 include the Elijah, Lanktree, Vickery, Chilcoat, and Letha Series.

Soil region 5 is located in the southern part of the hydrologic unit. Soils are derived from well mixed sediments, and are very deep. Textures are generally more sandy than the other soil regions and the drainage class ranges from somewhat poorly drained to well drained. Typical soils in soil region 4 include the Harpt, Turbyfill, Cashmere, Cencove and Feltham Series.

## Explanation

-  hydrologic unit boundary
-  interstate multilane highway
-  U.S. paved road
-  county boundary
-  rivers



Scale 1:500,000

Figure 2. Major communities in the hydrologic unit.

Figure 3 shows the five general soil regions of the hydrologic unit area. This map was refined from the State Soils Geographic Database (STATSGO) GIS coverage that was developed by USDA Soil Conservation Service. Note that no data are represented for the Oregon section of the hydrologic unit.

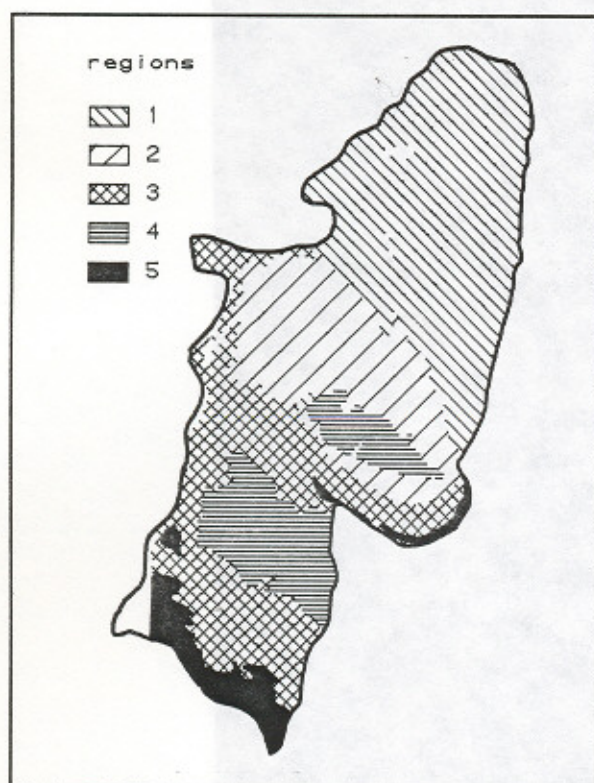


**Figure 3.** The general soil regions of the hydrologic unit.

## Geology

Figure 4 shows the general geology of the hydrologic unit. It is refined from the *1:500,000 Geologic Map of Idaho* (Idaho Geological Survey, 1978). The units are as follows: Qa, Quaternary alluvium; Qpa, Pleistocene water laid detritus; Qpg, Pleistocene outwash; Tmd, Miocene stream and lake deposits; Tpd, Pliocene stream and lake deposits (Glenns Ferry

Formation); Tmb, Miocene plateau basalt flows.

There are two different geologic regimes within the hydrologic unit. The first, which is extensively used for agricultural land, is dominated by lacustrine and fluvial deposits. The second which is sparsely populated and left as open range, is dominated by volcanic deposits.

The lacustrine deposits, southwestern portion of the hydrologic unit are geologically located within the Western Snake River Plain, an elongate feature that stretches from King Hill on the east to the Idaho-Oregon border on the west. The Western Snake River Plain is a fault-bounded depression, with **normal**, northwest-trending fault systems forming major segments of both edges of the plain (Malde, 1965). The depression of this area is believed to be aided by the weight of dense **Miocene** basalts. Above the Miocene basalts are sediments from **Pliocene** stream and lake deposits of the Glenns Ferry Formation, and younger alluvium and outwash. The Glenns Ferry Formation is the oldest and the deepest unit in the lacustrine regime, and is a thick unit, with a variable thickness of at least 5,000 feet. This formation is composed of clays, silts, and sands with some inter-bedded gravels. The top of this unit had been eroded prior to the deposition of the overlying sediments. Above the unconformity are **Quaternary** alluvium and outwash from the erosion of the adjacent uplands. This overlying unit is the result of deposition by the ancestral Snake, Boise, and Payette Rivers during glacial run off. This unit filled valleys that were formed in the underlying Glenns Ferry Formation. Overlying the alluvium and outwash is a soil mantle. The mantle is composed of sand and silt and is

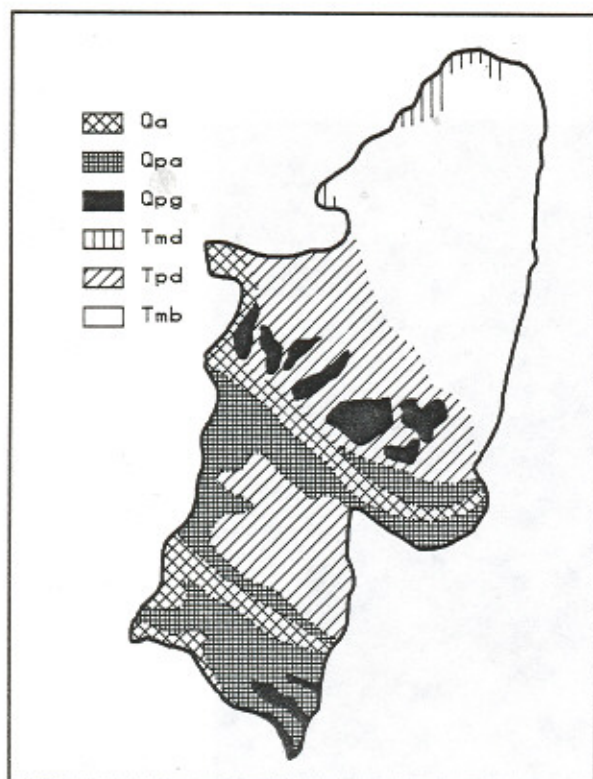


**Figure 4.** The general geology of the hydrologic unit (geologic unit description in text).

variable in thickness. This mantle is further described in the previous soils section.

The volcanic, northeastern regime of the hydrologic unit, located on the foot wall of the Western Snake River Plain, has lithologic differences from the southwestern regime. The northeastern regime is located within Miocene basalt flows and Miocene stream and lake deposits associated with volcanic episodes.

The landforms of the hydrologic unit are rounded with low topographic relief. The hydrologic unit is located within the Columbia Intermontane Plateau Province.

## Hydrology

The principle aquifers in the basin are in the Miocene basaltic rocks, the overlying Tertiary sediments (Glenns Ferry Formation), and Quaternary sediments. Ground water occurs under artesian and water table conditions in these aquifers. Shallow water table conditions exist throughout the hydrologic unit.

The Miocene basaltic rock aquifers are located in the northeastern portion of the hydrologic unit. These basaltic rock aquifers are less productive, and receive a small portion of the water use from the water users of the hydrologic unit.

The sedimentary rock aquifers are located in the lacustrine, southwestern portion of the hydrologic unit. Within the sedimentary rock aquifers exist two water producing units. The gravel aquifer that underlies the soil mantle is as a major source of ground water for much of the hydrologic unit area. In some areas, the unit is as much as 200 feet thick and is generally saturated throughout most of the thickness. The second water producing unit is the Glenns Ferry Formation. Well yields from the Glenns Ferry Formation are variable and generally have lower yields than the overlying unit.

Figure 5 shows the major aquifer types and their approximate location within the hydrologic unit. This map does not represent the smaller aquifers in the upland valleys. This GIS coverage was produced by IDWR.

## Land Use

Just as the hydrologic unit is split into two different geologic regimes, the hydrologic unit has two different types of

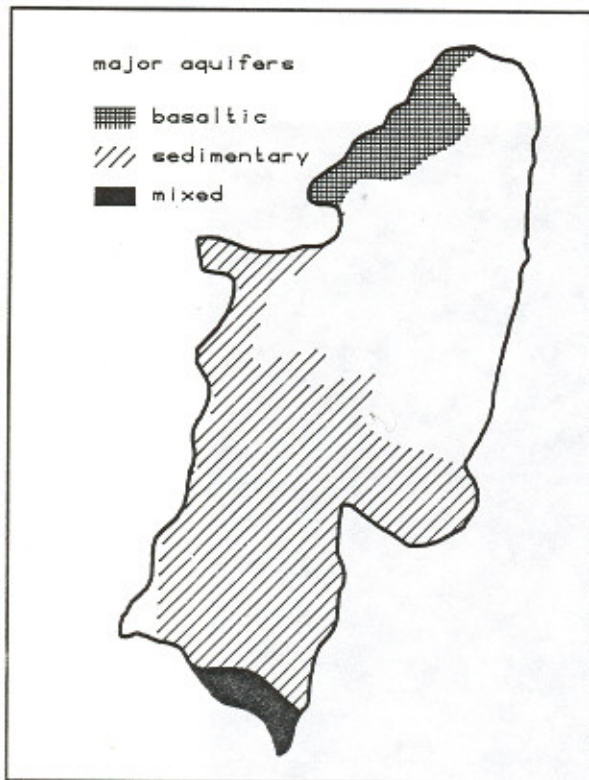


**Figure 5.** The major aquifer types of the hydrologic unit.

land use. The southwestern portion is primarily irrigated agricultural, and the northeastern portion is primarily open range.

Agricultural and related activities are the main economic support for the southwestern portion of the hydrologic unit. This agricultural area is one of the most productive agricultural areas in Idaho. More than 40 different crops are grown, including onions, potatoes, sugar beets, corn, mint, orchard fruit, vegetable seed, and seed crops. See Table I for the distribution of the acreage between these crops. Most of the crops are either gravity or sprinkler irrigated, however, there are a few dryland farms.

The northeastern portion of the

**Table I.** Major agricultural crops within the hydrologic unit (acreage determined by Mahler, 1991)

| <u>Crop</u> | <u>Acres</u> |
|-------------|--------------|
| alfalfa     | 76,800       |
| barley      | 25,100       |
| beans       | 12,100       |
| corn        | 20,800       |
| hops        | 2,600        |
| oats        | 9,800        |
| onions      | 7,700        |
| orchards    | 12,090       |
| peppermint  | 11,000       |
| potatoes    | 5,000        |
| seed crops  | 8,800        |
| spearmint   | 2,000        |
| sugarbeets  | 39,100       |
| wheat       | 52,400       |

hydrologic unit is primarily used for raising stock and recreation. Many of the operations that are raising stock also farm small amounts of alfalfa and/or other grasses for stock yard feeding. Most farming in this rangeland is associated with wet meadows adjacent to streams.

Figure 6 shows the general land use within the hydrologic unit. The GIS coverage was developed in three portions. The first portion was mapped by the Idaho Department of Water Resources. It was produced by delineating irrigated and dry farmland areas from 1:250,000 "Landsat False Color Composite" images taken in 1986. The second portion consisted of "Irrigation Water Management" data developed by USDA Soil Conservation Service. This portion represents irrigated farmland as either sprinkler or gravity-fed water delivery systems. These data were last field checked in 1983. The third portion was the "Actual Vegetation Map of

Idaho" created by Steve Caicco, and Ciscell (IDWR, in press). This portion was mapped at a scale of 1:500,000. The specific vegetation types were aggregated into five general categories representing rangelands, agriculture, forests, lava flows, and riparian areas.

## Water Use

All communities within the Snake-Payette Rivers Hydrologic Unit pump domestic water from wells, which is one of the greatest justifications for protecting ground water. The non-domestic water use in the northeast, open range portion of the hydrologic unit is significantly less than the non-domestic water use in the southeast, agricultural portion.

About 85 percent of the cropland in the, southeast agricultural portion of the hydrologic unit is furrow irrigated. The remaining cropland is either sprinkler irrigated (15 percent) or is dry farmed.

Water for irrigation is delivered through several canals, that which the result of irrigation projects and were constructed in the early 1900's. These canals now deliver water to more than 200,000 acres of farmland. Reservoirs on the Boise, Payette, and Weiser Rivers and their tributaries are the primary storage sources for this water. Irrigation water is also pumped or diverted from the Snake River.

## Materials and Methods

This assessment was prepared using existing data from various sources, explained in this section. This section also explains the computer data management

techniques that were used to compile this data into a useable data base.

## Sources of data

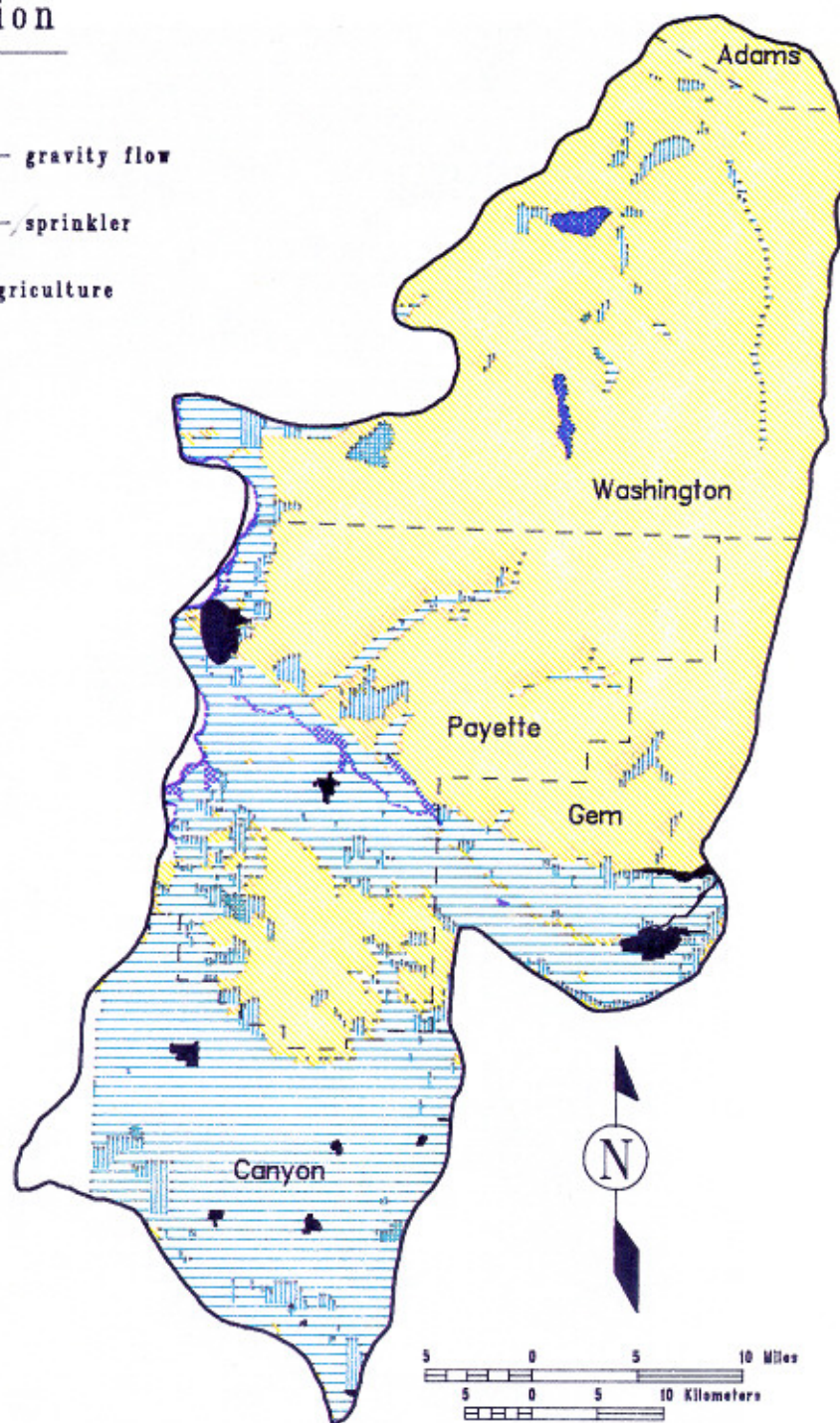
The data used in this hydrologic unit ground water assessment were generated from three sources. These sources are the Idaho Farm Bureau Federation reconnaissance ground water quality surveys (IFBF/RGWQS), IDEQ special projects, and the USGS/WRD data base. There are a total of 436 samples considered. The data are represented in tabular form in the Appendix of this assessment, (Table IV, V, and VI).

### Idaho Farm Bureau Reconnaissance Ground Water Quality Surveys

The IFBF/RGWQS consisted of individual county-wide sampling events, conducted to generate reconnaissance level nitrate ground water data. The methods used for each of these surveys were similar. Private domestic wells were used within the general area. Portions of two of these surveys (Canyon County IFBF/RGWQS, January 1991, and Gem and Payette Counties IFBF/RGWQS, March 1991) were used to describe conditions in the hydrologic unit. These IFBF/RGWQS were performed through a cooperative interagency and private sector program. Participants include; the Idaho Farm Bureau Federation (IFBF), local County Farm Bureau Federations, the Idaho Division of Environmental Quality, the University of Idaho Analytical Laboratory, and members of the general public.

## Explanation

-  rangeland
-  irrigated - gravity flow
-  irrigated - sprinkler
-  dryland agriculture
-  water
-  riparian
-  urban
-  hydrologic unit boundary
-  county lines



Scale 1:500,000

Figure 6. General land use within the hydrologic unit.

Participants were required to purchase sample bottles from IFBF centers prior to sampling. These participants were briefed in standard sample collection procedures for nitrates prior to collecting samples via an instruction sheet. Samples were taken, then delivered to collection centers. The samples were preserved, by acidification (addition of 0.25 ml sulfuric acid) and chilled by IDEQ staff, for the delivery to the laboratory. Sample containers brought to the collection centers were also refrigerated at 4° celsius and were listed on the IFBF Chain of Custody Inventory List for sample tracking. Participants also submitted a completed questionnaire which listed pertinent well information. The site from which the sample was taken was marked on a map at the collection centers by the individual submitting the sample with the assistance of a County Farm Bureau Federation volunteer. Samples were transported to and analyzed by University of Idaho Analytical Laboratory.

Standard quality assurance/quality control (QA/QC) procedures were employed on about ten percent of all samples collected by IDEQ staff or IDEQ trained staff. Transport and transfer blanks were analyzed to detect possible interferences introduced during sampling and transportation to verify method detection limits. Laboratory spiked samples were analyzed to measure analytical accuracy. Duplicate samples were taken to estimate analytical precision and variation between public and IDEQ sampling techniques.

Nitrate concentrations were analyzed by University of Idaho Analytic Laboratory, as nitrite and nitrate as nitrogen ( $\text{NO}_2 + \text{NO}_3$  as N), using standard Method 353.2 (Automated Cadmium Reduction Technique). IDEQ review of the QA/QC

data concludes that there is confidence in the validity of the nitrate concentration data.

Sampling locations are questionable because of the absence of QA/QC verification. Locations were plotted on maps by individuals with limited experience with these types of maps. IDEQ's spot check revealed many inaccuracies in locational data on a similar project. Source of sample data was also not controlled. There is no assurance or control of the water quality sample locations. The samples may be from city water systems or after water-treatment.

### **Idaho Division of Environmental Quality Special Projects**

IDEQ special projects are conducted in order to evaluate the status of ground water quality with respect to contamination from various sources. The IDEQ special projects that were conducted within the hydrologic unit are *Ground Water Quality Investigation in the Vicinity of Fruitland, Idaho* (IDEQ, in prep.) *Weiser Area Ground Water and Soils Monitoring Study* (Baldwin and Wicherski, unpublished) and *Ground Water and Soils Reconnaissance of the Lower Payette Area, Payette County, Idaho* (Baldwin and Wicherski, in prep.). The methods used for the three IDEQ special projects were similar.

These special projects were performed through a cooperative interagency venture. Participants include IDEQ, Payette Soil and Water Conservation District, Idaho Soil Conservation Commission, Idaho Department of Health and Welfare/Bureau of Laboratories (IDHW/BOL), and others.

The initial phase of each of these studies consisted of a selection of wells to be

sampled and analyzed. For example, in the above mentioned Payette study the initial phase April and May of 1991, consisted of taking samples and measurements from 80 wells within the study area. These 80 wells were randomly selected and specific types of criteria were used. Well owners were interviewed; IDEQ staff obtained information on well construction, water use, crop history, and other related information during these interviews. Following this initial phase, in the case of the Payette study, quarterly samples were taken from a subset of the initial wells.

Data collection for these studies, followed standard operating procedures for sampling. All water samples for nitrate were collected in clean polyethylene 500 ml containers, chilled to 4° Celsius, and were preserved with 2 ml sulfuric acid. Pesticide samples were collected in one liter amber glass jugs and were cooled to 4° Celsius. Well water levels and well depths were measured, when accessible. Samples were delivered to IDHW/BOL, where they were analyzed for nitrate, other inorganic, and pesticide compounds.

IDEQ standard QA/QC procedures were used. These procedures include travel and transfer blanks, that were analyzed to check field sample collection techniques. Laboratory spikes were added to selected samples for laboratory recovery accuracy. Duplicate nitrate and pesticide samples were collected from ten percent of the sampled wells, as part of IDEQ standard QA/QC procedures.

Data used in this hydrologic unit assessment from these surveys are expressed as nitrate concentrations, water table elevations, and locations. Nitrate concentrations were determined by IDHW/BOL and were analyzed as nitrate

as nitrogen (Nitrate as N) using method IDHW/BOL 109. IDEQ review of the QA/QC data concludes that there is confidence in the validity of the nitrate and pesticide concentration data, locations, and depth to water measurements.

## **United States Geological Survey Water Resource Division**

The USGS/WRD data base WATSTORE is a nationwide collection of all available monitoring data collected by USGS, and other affiliated agencies. The methods of data collection include USGS standard operating procedures and USGS standard QA/QC. IDEQ is confident in the validity of the data used from this data base due to methods used by USGS.

## **Preparation**

The preparation of this assessment required construction of a data base from existing data. Use of brand names in this assessment are for identification purposes only and do not constitute endorsement by the authors or their respective agencies.

The software used to create the data base was d-Base III plus by Ashton Tate. In order to keep this data base as simple as possible, sites (sampling locations) with multiple values for nitrates were manually sorted to find a single representative value at each location. This process was completed by manually selecting the highest nitrate value for each location that did not deviate from the remaining values by more than ten percent. This sorting process was conducted primarily on the *Ground Water and Soils Reconnaissance of the Lower Payette Area, Payette County, Idaho*, April 1991 to March 1992 data and

data contributed by USGS/WRD. There are 14 fields associated with this data base and description of these fields is covered in the Description of Data Fields section. Once this data base was completed, the data were used for Geographic Information System (GIS) analysis and other statistical analysis. Plates and most figures in this report were created using Environmental Systems Research Institute Inc.'s GIS PC Arc/Info software.

## Results and Discussion

The following section examines the data for the Snake-Payette Rivers Hydrologic Unit. The data from the previously mentioned sources were combined to create a single data base.

### Pesticides

There are few existing pesticide data within the hydrologic unit. Due to cost, not many samples have been analyzed for pesticides within the hydrologic unit. The data used are from the following IDEQ studies: *Ground Water Quality Investigation in the Vicinity of Fruitland, Idaho* (IDEQ, unpublished); *Weiser Area Ground Water and Soils Monitoring Study* (Baldwin and Wicherski, unpublished); and *Ground Water and Soils Reconnaissance of the Lower Payette Area, Payette County, Idaho* (Baldwin and Wicherski, in prep.).

Within the hydrologic unit there have been 63 ground water samples analyzed for pesticides. Of these 63 ground water samples, there have been 41 detections of five different pesticide compounds from 30 different locations. Of these 41 detections,

29 are Dacthal (or acid metabolite), nine are Pentachlorophenol, one is 2,4-D, one is Diazinon, and one is Metribuzin (see table II). Sample locations of pesticide

**Table II.** Pesticide data distribution.

| <u>name<br/>of<br/>contaminant</u> | <u>number<br/>of<br/>detections</u> |
|------------------------------------|-------------------------------------|
| Dacthal                            | 29                                  |
| PCP*                               | 9                                   |
| 2,4-D**                            | 1                                   |
| Diazinon                           | 1                                   |
| Metribuzin                         | 1                                   |
| total                              | 41                                  |
| * Pentachlorophenol                |                                     |
| ** 2,4-Dichlorophenoxyacetic acid  |                                     |

detections within the hydrologic unit are shown in Figure 8. Figure 8 represents each combination of the pesticides detected at a single location with a different symbol. Concentrations are not represented. The ranges of concentrations detected for the pesticides and their corresponding Maximum Contaminant Level (MCL) or Lifetime Health Advisory Level (HAL) for drinking water are included in Table III.

From these data there are two major areas of pesticide concern. The western portion of the lower Payette river valley and the Sunnyside region south west of Weiser. Both areas are extensively farmed and furrow is the predominate form of irrigation. Common crops are corn, sugar beets, small grains, alfalfa, onions, and mint. Both areas are believed to have been impacted by non-point source pollution of the ground water from pesticides. There are not enough pesticide

**Table III.** Pesticide maximum contaminant levels.

| Pesticide  | Range<br><i>µg/l</i> | MCL<br><i>mg/l</i> | HAL<br><i>µg/l</i> |
|------------|----------------------|--------------------|--------------------|
| Dacthal    | 0.040-98.5           |                    | 3500               |
| PCP*       | TR-0.265             | 0.001              | 200                |
| 2,4-D**    | 0.380                | 0.07               | 70                 |
| Diazinon   | TR                   |                    | 0.6                |
| Metribuzin | TR                   |                    | 200                |

\* Pentachlorophenol  
 \*\* 2,4-dichlorophenoxyacetic acid

TR-Trace

MCLs from 1992 Code of Federal Regulations 40 parts 100 to 149. HALs from 1989 Health Advisory Summaries U.S. Environmental Protection Agency.

analyses available for drawing a conclusion that covers the entire area of the hydrologic unit. However, for the studies previously mentioned with areas sampled for pesticides within the hydrologic unit, pesticides were detected 65 percent of the time. Dacthal, a herbicide used for pre-emergent weed control was detected 46 percent of the time. Dacthal was frequently detected and is widely used within the hydrologic unit. In areas where furrow irrigation is common, it is likely that Dacthal is not being managed in the crop root zone. The hydrologic unit needs a comprehensive pesticide monitoring project to evaluate this pesticide and other contamination.

## Nitrate

Chemicals are used intensively and extensively in the hydrologic unit. Fertilizer nitrogen use ranges between 29 and 297 lb/acre (Stieber, Stack, and Hutchison, 1992).

The following distinctions are made for the purpose of this assessment. Nitrate

contamination occurs when nitrate concentrations exceed the background nitrate concentrations. The background nitrate concentration is the lowest concentration for a given area. The lowest nitrate concentrations from the hydrologic unit data set are the concentrations below the detection limit (BDL). An adverse trend in nitrate concentrations is defined in this report as occurring when nitrate concentrations exceed half of the drinking water standard. Therefore, concentrations above 5 mg/l indicate the presence of an adverse trend that poses a threat to the beneficial uses of ground water.

The nitrate data set is 451 locations with nitrate values. The distribution of the concentrations is given in Table IV. A large percentage of the nitrate concentrations are below detection limits, which in most cases is 0.005 mg/l. Figures 9, 10 and 11 illustrate the nitrate concentrations in the hydrologic unit. Figure 9 shows sample locations and nitrate concentrations within the hydrologic unit.

Figure 10 is a nitrate concentration contour map. This computer-generated contour map was developed through a joint effort between IDEQ and USDA/SCS. The computer program GRASS, specifically the application *s.surf.idw*, was used to create the contour map. The application *s.surf.idw* fills a raster matrix with interpolated values generated from a set of irregularly spaced data points using numerical approximation (weighted averages) techniques. The interpolated value of a cell is determined by values of nearby data points and the distance of the cell from those input points. A line was manually inserted that shows areas of no data.

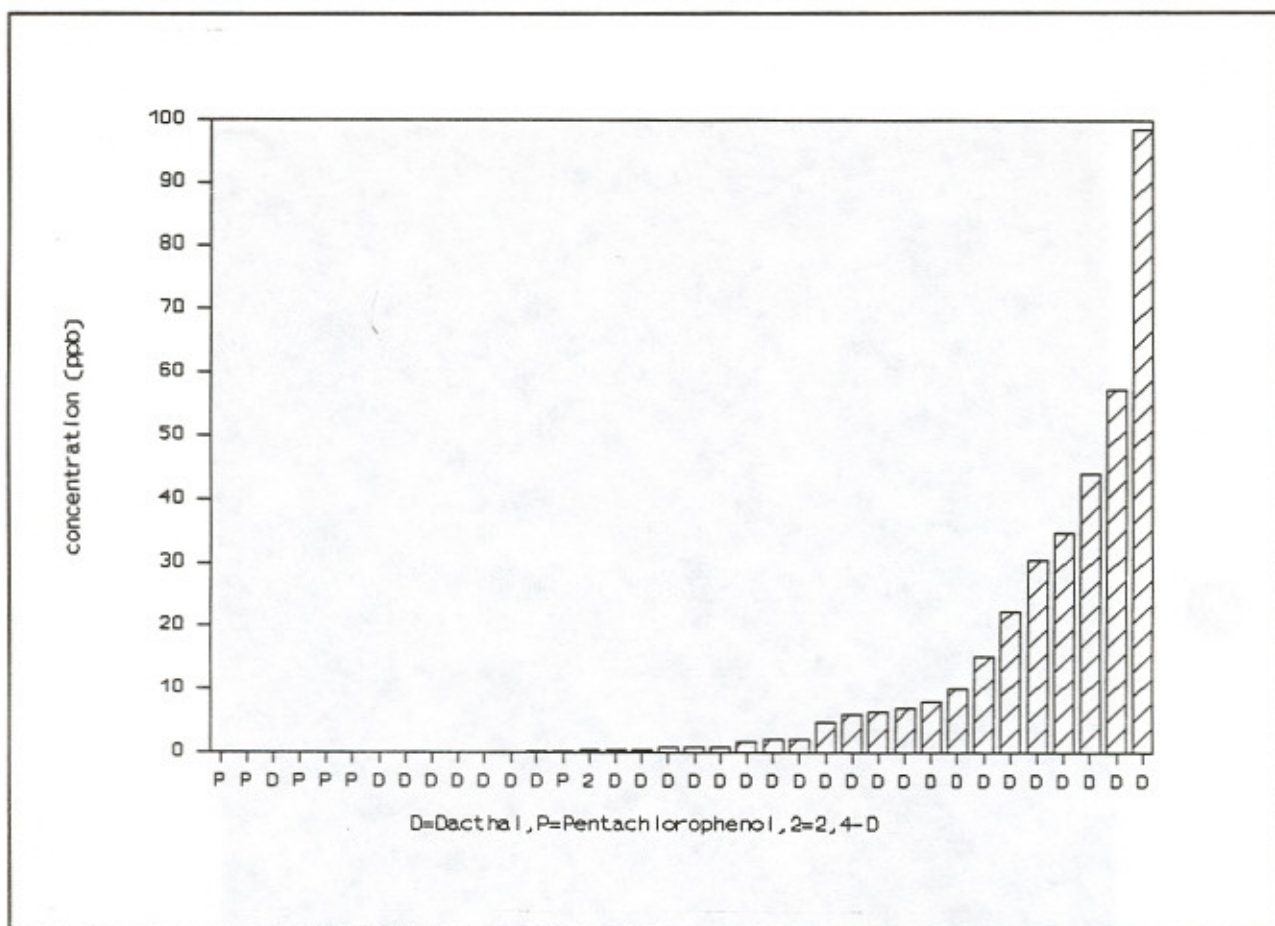


Figure 7. Distribution of pesticide concentrations in hydrologic unit.

Table IV. Nitrate data distribution

| data<br>range<br>category | number<br>of<br>data |
|---------------------------|----------------------|
| BDL                       | 164                  |
| 0-2 mg/l                  | 116                  |
| 2-5 mg/l                  | 86                   |
| 5-10 mg/l                 | 55                   |
| above 10 mg/l             | 30                   |
| total                     | 451                  |

Figure 11 shows the percentile distribution of nitrate concentrations

exceeding 5 mg/l. This map was developed by evaluating the data relative to a grid and then by representing a mosaic of these evaluations. The grid was produced by using a network of same-sized equilateral triangles; every corner of each equilateral triangle touches the corner of five other equilateral triangles. The point at which six equilateral triangles meet, the point of intersection, is the point used to evaluate the data contained within the six triangles. Therefore, the data within a single equilateral triangle would be evaluated three times. Both the number of concentrations that exceeded 5 mg/l within the six equilateral triangles and the total

number of samples within the same six equilateral triangles were counted. The ratio of the number of concentrations exceeding 5 mg/l, to the total number of concentrations would be the value stored at the point of intersection. The equilateral triangle size was determined so that no more than 50 locations would be within six connected equilateral triangles. The advantages to this type of map are unique. It shows areas that do not have enough data to evaluate; while it also treats high density data distribution areas and low density data distribution areas indifferently. A disadvantage is that a single high concentration in an area of medium density data can give the impression that the area has widespread contamination. Figure 11 has several of these areas in the northeast quadrant of the hydrologic unit. The areas that accurately depict contamination occur where there is a gradual change in percent of data above 5 mg/l nitrate. The data indicate several areas of nitrate concern. Sunnyside and the western half of the lower Payette River valley exhibit an adverse trend in nitrate concentrations. Also, much of Canyon County that is within the hydrologic unit exhibits an adverse trend in nitrate concentrations.

There are some areas exhibiting adverse trends in nitrate concentrations in the northeast quadrant of the hydrologic unit. Most of this area is open range and is used for raising stock by residents in the area. When the animals are kept in these stock yards there is a possibility for the wells to be contaminated. This practice or other waste disposal practices may be responsible for the adverse trends in nitrate concentrations in the northeast quadrant of the hydrologic unit.

## Vulnerability

The potential, relative vulnerability of ground water to contamination can be used to select areas of possible contamination. Vulnerability has been determined for some of the areas within the hydrologic unit through the *Idaho Ground Water Vulnerability Project* (Rupert et. al., 1991). This project used a modified form of DRASTIC (Aller et. al. 1985), which was developed by the National Water Well Association under contract to the U.S. Environmental Protection Agency. The DRASTIC model evaluates the ground water pollution potential of a given hydrogeologic setting based on a set of defined characteristics, along with ratings or "weights" assigned to those characteristics. The Idaho Ground Water Project used three layers that resemble those used by DRASTIC (depth-to-water, soils, recharge), but these differ from DRASTIC in that they use different sources of information, a finer scale, and a different rating scheme (Rupert et. al., 1991).

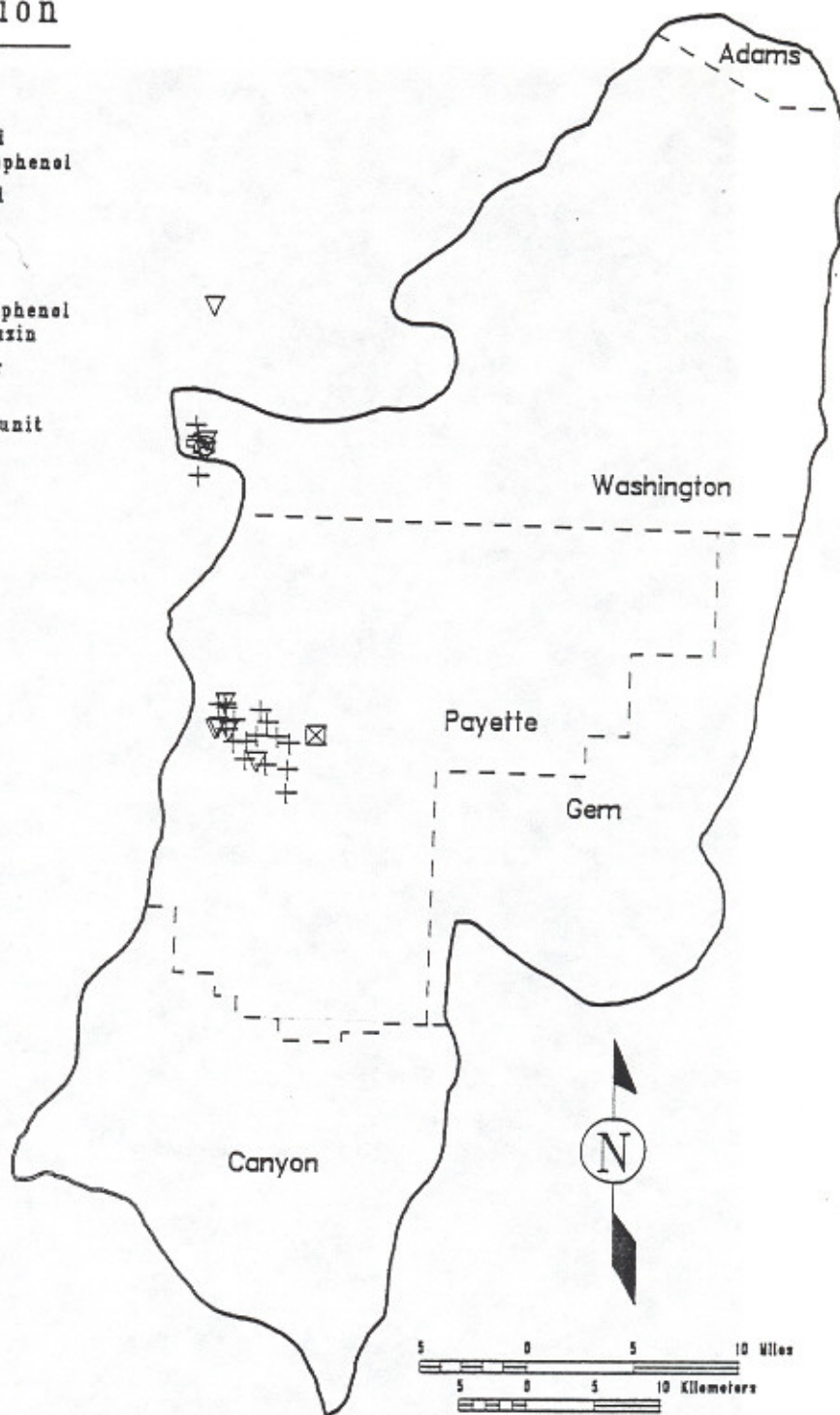
Figure 13 is a map of ground water vulnerability within the hydrologic unit. The source of the GIS coverage was the final ground water vulnerability layer, from the Idaho Ground Water Vulnerability Project. Note that vulnerability data do not exist for the portion of the hydrologic unit that extends into Oregon.

The areas along the Payette River, the Boise River, and the Snake River show the greatest vulnerability to contamination. These areas include Sunnyside, lower western Payette River valley, and northeastern Canyon County.

Based upon the data observed in the hydrologic unit, it is evident that the

## Explanation

- + Dacthal
- ▽ Dacthal and Pentachlorophenol
- ⊗ Dacthal and Diazinon
- ⊠ 2,4-D and Dacthal
- ⊕ Pentachlorophenol and Metribuzin
- \* town center
- hydrologic unit boundary
- - - county boundary



note: Dacthal or its acid metabolites

Scale 1:500,000

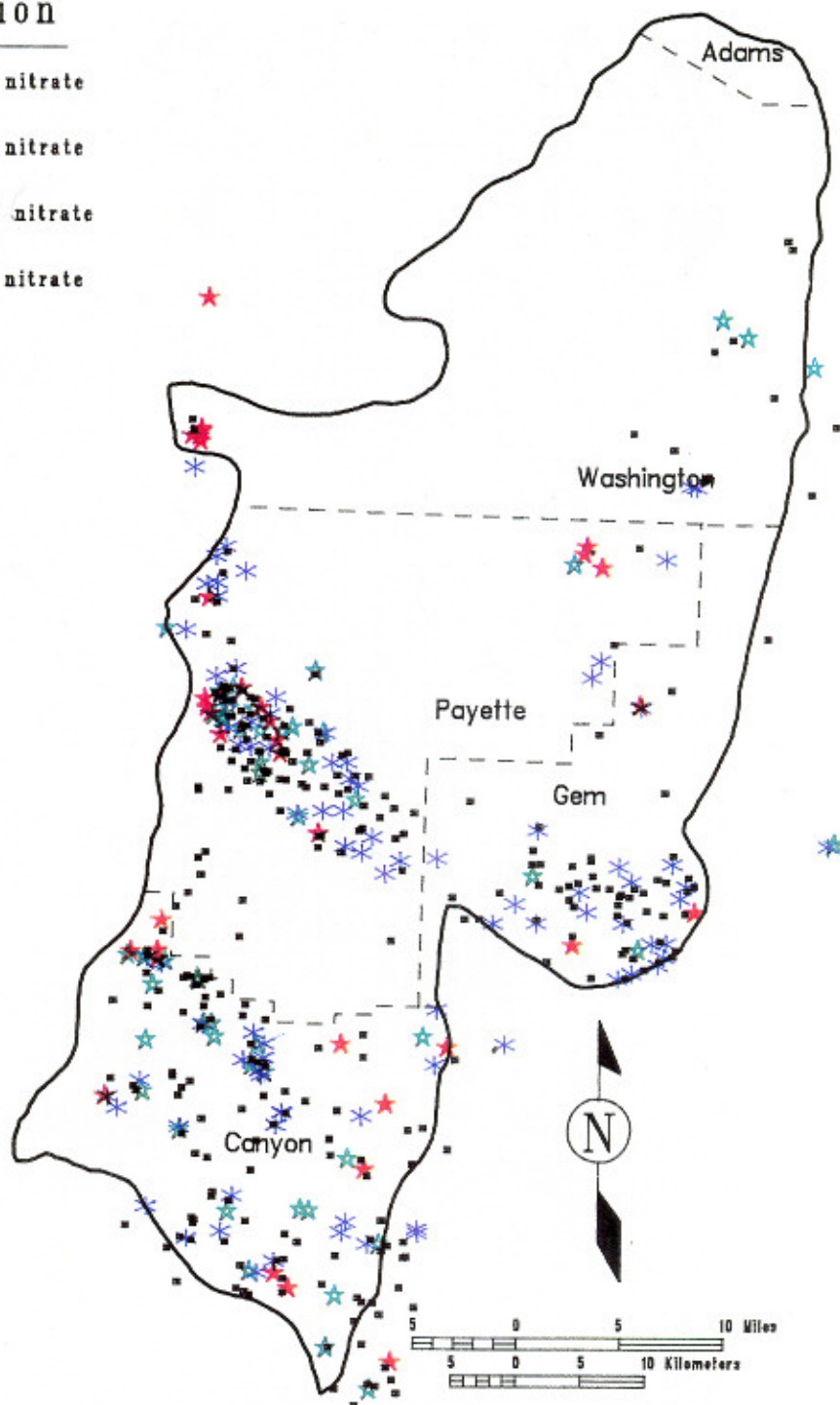
Figure 8. Sample location of pesticide detection within the hydrologic unit.

## Explanation

- 0-2 mg/l nitrate
- \* 2-5 mg/l nitrate
- ★ 5-10 mg/l nitrate
- ★ >10 mg/l nitrate

hydrologic unit boundary

county boundary

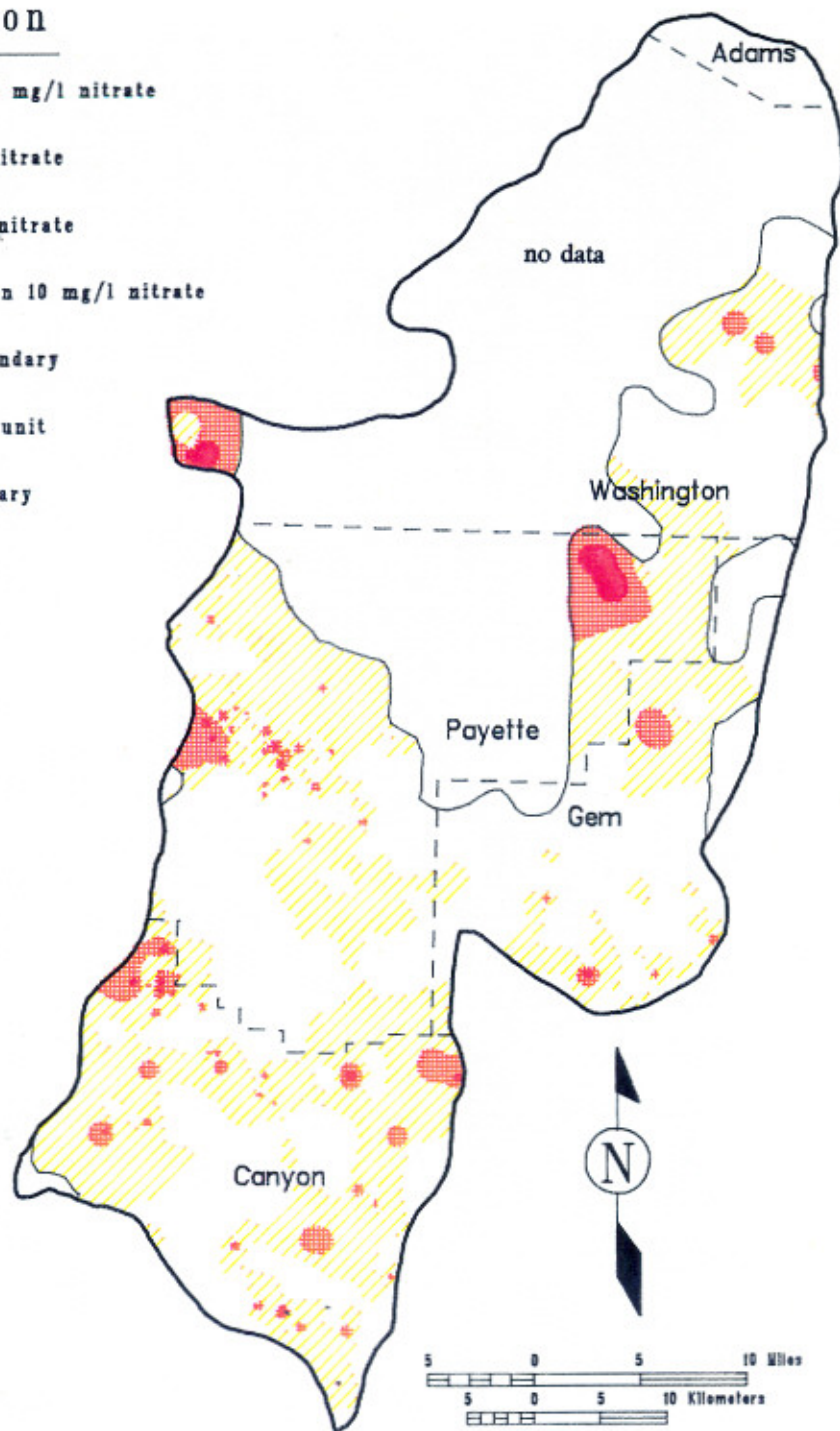


Scale 1:500,000

Figure 9. Sample location and nitrate concentrations within the hydrologic unit.

## Explanation

-  less than 2 mg/l nitrate
-  <2-5 mg/l nitrate
-  <5-10 mg/l nitrate
-  greater than 10 mg/l nitrate
-  county boundary
-  hydrologic unit boundary
-  data boundary



Scale 1:500,000

Figure 10. Contour map of nitrate concentrations measured in ground water.

## Explanation

-  no data within
-  no data greater is than 5 mg/l nitrate
-  less than 20% of data is greater than 5 mg/l nitrate
-  more than 20% of data is greater than 5 mg/l nitrate
-  hydrologic unit boundary
-  county lines

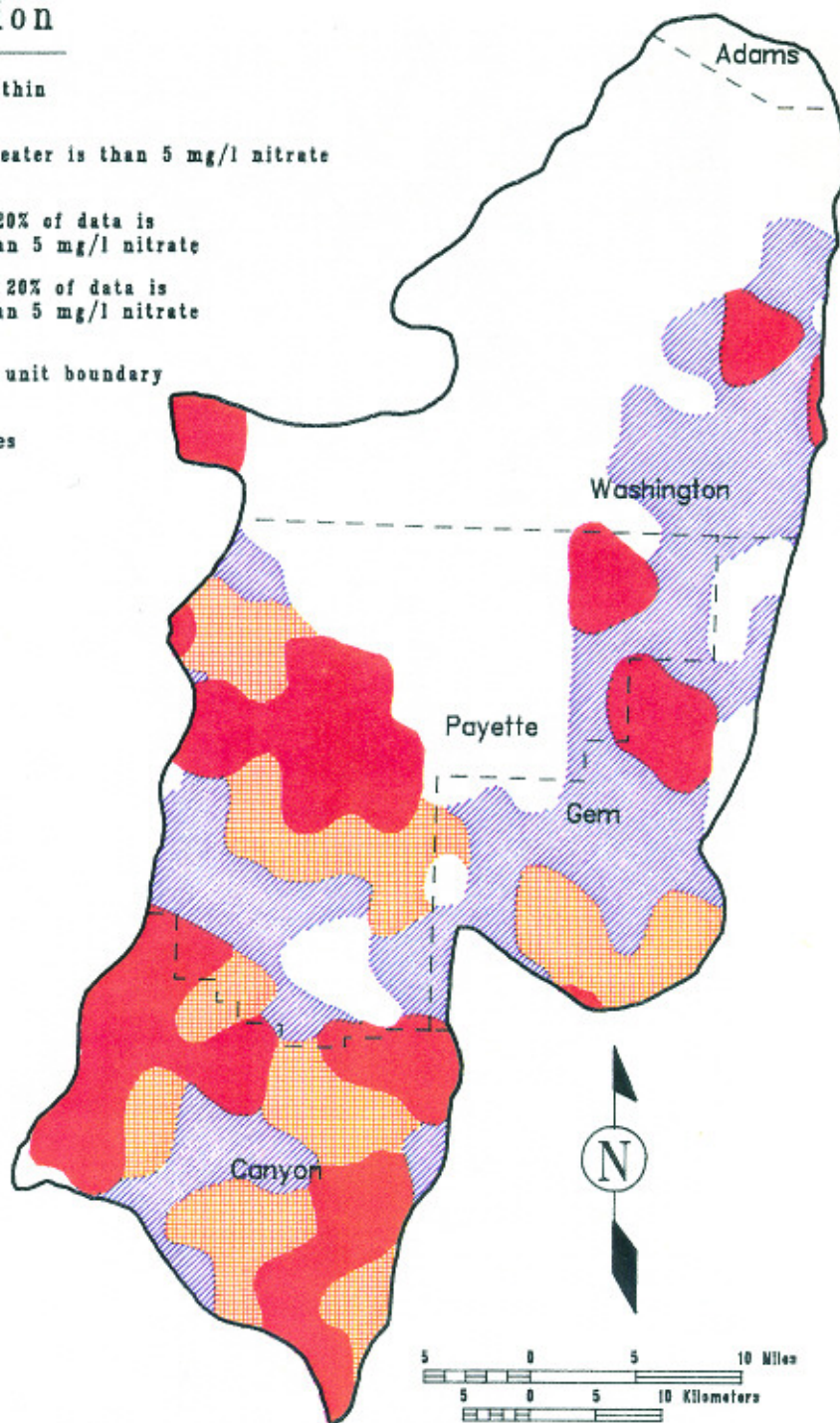


Figure 11. Percentile distribution of nitrate concentrations exceeding 5 mg/l.

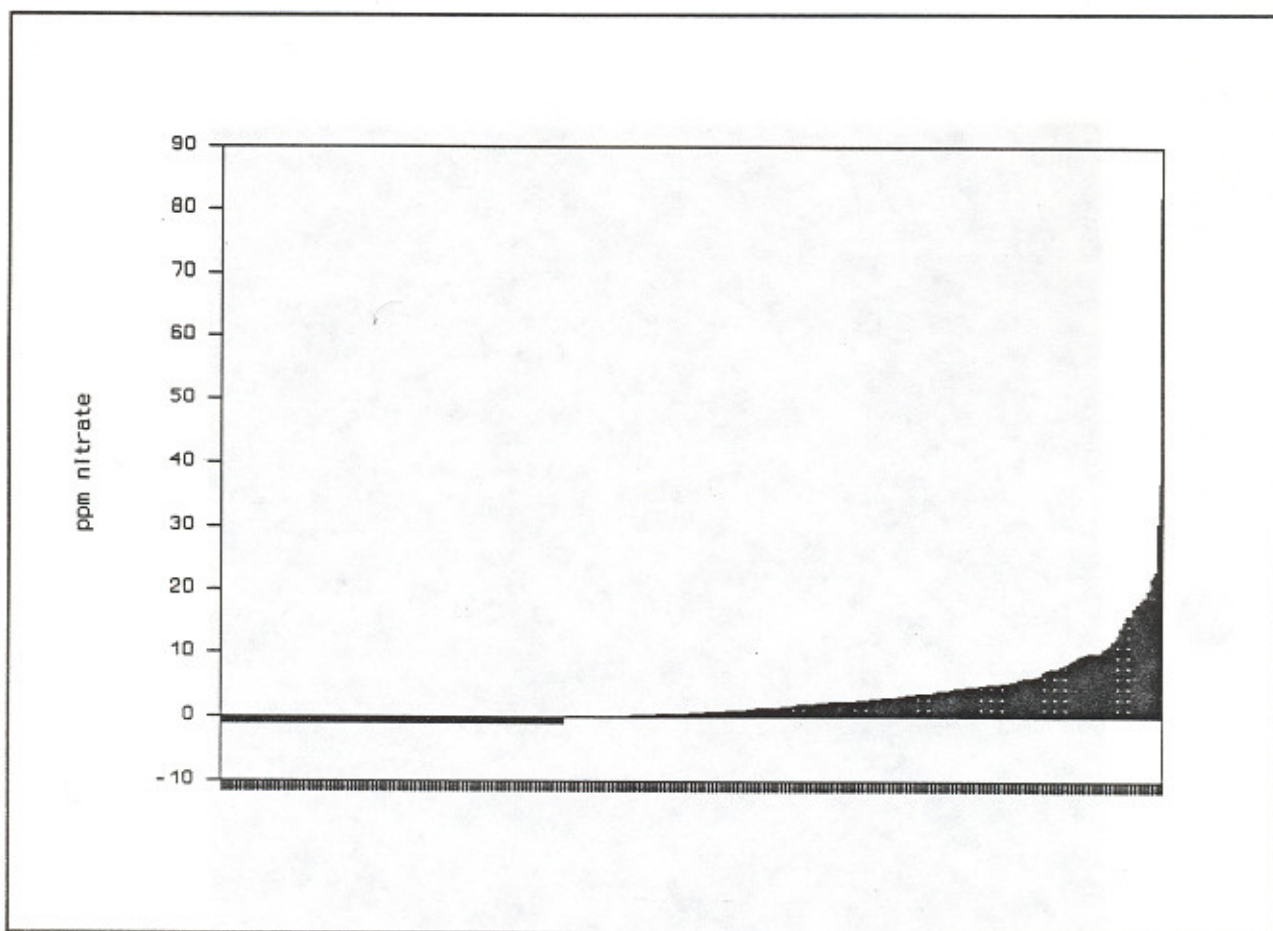


**Figure 12.** Distribution of nitrate concentrations in hydrologic unit.

vulnerability mapping is a valid tool for selecting areas that may be suitable for implementing nonpoint source pollution control mechanisms. Out of a data base consisting of 451 samples, only one of the samples that had nitrate concentrations above 10 mg/l was located within low and moderate vulnerability rated areas.

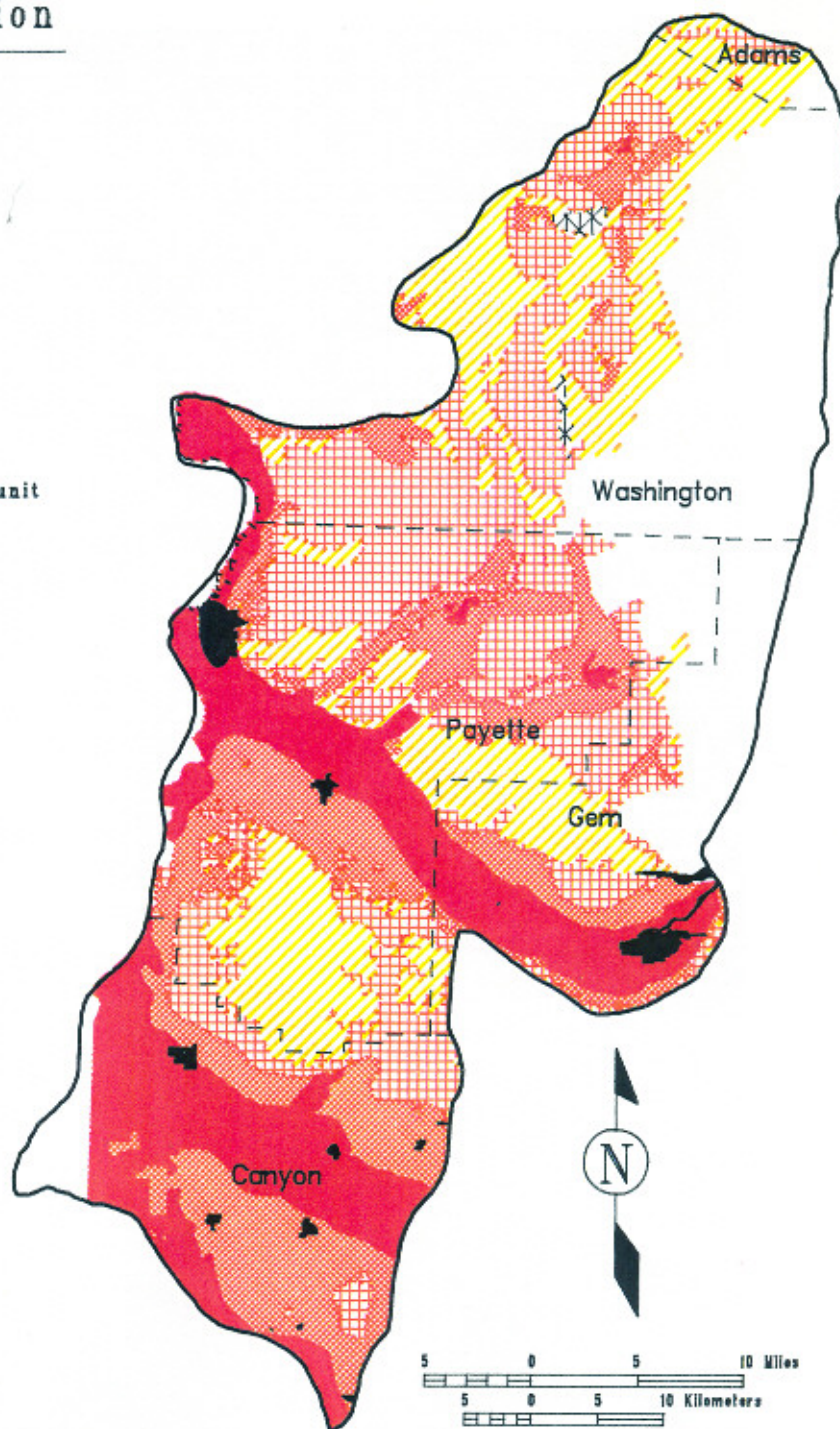
## Conclusions

From the results generated by this study of the pesticide, nitrate, and vulnerability data, the critical areas of the non-point source pollution of ground water within or

proximal to the hydrologic unit are located in the western portion of the lower Payette River valley, most of the portion of Canyon County that is within the hydrologic unit, and the Sunnyside area, south of Weiser. The western portion of the lower Payette River valley's ground water has pesticide contamination. Greater than 20 percent of the wells in this area are above 5 mg/l nitrate, and the area has been shown to be very vulnerable to ground water contamination. The area exhibits extensive agricultural activities. Ground water quality impacts from intensive crop production provides a likely

## Explanation

-  not rated
-  low
-  moderate
-  high
-  very high
-  urban
-  water
-  hydrologic unit boundary
-  county boundary



Scale 1:500,000

Figure 13. Ground water vulnerability of the hydrologic unit. (Rupert et al., 1991)

source for these nutrients and pesticides. The western portion of the lower Payette River valley is roughly defined as all of the lower Payette River valley west of New Plymouth and all of the lower Payette River valley north of New Plymouth.

Canyon County lacks the dense data coverage of the western portion of the lower Payette River valley. However, the limited nitrate concentrations exhibit an adverse trend. The vulnerability mapping project (Rupert et. al. 1991) substantiates this concern, as the area has a very high vulnerability rating.

Proximal to the hydrologic unit, Weiser Flats has an adverse trend in nitrate concentrations and pesticide detections. The entire Weiser River valley also may have high concentrations of nutrients and a high number of pesticide detections. This area requires additional investigation to fully characterize the ground water quality conditions.

Figure 14 illustrates the critical ground water quality areas within the hydrologic unit. These critical areas have been impacted by nutrients and/or pesticides. Because of the intensive and extensive fertilizer and chemical use in the project area and the relative inefficiency of irrigation application, agricultural chemical are likely a major source of contamination. These critical areas are also areas that will be used to develop nonpoint source pollution control mechanisms.

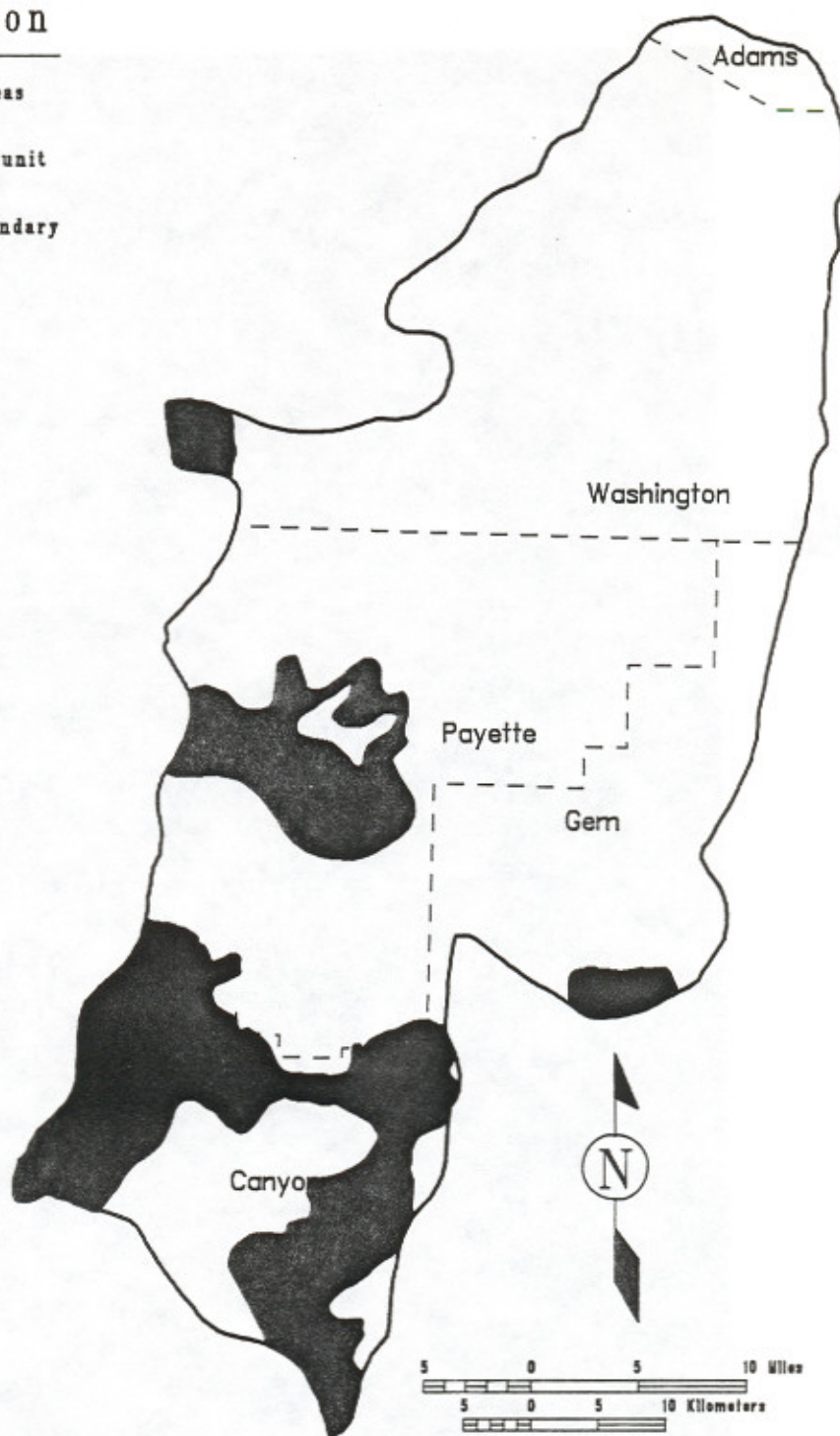
The major critical areas within the hydrologic unit are the western portion of the lower Payette River valley, the Sunnyside area south of Weiser, and the portion of Canyon County that is within the hydrologic unit. Another critical area proximal to the hydrologic unit that needs more investigation and evaluation is the area between the Weiser River valley and

Weiser Flats.

The hydrologic unit needs a comprehensive pesticide monitoring project to evaluate pesticide contamination. Several pesticide studies within the hydrologic unit have revealed frequent detections of pesticides, especially the herbicide Dacthal. Since Dacthal was frequently detected and is widely used within the hydrologic unit in areas where furrow irrigation is common with low irrigation efficiencies, it is likely not being managed in the crop root zone. Contrary to the *Another Look: National Survey of Pesticides In Drinking Water Wells* (EPA, 1992), areas in Idaho have serious problems with pesticide management in crop root zones.

## Explanation

-  critical areas
-  hydrologic unit boundary
-  county boundary



Scale 1:500,000

Figure 14. Critical ground water quality areas.

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Division of Environmental Quality  
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Monitoring and Technical Support

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United States Geological Survey  
Water Resource Division

Ellen Unsworth  
Division of Environmental Quality  
Community Programs  
Monitoring and Technical Support

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United States Geological Survey, Water Resources Division. *WATSTORE* (data base). Ground water information and water quality information for the hydrologic unit area.

## Glossary of Terms and Acronym List

**2,4-D:** Pesticide. Action: Selective hormone-type herbicide. Use: For grasses, wheat, barley, oats, rangeland pasture, asparagus, corn.

**Alluvial:** A general term for detrital deposits made by streams on river beds, flood plains, and alluvial fans.

**Background:** Natural background ground water quality; The ground water quality unaffected by man. (IDEQ, 1992)

**Basalt:** A dark-colored igneous rock, commonly extrusive, composed primarily of calcic plagioclase and pyroxene minerals.

**BDL:** Below detection limit, for nitrate BDL is usually less than 0.005 mg/l

**Dacthal:** Pesticide. Action: selective herbicide. Use: pre-emergence for smooth/hairy crabgrass, witchgrass, green/yellow foxtails, fall panicum, other annual grasses; broad leaf weeds.

**Dacthal acid metabolite:** a breakdown product of dacthal

**Diazinon:** Pesticide. Action: Insecticide, nematicide. Use: For soil insects and pests of fruits, vegetables, field crops, range, pasture.

**Duripan:** A horizon in a soil characterized by cementation by silica. Duripans occur mainly in areas of volcanism that have arid climates.

**Eolian:** Pertaining to the wind

**EPA:** United States Environmental Protection Agency

**Fluvial:** Produced by the action of a stream or river

**GIS:** Geographic Information System

**IDEQ:** Division of Environmental Quality, State, A division of Idaho Department of Health and Welfare

**IDWR:** Idaho Department of Water Resources.

**IFBF:** Idaho Farm Bureau Federation

**IFBF/RGWQS:** Idaho Farm Bureau Federation Reconnaissance Ground Water Quality Surveys

**ISPRHUPP:** Idaho Snake-Payette Rivers Hydrologic Unit Planning Project

**Lacustrine:** Pertaining to, produced by, or inhabiting a lake.

**Loam:** A rich, permeable soil composed of a mixture of clay, silt, sand, and organic material.

**MCL:** maximum contaminant level, maximum permissible level of contaminant in water delivered to any user of a public water system. MCLs are enforceable and federally determined standards.

**Metribuzin:** Pesticide. Action: Herbicide. Use: Controls a large number of grass and broad-leaf weeds infesting agricultural crops.

**Miocene:** An epoch of the early Tertiary period, after the Oligocene and before the Pliocene.

**μg/ℓ:** micrograms per liter, equivalent to parts per billion (ppb)

**mg/ℓ:** milligrams per liter, equivalent to parts per million (ppm)

**N:** Nitrogen

**Nitrate-N, or NO<sub>3</sub>-N:** Nitrate as nitrogen. This concentration unit is one of the most commonly used forms of detection.

**NOAA:** National Oceanic and Atmospheric Administration

**Nonpoint Source (ground water):** A potential source of ground water contamination that is diffuse and maybe intermittent. The cumulative effect of a high density of nonpoint sources results in ground water contamination.

**Normal Fault:** A fault in which the hanging has moved downward relative to the footwall. The angle of dip is usually 45-90°.

**NO<sub>2</sub>:** Nitrite

**NO<sub>3</sub>:** Nitrate

**Nutrient:** Any substance assimilated by living things that promotes growth. The term is generally applied to nitrogen and phosphorus in wastewater but is also applied to other essential and trace elements.

**ODEQ:** Oregon Department of Environmental Quality.

**OSHD:** Oregon State Health Department.

**Pentachlorophenol (PCP):** Biocide, Currently: Wood preservative, molluscicide. Historically, many different agricultural uses. PCP was the 2nd. most heavily used pesticide in 60's and 70's, and commonly used in the 80's.

**Pesticide:** Substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest (insecticides, herbicides, fungicides, and others). Also substance intended as a plant regulator, defoliant, or desiccant. Pesticides can accumulate in the food chain/or contaminate the environment if misused.

**Pleistocene:** An epoch of the Quaternary period, after the Pliocene of the Tertiary and before the Holocene, ice age, glacial epoch

**Pliocene:** An epoch of the Tertiary period, after the Miocene and before the Pleistocene.

**Point Source (ground water):** A source of ground water contamination such as a surface spill, leaking underground tanks, or landfill that has an identifiable point of release and some impact on the aquifer.

**ppb:** parts per billion, equivalent to μg/ℓ

**ppm:** parts per million, equivalent to mg/ℓ

**Quaternary:** The second period of the Cenozoic era, following Tertiary.

**QA/QC:** Quality Assurance/Quality Control

**Semiarid:** A type of climate (25-50 cm of precipitation) in which there is slightly more precipitation than an arid climate, and in which sparse grasses are the characteristic vegetation.

**USGS/WRD:** United States Geologic Survey, Water Resources Division

**USDA:** United States Department of Agriculture.

**USDA/SCS:** USDA Soil Conservation Service

**WATSTORE:** USGS/WRD water data base

## Appendixes

## **Description of Data Fields**

There are 14 fields and 451 records in the data base for the hydrologic unit. Of the 14 fields, 6 fields are designed to hold identification of the location, 2 fields are designed to hold nitrate concentrations, and date of sample, 1 field is designed to hold depth of water table information, and 5 fields are designed to hold pesticide concentrations, pesticide name, and date of detection. A specific list of the data fields follows:

**WELL\_ID:** Well identification, This character field has a field width of 16. This field stores a unique identification for each well location. In most cases this well identification is derived from the township, range, section, three levels of quarter sections, and sequence from the U.S. Public Land Survey Grid. Question marks "?" are placed where quarter section is unknown. In cases that the location is not known by U.S. Public Land Survey Grid then a unique well identification is fabricated.

**ALIAS:** Other well identification, This character field has a width of 11. This field stores other well identifications used by the source agency. This field is not published because some alias are made up of the well owners' last name.

**LATITUDE:** This numeric field, has a width of 13, with 6 decimal places. This field stores the geographic latitude at the well location, in decimal degrees.

**LONGITUDE:** This numeric field, has a width of 13, with 6 decimal places. This field stores the geographic longitude at the well location, in decimal degrees. The negative value indicates that location is within the western hemisphere.

**COUNTY:** This character field has a width of 14. This field stores the county name in which the well is located.

**PRO:** Data Source Project Code, this character field has a width of 5. This field stores a shortened code for the project or agency that provided the data for this assessment. The explanation for the shortened codes follows:

CFB - Canyon County, Idaho Farm Bureau Federation Reconnaissance Ground Water Quality Surveys

FGS - Ground water quality investigation in the vicinity of Fruitland, Idaho, July 1986

GFB - Gem County and Payette County, Idaho Farm Bureau Federation Reconnaissance Ground Water Quality Surveys

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

PAY - Ground water and soils reconnaissance of the Lower Payette Area,  
Payette County, Idaho, April 1991

USGS - United States Geological Survey, Water Resources Division,  
WATSTORE data base

WGS - Ground water reconnaissance of the Weiser area, Washington county,  
Idaho, August 1989

**DATE:** This numeric field has a width of 9, with 0 decimal places. This field stores the date that the nitrate sample was taken. The format of the contents is YYMMDD.

**NITRATE:** This numeric field has a width of 10, with 3 decimal places. This field stores the laboratory derived nitrate concentration, in mg/l.

**D2W:** Water Table Elevation. This numeric field has a width of 10 with 2 decimal places. This field stores the elevation of the water table above standard mean sea level in feet.

**PESTDATE:** Pesticide sample date, this numeric field has a width of 9, with 0 decimal places. This field stores the date that the pesticide sample was taken. The format of the contents is YYMMDD.

**PESTCONC:** Primary pesticide concentration, this numeric field has a width of 11, with 3 decimal places. This field stores the primary laboratory derived pesticide concentration, in  $\mu\text{g/l}$ .

**PESTDESC:** Primary pesticide description, this character field has a width of 20. This field stores the description of the primary description.

**PEST2CONC:** Secondary pesticide concentration, this numeric field has a width of 11, with 3 decimal places. This field stores the secondary laboratory derived pesticide concentration, in  $\mu\text{g/l}$ . Secondary meaning the second lesser concentration, if more than one type of pesticide is detected in the same sample.

**PEST2DESC:** Secondary pesticide description, this character field has a width of 20. This field stores the description of the secondary description. Secondary meaning the second lesser concentration, if more than one type of pesticide is detected in the same sample.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table V. Pesticide Data Table**

| Well<br>Identification | Latitude  | Longitude   | County     | Project<br>Code† | Date<br>of<br>Sample | Pest.<br>Conc.<br>in µg/l | Description |
|------------------------|-----------|-------------|------------|------------------|----------------------|---------------------------|-------------|
| 07N 04W 07ADA01        | 43.962500 | -116.853056 | PAYETTE    | PAY              | 910409               | 6.900                     | DACTHAL     |
| 07N 04W 06AAD01        | 43.978611 | -116.852778 | PAYETTE    | PAY              | 910828               | 0.040                     | DACTHAL     |
| 08N 05W 36DDD01        | 43.981389 | -116.873056 | PAYETTE    | FGS              | 860722               | 0.900                     | DACTHAL     |
| 08N 05W 36DCC01        | 43.983611 | -116.881944 | PAYETTE    | FGS              | 860722               | 0.004                     | DACTHAL     |
| 08N 05W 35ADA01        | 43.984444 | -116.893333 | PAYETTE    | FGS              | 860722               | 0.030                     | DACTHAL     |
| 08N 05W 35BAA01        | 43.996111 | -116.904444 | PAYETTE    | PAY              | 910827               | 1.700                     | DACTHAL     |
| 08N 04W 30DDD01        | 43.996667 | -116.851944 | PAYETTE    | FGS              | 860722               | 0.040                     | DACTHAL     |
| 08N 05W 25CCC01        | 43.996944 | -116.892222 | PAYETTE    | PAY              | 910827               | 22.400                    | DACTHAL     |
| 08N 05W 25DBC01        | 44.001111 | -116.882222 | PAYETTE    | PAY              | 910828               | 0.050                     | DACTHAL     |
| 08N 05W 30DBC01        | 44.001111 | -116.863889 | PAYETTE    | PAY              | 910828               | 98.500                    | DACTHAL     |
| 08N 04W 28CBA01        | 44.003611 | -116.826944 | PAYETTE    | PAY              | 910828               | 0.380                     | 2,4-D       |
| 08N 05W 26BCC01        | 44.004167 | -116.909167 | PAYETTE    | FGS              | 860722               | 0.400                     | DACTHAL     |
| 08N 05W 27ADC01        | 44.004722 | -116.910833 | PAYETTE    | FGS              | 860722               | 10.000                    | DACTHAL     |
| 08N 05W 27ACD01        | 44.005278 | -116.921944 | PAYETTE    | FGS              | 860722               | 8.000                     | DACTHAL     |
| 08N 05W 27ACA01        | 44.006667 | -116.919444 | PAYETTE    | FGS              | 860722               | 6.000                     | DACTHAL     |
| 08N 05W 25AAA01        | 44.010556 | -116.873056 | PAYETTE    | PAY              | 910828               | 34.800                    | DACTHAL     |
| 08N 05W 23CDD01        | 44.011667 | -116.904444 | PAYETTE    | PAY              | 910827               | 15.200                    | DACTHAL     |
| 08N 04W 24ABC02        | 44.018611 | -116.880000 | PAYETTE    | PAY              | 910529               | 0.820                     | DACTHAL     |
| 08N 05W 23BCC01        | 44.019444 | -116.912222 | PAYETTE    | PAY              | 910827               | 0.030                     | DACTHAL     |
| 08N 05W 22ACA01        | 44.021389 | -116.919444 | PAYETTE    | FGS              | 860722               | 0.500                     | DACTHAL     |
| 08N 05W 22ADB01        | 44.021944 | -116.913333 | PAYETTE    | FGS              | 860722               | 0.900                     | DACTHAL     |
| 08N 05W 22AAC01        | 44.023056 | -116.913611 | PAYETTE    | FGS              | 860722               | 2.000                     | DACTHAL     |
| 10N 05W 21BBA01        | 44.177800 | -116.947200 | WASHINGTON | WGS              | 890829               | 0.176                     | DACTHAL     |
| 10N 05W 21BAA01        | 44.195000 | -116.941700 | WASHINGTON | WGS              | 890829               | 44.100                    | DACTHAL     |
| 10N 05W 16CDA01        | 44.198900 | -116.943100 | WASHINGTON | WGS              | 890829               | 30.500                    | DACTHAL     |

† Project code explanation can be found in *Description of Data Fields* section

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table V. Pesticide Data Table**

| Well<br>Identification | Latitude  | Longitude   | County     | Project<br>Code† | Date<br>of<br>Sample | Pest.<br>Conc.<br>in µg/l | Description       |
|------------------------|-----------|-------------|------------|------------------|----------------------|---------------------------|-------------------|
| 10N 05W 16CCB01        | 44.198900 | -116.950600 | WASHINGTON | WGS              | 890829               | 0.265                     | PENTACHLOROPHENOL |
| 10N 05W 16DBB01        | 44.202200 | -116.940800 | WASHINGTON | WGS              | 890829               | 4.700                     | DACTHAL           |
| 10N 05W 17ADB01        | 44.204700 | -116.950000 | WASHINGTON | WGS              | 890829               | 2.100                     | DACTHAL           |
| 10N 05W 08DDA01        | 44.212200 | -116.951700 | WASHINGTON | WGS              | 890829               | 6.310                     | DACTHAL           |
| 10N 05W 21ABA01        | 44.295000 | -116.938900 | WASHINGTON | WGS              | 890829               | 57.300                    | DACTHAL           |
| 08N 05W 36DCC01        | 43.983611 | -116.881944 | PAYETTE    | FGS              | 860722               | 0.001                     | PENTACHLOROPHENOL |
| 08N 04W 28CBA01        | 44.003611 | -116.826944 | PAYETTE    | PAY              | 910828               | 0.090                     | DACTHAL           |
| 08N 05W 26BCC01        | 44.004167 | -116.909167 | PAYETTE    | FGS              | 860722               | 0.002                     | PENTACHLOROPHENOL |
| 08N 05W 27ACD01        | 44.005278 | -116.921944 | PAYETTE    | FGS              | 860722               | 0.006                     | PENTACHLOROPHENOL |
| 08N 05W 27ACA01        | 44.006667 | -116.919444 | PAYETTE    | FGS              | 860722               | 0.004                     | PENTACHLOROPHENOL |
| 08N 05W 22AAC01        | 44.023056 | -116.913611 | PAYETTE    | FGS              | 860722               | 0.005                     | PENTACHLOROPHENOL |
| 10N 05W 21BAA01        | 44.195000 | -116.941700 | WASHINGTON | WGS              | 890829               | trace                     | PENTACHLOROPHENOL |
| 10N 05W 16CDA01        | 44.198900 | -116.943100 | WASHINGTON | WGS              | 890829               | trace                     | DIAZINON          |
| 10N 05W 16CCB01        | 44.198900 | -116.950600 | WASHINGTON | WGS              | 890829               | trace                     | METRIBUZIN        |
| 10N 05W 16DBB01        | 44.202200 | -116.940800 | WASHINGTON | WGS              | 890829               | trace                     | PENTACHLOROPHENOL |
| 10N 05W 21ABA01        | 44.295000 | -116.938900 | WASHINGTON | WGS              | 890829               | trace                     | PENTACHLOROPHENOL |

† Project code explanation can be found in *Description of Data Fields* section

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| GFBIFBF1261         | 43.527500 | -116.759400 | PAYETTE | GFB            | 910405         | BDL                     |
| CFBIFBF1509         | 43.537200 | -116.719400 | CANYON  | CFB            | 910102         | 1.90                    |
| 09N 05W 14???02     | 43.538630 | -116.779000 | PAYETTE | GFB            | 910405         | 0.40                    |
| GFBIFBF1264         | 43.539290 | -116.744800 | PAYETTE | GFB            | 910405         | 6.60                    |
| GFBIFBF1266         | 43.541600 | -116.739800 | PAYETTE | GFB            | 910405         | 0.40                    |
| GFBIFBF1382         | 43.542720 | -116.746800 | PAYETTE | GFB            | 910405         | 0.40                    |
| 05N 04W 34???01     | 43.546300 | -116.724500 | CANYON  | CFB            | 910102         | BDL                     |
| CFBIFBF1507         | 43.554900 | -116.730900 | CANYON  | CFB            | 910102         | 1.50                    |
| CFBIFBF1503         | 43.556480 | -116.725200 | CANYON  | CFB            | 910102         | 13.00                   |
| 04N 03W 03CCB01     | 43.567480 | -116.786300 | CANYON  | CFB            | 910102         | 0.20                    |
| CFBIFBF1526         | 43.567480 | -116.788100 | CANYON  | CFB            | 910102         | 5.80                    |
| 04N 04W 11D??01     | 43.570430 | -116.754000 | CANYON  | CFB            | 910102         | BDL                     |
| 05N 05W 01BD?01     | 43.586120 | -116.761800 | CANYON  | CFB            | 910102         | BDL                     |
| 05N 04W 35???01     | 43.591200 | -116.738400 | CANYON  | CFB            | 910102         | BDL                     |
| 05N 05W 24ADD01     | 43.597200 | -116.705100 | CANYON  | CFB            | 910102         | BDL                     |
| CFBIFBF1582         | 43.599330 | -116.745500 |         | CFB            | 910102         | BDL                     |
| CFBIFBF1572         | 43.599670 | -116.755600 | CANYON  | CFB            | 910102         | BDL                     |
| 04N 05W 13A??01     | 43.601810 | -116.864000 | CANYON  | CFB            | 910102         | BDL                     |
| CFBIFBF1552         | 43.602400 | -116.759600 | CANYON  | CFB            | 910102         | BDL                     |
| 04N 04W 36DD?01     | 43.603880 | -116.780800 | CANYON  | CFB            | 910102         | 9.90                    |
| 06N 05W 02???01     | 43.604010 | -116.868600 | PAYETTE | CFB            | 910102         | BDL                     |
| GFBIFBF1208         | 43.604180 | -116.832000 | PAYETTE | GFB            | 910405         | BDL                     |
| GFBIFBF1207         | 43.605190 | -116.825400 | PAYETTE | GFB            | 910405         | 10.00                   |
| 05N 04W 16???01     | 43.606040 | -116.876600 | CANYON  | CFB            | 910102         | BDL                     |
| CFBIFBF0804         | 43.609050 | -116.934300 |         | CFB            | 910102         | BDL                     |

‡ BDL indicates that concentration is Below Detection Limit.

† Project code explanation can be found in *Description of Data Fields* section.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| 05N 05W 24DAA01     | 43.610600 | -116.720500 | CANYON  | CFB            | 910102         | BDL                     |
| CFBIFBF1531         | 43.611140 | -116.794200 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF1205         | 43.614070 | -116.831900 | PAYETTE | GFB            | 910405         | BDL                     |
| GFBIFBF1204         | 43.615460 | -116.839600 | PAYETTE | GFB            | 910405         | 82.00                   |
| 06N 05W 30DCB01     | 43.616360 | -116.856300 | CANYON  | CFB            | 910102         | 3.60                    |
| 06N 05W 28CCC01     | 43.618840 | -116.864000 | CANYON  | CFB            | 910102         | 5.70                    |
| CFBIFBF0965         | 43.622030 | -116.873200 | CANYON  | CFB            | 910102         | BDL                     |
| 09N 05W 33AB?01     | 43.624770 | -116.840200 | PAYETTE | GFB            | 910405         | 2.40                    |
| 08N 05W 07CC?01     | 43.626630 | -116.838600 | PAYETTE | GFB            | 910405         | BDL                     |
| 08N 05W 22???01     | 43.627640 | -116.831800 | PAYETTE | GFB            | 910405         | 0.20                    |
| CFBIFBF1532         | 43.631560 | -116.782500 | CANYON  | CFB            | 910102         | BDL                     |
| 05N 05W 35BB?01     | 43.631770 | -116.717500 | CANYON  | CFB            | 910102         | 0.20                    |
| 05N 05W 24CAB01     | 43.632530 | -116.714300 | CANYON  | CFB            | 910102         | BDL                     |
| 05N 05W 30BB?01     | 43.632770 | -116.945200 | CANYON  | CFB            | 910102         | BDL                     |
| 02N 04W 01BDD01     | 43.635680 | -116.738700 | CANYON  | CFB            | 910102         | BDL                     |
| 05N 05W 02DAD01     | 43.638430 | -116.889500 | CANYON  | CFB            | 910102         | BDL                     |
| 06N 05W 34BAA01     | 43.638620 | -116.925900 | CANYON  | CFB            | 910102         | 2.00                    |
| 06N 05W 32BAA01     | 43.638640 | -116.921800 | CANYON  | CFB            | 910102         | BDL                     |
| CFBIFBF1550         | 43.639060 | -116.751800 | CANYON  | CFB            | 910102         | 2.90                    |
| 02N 04W 01AB?01     | 43.639580 | -116.733400 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF1200         | 43.639940 | -116.819400 | PAYETTE | GFB            | 910405         | BDL                     |
| 05N 05W 36BBC01     | 43.640420 | -116.932800 | CANYON  | CFB            | 910102         | BDL                     |
| 04N 04W 36???01     | 43.641130 | -116.740600 | CANYON  | CFB            | 910102         | 8.40                    |
| 03N 04W 03A?01      | 43.642910 | -116.717800 | CANYON  | CFB            | 910102         | BDL                     |
| 03N 04W 27CA?01     | 43.643690 | -116.749300 | CANYON  | CFB            | 910102         | BDL                     |

‡ BDL indicates that concentration is Below Detection Limit.

† Project code explanation can be found in *Description of Data Fields* section.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| 06N 06W 17CBB01     | 43.644560 | -116.892900 | CANYON  | CFB            | 910102         | 2.60                    |
| 03N 03W 17BAC01     | 43.645320 | -116.831500 | CANYON  | CFB            | 910102         | 0.70                    |
| CFBIFBF1542         | 43.646660 | -116.777100 | CANYON  | CFB            | 910102         | 2.60                    |
| 05N 05W 29DAD01     | 43.647560 | -116.986300 | CANYON  | CFB            | 910102         | BDL                     |
| CFBIFBF1625         | 43.648130 | -116.703700 | CANYON  | CFB            | 910102         | 4.70                    |
| 05N 03W 16???01     | 43.650680 | -116.920600 | CANYON  | CFB            | 910102         | 0.90                    |
| 04N 03W 08???01     | 43.650830 | -116.704400 | CANYON  | CFB            | 910102         | 2.30                    |
| 05N 04W 30CDD01     | 43.652950 | -116.920000 | CANYON  | CFB            | 910102         | BDL                     |
| 06N 06W 02ABD01     | 43.652970 | -116.920000 | CANYON  | CFB            | 910102         | BDL                     |
| 04N 04W 07DD?01     | 43.653760 | -116.870400 | CANYON  | CFB            | 910102         | BDL                     |
| CFBIFBF1549         | 43.654130 | -116.773100 | CANYON  | CFB            | 910102         | 3.90                    |
| CFBIFBF0932         | 43.654520 | -116.922100 | CANYON  | CFB            | 910102         | 1.80                    |
| 03N 04W 27???01     | 43.657370 | -116.739600 | CANYON  | CFB            | 910102         | BDL                     |
| 05N 05W 11CDD01     | 43.660100 | -116.887300 | CANYON  | CFB            | 910102         | 5.20                    |
| 06N 05W 30???01     | 43.660210 | -116.966100 | CANYON  | CFB            | 910102         | 4.00                    |
| 05N 05W 10BC?01     | 43.662770 | -116.808800 | PAYETTE | GFB            | 910405         | 6.40                    |
| 08N 05W 14???02     | 43.663490 | -116.817100 | PAYETTE | GFB            | 910405         | 8.80                    |
| 06N 05W 19DAD01     | 43.667210 | -116.887200 | CANYON  | CFB            | 910102         | BDL                     |
| 05N 05W 10DBD01     | 43.669610 | -116.883200 | CANYON  | CFB            | 910102         | 2.30                    |
| 05N 04W 28C??01     | 43.669900 | -116.903600 | CANYON  | CFB            | 910102         | BDL                     |
| 05N 05W 13DCB01     | 43.672930 | -116.903200 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF1224         | 43.687840 | -116.755000 | PAYETTE | GFB            | 910405         | 0.40                    |
| 05N 05W 13BBA01     | 43.689050 | -116.867000 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF1226         | 43.690300 | -116.756900 | PAYETTE | GFB            | 910405         | 10.00                   |
| 05N 05W 10BBB01     | 43.696620 | -116.909300 | CANYON  | CFB            | 910102         | 0.40                    |

‡ BDL indicates that concentration is Below Detection Limit.

† Project code explanation can be found in *Description of Data Fields* section.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| 09N 05W 14???01     | 43.697130 | -116.712200 | PAYETTE | GFB            | 910405         | 0.20                    |
| GFBIFBF1223         | 43.699020 | -116.761100 | PAYETTE | GFB            | 910405         | 1.30                    |
| 05N 05W 34CBC01     | 43.699130 | -116.921000 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF1221         | 43.699830 | -116.773600 | PAYETTE | GFB            | 910405         | 7.60                    |
| GFBIFBF1214         | 43.701250 | -116.790700 | PAYETTE | GFB            | 910405         | BDL                     |
| CFBIFBF1652         | 43.708510 | -116.678100 | CANYON  | CFB            | 910102         | 0.90                    |
| 05N 05W 25AA?01     | 43.709610 | -116.862500 | CANYON  | CFB            | 910102         | BDL                     |
| 06N 05W 04CD?01     | 43.712610 | -116.792700 | PAYETTE | GFB            | 910405         | 0.70                    |
| CFBIFBF0901         | 43.712770 | -116.934700 | CANYON  | CFB            | 910102         | BDL                     |
| CFBIFBF0894         | 43.715920 | -116.937100 | CANYON  | CFB            | 910102         | 5.00                    |
| CFBIFBF0303         | 43.716120 | -116.937000 | CANYON  | CFB            | 910102         | 4.10                    |
| 06N 05W 28???01     | 43.719690 | -116.843300 | CANYON  | CFB            | 910102         | 2.70                    |
| GFBIFBF1231         | 43.720920 | -116.717100 | PAYETTE | GFB            | 910405         | 1.30                    |
| 05N 05W 24BAA01     | 43.721320 | -116.846200 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF1232         | 43.722990 | -116.702700 | PAYETTE | GFB            | 910405         | BDL                     |
| CFBIFBF0893         | 43.723610 | -116.916400 | CANYON  | CFB            | 910102         | 0.70                    |
| CFBIFBF0183         | 43.727890 | -116.997800 | CANYON  | CFB            | 910102         | 4.80                    |
| GFBIFBF1212         | 43.728360 | -116.761700 | PAYETTE | GFB            | 910405         | 4.20                    |
| 06N 06W 30ADD02     | 43.728580 | -116.838200 | CANYON  | CFB            | 910102         | 2.40                    |
| 05N 04W 11ADD01     | 43.729620 | -116.835400 | CANYON  | CFB            | 910102         | 0.20                    |
| 06N 05W 13???01     | 43.731450 | -116.877400 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF1211         | 43.732900 | -116.785800 | PAYETTE | GFB            | 910405         | BDL                     |
| CFBIFBF0170         | 43.734970 | -117.010000 | CANYON  | CFB            | 910102         | 18.00                   |
| CFBIFBF0171         | 43.735330 | -117.007200 | CANYON  | CFB            | 910102         | 4.80                    |
| 09N 05W 22AD?01     | 43.736250 | -116.738700 | PAYETTE | GFB            | 910405         | 10.00                   |

‡ BDL indicates that concentration is Below Detection Limit.

† Project code explanation can be found in *Description of Data Fields* section.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|--------|----------------|----------------|-------------------------|
| 05N 05W 10CBC01     | 43.738460 | -116.816800 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0184         | 43.739250 | -116.940100 |        | CFB            | 910102         | 1.50                    |
| 06N 06W 19CCB01     | 43.740990 | -116.857100 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0168         | 43.741550 | -116.973900 | CANYON | CFB            | 910102         | 5.50                    |
| CFBIFBF0169         | 43.741670 | -116.980900 | CANYON | CFB            | 910102         | BDL                     |
| 04N 05W 04BCC01     | 43.744630 | -116.936900 | CANYON | CFB            | 910102         | BDL                     |
| 04N 05W 32CDA01     | 43.744660 | -116.983300 | CANYON | CFB            | 910102         | 0.10                    |
| 06N 05W 27CDC01     | 43.744950 | -116.836300 | CANYON | CFB            | 910102         | 1.50                    |
| CFBIFBF0167         | 43.747440 | -116.976700 | CANYON | CFB            | 910102         | 4.10                    |
| 05N 04W 31ADB01     | 43.749420 | -116.929000 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0164         | 43.749570 | -117.005800 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0161         | 43.752770 | -116.946100 | CANYON | CFB            | 910102         | BDL                     |
| 06N 05W 29BBD01     | 43.753770 | -116.859500 | CANYON | CFB            | 910102         | 4.60                    |
| CFBIFBF0153         | 43.755100 | -116.946500 | CANYON | CFB            | 910102         | BDL                     |
| 06N 05W 29BCC01     | 43.757060 | -116.860900 | CANYON | CFB            | 910102         | 3.20                    |
| 06N 05W 30BAA02     | 43.757790 | -116.856100 | CANYON | CFB            | 910102         | 6.10                    |
| 06N 06W 30DAA01     | 43.761480 | -116.855900 | CANYON | CFB            | 910102         | BDL                     |
| 06N 05W 34CCD01     | 43.762480 | -116.869500 | CANYON | CFB            | 910102         | 5.10                    |
| 06N 06W 24CCC01     | 43.764080 | -116.863600 | CANYON | CFB            | 910102         | BDL                     |
| 06N 05W 33ACA01     | 43.764250 | -116.877300 | CANYON | CFB            | 910102         | 2.90                    |
| 06N 06W 31ADD01     | 43.764270 | -116.857700 | CANYON | CFB            | 910102         | 1.60                    |
| 04N 03W 29DCD01     | 43.765770 | -116.692300 | CANYON | CFB            | 910102         | 4.50                    |
| 06N 06W 24CCD01     | 43.766050 | -116.869800 | CANYON | CFB            | 910102         | BDL                     |
| 06N 06W 31ADA01     | 43.766270 | -116.857300 | CANYON | CFB            | 910102         | 3.60                    |
| 04N 04W 13C??01     | 43.770430 | -116.762800 | CANYON | CFB            | 910102         | BDL                     |

‡ BDL indicates that concentration is Below Detection Limit.

† Project code explanation can be found in *Description of Data Fields* section.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|--------|----------------|----------------|-------------------------|
| 04N 04W 26CA?01     | 43.770910 | -116.673400 | CANYON | CFB            | 910102         | 0.10                    |
| 06N 05W 27CDC02     | 43.775910 | -116.805500 | CANYON | CFB            | 910102         | 1.40                    |
| 06N 05W 19BD?01     | 43.775980 | -116.857700 | CANYON | CFB            | 910102         | 2.70                    |
| 06N 06W 17CCB01     | 43.776230 | -116.864900 | CANYON | CFB            | 910102         | 5.40                    |
| 06N 06W 17CCC01     | 43.776730 | -116.870800 | CANYON | CFB            | 910102         | BDL                     |
| 03N 03W 31DCC01     | 43.776860 | -116.783400 | CANYON | CFB            | 910102         | 19.00                   |
| CFBIFBF1669         | 43.777150 | -116.680600 | CANYON | CFB            | 910102         | 20.00                   |
| 03N 04W 08CC?01     | 43.777380 | -116.972700 | CANYON | CFB            | 910102         | 7.10                    |
| 05N 06W 26???02     | 43.781300 | -116.906100 | CANYON | CFB            | 910102         | 9.90                    |
| CFBIFBF1690         | 43.781460 | -116.624800 | CANYON | CFB            | 910102         | 3.40                    |
| 06N 06W 30ADD01     | 43.783660 | -116.868100 | CANYON | CFB            | 910102         | 2.00                    |
| 04N 04W 13BBD01     | 43.786320 | -116.763500 |        | CFB            | 910102         | BDL                     |
| CFBIFBF1680         | 43.786470 | -116.704800 | CANYON | CFB            | 910102         | 5.50                    |
| 06N 06W 17AAA01     | 43.787560 | -116.920900 | CANYON | CFB            | 910102         | 1.80                    |
| CFBIFBF0846         | 43.788420 | -116.918000 | CANYON | CFB            | 910102         | 2.10                    |
| 05N 06W 26???01     | 43.790520 | -116.909600 | CANYON | CFB            | 910102         | 8.10                    |
| 05N 03W 32CCC01     | 43.790530 | -116.917300 | CANYON | CFB            | 910102         | 7.70                    |
| 05N 06W 25AAC01     | 43.792760 | -116.911100 | CANYON | CFB            | 910102         | 0.20                    |
| 05N 05W 13DDD01     | 43.794180 | -116.858000 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0853         | 43.796440 | -116.880400 | CANYON | CFB            | 910102         | BDL                     |
| 05N 05W 20???01     | 43.797160 | -116.938100 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0150         | 43.800570 | -116.972900 | CANYON | CFB            | 910102         | 0.90                    |
| 05N 04W 17BAB01     | 43.802230 | -116.918500 | CANYON | CFB            | 910102         | 1.10                    |
| CFBIFBF0151         | 43.804000 | -117.006400 | OWYHEE | CFB            | 910102         | 0.20                    |
| CFBIFBF1681         | 43.804450 | -116.692100 |        | CFB            | 910102         | 4.70                    |

‡ BDL indicates that concentration is Below Detection Limit.

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*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|--------|----------------|----------------|-------------------------|
| 05N 05W 12BDD01     | 43.804540 | -116.877900 | CANYON | CFB            | 910102         | BDL                     |
| 05N 05W 10AA?01     | 43.808410 | -116.917300 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0831         | 43.810950 | -116.902800 | CANYON | CFB            | 910102         | BDL                     |
| 03N 05W 08DAA01     | 43.811490 | -116.962600 | OWYHEE | CFB            | 910102         | BDL                     |
| 04N 05W 28D??01     | 43.816480 | -116.967800 | CANYON | CFB            | 910102         | 9.50                    |
| 06N 05W 30BAA01     | 43.816770 | -116.925900 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0829         | 43.820710 | -116.918600 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0828         | 43.820790 | -116.923800 | CANYON | CFB            | 910102         | 6.20                    |
| 05N 05W 25AD?01     | 43.821880 | -116.939400 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0814         | 43.822300 | -116.925300 | CANYON | CFB            | 910102         | 6.40                    |
| 05N 04W 18CBB01     | 43.822350 | -116.932500 |        | CFB            | 910102         | BDL                     |
| CFBIFBF0822         | 43.822400 | -116.913700 |        | CFB            | 910102         | BDL                     |
| CFBIFBF0821         | 43.822460 | -116.916800 |        | CFB            | 910102         | BDL                     |
| 05N 04W 29BBD01     | 43.823280 | -116.935600 | CANYON | CFB            | 910102         | BDL                     |
| 04N 05W 33BC?01     | 43.823980 | -116.975100 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF0142         | 43.829730 | -116.959600 | CANYON | CFB            | 910102         | 2.50                    |
| GFBIFBF2789         | 43.830010 | -116.517600 | GEM    | GFB            | 910405         | 3.10                    |
| GFBIFBF2790         | 43.831480 | -116.544200 | GEM    | GFB            | 910405         | 0.70                    |
| GFBIFBF2786         | 43.831670 | -116.511300 |        | GFB            | 910405         | BDL                     |
| 04N 05W 23DCD01     | 43.831930 | -116.964100 | CANYON | CFB            | 910102         | 18.00                   |
| CFBIFBF0141         | 43.833040 | -116.956900 | CANYON | CFB            | 910102         | 6.30                    |
| GFBIFBF2785         | 43.834010 | -116.504200 | GEM    | GFB            | 910405         | 2.10                    |
| CFBIFBF0126         | 43.834100 | -116.974100 | CANYON | CFB            | 910102         | 4.60                    |
| 03N 05W 11D??01     | 43.835550 | -116.976600 | CANYON | CFB            | 910102         | 8.60                    |
| CFBIFBF0124         | 43.835790 | -116.974700 | CANYON | CFB            | 910102         | BDL                     |

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*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| 04N 05W 22ABA01     | 43.836620 | -116.993200 | CANYON  | CFB            | 910102         | 6.35                    |
| CFBIFBF0121         | 43.836760 | -116.989900 | CANYON  | CFB            | 910102         | 11.00                   |
| CFBIFBF0131         | 43.837950 | -116.964100 |         | CFB            | 910102         | 17.00                   |
| GFBIFBF2781         | 43.838050 | -116.492600 | GEM     | GFB            | 910405         | 0.60                    |
| 03N 05W 02DD?01     | 43.839610 | -116.975200 | CANYON  | CFB            | 910102         | BDL                     |
| 06N 02W 02???01     | 43.840350 | -116.478200 |         | GFB            | 910405         | 2.00                    |
| GFBIFBF2568         | 43.841840 | -116.587900 | GEM     | GFB            | 910405         | 0.70                    |
| GFBIFBF2771         | 43.844090 | -116.478400 | GEM     | GFB            | 910405         | 1.50                    |
| GFBIFBF2766         | 43.845890 | -116.472500 | GEM     | GFB            | 910405         | 3.30                    |
| GFBIFBF2664         | 43.845930 | -116.503400 | GEM     | GFB            | 910405         | BDL                     |
| GFBIFBF2769         | 43.847920 | -116.465500 | GEM     | GFB            | 910405         | 1.60                    |
| GFBIFBF2661         | 43.848990 | -116.514800 | GEM     | GFB            | 910405         | 0.10                    |
| GFBIFBF2626         | 43.851630 | -116.562200 | GEM     | GFB            | 910405         | 23.00                   |
| 05N 05W 28BD?01     | 43.851710 | -116.886500 | CANYON  | CFB            | 910102         | BDL                     |
| 07N 03W 28DC?01     | 43.851840 | -116.511600 | GEM     | GFB            | 910405         | 1.10                    |
| GFBIFBF2663         | 43.852160 | -116.498600 | GEM     | GFB            | 910405         | 7.50                    |
| GFBIFBF2765         | 43.852210 | -116.462700 | GEM     | GFB            | 910405         | 1.10                    |
| 07N 05W 11AA?01     | 43.852700 | -116.740200 | PAYETTE | GFB            | 910405         | BDL                     |
| 04N 05W 11A??01     | 43.853580 | -116.961000 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF2694         | 43.855350 | -116.485800 | GEM     | GFB            | 910405         | 2.40                    |
| GFBIFBF2761         | 43.855770 | -116.471100 | GEM     | GFB            | 910405         | 4.20                    |
| GFBIFBF2693         | 43.858170 | -116.478200 | GEM     | GFB            | 910405         | 0.50                    |
| CFBIFBF0105         | 43.859310 | -116.961600 | CANYON  | CFB            | 910102         | 16.00                   |
| 07N 01W 33DDB01     | 43.860060 | -116.563600 | GEM     | GFB            | 910405         | 0.90                    |
| GFBIFBF2527         | 43.866090 | -116.640700 | GEM     | GFB            | 910405         | 2.10                    |

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*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/ℓ ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| GFBIFBF2567         | 43.867190 | -116.598500 | GEM     | GFB            | 910405         | 2.80                    |
| 07N 01W 23B?01      | 43.868820 | -116.513600 | GEM     | GFB            | 910405         | 3.00                    |
| 07N 03W 14DB?01     | 43.869630 | -116.669400 | GEM     | GFB            | 910405         | BDL                     |
| 07N 01W 28CB?01     | 43.870050 | -116.655100 | GEM     | GFB            | 910405         | 0.70                    |
| 06N 03W 11DC?01     | 43.870820 | -116.599500 | GEM     | GFB            | 910405         | 0.10                    |
| GFBIFBF2650         | 43.871030 | -116.510800 | GEM     | GFB            | 910405         | 0.50                    |
| CFBIFBF0101         | 43.871660 | -116.949300 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF2648         | 43.875870 | -116.521000 | GEM     | GFB            | 910405         | BDL                     |
| 06N 03W 03BC?01     | 43.876140 | -116.549500 | GEM     | GFB            | 910405         | 2.60                    |
| GFBIFBF2689         | 43.876570 | -116.475500 | GEM     | GFB            | 910405         | BDL                     |
| GFBIFBF2692         | 43.877000 | -116.444400 | GEM     | GFB            | 910405         | 10.00                   |
| 05N 05W 30BCD01     | 43.877390 | -116.884400 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF2688         | 43.878210 | -116.454400 | GEM     | GFB            | 910405         | 1.30                    |
| GFBIFBF2649         | 43.879570 | -116.491800 | GEM     | GFB            | 910405         | 1.00                    |
| GFBIFBF2564         | 43.880330 | -116.620100 | GEM     | GFB            | 910405         | 4.40                    |
| 08N 04W 31CA?01     | 43.881150 | -116.938200 | PAYETTE | GFB            | 910405         | BDL                     |
| 07N 02W 29CD?01     | 43.881150 | -116.563400 | GEM     | GFB            | 910405         | 0.80                    |
| GFBIFBF2647         | 43.883360 | -116.520300 | GEM     | GFB            | 910405         | 0.60                    |
| GFBIFBF2512         | 43.884620 | -116.682500 | GEM     | GFB            | 910405         | 0.20                    |
| 06N 02W 12DB?02     | 43.885470 | -116.567800 | GEM     | GFB            | 910405         | 0.50                    |
| GFBIFBF2685         | 43.887450 | -116.458400 | GEM     | GFB            | 910405         | 2.50                    |
| GFBIFBF2645         | 43.888700 | -116.509300 | GEM     | GFB            | 910405         | BDL                     |
| GFBIFBF2553         | 43.888950 | -116.636000 | GEM     | GFB            | 910405         | 1.20                    |
| 06N 01W 09BB?01     | 43.889060 | -116.519300 | GEM     | GFB            | 910405         | BDL                     |
| 06N 02W 12DB?01     | 43.890040 | -116.557100 | GEM     | GFB            | 910405         | 3.80                    |

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*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| GFBIFBF2643         | 43.890340 | -116.517500 | GEM     | GFB            | 910405         | 0.40                    |
| GFBIFBF2644         | 43.892470 | -116.496000 | GEM     | GFB            | 910405         | 0.80                    |
| 06N 02W 25C??01     | 43.892610 | -116.578600 | GEM     | GFB            | 910405         | 0.10                    |
| 07N 01W 33DDB02     | 43.894220 | -116.529400 | GEM     | GFB            | 910405         | 1.20                    |
| GFBIFBF1827         | 43.894320 | -116.926300 |         | GFB            | 910405         | 0.10                    |
| 07N 02W 35???01     | 43.894490 | -116.452900 | GEM     | GFB            | 910405         | BDL                     |
| 06N 02W 03???01     | 43.894680 | -116.542100 | GEM     | GFB            | 910405         | BDL                     |
| 07N 01W 09BCA01     | 43.894790 | -116.504700 | GEM     | GFB            | 910405         | 0.50                    |
| GFBIFBF2602         | 43.895290 | -116.569000 | GEM     | GFB            | 910405         | 0.10                    |
| 07N 02E 14AD?01     | 43.895510 | -116.598600 | GEM     | GFB            | 910405         | 0.90                    |
| GFBIFBF2682         | 43.895960 | -116.453100 | GEM     | GFB            | 910405         | 2.30                    |
| 07N 02W 29CC?01     | 43.897450 | -116.559900 | GEM     | GFB            | 910405         | 0.80                    |
| GFBIFBF2674         | 43.897520 | -116.446800 | GEM     | GFB            | 910405         | 0.90                    |
| 06N 02W 15???01     | 43.898180 | -116.506500 | GEM     | GFB            | 910405         | 2.70                    |
| GFBIFBF1893         | 43.898220 | -116.747500 | PAYETTE | GFB            | 910405         | 3.70                    |
| GFBIFBF2672         | 43.899940 | -116.473800 | GEM     | GFB            | 910405         | 1.00                    |
| 06N 02W 01AC?01     | 43.901710 | -116.603600 | GEM     | GFB            | 910405         | 5.40                    |
| GFBIFBF2671         | 43.901730 | -116.482200 | GEM     | GFB            | 910405         | 0.20                    |
| 07N 03W 31ADD01     | 43.901944 | -116.731944 | PAYETTE | PAY            | 910401         | 0.04                    |
| GFBIFBF2601         | 43.902680 | -116.546100 | GEM     | GFB            | 910405         | 1.80                    |
| GFBIFBF2673         | 43.903510 | -116.452100 | GEM     | GFB            | 910405         | 1.40                    |
| 04N 03W 31???01     | 43.905940 | -116.929800 | CANYON  | CFB            | 910102         | BDL                     |
| 07N 03W 31DCD01     | 43.907500 | -116.733333 | PAYETTE | PAY            | 910402         | 4.56                    |
| GFBIFBF2630         | 43.908570 | -116.519300 | GEM     | GFB            | 910405         | 2.70                    |
| GFBIFBF2550         | 43.909410 | -116.605700 | GEM     | GFB            | 910405         | BDL                     |

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*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

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Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| 07N 03W 21ADA01     | 43.909630 | -116.566000 | GEM     | GFB            | 910405         | 0.10                    |
| GFBIFBF2551         | 43.909930 | -116.597000 | GEM     | GFB            | 910405         | BDL                     |
| CFBIFBF1832         | 43.910200 | -116.922700 | CANYON  | CFB            | 910102         | BDL                     |
| GFBIFBF2502         | 43.910260 | -116.697500 | GEM     | GFB            | 910405         | 3.20                    |
| GFBIFBF2668         | 43.911250 | -116.467600 | GEM     | GFB            | 910405         | 4.50                    |
| 07N 04W 25CCB01     | 43.912222 | -116.771111 | PAYETTE | PAY            | 910829         | 3.66                    |
| 07N 04W 26CBC01     | 43.913056 | -116.791667 | PAYETTE | PAY            | 910402         | 0.04                    |
| GFBIFBF2593         | 43.913420 | -116.548100 | GEM     | GFB            | 910405         | 0.10                    |
| 07N 04W 28DAA01     | 43.915833 | -116.813889 | PAYETTE | PAY            | 910606         | BDL                     |
| GFBIFBF2588         | 43.915870 | -116.548100 | GEM     | GFB            | 910405         | 0.10                    |
| 07N 03W 09???01     | 43.916080 | -116.787000 | PAYETTE | GFB            | 910405         | 2.50                    |
| GFBIFBF2665         | 43.918490 | -116.467700 | GEM     | GFB            | 910405         | 1.50                    |
| 06N 02W 08CAA02     | 43.919120 | -116.605400 | GEM     | GFB            | 910405         | BDL                     |
| 07N 04W 28AAA01     | 43.923333 | -116.812778 | PAYETTE | PAY            | 910829         | 30.60                   |
| 07N 04W 25ABB01     | 43.923333 | -116.761111 | PAYETTE | PAY            | 910829         | 2.54                    |
| 07N 04W 28AAA02     | 43.923611 | -116.813611 | PAYETTE | PAY            | 910606         | BDL                     |
| 07N 03W 19CDD01     | 43.923889 | -116.739444 | PAYETTE | PAY            | 910411         | BDL                     |
| 07N 04W 27BBB02     | 43.923889 | -116.811111 | PAYETTE | PAY            | 910606         | BDL                     |
| 07N 04W 27BBB01     | 43.923889 | -116.811667 | PAYETTE | PAY            | 910606         | BDL                     |
| GFBIFBF2791         | 43.926760 | -116.315900 |         | GFB            | 910405         | 2.40                    |
| 07N 03W 19DAD01     | 43.927500 | -116.731944 | PAYETTE | PAY            | 910411         | 0.38                    |
| 07N 04W 23DAC02     | 43.928611 | -116.774722 | PAYETTE | PAY            | 910411         | BDL                     |
| 07N 04W 23DAC01     | 43.930278 | -116.771944 | PAYETTE | PAY            | 910531         | 1.95                    |
| GFBIFBF2792         | 43.930420 | -116.310000 | GEM     | GFB            | 910405         | 5.10                    |
| 07N 02W 33???01     | 43.932110 | -116.600200 | GEM     | GFB            | 910405         | 2.60                    |

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*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| GFBIFBF2532         | 43.935440 | -116.599900 | GEM     | GFB            | 910405         | BDL                     |
| GFBIFBF1870         | 43.937220 | -116.833100 | PAYETTE | GFB            | 910405         | 9.80                    |
| 07N 04W 20AAA01     | 43.937778 | -116.834167 | PAYETTE | PAY            | 910403         | 3.60                    |
| 07N 04W 13DDC01     | 43.938333 | -116.755278 | PAYETTE | PAY            | 910401         | BDL                     |
| 07N 04W 15CCB01     | 43.940278 | -116.810000 | PAYETTE | PAY            | 910530         | 4.27                    |
| 07N 04W 17CCB01     | 43.940556 | -116.851667 | PAYETTE | PAY            | 910410         | 0.48                    |
| 07N 04W 14CCB01     | 43.940833 | -116.789722 | PAYETTE | PAY            | 910403         | 3.22                    |
| 07N 03W 17CBC01     | 43.942222 | -116.722222 | PAYETTE | PAY            | 910401         | BDL                     |
| 07N 03W 18CAA01     | 43.945278 | -116.741944 | PAYETTE | PAY            | 910401         | 0.08                    |
| 07N 04W 13BCC01     | 43.946111 | -116.771111 | PAYETTE | PAY            | 910403         | BDL                     |
| 07N 01E 22DD?01     | 43.950120 | -116.778700 | PAYETTE | GFB            | 910405         | 6.30                    |
| GFBIFBF2505         | 43.951860 | -116.668100 | GEM     | GFB            | 910405         | 1.40                    |
| 07N 04W 18BAA01     | 43.951944 | -116.862500 | PAYETTE | PAY            | 919410         | BDL                     |
| GFBIFBF1845         | 43.952970 | -116.931800 | PAYETTE | GFB            | 910405         | BDL                     |
| 07N 04W 07CCC01     | 43.953333 | -116.751111 | PAYETTE | PAY            | 910402         | 0.90                    |
| GFBIFBF1847         | 43.953750 | -116.902600 |         | GFB            | 910405         | 1.10                    |
| GFBIFBF1891         | 43.953920 | -116.796000 | PAYETTE | GFB            | 910405         | 1.40                    |
| GFBIFBF1846         | 43.955000 | -116.932100 | PAYETTE | GFB            | 910405         | 0.10                    |
| GFBIFBF1890         | 43.957190 | -116.787400 |         | GFB            | 910405         | 1.70                    |
| GFBIFBF1867         | 43.957690 | -116.827600 | PAYETTE | GFB            | 910405         | BDL                     |
| 07N 04W 10CBC01     | 43.958333 | -116.809722 | PAYETTE | PAY            | 910606         | BDL                     |
| 06N 01W 03CB?01     | 43.958730 | -116.776300 | PAYETTE | GFB            | 910405         | 3.00                    |
| 07N 04W 09CBB01     | 43.960000 | -116.831944 | PAYETTE | PAY            | 910409         | BDL                     |
| 07N 04W 07BCC01     | 43.960556 | -116.871944 | PAYETTE | PAY            | 910415         | BDL                     |
| 07N 05W 12BDD01     | 43.960556 | -116.884444 | PAYETTE | PAY            | 910415         | BDL                     |

‡ BDL indicates that concentration is Below Detection Limit.

† Project code explanation can be found in *Description of Data Fields* section.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| 07N 01E 22DD?02     | 43.962120 | -116.477600 | GEM     | GFB            | 910405         | BDL                     |
| GFBIFBF1865         | 43.962180 | -116.847500 | PAYETTE | GFB            | 910405         | BDL                     |
| 07N 04W 07ADA01     | 43.962500 | -116.853056 | PAYETTE | PAY            | 910828         | BDL                     |
| GFBIFBF1888         | 43.963410 | -116.784100 | PAYETTE | GFB            | 910405         | 3.20                    |
| 07N 04W 07BBB02     | 43.966389 | -116.866667 | PAYETTE | PAY            | 910612         | BDL                     |
| 07N 04W 07BBB01     | 43.966667 | -116.871944 | PAYETTE | PAY            | 910710         | 8.24                    |
| 07N 04W 10ABA01     | 43.966667 | -116.797778 | PAYETTE | PAY            | 910403         | BDL                     |
| 07N 04W 12BBA01     | 43.966944 | -116.767500 | PAYETTE | PAY            | 910402         | 0.06                    |
| 07N 04W 11DBB01     | 43.966944 | -116.780833 | PAYETTE | PAY            | 910403         | BDL                     |
| 07N 04W 06DCC01     | 43.967778 | -116.864444 | PAYETTE | PAY            | 910403         | BDL                     |
| 07N 04W 06CCD01     | 43.968056 | -116.868611 | PAYETTE | PAY            | 910612         | BDL                     |
| GFBIFBF1844         | 43.969000 | -116.887900 | PAYETTE | GFB            | 910405         | BDL                     |
| GFBIFBF1885         | 43.973820 | -116.824700 | PAYETTE | GFB            | 910405         | 5.20                    |
| 08N 04W 32DDD01     | 43.974167 | -116.871667 | PAYETTE | FGS            | 860722         | 5.09                    |
| 07N 05W 01DBB01     | 43.974167 | -116.881944 | PAYETTE | PAY            | 910419         | 0.27                    |
| 07N 05W 02DBB01     | 43.974167 | -116.900833 | PAYETTE | PAY            | 910419         | 0.07                    |
| 07N 04W 03DBB01     | 43.974444 | -116.801944 | PAYETTE | PAY            | 910531         | 3.27                    |
| 06N 03W 19BBA01     | 43.974990 | -116.788000 | PAYETTE | GFB            | 910405         | 2.60                    |
| GFBIFBF1863         | 43.975270 | -116.841500 | PAYETTE | GFB            | 910405         | BDL                     |
| 07N 04W 06AAD01     | 43.978611 | -116.852778 | PAYETTE | PAY            | 910530         | 10.20                   |
| 08N 04W 31DC?01     | 43.980720 | -116.848100 | PAYETTE | GFB            | 910405         | BDL                     |
| 08N 04W 32D??01     | 43.980740 | -116.850700 | PAYETTE | GFB            | 910405         | BDL                     |
| 08N 05W 36DDD01     | 43.981389 | -116.873056 | PAYETTE | FGS            | 860722         | 0.00                    |
| 07N 04W 03AAB01     | 43.981389 | -116.794167 | PAYETTE | PAY            | 910402         | BDL                     |
| 07N 05W 01BAA01     | 43.981667 | -116.874722 | PAYETTE | PAY            | 910606         | BDL                     |

‡ BDL indicates that concentration is Below Detection Limit.

† Project code explanation can be found in *Description of Data Fields* section.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| 08N 04W 36DDD01     | 43.982222 | -116.874167 | PAYETTE | PAY            | 910415         | BDL                     |
| 08N 04W 33CCD01     | 43.982222 | -116.827778 | PAYETTE | PAY            | 910409         | BDL                     |
| 07N 04W 31DDD01     | 43.982222 | -116.851944 | PAYETTE | PAY            | 910606         | BDL                     |
| 08N 05W 35DDC01     | 43.982500 | -116.897500 | PAYETTE | PAY            | 910419         | BDL                     |
| GFBIFBF1852         | 43.982900 | -116.863400 | PAYETTE | GFB            | 910405         | 3.10                    |
| GFBIFBF1883         | 43.982960 | -116.788700 | PAYETTE | GFB            | 910405         | BDL                     |
| 08N 04W 03D??01     | 43.983010 | -116.849500 | PAYETTE | GFB            | 910405         | BDL                     |
| 08N 05W 35CCC01     | 43.983333 | -116.911944 | PAYETTE | PAY            | 910524         | BDL                     |
| 08N 05W 36DCC01     | 43.983611 | -116.881944 | PAYETTE | FGS            | 860722         | 2.71                    |
| 08N 05W 35ADA01     | 43.984444 | -116.893333 | PAYETTE | FGS            | 860722         | 3.77                    |
| GFBIFBF1851         | 43.987710 | -116.856100 | PAYETTE | GFB            | 910405         | 14.00                   |
| 08N 04W 33ADC01     | 43.989444 | -116.815278 | PAYETTE | PAY            | 910403         | BDL                     |
| GFBIFBF1843         | 43.989650 | -116.887400 | PAYETTE | GFB            | 910405         | BDL                     |
| 08N 05W 35BCC01     | 43.990556 | -116.911667 | PAYETTE | PAY            | 910529         | 15.90                   |
| GFBIFBF1849         | 43.992080 | -116.867400 |         | GFB            | 910405         | 0.10                    |
| GFBIFBF1881         | 43.995080 | -116.810100 |         | GFB            | 910405         | 4.60                    |
| 08N 05W 35BAA01     | 43.996111 | -116.904444 | PAYETTE | PAY            | 910528         | 4.24                    |
| 08N 05W 25DDD01     | 43.996667 | -116.872778 | PAYETTE | PAY            | 910828         | 7.43                    |
| 08N 04W 28DCD01     | 43.996667 | -116.817778 | PAYETTE | PAY            | 910409         | BDL                     |
| 08N 04W 30DDD01     | 43.996667 | -116.851944 | PAYETTE | FGS            | 860722         | 5.09                    |
| 08N 05W 25CCC01     | 43.996944 | -116.892222 | PAYETTE | PAY            | 910827         | 5.40                    |
| 08N 05W 25CCC02     | 43.996944 | -116.892222 | PAYETTE | PAY            | 910528         | BDL                     |
| GFBIFBF1874         | 43.997060 | -116.812100 | PAYETTE | GFB            | 910405         | 7.60                    |
| 07N 05W 09DD?01     | 43.999520 | -116.887300 | PAYETTE | GFB            | 910405         | BDL                     |
| 08N 05W 24CC?01     | 43.999850 | -116.842100 |         | GFB            | 910405         | 7.60                    |

‡ BDL indicates that concentration is Below Detection Limit.

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*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| 08N 05W 25CBC01     | 44.000278 | -116.892222 | PAYETTE | PAY            | 910411         | BDL                     |
| 08N 04W 29CBC01     | 44.000278 | -116.851111 | PAYETTE | PAY            | 910409         | BDL                     |
| 08N 05W 25DBC01     | 44.001111 | -116.882222 | PAYETTE | PAY            | 910828         | 3.58                    |
| 08N 05W 30DBC01     | 44.001111 | -116.863889 | PAYETTE | PAY            | 910530         | 11.90                   |
|                     | 44.001600 | -116.544401 |         | USGS           | 750828         | 0.49                    |
| 08N 04W 28CBA01     | 44.003611 | -116.826944 | PAYETTE | PAY            | 910530         | 0.02                    |
| 08N 05W 26BCC01     | 44.004167 | -116.909167 | PAYETTE | FGS            | 860722         | 8.16                    |
| 08N 05W 27ADC01     | 44.004722 | -116.910833 | PAYETTE | FGS            | 860722         | 7.77                    |
| 08N 04W 30BCC01     | 44.005000 | -116.871667 | PAYETTE | PAY            | 910524         | BDL                     |
| 08N 05W 27ACD01     | 44.005278 | -116.921944 | PAYETTE | FGS            | 860722         | 12.30                   |
| 08N 05W 26ACB01     | 44.005556 | -116.902222 | PAYETTE | PAY            | 910606         | BDL                     |
| 08N 05W 26BDA01     | 44.005833 | -116.904722 | PAYETTE | PAY            | 910612         | BDL                     |
| 08N 05W 27ACA01     | 44.006667 | -116.919444 | PAYETTE | FGS            | 860722         | 5.21                    |
| 08N 04W 30BAA01     | 44.007222 | -116.863889 | PAYETTE | PAY            | 910530         | 3.81                    |
| 08N 05W 26AAD01     | 44.007500 | -116.884722 | PAYETTE | PAY            | 910524         | BDL                     |
| CFBIFBF1804         | 44.009250 | -116.925800 | OWYHEE  | CFB            | 910102         | 10.00                   |
| 08N 05W 23DAD01     | 44.010000 | -116.893056 | PAYETTE | PAY            | 910612         | BDL                     |
| 08N 05W 25AAA01     | 44.010556 | -116.873056 | PAYETTE | PAY            | 910411         | 37.00                   |
| 08N 05W 23CDD01     | 44.011667 | -116.904444 | PAYETTE | PAY            | 910827         | 5.33                    |
| CFBIFBF1807         | 44.011730 | -116.880300 | CANYON  | CFB            | 910102         | 5.00                    |
| CFBIFBF1814         | 44.012460 | -116.846100 |         | CFB            | 910102         | BDL                     |
| 03N 03W 05B??01     | 44.014900 | -116.908600 | CANYON  | CFB            | 910102         | 2.30                    |
| 03N 05W 13BA?01     | 44.015200 | -116.928100 | CANYON  | CFB            | 910102         | 22.00                   |
| 08N 04W 19DBC01     | 44.016111 | -116.911111 | PAYETTE | PAY            | 910409         | BDL                     |
| 08N 05W 23ACC01     | 44.016944 | -116.901944 | PAYETTE | PAY            | 910612         | BDL                     |

‡ BDL indicates that concentration is Below Detection Limit.

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*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County  | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|---------|----------------|----------------|-------------------------|
| 08N 05W 24ACC01     | 44.018611 | -116.880000 | PAYETTE | PAY            | 910523         | BDL                     |
| 08N 04W 24ABC02     | 44.018611 | -116.880000 | PAYETTE | PAY            | 910529         | BDL                     |
| 08N 04W 19ACC01     | 44.019167 | -116.859167 | PAYETTE | PAY            | 910828         | 3.50                    |
| GFBIFBF1810         | 44.019170 | -116.885100 | PAYETTE | GFB            | 910405         | BDL                     |
| 08N 05W 23BCC01     | 44.019444 | -116.912222 | PAYETTE | PAY            | 910528         | 10.80                   |
|                     | 44.020300 | -116.503101 |         | USGS           | 751010         | 4.80                    |
|                     | 44.020400 | -116.503501 |         | USGS           | 821013         | 16.00                   |
| 08N 05W 22ACA01     | 44.021389 | -116.919444 | PAYETTE | FGS            | 860722         | 1.00                    |
| 08N 05W 22ADB01     | 44.021944 | -116.913333 | PAYETTE | FGS            | 860722         | 5.91                    |
| 08N 05W 22AAC01     | 44.023056 | -116.913611 | PAYETTE | FGS            | 860722         | 6.09                    |
| 08N 05W 24BBC02     | 44.023333 | -116.892222 | PAYETTE | PAY            | 910528         | 11.40                   |
| 08N 05W 24BBB02     | 44.023889 | -116.892222 | PAYETTE | PAY            | 910528         | BDL                     |
| 08N 05W 24BBB01     | 44.023889 | -116.892222 | PAYETTE | PAY            | 910528         | BDL                     |
| CFBIFBF1809         | 44.025400 | -116.905700 | CANYON  | CFB            | 910102         | BDL                     |
| 08N 05W 14DCD01     | 44.025833 | -116.901111 | PAYETTE | PAY            | 910827         | 5.08                    |
| 04N 04W 10BC?01     | 44.026310 | -116.910700 | CANYON  | CFB            | 910102         | BDL                     |
| 08N 05W 15DAB01     | 44.032500 | -116.917778 | PAYETTE | PAY            | 910529         | 2.12                    |
|                     | 44.034000 | -116.474901 |         | USGS           | 821014         | 0.38                    |
| 08N 04W 29DA?01     | 44.037000 | -116.822600 | PAYETTE | GFB            | 910405         | 1.30                    |
| 03N 04W 08CDC01     | 44.037870 | -116.899000 | CANYON  | CFB            | 910102         | 2.30                    |
| CFBIFBF1789         | 44.038690 | -116.902800 | CANYON  | CFB            | 910102         | BDL                     |
| CFBIFBF1812         | 44.039720 | -116.822000 | CANYON  | CFB            | 910102         | 9.60                    |
|                     | 44.040200 | -116.552801 |         | USGS           | 750828         | 3.70                    |
|                     | 44.051900 | -116.544401 |         | USGS           | 750828         | 2.40                    |
| CFBIFBF1788         | 44.057950 | -116.905800 | CANYON  | CFB            | 910102         | 0.30                    |

‡ BDL indicates that concentration is Below Detection Limit.

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*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|--------|----------------|----------------|-------------------------|
| 05N 06W 35AA?01     | 44.062130 | -116.930200 | CANYON | CFB            | 910102         | 0.40                    |
| 03N 04W 13B??01     | 44.063700 | -116.949300 | CANYON | CFB            | 910102         | 2.00                    |
|                     | 44.064900 | -116.532701 |        | USGS           | 821014         | 1.80                    |
| CFBIFBF1765         | 44.066020 | -116.968400 | CANYON | CFB            | 910102         | 5.00                    |
|                     | 44.071900 | -116.382501 |        | USGS           | 910912         | 0.13                    |
| CFBIFBF1752         | 44.084820 | -116.921000 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF1754         | 44.085740 | -116.927700 | CANYON | CFB            | 910102         | 10.00                   |
| CFBIFBF1760         | 44.086290 | -116.942400 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF1745         | 44.087750 | -116.919400 | CANYON | CFB            | 910102         | 4.10                    |
| CFBIFBF1753         | 44.095840 | -116.930400 | CANYON | CFB            | 910102         | 3.80                    |
| CFBIFBF1741         | 44.097060 | -116.920100 | CANYON | CFB            | 910102         | 2.10                    |
| CFBIFBF1724         | 44.105060 | -116.916400 | CANYON | CFB            | 910102         | BDL                     |
| CFBIFBF1731         | 44.105670 | -116.892700 | CANYON | CFB            | 910102         | 3.00                    |
|                     | 44.115600 | -116.545101 |        | USGS           | 900810         | 15.00                   |
| CFBIFBF1707         | 44.115670 | -116.922100 | CANYON | CFB            | 910102         | 4.70                    |
|                     | 44.120100 | -116.573601 |        | USGS           | 750815         | 6.30                    |
| CFBIFBF1702         | 44.120540 | -116.912900 | CANYON | CFB            | 910102         | BDL                     |
| 05N 03W 04AC?01     | 44.122780 | -116.913400 | CANYON | CFB            | 910102         | 3.40                    |
|                     | 44.123800 | -116.483301 |        | USGS           | 910911         | 3.70                    |
|                     | 44.125200 | -116.563801 |        | USGS           | 911002         | 19.00                   |
|                     | 44.130400 | -116.560702 |        | USGS           | 910911         | 12.00                   |
|                     | 44.132600 | -116.510701 |        | USGS           | 910911         | 0.07                    |
|                     | 44.173800 | -116.343601 |        | USGS           | 750814         | 0.01                    |
|                     | 44.175200 | -116.455301 |        | USGS           | 730827         | 3.10                    |
|                     | 44.175800 | -116.461501 |        | USGS           | 730827         | 2.30                    |

‡ BDL indicates that concentration is Below Detection Limit.

† Project code explanation can be found in *Description of Data Fields* section.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well Identification | Latitude  | Longitude   | County     | Project Code † | Date of Sample | Nitrate conc. in mg/l ‡ |
|---------------------|-----------|-------------|------------|----------------|----------------|-------------------------|
| 10N 05W 21BBA01     | 44.177800 | -116.947200 | WASHINGTON | WGS            | 890829         | 2.93                    |
|                     | 44.181000 | -116.450101 |            | USGS           | 731001         | 1.40                    |
|                     | 44.182300 | -116.444501 |            | USGS           | 730802         | 0.04                    |
|                     | 44.182300 | -116.444101 |            | USGS           | 720630         | 0.06                    |
| 10N 05W 21BAA01     | 44.195000 | -116.941700 | WASHINGTON | WGS            | 890829         | 11.10                   |
| 10N 05W 16CDA01     | 44.198900 | -116.943100 | WASHINGTON | WGS            | 890829         | 18.60                   |
| 10N 05W 16CCB01     | 44.198900 | -116.950600 | WASHINGTON | WGS            | 890829         | 22.30                   |
| 10N 05W 16DBB01     | 44.202200 | -116.940800 | WASHINGTON | WGS            | 890829         | 14.40                   |
|                     | 44.202400 | -116.480401 |            | USGS           | 730807         | 1.00                    |
| 10N 05W 16ACC01     | 44.203600 | -116.941100 | WASHINGTON | WGS            | 890829         | 20.30                   |
| 10N 05W 17ADB01     | 44.204700 | -116.950000 | WASHINGTON | WGS            | 890829         | 0.00                    |
| 10N 05W 08DDA01     | 44.212200 | -116.951700 | WASHINGTON | WGS            | 890829         | 0.06                    |
|                     | 44.213000 | -116.520201 |            | USGS           | 750814         | 0.02                    |
|                     | 44.221500 | -116.321401 |            | USGS           | 750814         | 0.22                    |
|                     | 44.241000 | -116.384001 |            | USGS           | 750813         | 1.80                    |
|                     | 44.263200 | -116.344502 |            | USGS           | 750814         | 7.20                    |
|                     | 44.263300 | -116.275101 |            | USGS           | 750814         | 0.06                    |
|                     | 44.271700 | -116.444001 |            | USGS           | 750814         | 0.16                    |
|                     | 44.280000 | -116.425801 |            | USGS           | 750813         | 0.01                    |
|                     | 44.282400 | -116.410501 |            | USGS           | 620522         | 9.30                    |
|                     | 44.294100 | -116.435601 |            | USGS           | 750813         | 9.00                    |
|                     | 44.295000 | -116.938900 |            | WGS            | 890829         | 17.20                   |
|                     | 44.313500 | -116.261801 |            | USGS           | 750813         | BDL                     |
|                     | 44.335100 | -116.265001 |            | USGS           | 750812         | 0.01                    |
|                     | 44.345000 | -116.370501 |            | USGS           | 750813         | 0.11                    |

‡ BDL indicates that concentration is Below Detection Limit.

† Project code explanation can be found in *Description of Data Fields* section.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VI. Nitrate Data Table**

Blanks indicate unavailable data.

| Well<br>Identification | Latitude  | Longitude   | County | Project<br>Code † | Date<br>of<br>Sample | Nitrate<br>conc. in<br>mg/l ‡ |
|------------------------|-----------|-------------|--------|-------------------|----------------------|-------------------------------|
|                        | 44.350500 | -116.375101 |        | USGS              | 720628               | 0.06                          |

‡ BDL indicates that concentration is Below Detection Limit.

† Project code explanation can be found in *Description of Data Fields* section.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VII. Water Table Elevation Data Table**

Blanks indicate unavailable data

| Well Identification | Latitude  | Longitude   | County     | Project Code † | Date of Measurement | Water Elevation feet. ‡ |
|---------------------|-----------|-------------|------------|----------------|---------------------|-------------------------|
| 10N 05W 16CDA01     | 44.198900 | -116.943100 | WASHINGTON | WGS            | 890829              | 2092.60                 |
| 10N 05W 16DBB01     | 44.202200 | -116.940800 | WASHINGTON | WGS            | 890829              | 2088.07                 |
| 07N 04W 07BCC01     | 43.960556 | -116.871944 | PAYETTE    | PAY            | 910415              | 2290.92                 |
| 07N 04W 07BBB01     | 43.966667 | -116.871944 | PAYETTE    | PAY            | 910710              | 2275.55                 |
| 08N 05W 25AAA01     | 44.010556 | -116.873056 | PAYETTE    | PAY            | 910411              | 2188.12                 |
| 08N 04W 36DDD01     | 43.982222 | -116.874167 | PAYETTE    | PAY            | 910415              | 2237.31                 |
| 08N 05W 26BDA01     | 44.005833 | -116.904722 | PAYETTE    | PAY            | 910612              | 2211.30                 |
| 08N 05W 24ACC01     | 44.018611 | -116.880000 | PAYETTE    | PAY            | 910523              | 2170.01                 |
| 08N 05W 23CDD01     | 44.011667 | -116.904444 | PAYETTE    | PAY            | 910827              | 2200.90                 |
| 08N 04W 24ABC02     | 44.018611 | -116.880000 | PAYETTE    | PAY            | 910529              | 2160.08                 |
| 08N 05W 23ACC01     | 44.016944 | -116.901944 | PAYETTE    | PAY            | 910612              | 2191.73                 |
| 07N 05W 02DBB01     | 43.974167 | -116.900833 | PAYETTE    | PAY            | 910419              | 2243.71                 |
| 07N 03W 19CDD01     | 43.923889 | -116.739444 | PAYETTE    | PAY            | 910411              | 2276.56                 |
| 07N 04W 28DAA01     | 43.915833 | -116.813889 | PAYETTE    | PAY            | 910606              | 2352.98                 |
| 08N 04W 28DCD01     | 43.996667 | -116.817778 | PAYETTE    | PAY            | 910409              | 2191.51                 |
| 07N 04W 13DDC01     | 43.938333 | -116.755278 | PAYETTE    | PAY            | 910401              | 2251.98                 |
| 07N 04W 20AAA01     | 43.937778 | -116.834167 | PAYETTE    | PAY            | 910403              | 2327.62                 |
| 07N 04W 17CCB01     | 43.940556 | -116.851667 | PAYETTE    | PAY            | 910410              | 2352.17                 |
| 07N 04W 12BBA01     | 43.966944 | -116.767500 | PAYETTE    | PAY            | 910402              | 2221.01                 |
| 07N 04W 07ADA01     | 43.962500 | -116.853056 | PAYETTE    | PAY            | 910828              | 2269.86                 |
| 07N 04W 23DAC01     | 43.930278 | -116.771944 | PAYETTE    | PAY            | 910531              | 2292.69                 |
| 07N 04W 07BBB02     | 43.966389 | -116.866667 | PAYETTE    | PAY            | 910612              | 2267.00                 |
| 07N 04W 14CCB01     | 43.940833 | -116.789722 | PAYETTE    | PAY            | 910403              | 2299.77                 |
| 07N 04W 10ABA01     | 43.966667 | -116.797778 | PAYETTE    | PAY            | 910403              | 2232.18                 |
| 07N 04W 03DBB01     | 43.974444 | -116.801944 | PAYETTE    | PAY            | 910531              | 2223.49                 |
| 07N 04W 15CCB01     | 43.940278 | -116.810000 | PAYETTE    | PAY            | 910530              | 2301.10                 |

† Project code explanation can be found in *Description of Data Fields* section.

‡ Feet above mean sea level.

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**Table VII. Water Table Elevation Data Table**

| Blanks indicate unavailable data |           |             |            |                |                     |                         |
|----------------------------------|-----------|-------------|------------|----------------|---------------------|-------------------------|
| Well Identification              | Latitude  | Longitude   | County     | Project Code † | Date of Measurement | Water Elevation feet. ‡ |
| 08N 05W 23DAD01                  | 44.010000 | -116.893056 | PAYETTE    | PAY            | 910612              | 2196.59                 |
| 08N 04W 28CBA01                  | 44.003611 | -116.826944 | PAYETTE    | PAY            | 910530              | 2186.13                 |
| 07N 04W 06AAD01                  | 43.978611 | -116.852778 | PAYETTE    | PAY            | 910530              | 2245.16                 |
| 08N 05W 30DBC01                  | 44.001111 | -116.863889 | PAYETTE    | PAY            | 910530              | 2199.45                 |
| 07N 04W 06CCD01                  | 43.968056 | -116.868611 | PAYETTE    | PAY            | 910612              | 2255.50                 |
| 07N 03W 19DAD01                  | 43.927500 | -116.731944 | PAYETTE    | PAY            | 910411              | 2245.41                 |
| 07N 03W 31ADD01                  | 43.901944 | -116.731944 | PAYETTE    | PAY            | 910401              | 2309.43                 |
| 10N 05W 16CCB01                  | 44.198900 | -116.950600 | WASHINGTON | WGS            | 890829              | 2083.51                 |
| 10N 05W 08DDA01                  | 44.212200 | -116.951700 | WASHINGTON | WGS            | 890829              | 2095.63                 |
| 10N 05W 17ADB01                  | 44.204700 | -116.950000 | WASHINGTON | WGS            | 890829              | 2090.19                 |
| 08N 04W 33ADC01                  | 43.989444 | -116.815278 | PAYETTE    | PAY            | 910403              | 2206.12                 |
|                                  | 44.313500 | -116.261801 |            | USGS           | 750813              | 3074.20                 |
|                                  | 44.280000 | -116.425801 |            | USGS           | 750813              | 2560.14                 |
|                                  | 44.335100 | -116.265001 |            | USGS           | 750812              | 2954.80                 |
|                                  | 44.173800 | -116.343601 |            | USGS           | 750814              | 3150.00                 |
|                                  | 44.213000 | -116.520201 |            | USGS           | 750814              | 2594.81                 |
|                                  | 44.263300 | -116.275101 |            | USGS           | 750814              | 3265.80                 |
|                                  | 44.132600 | -116.510701 |            | USGS           | 910911              | 2175.20                 |
|                                  | 44.345000 | -116.370501 |            | USGS           | 750813              | 2693.34                 |
|                                  | 44.271700 | -116.444001 |            | USGS           | 750814              | 2546.75                 |
|                                  | 44.221500 | -116.321401 |            | USGS           | 750814              | 3161.78                 |
|                                  | 44.001600 | -116.544401 |            | USGS           | 750828              | 2208.35                 |
|                                  | 44.064900 | -116.532701 |            | USGS           | 821014              | 2138.80                 |
|                                  | 44.241000 | -116.384001 |            | USGS           | 750813              | 3349.65                 |
|                                  | 44.051900 | -116.544401 |            | USGS           | 750828              | 2136.45                 |
|                                  | 44.040200 | -116.552801 |            | USGS           | 750828              | 2148.24                 |

† Project code explanation can be found in *Description of Data Fields* section.

‡ Feet above mean sea level.

*Snake-Payette Rivers Hydrologic Unit Ground Water Quality Assessment Appendix*

**Table VII. Water Table Elevation Data Table**

Blanks indicate unavailable data

| Well<br>Identification | Latitude  | Longitude   | County | Project<br>Code † | Date<br>of<br>Measurement | Water<br>Elevation<br>feet. ‡ |
|------------------------|-----------|-------------|--------|-------------------|---------------------------|-------------------------------|
|                        | 44.020300 | -116.503101 |        | USGS              | 751010                    | 2187.04                       |
|                        | 44.120100 | -116.573601 |        | USGS              | 750815                    | 2094.02                       |
|                        | 44.294100 | -116.435601 |        | USGS              | 750813                    | 2592.66                       |
|                        | 44.020400 | -116.503501 |        | USGS              | 821013                    | 2176.80                       |

† Project code explanation can be found in *Description of Data Fields* section.

‡ Feet above mean sea level.

## **Other Idaho Division of Environmental Quality Ground Water Quality Technical Reports**

- *Snake Plain Aquifer Technical Report.* September 1985
- *The Rathdrum Prairie Aquifer Technical Report.* August 1988
- *Ground Water Contamination and Monitoring Activities on the Rathdrum Prairie Aquifer.* April 1991
- *Ground Water Vulnerability Assessment Snake River Plain, Southern Idaho.*  
April 1991
- *Annual Ground Water Contamination Report, State Fiscal Year 1991*
- *Appendixes to the Annual Ground Water Contamination Report, State Fiscal Year 1991*
- *Ground Water and Soils Reconnaissance of the Lower Payette Area, Payette County, Idaho.* in prep.

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