U.S. Department of the Interior
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Prepared in cooperation with
U.S. Environmental Protection Agency

Concentrations and Loads of Cadmium, Lead, and Zinc Measured Near the Peak of the 1999 Snowmelt-Runoff Hydrographs for 42 Water-Quality Stations, Coeur d'Alene River Basin, Idaho

Open-File Report 00–322

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By Paul F. Woods

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CONVERSION FACTORS AND OTHER ABBREVIATED UNITS

Multiply	By	To obtain
cubic foot per second (ft^3/s)	0.02832	cubic meter per second
mile (mi)	1.609	kilometer
pound per day (lb/d)	0.4536	kilogram per day
square mile (mi^2)	2.590	square kilometer

Temperature in degrees Celsius (°C) can be converted to degrees Fahrenheit (°F) as follows:

$$°F=(1.8)\,(°C)+32$$

Other abbreviated units:

DEG C. . . . . degrees Celsius
µg/L, UG/L . . . . . microgram per liter
µm . . . . . micrometer
US/CM, micromhos/cm, microsiemens . . . . . microsiemens per centimeter
mg/L, MG/L . . . . . milligram per liter
mL, ML. . . . . milliliter
T/DAY . . . . . ton per day

Concentrations and Loads of Cadmium, Lead, and Zinc Measured Near the Peak of the 1999 Snowmelt-Runoff Hydrographs for 42 Water-Quality Stations, Coeur d'Alene River Basin, Idaho

By Paul F. Woods

Abstract

The Remedial Investigation/Feasibility Study conducted by the U.S. Environmental Protection Agency within the Spokane River Basin of northern Idaho and eastern Washington included extensive data-collection activities to determine the nature and extent of trace-element contamination within the basin. The U.S. Geological Survey designed and implemented synoptic sampling of the 1999 snowmelt-runoff event at 42 water-quality stations during the 1999 water year. The distribution of the 42 stations was as follows: North Fork Coeur d'Alene River and tributaries, 4 stations; South Fork Coeur d'Alene River, 13 stations; Canyon, Ninemile, and Pine Creeks, 4 stations each; other tributaries to South Fork Coeur d'Alene River, 10 stations; and main stem Coeur d'Alene River, 3 stations. The objective was to synoptically collect discharge and water-quality data in order to significantly improve the estimation of trace-element loads from multiple contributing source areas during the snowmelt-runoff event. Discharge and water-quality data were collected near the peak discharge during late May 1999. Each station was sampled for whole-water recoverable and dissolved concentrations and loads of cadmium, lead, and zinc.

Three general concentration levels of cadmium, lead, and zinc were noted among the 42 stations. Dissolved cadmium concentrations were less than 1 microgram per liter (µg/L) at 26 stations, exceeded 10 µg/L at 1 station, and ranged from 1 to 10 µg/L at the remaining 15 stations. Whole-water recoverable cadmium concentrations were less than 1 µg/L at 23 stations, exceeded 10 µg/L at 4 stations, and ranged from 1 to 10 µg/L at the remaining 15 stations. Dissolved lead concentrations were less than 1 µg/L at 22 stations, exceeded 10 µg/L at 7 stations, and ranged from 1 to 10 µg/L at the remaining 13 stations. Whole-water recoverable lead concentrations were less than 10 µg/L at 13 stations, exceeded 500 µg/L at 20 stations, and ranged from 10 to 500 µg/L at the remaining 9 stations. Dissolved zinc concentrations were less than 10 µg/L at 14 stations, exceeded 500 µg/L at 6 stations, and ranged from 10 to 500 µg/L at the remaining 22 stations. Whole-water recoverable zinc concentrations were less than 10 µg/L at 9 stations, exceeded 500 µg/L at 15 stations, and ranged from 10 to 500 µg/L at the remaining 18 stations.

The accounting of tributary loads between two South Fork stations at O'Brien Gulch and Pinehurst revealed differences between dissolved and whole-water recoverable loads, as well as differences among the three trace elements. Tributary loads accounted for an average of 29 percent (range of 27 to 31.6 percent) of the differences in whole-water recoverable loads of the three trace elements between the O'Brien Gulch and Pinehurst stations. This result implies that the main stem of the South Fork Coeur d'Alene River is an important source of sediment-associated trace elements under elevated streamflows. In the case of dissolved loads of cadmium and zinc, the tributary loads accounted for about one-half (range of 47.3

to 55 percent) of the differences between the two South Fork stations. As with whole-water recoverable loads, this result indicates an important source of dissolved cadmium and zinc within the main stem. The picture is much different for dissolved lead loads: About 94 percent of the load difference between the O'Brien Gulch and Pinehurst stations was accounted for by loads from the 13 tributaries.

The Coeur d'Alene River near Harrison transported 924 pounds of dissolved lead per day, of which 82.8 pounds came from the South Fork and 11.7 pounds from the North Fork. Only 10.2 percent of the load at Harrison was measured at the Pinehurst and Enaville stations; therefore, a substantial load of dissolved lead is being contributed downstream from the confluence of the North and South Forks.

INTRODUCTION

Mining and ore-processing activities conducted over the past 100 years in the South Fork Coeur d'Alene River Basin have produced extensive deposits of trace-element-contaminated sediments throughout the South Fork Coeur d'Alene River valley and its tributaries, the channel and flood plain of the main stem Coeur d'Alene River, and the lakebed of Coeur d'Alene Lake. Snowmelt runoff and occasional floods continue to transport and redistribute trace-element-contaminated sediments throughout the 6,680-mi^2 Spokane River Basin of northern Idaho and eastern Washington (fig. 1, back of report).

The U.S. Environmental Protection Agency (EPA) recently initiated a Remedial Investigation/Feasibility Study (RI/FS) of the Spokane River Basin under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), which requires EPA to evaluate contaminant release, fate, and transport. The Remedial Investigation phase involves data collection to characterize site conditions, development of conceptual models, determination of the nature and extent of trace-element contamination, and risk assessment for human health and the environment. The development and evaluation of remedial action alternatives is the focus of the Feasibility Study. In March 1998, the EPA asked the U.S. Geological Survey (USGS) to identify hydrologic and water-quality studies the USGS might perform in support of the RI/FS of the Spokane River Basin. The study described in this report was conducted by USGS as Task 10 (spring 1999 snowmelt-runoff synoptic sampling of Coeur d'Alene River Basin) under Interagency Agreement DW14957278–01–2 with EPA.

The purpose of this report is to summarize the results of synoptic sampling at 42 water-quality stations in the Coeur d'Alene River Basin. Data collected during this study can be used to significantly improve the estimation of trace-element loads from multiple contributing source areas during a high-flow event. Multiple crews were deployed among the 42 stations so that an identical sampling design could be used for data collection at each site. Data were collected at the 42 stations between May 22 and 27, during the spring 1999 snowmelt-runoff event.

APPROACH

Discharge measurements and water-quality samples were collected at the 42 USGS water-quality stations listed in table 1 (back of report). The locations of the stations are illustrated in figure 1 in relation to the number or letter preceding each USGS station name. The distribution of the 42 stations was as follows: North Fork Coeur d'Alene River and tributaries, 4 stations; South Fork Coeur d'Alene River, 13 stations; Canyon, Ninemile, and Pine Creeks, 4 stations each; other tributaries to South Fork Coeur d'Alene River, 10 stations; and main stem Coeur d'Alene River, 3 stations.

Discharge measurements were made using standardized USGS methods for collection of discharge data, computation of discharge, and quality assurance procedures, which are thoroughly described in six USGS Techniques of Water-Resources Investigations Reports (Buchanan and Somers, 1968, 1969; Riggs, 1968; Carter and Davidian, 1968; Kennedy, 1983, 1984). The field sampling plan was to measure discharge on the ascending limb of the hydrograph, near the peak, at each station. The 42 discharge measurements were made between May 22 and 27. Of the 42 stations, the following 14 were equipped to collect a continuous record of discharge: 1, 2, 3, 4, 5, 8, 10, 13, 14, 15, 16, 17, 18, and 19.

Water-quality samples were collected each time a discharge measurement was made. Water temperature,

pH, alkalinity, and specific conductance were measured onsite each time samples were collected. Water-quality samples were collected with nonmetallic samplers and using cross-sectional, depth-integrated procedures described by Edwards and Glysson (1988). The individual samples were composited in a churn splitter and subsamples were withdrawn for laboratory analyses. Samples destined for whole-water recoverable (WWR) analyses were withdrawn initially; samples for dissolved analyses then were withdrawn via a peristaltic pump and nonmetallic filtration apparatus with a filter pore size of 0.45 µm (Gelman capsule filters). Each capsule filter had been prerinsed with 1,000 mL of deionized water. Trace-element samples were preserved with 2 mL of Ultrex nitric acid. Sample collection and field processing were conducted using "clean" protocols that ensure noncontamination at the parts-per-billion level, as described by Horowitz and others (1994). The samples were shipped in plastic coolers that were securely taped, custody-sealed, and logged in on an enclosed chain-of-custody form. The chain-of-custody was quite short—the field personnel shipped the samples via air to the USGS National Water-Quality Laboratory in Denver, Colorado.

The water-quality samples were analyzed for WWR and dissolved concentrations of cadmium, lead, and zinc. Additionally, each sample was analyzed for dissolved concentrations of SO_4, Cl, Mg, K, Si, Ca, Na, F, Fe, and Mn, as well as lab values of pH, alkalinity, and conductivity. All analyses were performed using low-level detection limit methods described by Fishman and Friedman (1989) and quality assurance/quality control procedures described by Pritt and Raese (1995).

The water-quality data were combined with discharge data to compute instantaneous constituent loads near the peak of the hydrograph for each station. Instantaneous loads, in pounds per day, were computed by multiplying the following four variables: instantaneous discharge, in cubic feet per second; constituent concentration, in milligrams per liter; a conversion factor of 0.0027 to convert flow and concentration units; and a conversion factor of 2,000 to convert tons to pounds.

HYDROLOGIC MASS BALANCE

Hydrologic mass balance was evaluated to aid in interpretation of the trace-element loads developed for the 42 stations. The hydrographs for the 14 stations with continuous records of discharge (figs. 2 through 15, back of report) were used to identify which stations were most suitable for evaluating the routing of the snowmelt-runoff peak.

Within the main stem South Fork Coeur d'Alene River (SFCDR), the snowmelt-runoff peak occurred on May 25 (figs. 2 through 5). Canyon, Ninemile, Placer, and Pine Creeks (figs. 6 through 9) also peaked on May 25. Of these eight stations, all but SFCDR at Silverton (fig. 3) and Placer Creek (fig. 8) were sampled at or near the peak. The relation between sample-collection date and runoff peak at the other stations within the SFCDR basin cannot be accurately determined because they lacked continuous records of discharge. Beginning at SFCDR below Trowbridge Gulch, discharge was 466 ft^3/s on May 24. The sum of measured tributary inflows between that station and SFCDR near Pinehurst was 2,800 ft^3/s; thus, the combined measured discharge upstream from SFCDR near Pinehurst was 3,270 ft^3/s. The discharge at the latter station was 4,190 ft^3/s; thus, 78 percent of the hydrologic mass balance was accounted for by measured surface-water inflows. Part of the missing 22 percent was attributable to discharge-measurement error, often cited as ±5 to 10 percent. Two other sources for the missing inflow were (1) discharge not measured at the peak of each station's hydrograph, and (2) ground-water inflow to the main stem SFCDR.

The hydrologic mass balance at Coeur d'Alene River (CDR) near Cataldo was quite good. Discharge at the Cataldo station was 16,000 ft^3/s on May 25 (fig. 13). The SFCDR near Pinehurst carried 4,190 ft^3/s on May 25 (fig. 5); the North Fork Coeur d'Alene River (NFCDR) at Enaville added 11,100 ft^3/s on May 25 (fig. 12). Some discharge, about 400 ft^3/s, was lost on the CDR between the Cataldo and Rose Lake stations, both of which were sampled at the runoff peak (figs. 13 and 14). The 400-ft^3/s loss is well within the margin of discharge-measurement error. The downstream-most station on the CDR, near Harrison, was sampled about 3 days prior to the runoff peak (fig. 15). The increase in stage was likely caused by backwater conditions due to the filling of Coeur d'Alene Lake.

MAGNITUDE OF CONCENTRATIONS AND LOADS AMONG STATIONS

The results of discharge measurements and water-quality sampling for cadmium, lead, and zinc at the 42 stations are summarized in table 2 (back of report). Hydrographs were plotted for the 14 stations with a continuous record of discharge to clearly indicate when water-quality samples were collected and to list the concentration and instantaneous loads associated with each water-quality sample (figs. 2 through 15). Note that the sample points do not always plot on the hydrograph curve; the indicated samples are associated with instantaneous discharge measurements, whereas the hydrograph curve depicts mean daily discharge.

Dissolved and WWR concentrations, in µg/L, of cadmium among the 42 stations ranged, respectively, from 0.006 (NFCDR, Prichard) to 28.7 (Government Gulch) and from 0.002 (NFCDR, Prichard) to 29.3 (Government Gulch). Dissolved and WWR concentrations, in µg/L, of lead ranged, respectively, from 0.02 (Pine Creek above mouth of East Fork (EF) Pine Creek) to 35.6 (EF Ninemile Creek above mouth) and from 0.133 (Pine Creek above mouth of EF Pine Creek) to 2,000 (Canyon Creek above mouth). Dissolved and WWR concentrations, in µg/L, of zinc ranged, respectively, from 0.509 (Pine Creek above mouth of EF Pine Creek) to 1,600 (EF Ninemile Creek above mouth) and from 0.79 (Little North Fork above mouth) to 1,900 (EF Ninemile Creek above mouth).

The wide range in concentrations shown in table 2 reflects three general concentration levels in cadmium, lead, and zinc among the stations. Dissolved cadmium concentrations were less than 1 µg/L at 26 stations, exceeded 10 µg/L at 1 station, and ranged from 1 to 10 µg/L at the remaining 15 stations. WWR cadmium concentrations were less than 1 µg/L at 23 stations, exceeded 10 µg/L at 4 stations, and ranged from 1 to 10 µg/L at the remaining 15 stations. Dissolved lead concentrations were less than 1 µg/L at 22 stations, exceeded 10 µg/L at 7 stations, and ranged from 1 to 10 µg/L at the remaining 13 stations. WWR lead concentrations were less than 10 µg/L at 13 stations, exceeded 500 µg/L at 20 stations, and ranged from 10 to 500 µg/L at the remaining 9 stations. Dissolved zinc concentrations were less than 10 µg/L at 14 stations, exceeded 500 µg/L at 6 stations, and ranged from 10 to 500 µg/L at the remaining 22 stations. WWR zinc concentrations were less than 10 µg/L at 9 stations, exceeded 500 µg/L at 15 stations, and ranged from 10 to 500 µg/L at the remaining 18 stations.

The constituent load carried at each station was affected by its constituent concentration and the discharge at the time the water-quality sample was obtained. The foregoing discussion of table 2 has noted the wide variations in cadmium, lead, and zinc concentrations. Discharges listed in table 2 also varied widely, from 1 ft^3/s (Terror Gulch) to 16,000 ft^3/s (CDR near Cataldo). The smallest loads were carried at stations with a combination of low constituent concentration and low discharge. The largest loads were not necessarily carried at those stations with the largest constituent concentrations because discharge at those stations was not always large. Dissolved and (or) WWR loads, in lb/d, of cadmium ranged, respectively, from less than 0.01 (Little North Fork above mouth, Ninemile Creek above mouth of EF Ninemile Creek, Placer Creek, Lake Creek, Twomile Creek, Terror Gulch, Montgomery Creek, Elk Creek, EF Pine Creek, Pine Creek above mouth) to 41.9 (CDR at Rose Lake) and from less than 0.01 (Little North Fork above mouth, Ninemile Creek above mouth of EF Ninemile Creek, Lake Creek, Twomile Creek, Terror Gulch, Montgomery Creek, EF Pine Creek) to 181 (CDR near Cataldo). Dissolved and WWR loads, in lb/d, of lead ranged, respectively, from less than 0.01 (Twomile Creek, Terror Gulch, Montgomery Creek) to 924 (CDR near Harrison) and from less than 0.01 (Twomile Creek, Terror Gulch) to 20,100 (CDR near Cataldo). Dissolved and WWR loads, in lb/d, of zinc ranged, respectively, from 0.04 (Twomile Creek) to 6,530 (CDR at Rose Lake) and from 0.04 (Twomile Creek) to 18,100 (CDR near Cataldo).

Canyon Creek was sampled at four stations (Burke, Gem, Woodland Park, Wallace) on May 24. Discharge increased about 75 percent between Burke and Wallace; however, substantial increases in constituent concentration caused load increases of several orders of magnitude downstream. For example, the WWR lead load at Burke was 5.6 lb/d, whereas above the mouth at Wallace, the load had increased to 4,150 lb/d, a 740-fold increase due almost entirely to increases in concentration from 4.68 to 2,000 µg/L. The pattern for other dissolved and WWR constituents transported by Canyon Creek was similar, but of lesser magnitude.

Ninemile Creek was also sampled at four stations; however, the three stations upstream from the mouth (EF Ninemile Creek, EF Ninemile Creek above mouth, and Ninemile Creek above mouth of EF Ninemile Creek) were sampled on May 23, whereas the station at

the mouth (Ninemile Creek at Wallace) was sampled on May 26. Because of the differences in sampling dates, a comparison of loads among the four stations is less instructive than the one just done for Canyon Creek. Regardless, the trace-element loads contributed by Ninemile Creek above mouth of EF Ninemile Creek are of little consequence compared with those contributed by the two stations on the EF Ninemile Creek.

For Pine Creek, the two upstream stations (EF Pine Creek above Gilbert Creek and Pine Creek above mouth of EF Pine Creek) were sampled on May 23; the two stations near the town of Pinehurst (Pine Creek below Amy Gulch and Pine Creek above mouth) were sampled on May 25. The two upstream stations contributed very small loads of the three trace elements. Discharge, constituent concentrations, and loads at the two downstream stations were similar on May 25, indicating the absence of significant load sources between the two stations.

ROUTING OF CONSTITUENT LOADS DURING 1999 SNOWMELT-RUNOFF EVENT

The majority of the water-quality sampling was conducted at the 13 stations on the SFCDR and 13 of its tributaries. The ensuing discussion uses table 2 and figures 2 through 15 to describe the effect of tributary constituent loads on the loads transported in the SFCDR from the O'Brien Gulch station (12413030) to the Pinehurst station (12413470), as well as the relative effects of the North and South Forks' constituent loads on those measured at CDR near Harrison (12413860).

The load of 0.04 lb/d of dissolved cadmium measured at the O'Brien Gulch station increased to 36.2 lb/d at the Pinehurst station. The three largest tributary loads, in lb/d, were delivered by Canyon Creek (12.1), by Ninemile Creek (4.28), and by Government Gulch (2.37); the other 10 tributaries contributed only 1.19 lb/d. The combined load of 19.9 lb/d from the 13 tributaries accounted for 55 percent of the increase in dissolved cadmium load between the stations at O'Brien Gulch and Pinehurst. Much of the unaccounted load between the two stations was likely contributed by inflow of cadmium-bearing ground water. About 94 percent of the 38.5 lb/d of dissolved cadmium load measured at the CDR near Harrison was contributed by the South Fork.

The load of 0.11 lb/d of WWR cadmium measured at the O'Brien Gulch station increased to 125 lb/d at the Pinehurst station. Canyon, Ninemile, and Government Gulch Creeks again were the three largest tributary loaders, adding 22.4, 6.15, and 2.42 lb/d, respectively. The 13 tributaries added 33.6 lb/d and accounted for 27 percent of the increase in load between the stations at O'Brien Gulch and Pinehurst. The unaccounted load was likely contributed by dissolved cadmium from ground-water inflow, as well as by the erosion and transport of sediment-associated cadmium contained in the channel and banks of the South Fork. About 98 percent of the 127 lb/d of WWR cadmium load measured at the CDR near Harrison was from the South Fork.

The load of 0.32 lb/d of dissolved lead measured at the O'Brien Gulch station increased to 82.8 lb/d at the Pinehurst station. The 13 tributaries contributed 77.2 lb/d, or 93.6 percent, of the additional load. Canyon, Ninemile, and Pine Creeks added the largest tributary loads—54.5, 15.1, and 5.78 lb/d, respectively. The CDR near Harrison transported 924 lb/d of dissolved lead, 82.8 lb/d from the South Fork and 11.7 lb/d from the North Fork. Only 10.2 percent of the load at Harrison was measured at the Pinehurst and Enaville stations; therefore, a substantial load of dissolved lead is being contributed downstream from the confluence of the North and South Forks. This unaccounted load could be from some combination of the following three sources: (1) ground water from the South Fork may add dissolved lead to the CDR if the reach between Pinehurst and Cataldo gains ground water; (2) lead may be desorbed from sediments within the water column as the North Fork (small WWR lead concentration, 0.2 µg/L) mixes with the South Fork (large WWR lead concentration, 3.66 µg/L); and (3) dissolved concentrations are operationally defined as the filtrate passing a 0.45-µm filter pore size; thus, colloidal iron-lead complexes formed in the South Fork would be included in such filtrates and would inflate the dissolved concentrations.

The load of 9.31 lb/d of WWR lead measured at the O'Brien Gulch station was augmented by a combined load of 5,000 lb/d from the 13 tributaries. As for dissolved lead, Canyon, Ninemile, and Pine Creeks were the largest tributary loaders for WWR lead, adding 4,150, 534, and 227 lb/d, respectively. However, the loads from the 13 tributaries only accounted for 28.6 percent of the difference in loads between the O'Brien Gulch and Pinehurst stations; the latter transported 17,500 lb/d. Sources for the unaccounted load

are likely the erosion and transport of sediment-associated lead contained in the channel and banks of the South Fork and authegenic conversion of dissolved lead to WWR lead via adsorption to iron. The WWR lead load of 17,500 lb/d from the South Fork was the dominant contribution to the 19,800 lb/d in transport at the Harrison station.

The load of 4.13 lb/d of dissolved zinc measured at the O'Brien Gulch station increased to 5,140 lb/d at the Pinehurst station. Canyon Creek added 1,390 lb/d; the other 12 tributaries added another 1,040 lb/d. The tributary loads accounted for 47.3 percent of the increase between the O'Brien Gulch and Pinehurst stations. Much of the unaccounted load between the two stations was likely from inflow of zinc-bearing ground water. The dissolved zinc load of 6,000 lb/d at the Harrison station was contributed mainly by the South Fork.

The load of 21.4 lb/d of WWR zinc measured at the O'Brien Gulch station increased to 15,500 lb/d at the Pinehurst station. Canyon, Ninemile, and Pine Creeks added the largest tributary loads; Canyon Creek alone added 2,990 lb/d. However, the 4,900 lb/d added by the 13 tributaries accounted for only 31.6 percent of the load increase. The unaccounted load was likely contributed by dissolved zinc from ground-water inflow, as well as by the erosion and transport of sediment-associated zinc contained in the channel and banks of the South Fork. The South Fork contributed more than 95 percent of the WWR load of 16,100 lb/d of zinc at the Harrison station.

The accounting of tributary loads between the two South Fork stations at O'Brien Gulch and Pinehurst revealed differences between dissolved and WWR loads, as well as differences among the three trace elements. Tributary loads accounted for an average of 29 percent (range of 27 to 31.6 percent) of the differences in WWR loads of the three trace elements between the O'Brien Gulch and Pinehurst stations. This result implies that the main stem SFCDR is an important source of sediment-associated trace elements under elevated streamflows. In the case of dissolved loads of cadmium and zinc, the tributary loads accounted for about one-half (range of 47.3 to 55 percent) of the differences between the two South Fork stations. As with WWR loads, this result indicates an important source of dissolved cadmium and zinc within the main stem. The picture is much different for dissolved lead loads: About 94 percent of the load difference between the O'Brien Gulch and Pinehurst stations was accounted for by loads from the 13 tributaries.

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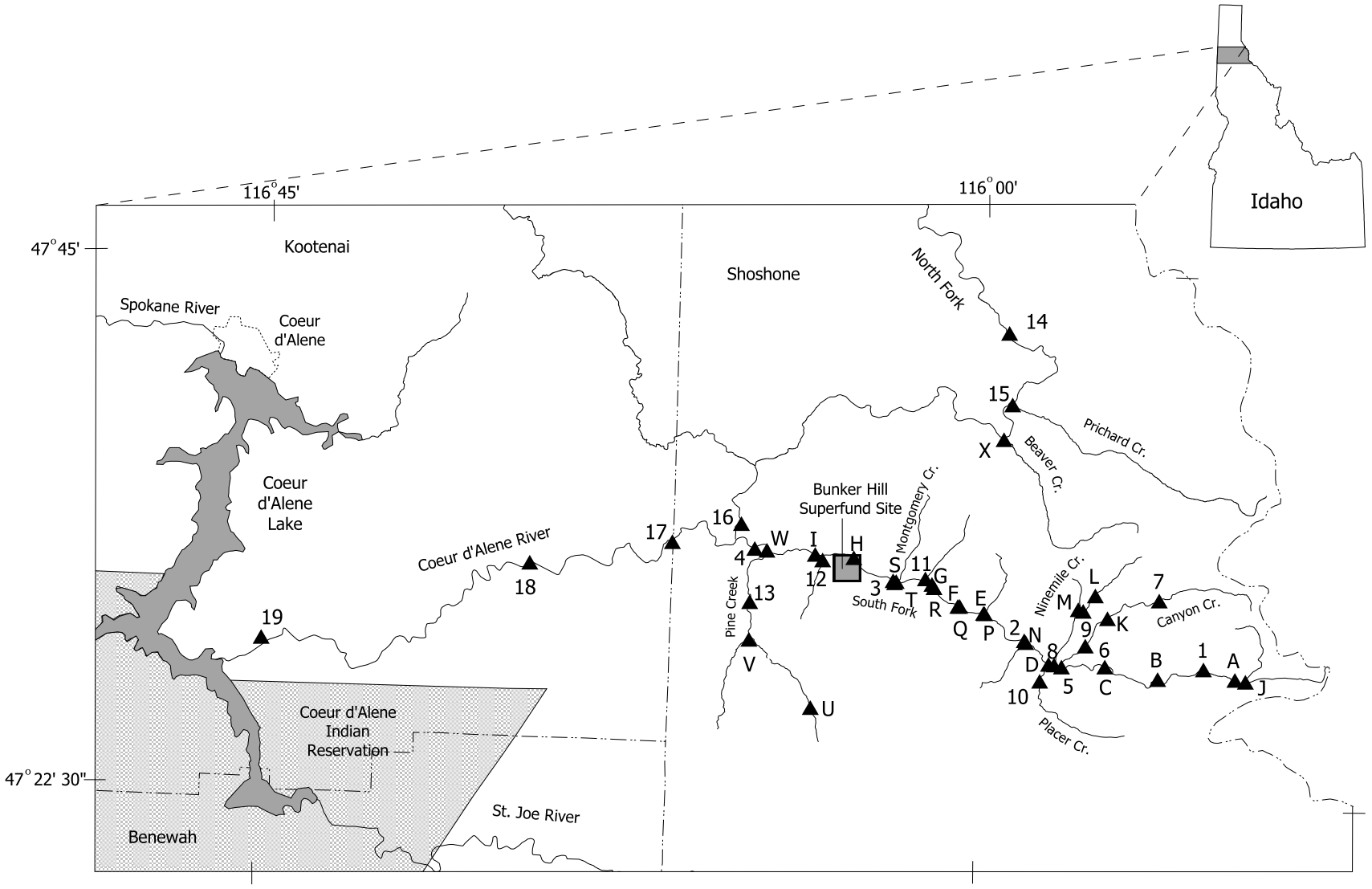
Figures 1-15



Base from U.S. Geological Survey digital data, 1:100,000, 1999
Albers Equal-Area projection
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Figure 1. Locations of 42 water-quality stations monitored during spring 1999 snowmelt runoff within the Coeur d'Alene River Basin, Idaho.

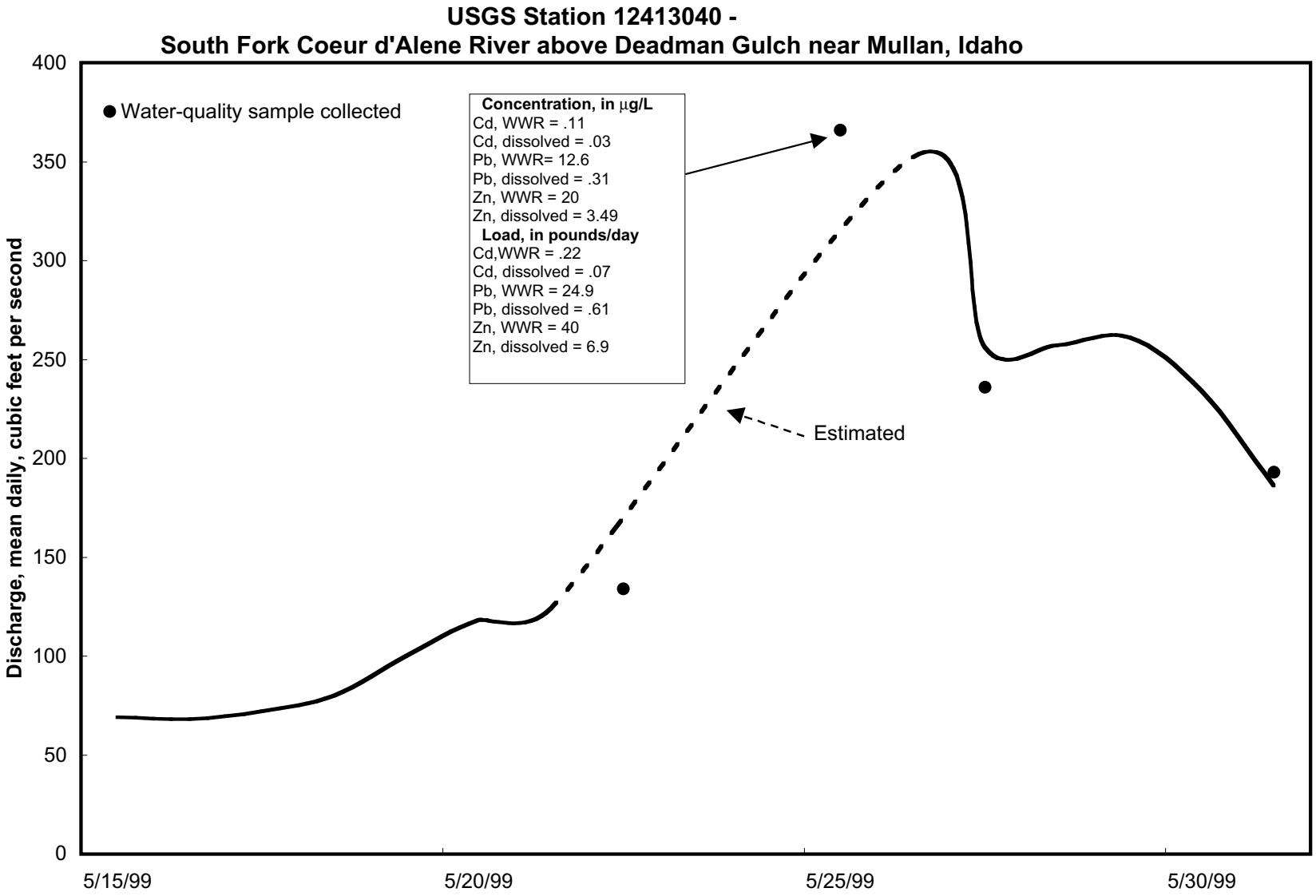

Figure 2. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at South Fork Coeur d'Alene River above Deadman Gulch near Mullan, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

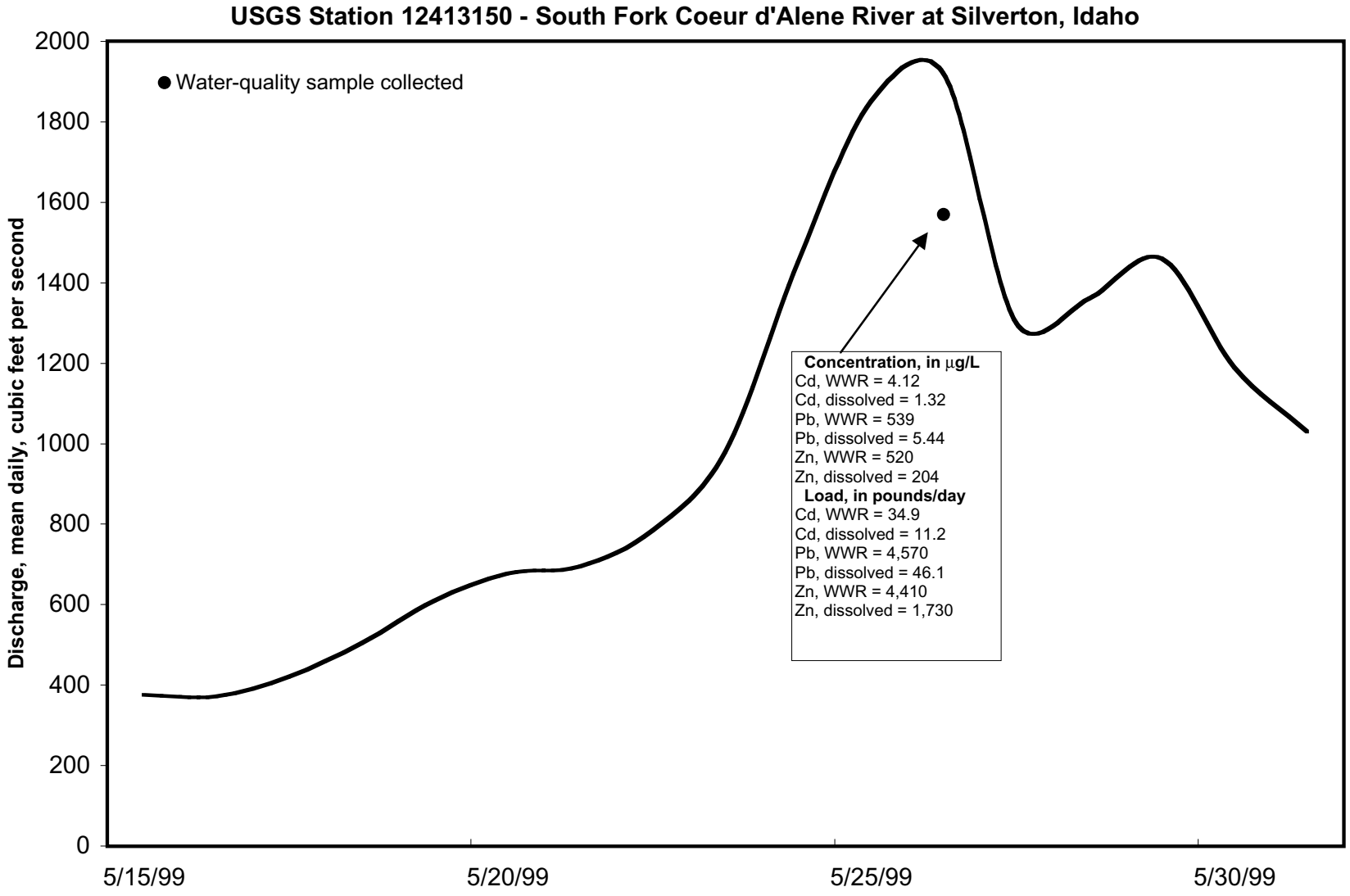

Figure 3. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at South Fork Coeur d'Alene River at Silverton, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

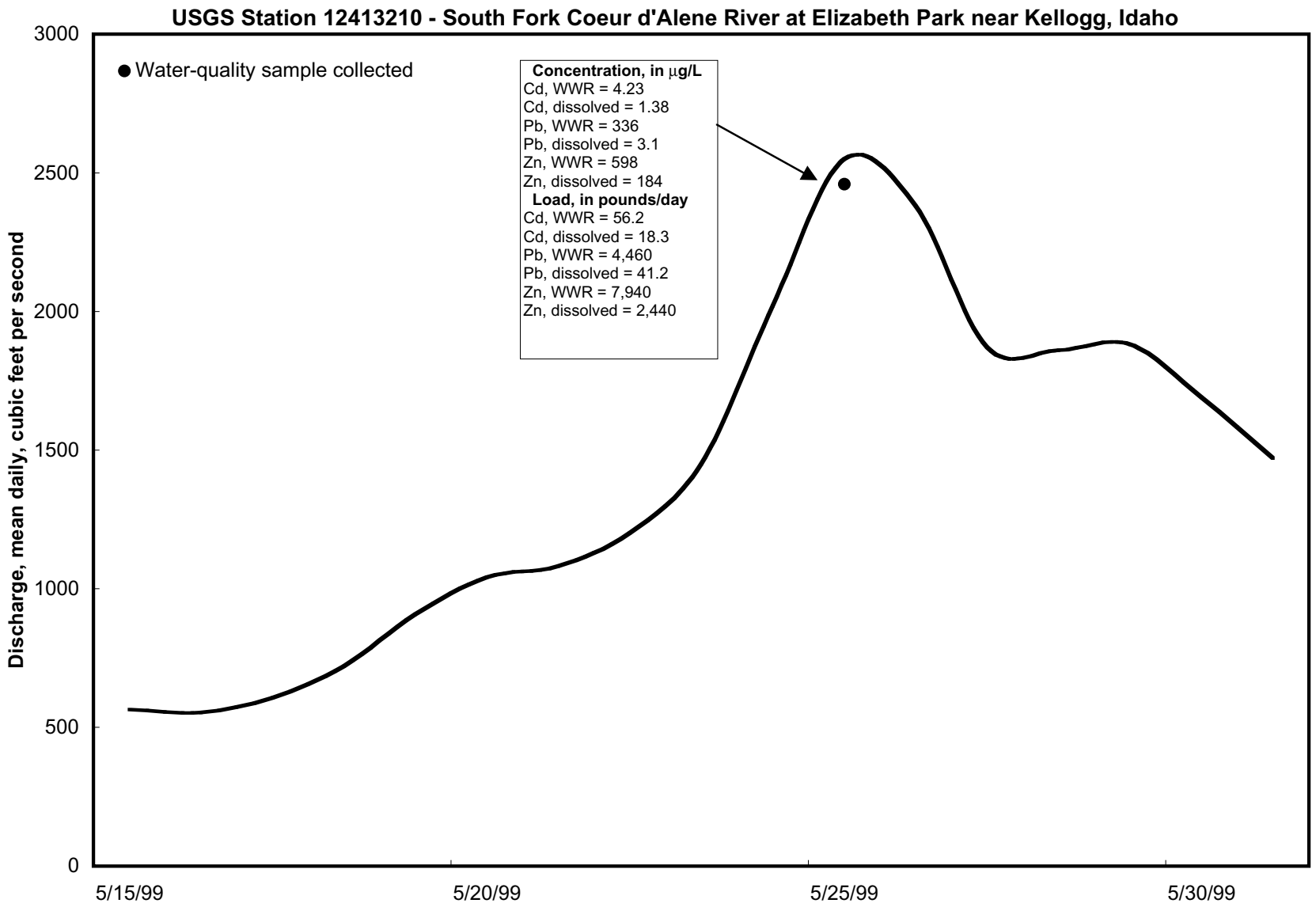

Figure 4. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at South Fork Coeur d'Alene River at Elizabeth Park near Kellogg, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

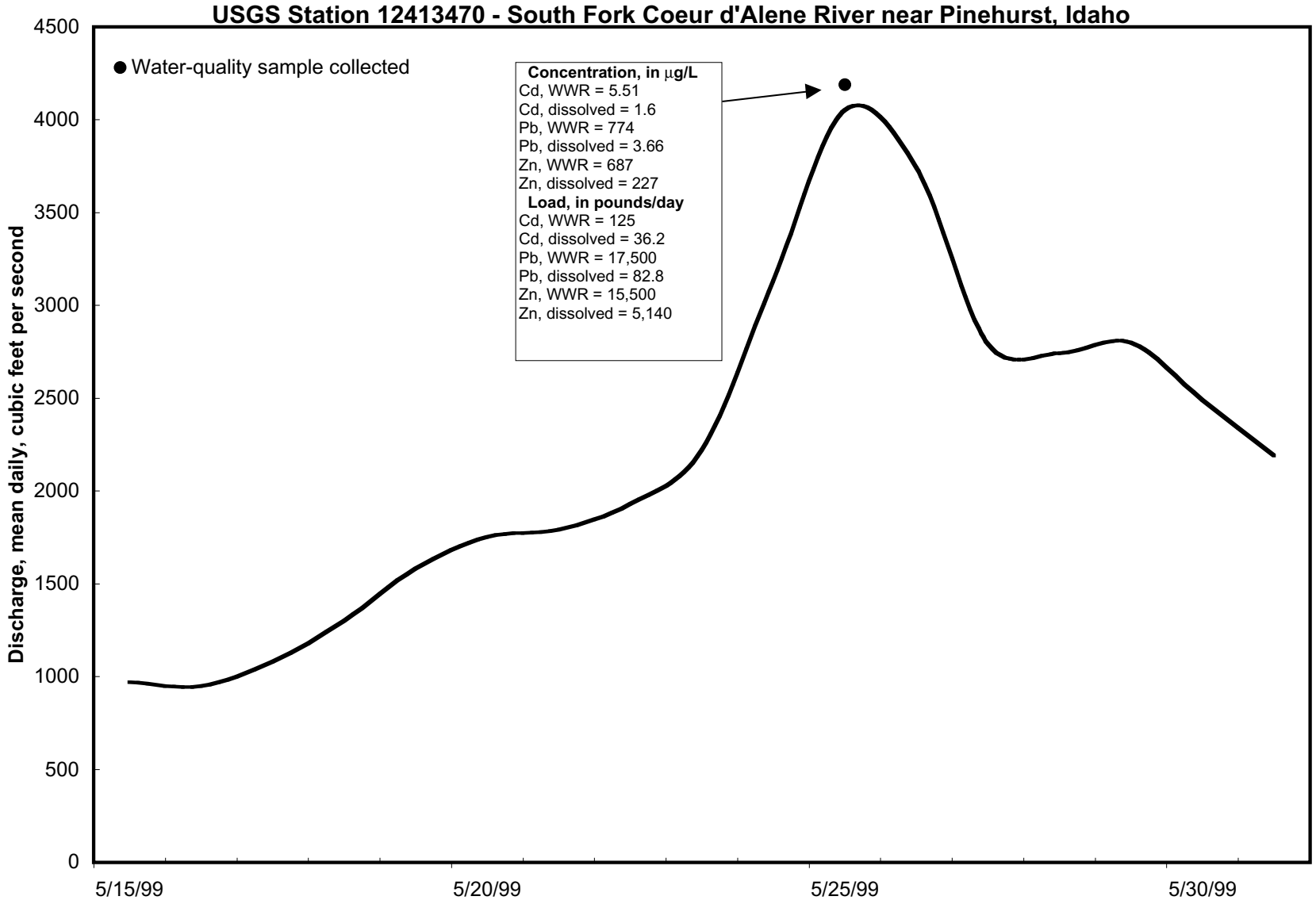

Figure 5. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at South Fork Coeur d'Alene River near Pinehurst, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

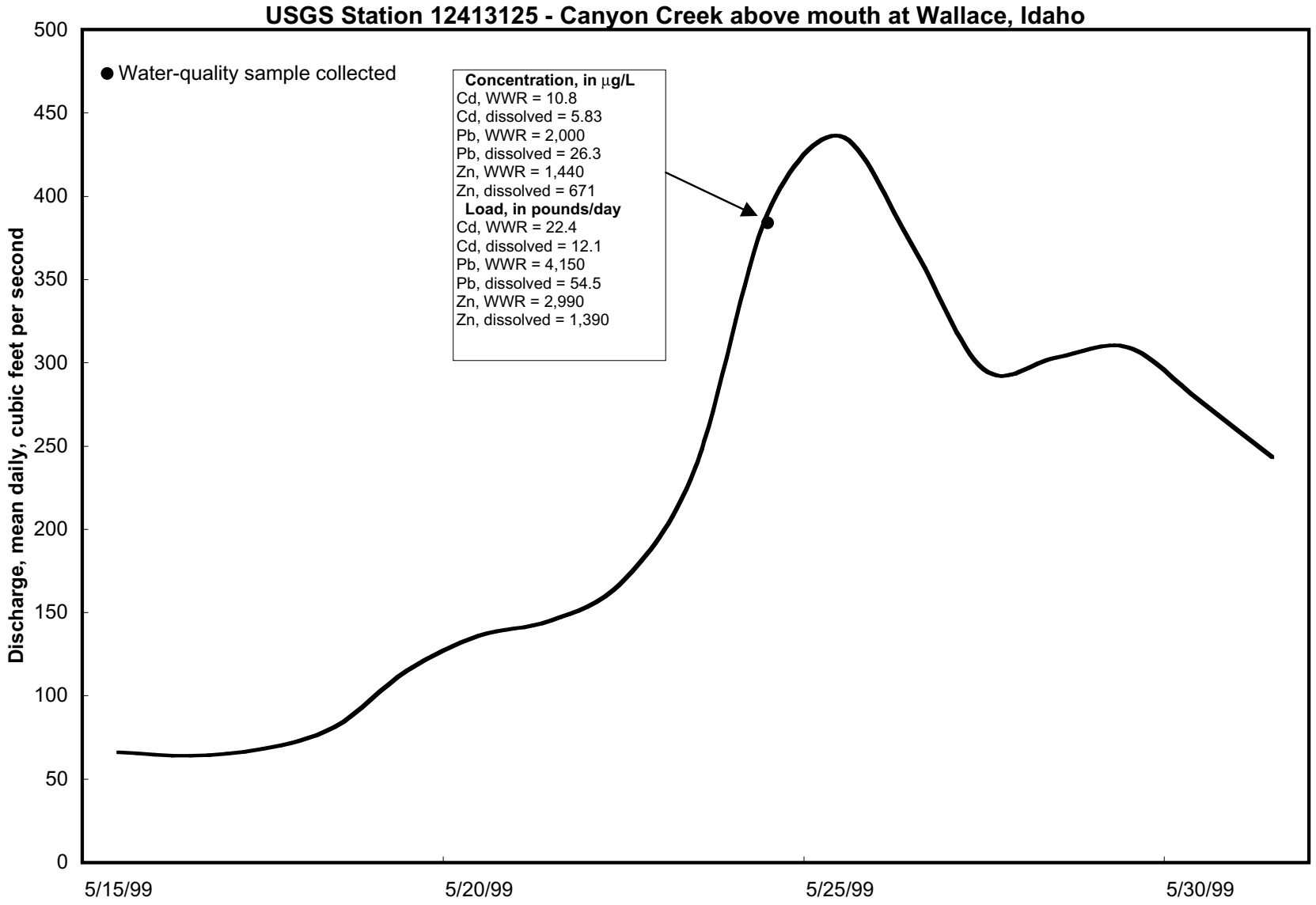

Figure 6. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at Canyon Creek above mouth at Wallace, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

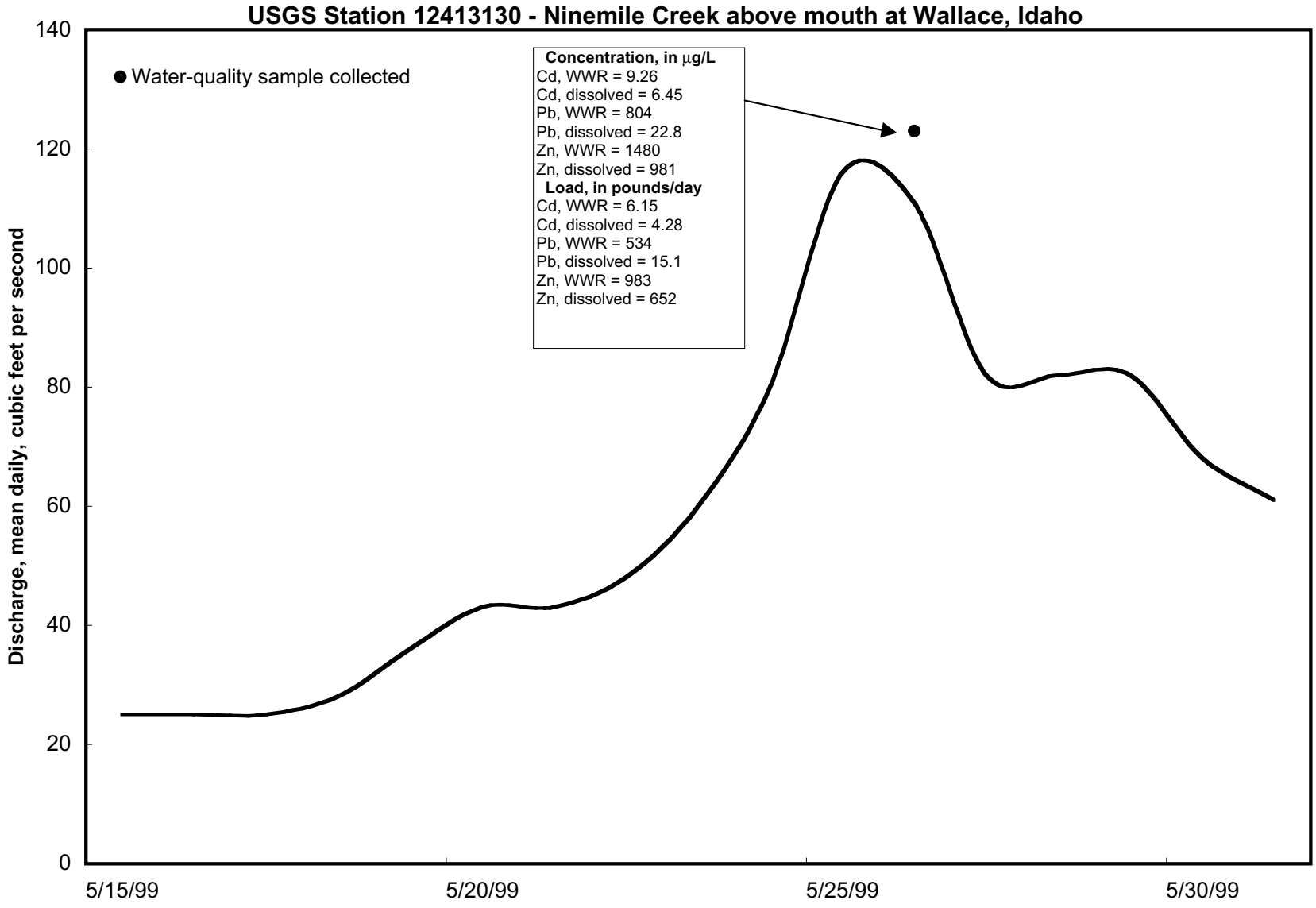

Figure 7. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at Ninemile Creek above mouth at Wallace, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

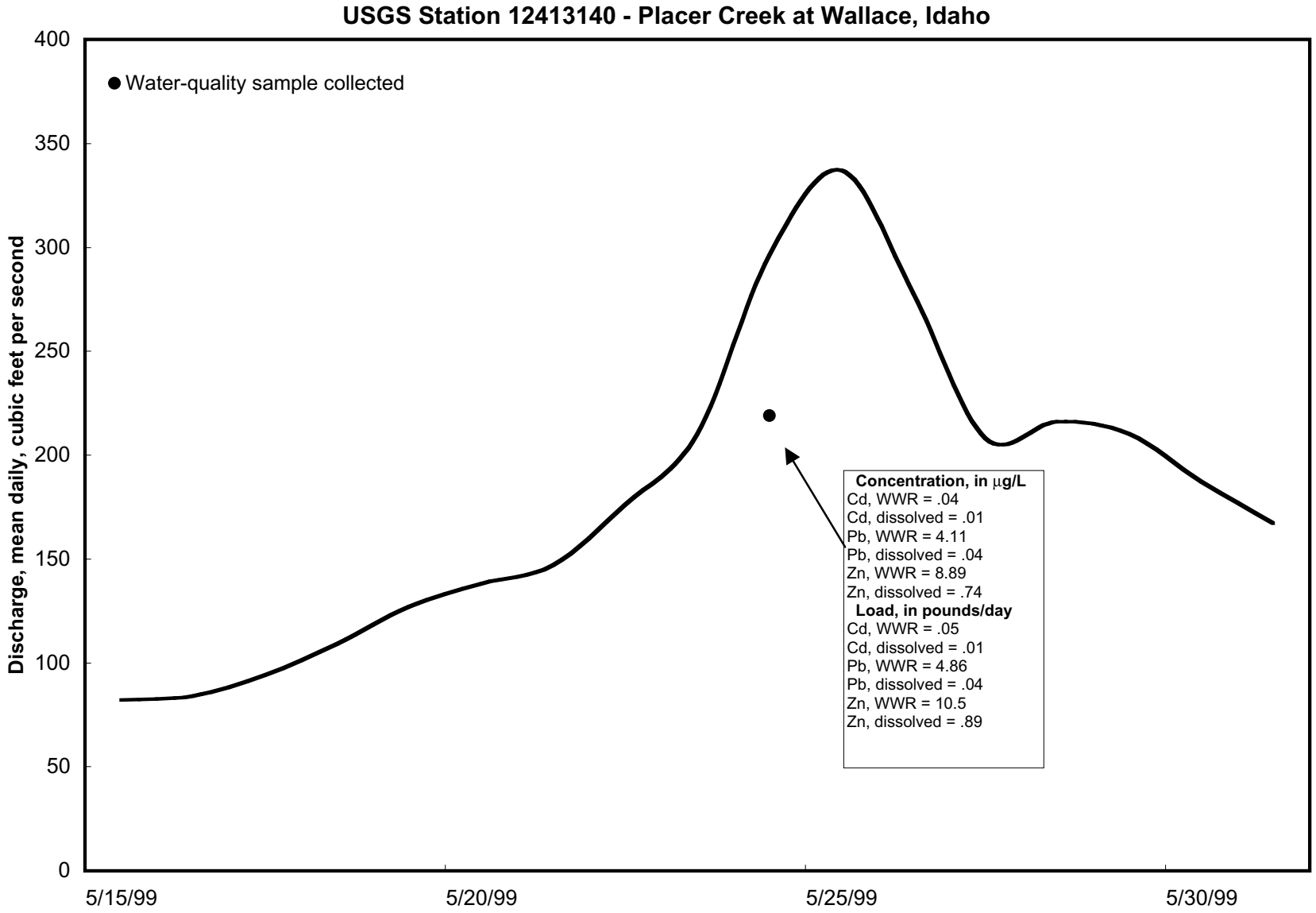

Figure 8. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at Placer Creek at Wallace, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

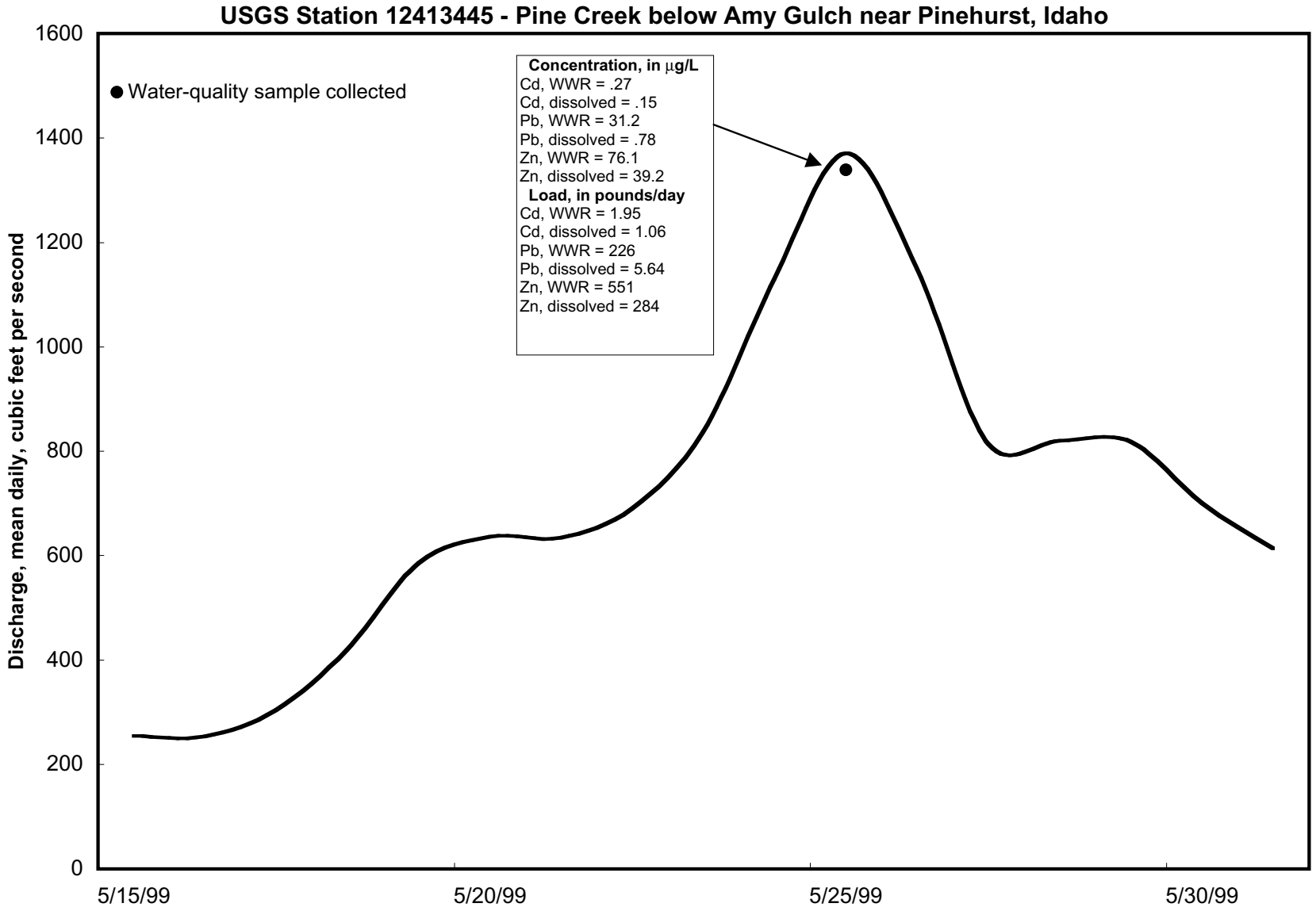

Figure 9. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at Pine Creek below Amy Gulch near Pinehurst, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

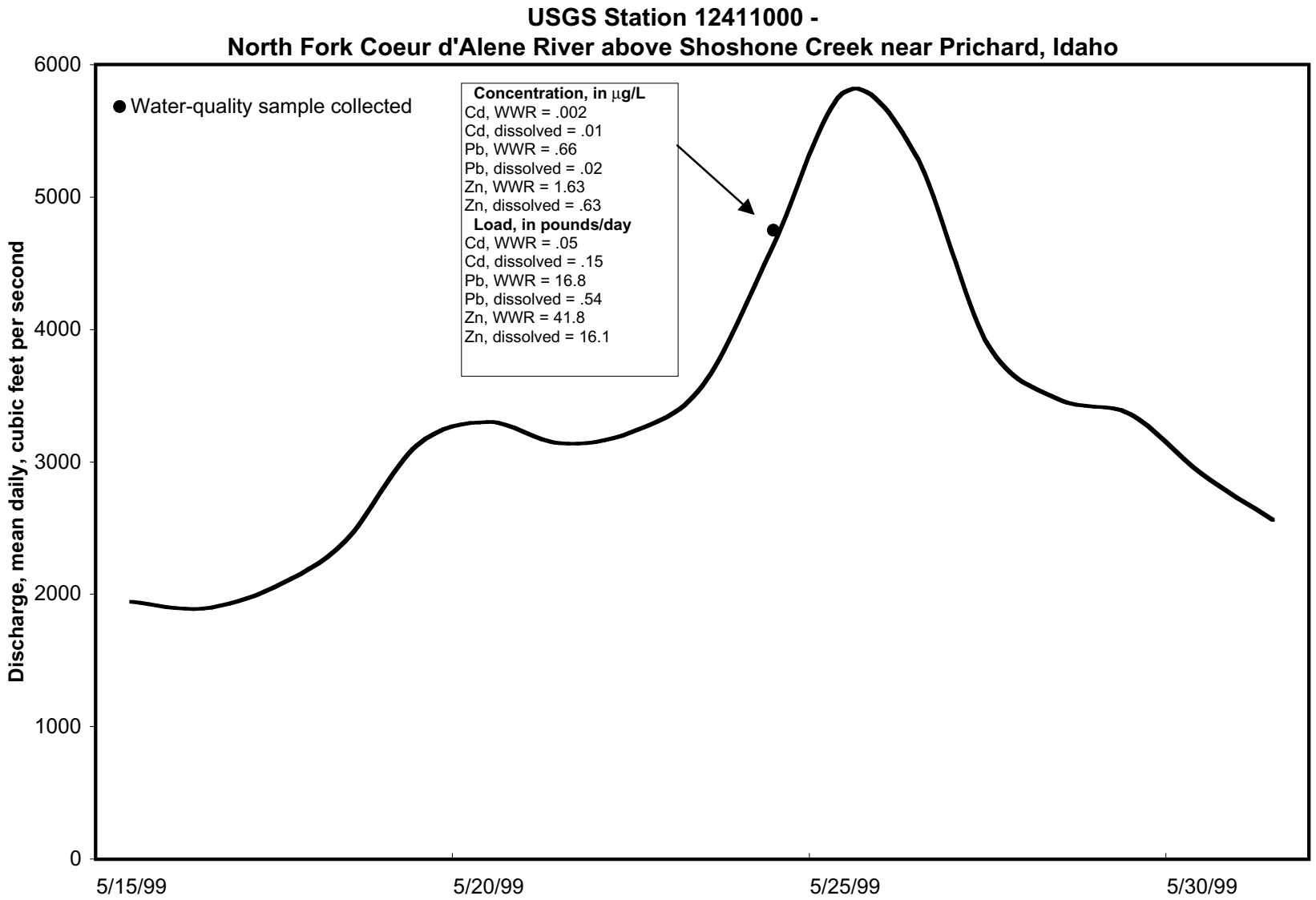

Figure 10. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at North Fork Coeur d'Alene River above Shoshone Creek near Prichard, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

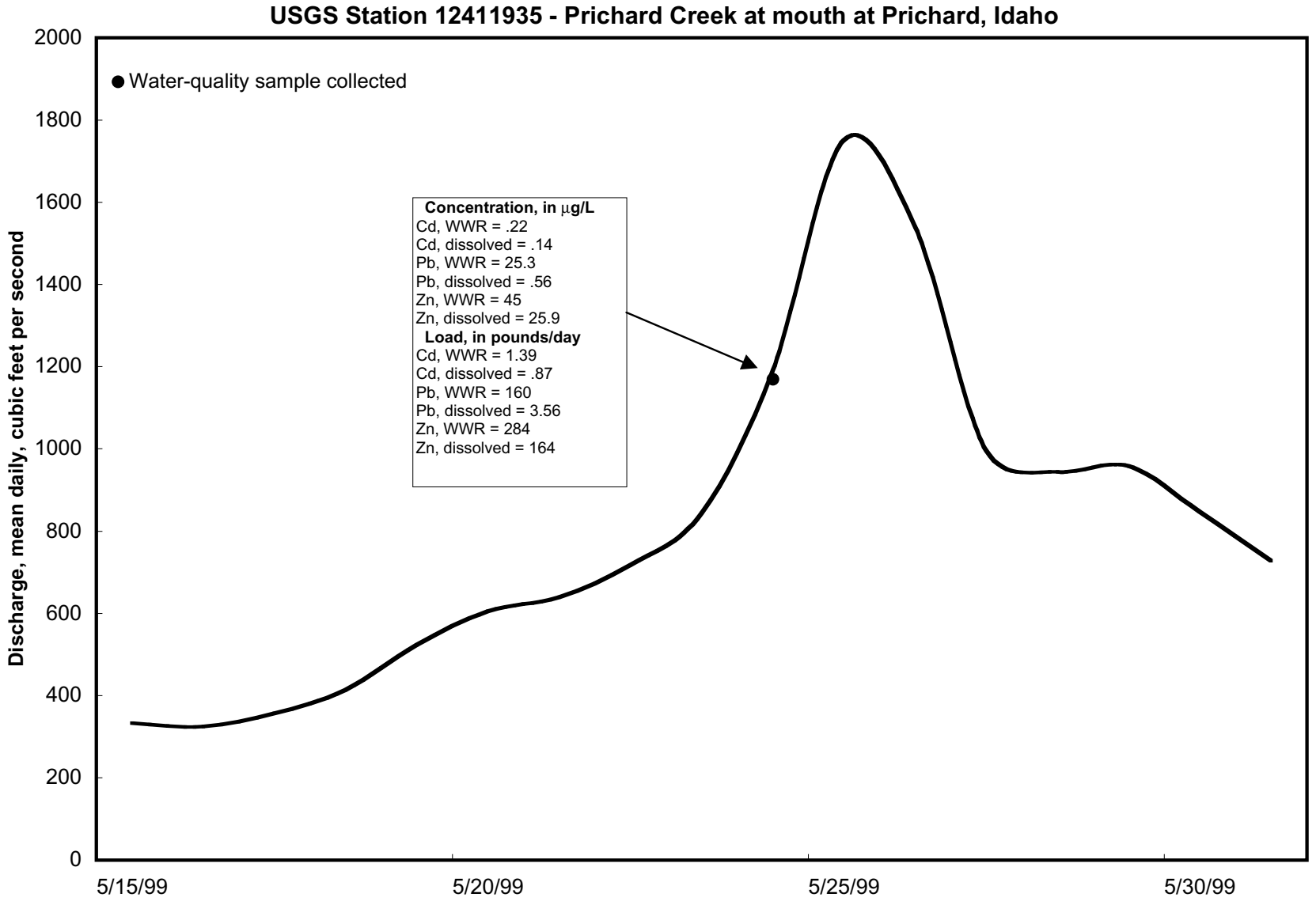

Figure 11. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at Prichard Creek at mouth at Prichard, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

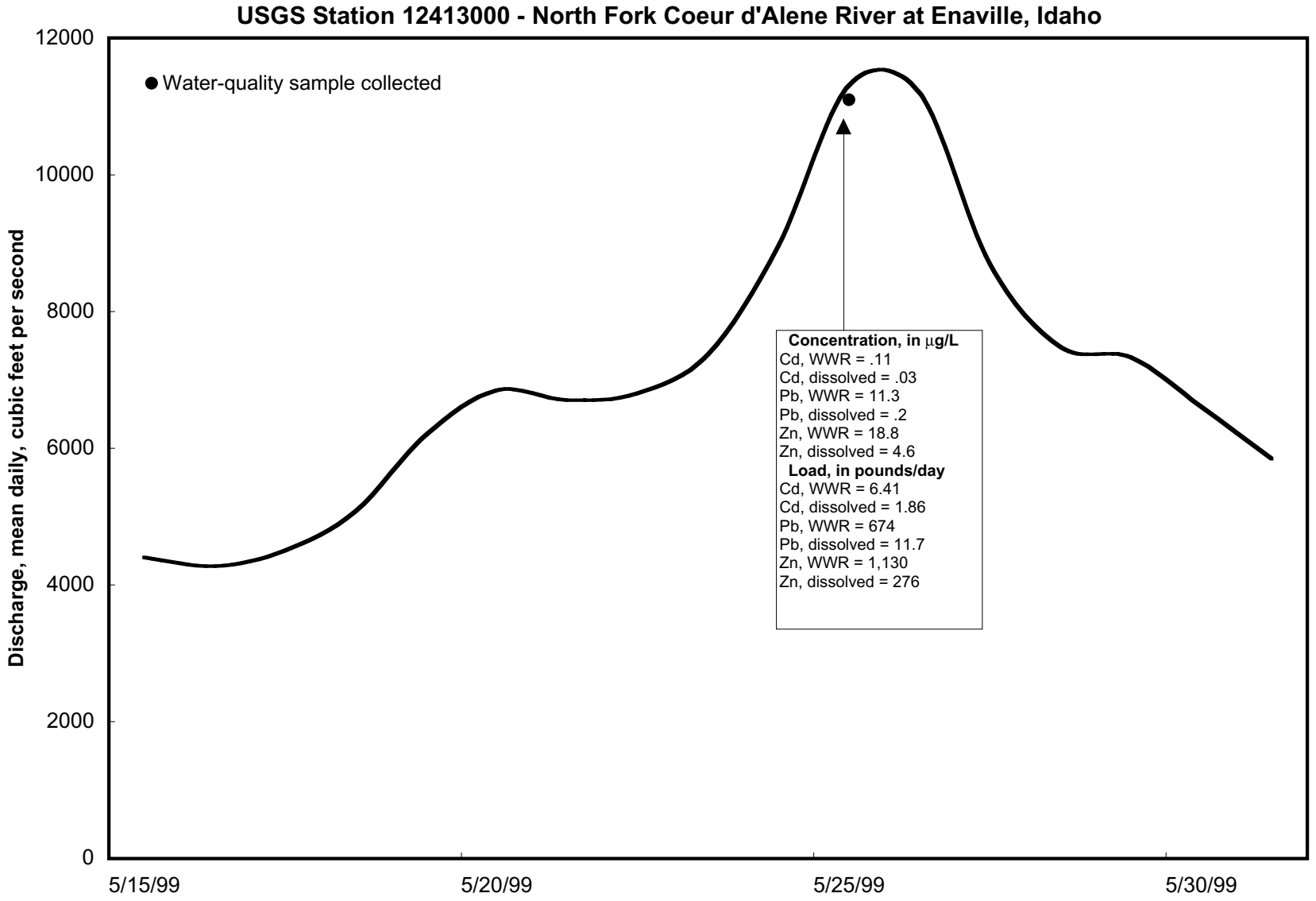

Figure 12. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at North Fork Coeur d'Alene River at Enaville, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

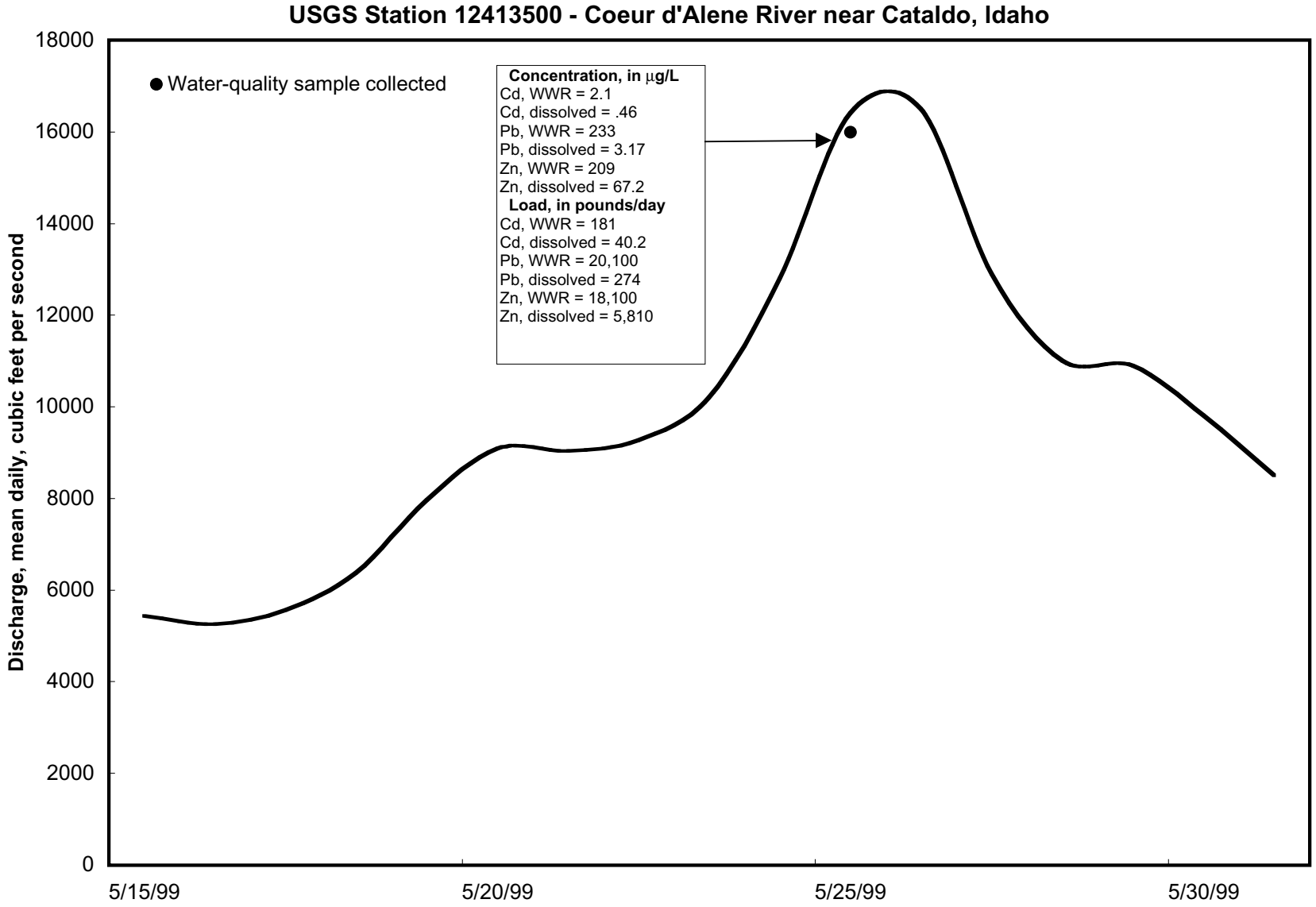

Figure 13. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at Coeur d'Alene River near Cataldo, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

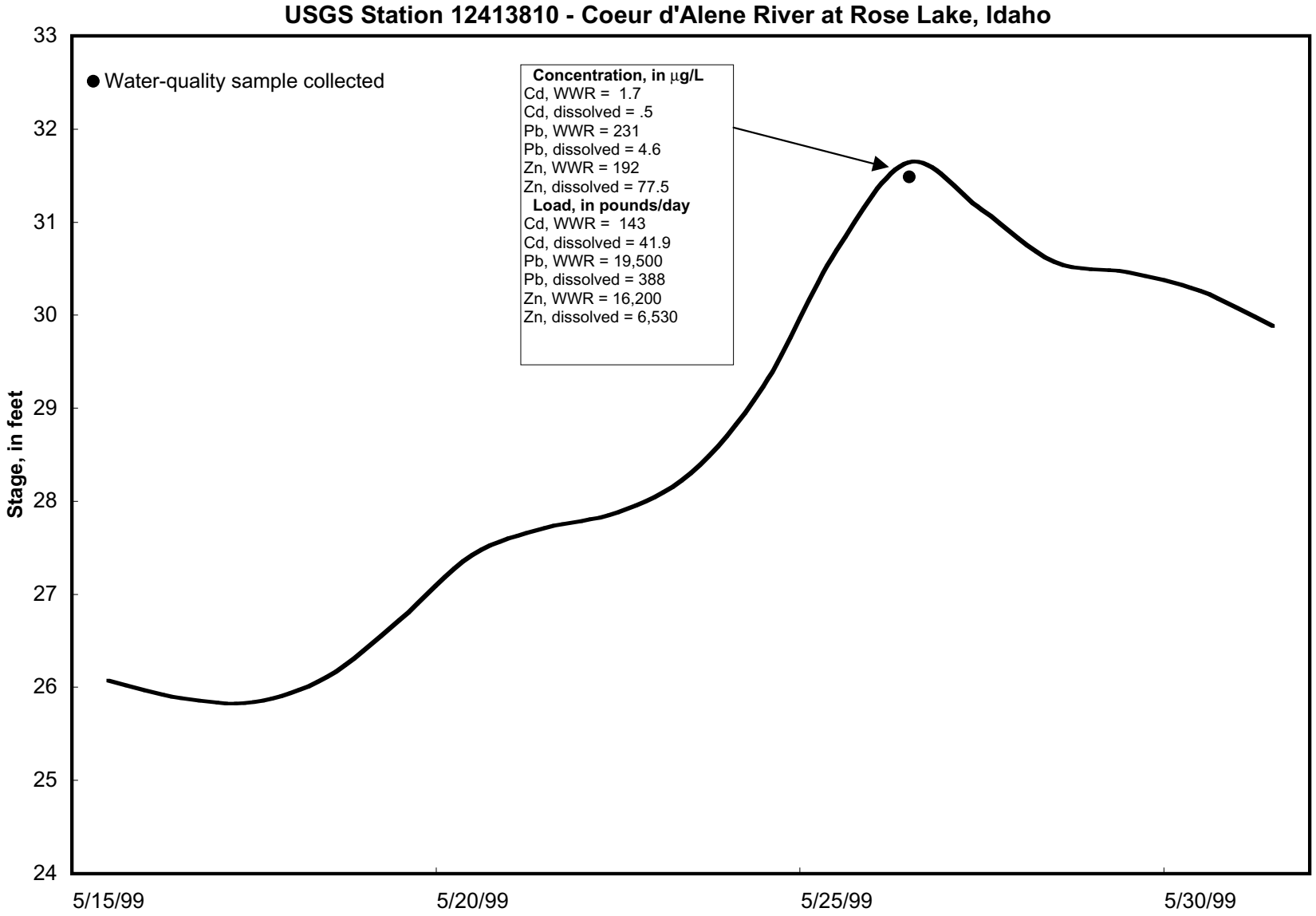

Figure 14. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at Coeur d'Alene River at Rose Lake, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

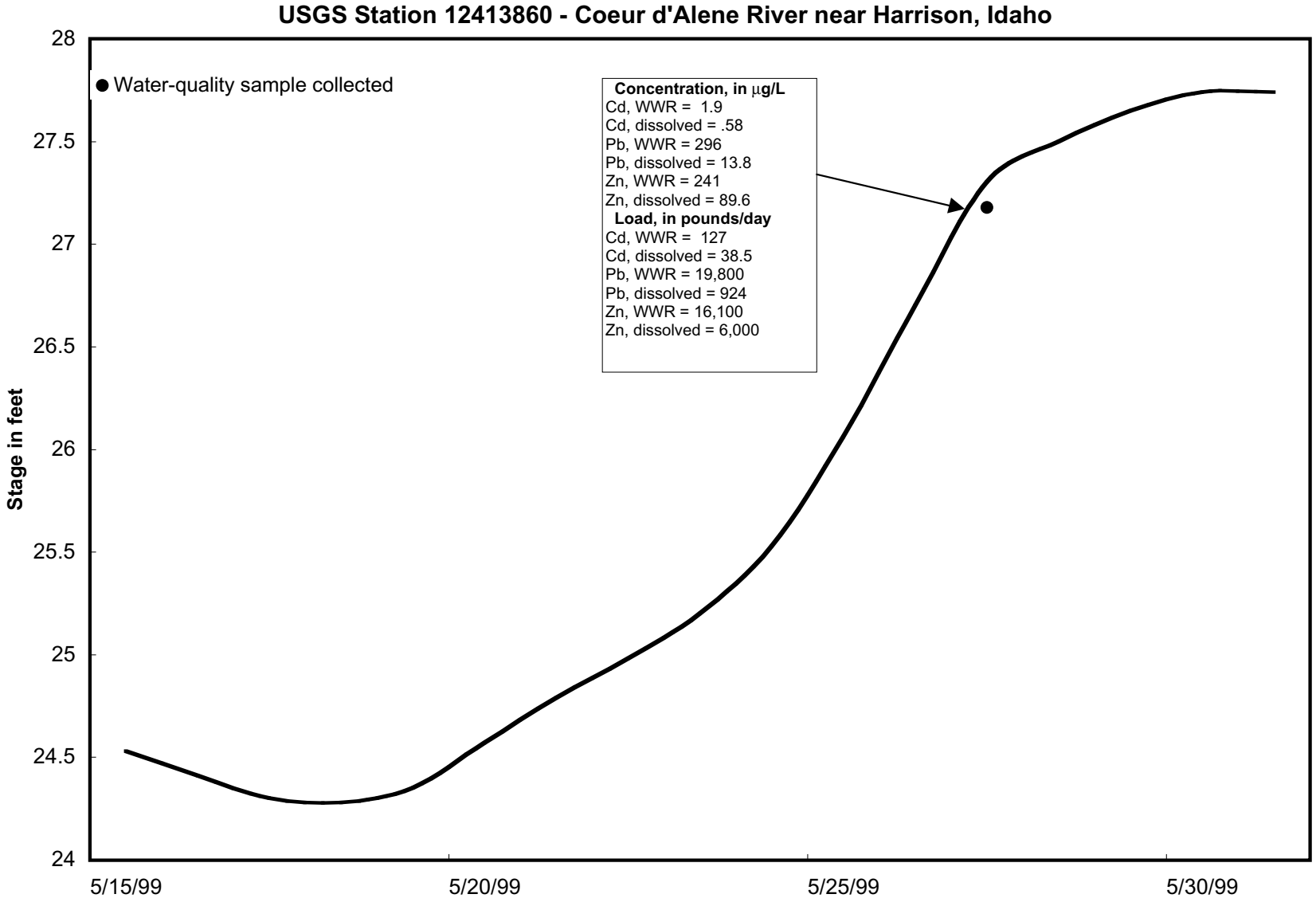

Figure 15. Near-peak portion of 1999 snowmelt-runoff hydrograph with concentrations and loads of cadmium, lead, and zinc at Coeur d'Alene River near Harrison, Idaho.
(USGS, U.S. Geological Survey; µg/L, micrograms per liter; WWR, whole-water recoverable)

Table 1

Table 1. Names and identification numbers of 42 U.S. Geological Survey water-quality stations monitored during the 1999 snowmelt runoff, Coeur d'Alene River Basin, Idaho

Number or letter of station on figure 1	U.S. Geological Survey water-quality station	
	Number	Name
South Fork Coeur d'Alene River (SFCDR), main stem		
A	12413030	SFCDR below O'Brien Gulch near Larson
1	12413040	SFCDR above Deadman Gulch near Mullan
B	12413103	SFCDR above Slaughterhouse Gulch at Mullan
C	12413104	SFCDR below Trowbridge Gulch near Wallace
D	12413131	SFCDR above Placer Creek at Wallace
2	12413150	SFCDR at Silverton
E	12413169	SFCDR below Twomile Creek near Osburn
F	12413175	SFCDR at Terror Gulch at Osburn
G	12413179	SFCDR near Big Creek
3	12413210	SFCDR at Elizabeth Park near Kellogg
H	12413250	SFCDR at Bunker Avenue Bridge at Kellogg
I	12413300	SFCDR at Smelterville
4	12413470	SFCDR near Pinehurst
Canyon Creek		
7	12413118	Canyon Creek near Burke
K	12413120	Canyon Creek at Gem
6	12413123	Canyon Creek at Woodland Park
5	12413125	Canyon Creek above mouth at Wallace
Ninemile Creek		
L	124131267	East Fork Ninemile Creek near Blackcloud
9	12413127	East Fork Ninemile Creek above mouth near Blackcloud
M	12413126	Ninemile Creek above mouth of East Fork Ninemile Creek near Blackcloud
8	12413130	Ninemile Creek above mouth at Wallace
Pine Creek		
U	12413360	East Fork Pine Creek above Gilbert Creek near Pinehurst
V	12413440	Pine Creek above mouth of East Fork Pine Creek at Pine
13	12413445	Pine Creek below Amy Gulch near Pinehurst
W	12413460	Pine Creek above mouth near Pinehurst

Number or letter of station on figure 1	U.S. Geological Survey water-quality station	
	Number	Name
Other tributaries to South Fork Coeur d'Alene River		
J	12413025	Little North Fork at Hale Fish Hatchery above mouth
10	12413140	Placer Creek at Wallace
N	12413151	Lake Creek above mouth near Silverton
P	12413168	Twomile Creek above mouth at Osburn
Q	12413174	Terror Gulch Creek above mouth near Osburn
R	12413185	Big Creek above mouth near Big Creek
11	12413190	Moon Creek above mouth at Elk Creek
S	12413204	Montgomery Creek above mouth near Elizabeth Park
T	12413209	Elk Creek above mouth at Elizabeth Park
12	12413290	Government Gulch near mouth at Smelterville
North Fork Coeur d'Alene River (NFCDR)		
14	12411000	NFCDR above Shoshone Creek near Prichard
16	12413000	NFCDR at Enaville
Tributaries to North Fork Coeur d'Alene River		
15	12411935	Prichard Creek at mouth at Prichard
X	12411950	Beaver Creek above Carpenter Gulch near Prichard
Mainstem Coeur d'Alene River (CDR)		
17	12413500	CDR near Cataldo
18	12413810	CDR at Rose Lake
19	12413860	CDR near Harrison

Table 2

Table 2. Concentrations and instantaneous loads of cadmium, lead, and zinc measured during late May 1999, near the peak of snowmelt runoff, at 42 water-quality stations within the Coeur d'Alene River Basin, Idaho

[NFCDR, North Fork Coeur d'Alene River; SFCDR, South Fork Coeur d'Alene River; CDR, Coeur d'Alene River; ns, not sampled; na, not applicable; µg/L, micrograms per liter; ft^3/s, cubic feet per second; WWR, whole-water recoverable; DISS, dissolved; Inst. Q, instantaneous discharge; USGS, U.S. Geological Survey]

USGS Station Number	Station Name	Sample Date	Inst. Q (ft^3/s)	Cadmium Concentration (µg/L) and Instantaneous Load (pounds/day)				Lead Concentration (µg/L) and Instantaneous Load (pounds/day)				Zinc Concentration (µg/L) and Instantaneous Load (pounds/day)			
				Load WWR	WWR[1]	Load DISS	DISS[2]	Load WWR	WWR[1]	Load DISS	DISS[2]	Load WWR	WWR[1]	Load DISS	DISS[2]
12411000	NFCDR above Shoshone Creek near Prichard	5/24/99	4750	0.051	0.002	0.154	0.006	16.8	0.656	0.539	0.021	41.8	1.63	16.1	0.63
12411935	Prichard Creek at mouth at Prichard	5/24/99	1170	1.39	0.22	0.872	0.138	160	25.3	3.56	0.564	284	45	164	25.9
12411950	Beaver Creek above Carpenter Gulch near Prichard	5/24/99	141	0.239	0.314	0.186	0.244	3.36	4.42	0.101	0.132	52.8	69.3	45.2	59.4
12413000	NFCDR at Enaville	5/25/99	11100	6.41	0.107	1.86	0.031	674	11.3	11.7	0.195	1130	18.8	276	4.60
12413025	Little North Fork at Hale Fish Hatchery above mouth	5/22/99	46.8	0.002	0.007	0.003	0.013	0.051	0.201	0.015	0.06	0.200	0.79	0.339	1.34
12413030	SFCDR below O'Brien Gulch near Larson	5/25/99	154	0.114	0.137	0.040	0.048	9.31	11.2	0.319	0.384	21.4	25.7	4.13	4.97
12413040	SFCDR above Deadman Gulch near Mullan	5/25/99	366	0.217	0.11	0.065	0.033	24.9	12.6	0.611	0.309	39.5	20	6.90	3.49
12413103	SFCDR above Slaughterhouse Gulch at Mullan	5/24/99	466	0.775	0.308	0.113	0.045	208	82.7	2.35	0.933	196	78	17.9	7.13
12413104	SFCDR below Trowbridge Gulch near Wallace	5/24/99	466	2.20	0.876	0.609	0.242	213	84.6	1.87	0.742	316	126	114	45.4
12413118	Canyon Creek near Burke	5/24/99	221	0.961	0.805	0.038	0.032	5.59	4.68	0.243	0.204	16.3	13.7	5.41	4.53
12413120	Canyon Creek at Gem	5/24/99	310	6.61	3.95	4.29	2.56	798	477	23.1	13.8	805	481	569	340
12413123	Canyon Creek at Woodland Park	5/24/99	329	12.2	6.84	7.46	4.20	2520	1420	44.4	25	1670	940	897	505

USGS Station Number	Station Name	Sample Date	Inst. Q (ft^3/s)	Cadmium Concentration (µg/L) and Instantaneous Load (pounds/day)				Lead Concentration (µg/L) and Instantaneous Load (pounds/day)				Zinc Concentration (µg/L) and Instantaneous Load (pounds/day)			
				Load WWR	WWR[1]	Load DISS	DISS[2]	Load WWR	WWR[1]	Load DISS	DISS[2]	Load WWR	WWR[1]	Load DISS	DISS[2]
12413125	Canyon Creek above mouth at Wallace	5/24/99	384	22.4	10.8	12.1	5.83	4150	2000	54.5	26.3	2990	1440	1390	671
124131267	East Fork Ninemile Creek near Blackcloud	5/23/99	37.6	2.13	10.5	1.66	8.19	126	619	5.16	25.4	351	1730	280	1380
12413127	East Fork Ninemile Creek above mouth near Blackcloud	5/23/99	45.2	2.81	11.5	2.42	9.91	109	445	8.68	35.6	464	1900	391	1600
12413126	Ninemile Creek above mouth of East Fork Ninemile Creek near Blackcloud	5/23/99	5.58	0.005	0.165	0.005	0.18	0.077	2.55	0.039	1.30	0.672	22.3	0.669	22.2
12413130	Ninemile Creek above mouth at Wallace	5/26/99	123	6.15	9.26	4.28	6.45	534	804	15.1	22.8	983	1480	652	981
12413131	SFCDR above Placer Creek at Wallace	5/24/99	1160	25.5	4.07	14.8	2.37	3010	480	54.9	8.76	3500	558	2000	319
12413140	Placer Creek at Wallace	5/24/99	219	0.053	0.045	0.008	0.007	4.86	4.11	0.043	0.036	10.5	8.89	0.876	0.741
12413150	SFCDR at Silverton	5/26/99	1570	34.9	4.12	11.2	1.32	4570	539	46.1	5.44	4410	520	1730	204
12413151	Lake Creek above mouth near Silverton	5/22/99	30.3	0.005	0.029	0.006	0.038	0.728	4.45	0.042	0.257	1.02	6.22	1.65	10.1
12413168	Twomile Creek above mouth at Osburn	5/22/99	4.77	0.0003	0.013	0.001	0.024	0.008	0.314	0.001	0.035	0.039	1.53	0.039	1.51
12413169	SFCDR below Twomile Creek near Osburn	5/26/99	1850	38.7	3.87	15.8	1.58	5000	500	44.3	4.43	6280	629	2230	223
12413174	Terror Gulch Creek above mouth near Osburn	5/22/99	1	0.0001	0.016	0.0004	0.077	0.003	0.467	0.0005	0.084	0.127	23.6	0.122	22.5
12413175	SFCDR at Terror Gulch at Osburn	5/24/99	1510	31.7	3.89	15.3	1.88	3890	477	45.6	5.60	4360	534	2050	251
12413179	SFCDR above Big Creek near Big Creek	5/24/99	1720	54.0	5.81	18.4	1.98	7930	854	60.7	6.54	6430	692	2440	263

USGS Station Number	Station Name	Sample Date	Inst. Q (ft^3/s)	Cadmium Concentration (µg/L) and Instantaneous Load (pounds/day)				Lead Concentration (µg/L) and Instantaneous Load (pounds/day)				Zinc Concentration (µg/L) and Instantaneous Load (pounds/day)			
				Load WWR	WWR[1]	Load DISS	DISS[2]	Load WWR	WWR[1]	Load DISS	DISS[2]	Load WWR	WWR[1]	Load DISS	DISS[2]
12413185	Big Creek above mouth near Big Creek	5/25/99	604	0.424	0.13	0.033	0.01	91.1	27.9	1.31	0.401	228	70	4.70	1.44
12413190	Moon Creek above mouth at Elk Creek	5/23/99	8.69	0.015	0.327	0.015	0.326	0.023	0.494	0.029	0.61	3.24	69	2.85	60.8
12413204	Montgomery Creek above mouth near Elizabeth Park	5/22/99	7.89	0.001	0.035	0.001	0.025	0.017	0.407	0.003	0.065	0.109	2.55	0.118	2.78
12413209	Elk Creek above mouth at Elizabeth Park	5/23/99	20	0.017	0.156	0.009	0.079	1.56	14.4	0.020	0.19	0.923	8.56	0.350	3.25
12413210	SFCDR at Elizabeth Park near Kellogg	5/25/99	2460	56.2	4.23	18.3	1.38	4460	336	41.2	3.10	7940	598	2440	184
12413250	SFCDR at Bunker Avenue Bridge at Kellogg	5/25/99	2650	63.0	4.40	20.9	1.46	10400	724	65.5	4.58	9600	671	2680	187
12413290	Government Gulch near mouth at Smelterville	5/23/99	15.3	2.42	29.3	2.37	28.7	1.88	22.8	0.321	3.89	75.4	913	72.0	872
12413300	SFCDR at Smelterville	5/25/99	2610	86.0	6.1	24.4	1.73	12700	900	66.2	4.69	12000	850	3560	253
12413360	EF Pine Creek above Gilbert Creek near Pinehurst	5/23/99	63.3	0.002	0.006	0.005	0.015	0.181	0.529	0.050	0.145	1.19	3.49	1.34	3.93
12413440	Pine Creek above mouth of East Fork Pine Creek at Pine	5/23/99	412	0.007	0.003	0.029	0.013	0.296	0.133	0.044	0.02	na	<1	1.13	0.509
12413445	Pine Creek below Amy Gulch near Pinehurst	5/25/99	1340	1.95	0.269	1.06	0.147	226	31.2	5.64	0.780	551	76.1	284	39.2
12413460	Pine Creek above mouth near Pinehurst	5/25/99	1380	2.15	0.288	1.11	0.149	227	30	5.78	0.776	606	81.3	300	40.3
12413470	SFCDR near Pinehurst	5/25/99	4190	125	5.51	36.2	1.60	17500	774	82.8	3.66	15500	687	5140	227
12413500	CDR near Cataldo	5/25/99	16000	181	2.10	40.2	0.465	20100	233	274	3.17	18100	209	5810	67.2
12413810	CDR at Rose Lake	5/26/99	15600	143	1.70	41.9	0.497	19500	231	388	4.60	16200	192	6530	77.5

USGS Station Number	Station Name	Sample Date	Inst. Q (ft^3/s)	Cadmium Concentration (µg/L) and Instantaneous Load (pounds/day)				Lead Concentration (µg/L) and Instantaneous Load (pounds/day)				Zinc Concentration (µg/L) and Instantaneous Load (pounds/day)			
				Load WWR	WWR[1]	Load DISS	DISS[2]	Load WWR	WWR[1]	Load DISS	DISS[2]	Load WWR	WWR[1]	Load DISS	DISS[2]
12413860	CDR near Harrison	5/27/99	12400	127	1.90	38.5	0.575	19800	296	924	13.8	16100	241	6000	90

[1] Weak-acid digestion performed on water, suspended-sediment mixture at U.S. Geological Survey National Water-Quality Laboratory.

[2] Filtrate passing a 0.45-micrometer capsule filter.

Appendix A. Selected water-quality analyses from the U.S. Geological Survey National Water-Quality Laboratory for 42 water-quality stations sampled near the peak of 1999 snowmelt runoff, Coeur d'Alene River Basin, Idaho

12411000 NORTH FORK COEUR D' ALENE RIVER ABOVE SHOSHONE CREEK NEAR PRICHARD, ID

WATER QUALITY RECORDS

PERIOD OF RECORD.--October 1992 to September 1994, October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT										
20...	0930	90	6	7.8	3.0	5.5	27	6.1	2.8	--
NOV										
18...	1230	155	55	7.8	6.0	5.0	25	5.5	2.7	--
DEC										
10...	0745	304	47	7.3	-2.0	1.5	22	4.9	2.3	--
JAN										
27...	0845	569	42	7.4	-3.5	1.0	20	4.4	2.1	--
FEB										
08...	0950	408	44	7.0	-2.0	1.0	22	4.9	2.3	--
MAR										
08...	1115	545	45	7.5	4.0	2.0	21	4.7	2.2	--
APR										
15...	0805	1160	41	7.0	-2.0	3.0	18	4.2	2.0	--
MAY										
10...	1000	1930	36	6.8	12.0	4.5	17	3.8	1.8	.91
24...	1200	4750	29	7.1	26.0	6.0	13	3.0	1.3	.80
JUN										
01...	1540	2700	33	7.7	19.0	8.0	14	3.2	1.5	.81
JUL										
13...	1115	295	51	7.4	25.0	16.5	23	5.2	2.4	.94
AUG										
12...	1200	161	60	7.8	23.5	19.0	27	6.3	2.9	1.1
SEP										
08...	0930	111	58	7.3	8.5	19.0	27	6.1	2.9	1.0

DATE	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT										
20...	--	--	--	--	--	.005	<.002	<.10	.002	.001
NOV										
18...	--	--	--	--	--	.034	<.002	<.10	.005	.001
DEC										
10...	--	--	--	--	--	.021	.004	<.10	.005	.004
JAN										
27...	--	--	--	--	--	.012	.004	E.06	.005	.004
FEB										
08...	--	--	--	--	--	.010	<.002	<.10	.005	.004
MAR										
08...	--	--	--	--	--	<.005	<.002	<.10	.004	.002
APR										
15...	--	--	--	--	--	<.005	.003	E.05	.007	.003
MAY										
10...	--	1.1	.12	<.10	9.4	.005	.002	<.10	.005	.003
24...	12	1.0	.18	<.10	8.8	--	--	--	--	--
JUN										
01...	17	<.10	.20	<.10	8.7	.019	.002	.12	.009	.004
JUL										
13...	27	.87	.12	<.10	9.5	.005	<.002	E.05	<.004	.003
AUG										
12...	30	.95	.11	<.10	9.5	<.005	.003	<.10	.007	.003
SEP										
08...	29	1.4	E.14	<.10	9.2	<.005	.008	E.10	.004	.003

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
20...	0930	<1	<1	<1	<1	<20	<10
NOV							
18...	1230	<1	<1	<1	<1	<20	<10
DEC							
10...	0745	<1	<1	<1	<1	<20	<10
JAN							
27...	0845	<1	<1	<1	<1	<20	<10
FEB							
08...	0950	<1	<1	<1	<1	<20	<10
MAR							
08...	1115	<1	<1	<1	<1	<20	<40
APR							
15...	0805	<1	<1	<1	<1	<20	<40
MAY							
10...	1000	<1	<.1	<1	<.1	2	<1.0
24...	1200	<1	<.1	<1	.66	<1	1.6
JUN							
01...	1540	<1	<.1	<1	<.1	1	<1.0
JUL							
13...	1115	<1	<.1	<1	<.1	1	<1.0
AUG							
12...	1200	<1	<.1	<1	<.1	<1	<1.0
SEP							
08...	0930	<1	<.1	<1	<.1	<1	<1.0

PERIOD OF RECORD.--October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
20...	1200	17	37	7.0	6.0	11.0	13	3.4
NOV								
18...	0950	52	39	6.8	4.0	8.0	14	3.8
DEC								
10...	1045	72	36	7.2	-.5	5.0	13	3.4
29...	1235	113	34	7.0	3.0	4.0	12	3.1
FEB								
25...	1315	243	32	6.8	3.5	3.5	12	3.1
MAR								
24...	1150	803	28	7.1	17.0	5.8	9	2.4
APR								
21...	0750	984	24	7.0	3.0	4.6	8	2.1
MAY								
04...	0845	520	25	7.0	5.0	5.3	8	2.1
24...	1430	1170	20	7.1	27.0	10.2	6	1.7
JUN								
15...	0915	659	22	7.2	24.0	9.0	7	1.9
JUL								
13...	1310	124	27	6.8	24.5	14.5	10	2.5
AUG								
12...	1015	46	33	6.6	14.5	17.0	12	3.1
SEP								
08...	0755	28	34	6.8	7.0	11.0	12	3.3

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
20...	1.1	--	--	--	--	--	--
NOV							
18...	1.2	--	--	--	--	--	--
DEC							
10...	1.1	--	--	--	--	--	--
29...	1.1	--	--	--	--	--	--
FEB							
25...	1.0	--	--	--	--	--	--
MAR							
24...	.77	--	--	--	--	--	--
APR							
21...	.67	--	--	--	--	--	--
MAY							
04...	.68	1.2	--	3.3	.22	<.10	10
24...	.52	1.0	6	2.7	.11	<.10	7.0
JUN							
15...	.57	1.0	9	2.2	.12	<.10	8.8
JUL							
13...	.79	1.3	11	2.5	.10	<.10	11
AUG							
12...	.96	1.5	12	2.9	.13	<.10	12
SEP							
08...	1.0	1.5	13	3.7	<.29	<.10	12

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
20...	1200	<1	<1	<1	<1	62	--
NOV							
18...	0950	<1	<1	--	<1	25	20
DEC							
10...	1045	<1	<1	<1	<1	28	--
29...	1235	<1	<1	<1	<1	34	--
FEB							
25...	1315	<1	<1	<1	2	25	43.2
MAR							
24...	1150	<1	<1	<1	3	31	E36.2
APR							
21...	0750	<1	<1	<1	7	34	41.4
MAY							
04...	0845	<1	.15	<1	1.3	30	30.5
24...	1430	<1	.22	<1	25.3	26	45.0
JUN							
15...	0915	<1	.14	<1	3.5	30	30.7
JUL							
13...	1310	<1	.13	<1	.66	25	25.4
AUG							
12...	1015	<1	.12	<1	.39	24	22.8
SEP							
08...	0755	<1	.13	<1	.32	27	24.1

E Positive detection, but below detection limit.

12413000 NORTH FORK COEUR D'ALENE RIVER AT ENAVILLE, ID

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-73, 1975-1980, 1990, 1992 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May 20 to September 30, 1998, May to September 1999 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum 21.9 °C July 27, 1998.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURE: Maximum 20.2 °C Aug. 3.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT										
20...	1530	254	50	7.5	12.5	10.5	--	--	--	--
NOV										
17...	0900	592	53	7.0	3.5	6.0	--	--	--	--
DEC										
15...	0800	1940	40	7.2	.0	3.2	--	--	--	--
JAN										
27...	1130	1840	40	7.3	-2.0	1.5	--	--	--	--
FEB										
08...	1255	1540	41	7.2	9.0	3.0	--	--	--	--
MAR										
08...	1445	1940	41	7.4	5.0	3.0	--	--	--	--
APR										
13...	1030	2740	44	7.3	10.5	3.9	1.2	12.2	101	<1
20...	1120	9680	30	7.2	13.0	5.0	--	--	--	--
MAY										
06...	1010	5180	35	7.2	11.0	4.9	2.0	12.0	103	K1
27...	1430	8450	27	7.3	24.5	8.5	--	--	--	--
JUN										
02...	1015	5810	32	7.3	19.0	8.1	1.9	--	--	K1
JUL										
13...	0740	902	45	7.5	15.5	13.9	1.9	8.9	94	K7
AUG										
10...	0745	504	51	7.2	17.0	15.3	.36	8.3	90	K5
SEP										
08...	1245	306	53	7.8	21.5	13.0	.22	9.6	100	K1

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	ANC UNFLTRD CARB FET FIELD MG/L AS CO3 (00445)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)
OCT										
20...	--	23	5.6	2.2	--	--	--	--	--	--
NOV										
17...	--	23	5.7	2.2	--	--	--	--	--	--
DEC										
15...	--	19	4.5	1.8	--	--	--	--	--	--
JAN										
27...	--	18	4.3	1.7	--	--	--	--	--	--
FEB										
08...	--	19	4.6	1.8	--	--	--	--	--	--
MAR										
08...	--	18	4.3	1.7	--	--	--	--	--	--
APR										
13...	K4	17	4.2	1.7	--	--	--	--	--	--
20...	--	13	3.1	1.2	--	--	--	--	--	--
MAY										
06...	K1	14	3.4	1.4	.93	--	--	19	0	16
27...	--	12	2.9	1.1	--	--	--	--	--	--
JUN										
02...	K1	13	3.1	1.2	.85	--	--	17	0	14
JUL										
13...	28	19	4.7	1.8	1.0	--	--	25	0	21
AUG										
10...	K9	22	5.3	2.0	1.1	--	--	29	0	24
SEP										
08...	K5	23	5.5	2.1	1.2	10	.44	29	0	24

K Results based on counts outside ideal colony range.

12413000 NORTH FORK COEUR D'ALENE RIVER AT ENAVILLE, ID--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT									
20...	--	--	--	--	.013	<.002	<.10	.002	.001
NOV									
17...	--	--	--	--	.059	<.002	<.10	.004	.001
DEC									
15...	--	--	--	--	.042	<.002	.10	.007	.003
JAN									
27...	--	--	--	--	.024	.004	E.06	.005	.003
FEB									
08...	--	--	--	--	.013	<.002	<.10	.004	.003
MAR									
08...	--	--	--	--	.005	<.002	<.10	<.004	.001
APR									
13...	--	--	--	--	.005	.004	<.10	.005	.002
20...	--	--	--	--	--	--	--	--	--
MAY									
06...	1.5	.19	<.10	9.7	.008	.002	E.05	.008	.003
27...	--	--	--	--	--	--	--	--	--
JUN									
02...	1.6	.38	<.10	8.7	.017	.003	.13	.007	.003
JUL									
13...	1.2	.14	<.10	10	<.005	<.002	<.10	.004	.002
AUG									
10...	1.3	.18	<.10	10	<.005	<.002	<.10	<.004	.001
SEP									
08...	1.7	E.15	<.10	10	.005	.007	.11	<.004	.003

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT									
20...	1530	<1	<1	<1	<1	<20	<10	--	--
NOV									
17...	0900	<1	<1	<1	<1	E8	<10	--	--
DEC									
15...	0800	<1	<1	<1	<1	<20	<10	--	--
JAN									
27...	1130	<1	<1	<1	<1	<20	<10	--	--
FEB									
08...	1255	<1	<1	<1	<1	<20	<10	--	--
MAR									
08...	1445	<1	<1	<1	<1	<20	<40	--	--
APR									
13...	1030	<1	<1	<1	<1	<20	<40	2	15
20...	1120	<1	<1	<1	3	<20	<40	37	967
MAY									
06...	1010	<1	<.1	<1	.78	4	6.9	3	42
27...	1430	<1	<.1	<1	2.2	4	--	--	--
JUN									
02...	1015	<1	<.1	<1	.67	4	4.4	5	78
JUL									
13...	0740	<1	<.1	<1	.17	5	4.8	<1	--
AUG									
10...	0745	<1	<.1	<1	.14	3	3.2	22	30
SEP									
08...	1245	<1	<.1	<1	.10	3	2.4	<1	--

E Positive detection, but below stated detection limit.

12413040 SOUTH FORK COEUR D'ALENE RIVER ABOVE DEADMAN GULCH NEAR MULLAN, ID

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
22...	1220	9.7	144	7.6	9.5	7.0	58	16
NOV								
16...	1530	76	149	7.7	2.0	5.4	56	16
DEC								
14...	1610	20	144	7.7	-1.0	2.5	52	14
JAN								
20...	0855	22	132	7.5	1.0	2.0	52	14
MAR								
22...	1115	56	115	7.7	6.5	2.0	42	11
APR								
19...	0845	115	79	7.6	4.0	3.5	32	7.9
MAY								
05...	0730	87	79	7.3	3.5	3.5	32	8.2
22...	1710	134	52	7.4	16.5	8.5	20	5.4
25...	1100	366	31	7.3	24.0	6.4	12	3.3
27...	1000	236	35	7.3	21.0	6.0	14	3.8
31...	1415	193	37	7.4	10.5	5.5	15	4.0
JUN								
16...	0755	230	32	7.2	19.5	5.9	12	3.4
JUL								
12...	1425	64	49	7.3	30.0	11.8	21	5.5
AUG								
12...	0730	22	95	7.5	13.5	10.5	39	11
31...	0730	16	115	8.0	12.0	9.5	50	13

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
22...	4.6	--	--	--	--	--	--
NOV							
16...	4.1	--	--	--	--	--	--
DEC							
14...	4.1	--	--	--	--	--	--
JAN							
20...	4.1	--	--	--	--	--	--
MAR							
22...	3.7	--	--	--	--	--	--
APR							
19...	2.9	--	--	--	--	--	--
MAY							
05...	2.8	2.2	--	6.3	3.3	<.10	8.8
22...	1.7	--	15	--	--	--	--
25...	1.0	1.0	11	2.0	.77	<.10	7.0
27...	1.2	--	--	--	--	--	--
31...	1.3	--	--	--	--	--	--
JUN							
16...	.96	1.0	12	2.6	.54	<.10	7.1
JUL							
12...	1.7	1.3	20	3.1	.92	<.10	8.0
AUG							
12...	3.2	2.0	37	8.1	1.6	<.10	9.6
31...	4.0	2.2	41	11	1.8	<.10	9.8

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
22...	1220	<1	<1	<1	<1	<20	<10
NOV							
16...	1530	<1	<1	2	10	59	60
DEC							
14...	1610	<1	<1	<1	7	24	30
JAN							
20...	0855	<1	<1	1	4	22	20
MAR							
22...	1115	<1	<1	<1	24	<20	52.4
APR							
19...	0845	<1	<1	<1	5	E9	E32.6
MAY							
05...	0730	<1	<.1	<1	2.3	8	9.2
22...	1710	<1	<.1	<1	3.5	4	9.2
25...	1100	<1	.11	<1	12.6	3	20.0
27...	1000	<1	<.1	<1	4.7	4	9.7
31...	1415	<1	<.1	<1	2.4	4	6.3
JUN							
16...	0755	<1	<.1	<1	2.9	4	6.2
JUL							
12...	1425	<1	<.1	<1	1.8	3	4.4
AUG							
12...	0730	<1	<.1	<1	1.4	3	6.7
31...	0730	<1	<.1	<1	1.3	8	8.2

E Positive detection, but below detection limit.

12413118 CANYON CREEK NEAR BURKE, ID

LOCATION.--Lat 47°31'32", long 115°48'00", in NE1/4 sec. 10, T. 48N., R. 5E, (unsurveyed, from USGS topographic map), Shoshone County, Burke Quadrangle, Hydrologic Unit 17010302, 0.5 mi upstream from Gorge Gulch and 0.8 mi northeast of Burke.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
27...	0745	5.6	30	7.1	3.0	4.5	12	3.3
NOV								
18...	0735	6.1	30	7.0	.5	2.5	12	3.2
DEC								
15...	0810	9.9	28	7.0	-3.0	1.7	12	3.1
JAN								
20...	1105	9.9	28	7.3	.0	.5	11	2.8
MAR								
22...	1720	24	24	7.1	1.0	3.0	9	2.4
APR								
21...	0815	70	20	6.3	2.5	3.0	7	1.9
MAY								
05...	1000	46	20	6.7	5.0	3.0	7	1.8
24...	0830	221	15	7.4	11.5	3.2	5	1.3
JUN								
15...	1510	292	13	6.9	27.5	5.5	4	1.2
JUL								
08...	0745	103	16	7.3	7.5	4.8	6	1.6
AUG								
05...	0720	22	25	7.2	15.5	9.0	10	2.7
30...	0955	12	27	7.1	14.0	9.0	12	3.1

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
27...	1.0	--	--	--	--	--	--
NOV							
18...	.99	--	--	--	--	--	--
DEC							
15...	.97	--	--	--	--	--	--
JAN							
20...	.88	--	--	--	--	--	--
MAR							
22...	.78	--	--	--	--	--	--
APR							
21...	.58	--	--	--	--	--	--
MAY							
05...	.55	.92	--	1.6	.12	<.10	7.5
24...	.36	.70	5	1.3	.25	<.10	6.4
JUN							
15...	.34	.58	7	.87	<.10	<.10	5.8
JUL							
08...	.47	.65	7	.63	<.10	<.10	6.0
AUG							
05...	.79	.86	12	.80	<.10	<.10	7.2
30...	.95	.97	13	1.3	<.29	<.10	7.4

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
27...	0745	<1	<1	<1	<1	<20	10
NOV							
18...	0735	<1	<1	<1	<1	E11	<10
DEC							
15...	0810	<1	<1	<1	<1	20	20
JAN							
20...	1105	<1	<1	<1	<1	E16	10
MAR							
22...	1720	<1	<1	<1	<1	E8	<40
APR							
21...	0815	<1	<1	1	1	E11	<40
MAY							
05...	1000	<1	<.1	<1	.18	8	8.3
24...	0830	<1	.81	<1	4.7	5	13.7
JUN							
15...	1510	<1	<.1	<1	4.2	3	4.3
JUL							
08...	0745	<1	<.1	<1	1.1	5	4.6
AUG							
05...	0720	<1	<.1	<1	.62	5	5.5
30...	0955	<1	<.1	<1	.24	5	4.6

E Positive detection, but below stated detection limit.

12413123 CANYON CREEK AT WOODLAND PARK, ID

LOCATION.--Lat 47°29'19", long 115°53'22", in SE1/4SE1/4SW1/4 sec. 24, T. 48N., R. 4E., Shoshone County, Hydrologic Unit 17010302, at bridge crossing 1.9 mi upstream from South Fork Coeur D'Alene River.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
27...	0940	12	107	7.5	8.5	6.0	44	12
NOV								
18...	0930	14	108	7.3	3.0	4.5	45	13
DEC								
15...	1005	19	103	7.3	.5	2.6	41	12
JAN								
20...	1400	23	90	7.0	7.0	3.0	34	9.6
MAR								
23...	0730	88	77	6.9	1.0	3.0	26	7.4
APR								
21...	1030	122	48	6.4	10.0	5.0	17	4.8
MAY								
05...	1020	77	47	7.0	15.0	5.0	19	5.3
24...	1340	329	29	7.0	30.0	9.0	10	2.8
JUN								
15...	1300	345	24	7.1	27.5	11.0	9	2.5
JUL								
08...	0920	117	36	7.0	10.0	7.5	14	4.1
AUG								
05...	0950	31	73	7.4	20.5	13.0	31	8.6
30...	1150	24	88	7.3	22.0	15.0	39	11

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
27...	3.2	--	--	--	--	--	--
NOV							
18...	3.2	--	--	--	--	--	--
DEC							
15...	2.9	--	--	--	--	--	--
JAN							
20...	2.4	--	--	--	--	--	--
MAR							
23...	1.9	--	--	--	--	--	--
APR							
21...	1.2	--	--	--	--	--	--
MAY							
05...	1.4	1.2	--	6.9	.22	<.10	8.6
24...	.70	.75	9	3.9	.17	<.10	8.9
JUN							
15...	.62	.64	11	2.7	.14	<.10	6.4
JUL							
08...	1.0	.76	14	3.1	.14	<.10	6.4
AUG							
05...	2.2	1.2	27	6.9	.23	<.10	7.8
30...	2.8	1.3	34	9.7	E.20	<.10	8.2

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
27...	0940	13	--	30	46	1700	1600
NOV							
18...	0930	16	16	22	120	2300	2400
DEC							
15...	1005	19	20	22	56	2800	2800
JAN							
20...	1400	16	17	24	50	2200	2300
MAR							
23...	0730	20	21	37	130	2900	2840
APR							
21...	1030	9	10	24	96	1300	1300
MAY							
05...	1020	6	6.0	19	56.6	956	921
24...	1340	4	6.8	25	1420	505	940
JUN							
15...	1300	2	2.6	19	105	307	317
JUL							
08...	0920	3	3.4	16	28.1	457	436
AUG							
05...	0950	7	7.4	21	61.4	944	865
30...	1150	9	9.0	27	45.9	1130	1030

E Positive detection, but below stated detection limit.

12413125 CANYON CREEK ABOVE MOUTH AT WALLACE, ID

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1972 to October 1972, October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
26...	1315	13	127	7.8	12.5	10.0	49	14
NOV								
18...	1200	16	133	7.3	3.5	5.0	57	16
DEC								
15...	1225	25	130	7.6	2.0	2.8	48	13
28...	1415	27	128	6.7	3.5	.0	47	13
MAR								
23...	0845	96	91	7.1	6.0	3.5	31	8.7
APR								
19...	1100	138	60	7.2	8.0	5.5	22	6.2
MAY								
05...	1255	84	56	7.1	10.0	7.0	21	5.9
24...	1630	384	31	7.1	26.5	9.5	11	3.0
27...	0900	261	28	7.0	9.0	5.5	11	3.0
JUN								
02...	1030	241	31	6.0	10.0	7.0	11	3.2
15...	0915	263	31	6.9	27.0	10.0	10	2.8
JUL								
08...	1045	107	39	7.0	18.5	9.9	16	4.6
AUG								
05...	1240	34	83	7.4	25.0	17.5	35	9.9
30...	1325	22	103	7.3	19.0	17.0	44	13

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
26...	3.5	--	--	--	--	--	--
NOV							
18...	4.1	--	--	--	--	--	--
DEC							
15...	3.4	--	--	--	--	--	--
28...	3.4	--	--	--	--	--	--
MAR							
23...	2.2	--	--	--	--	--	--
APR							
19...	1.6	--	--	--	--	--	--
MAY							
05...	1.5	1.2	--	9.0	.27	<.10	8.4
24...	.75	.77	10	5.1	.49	<.10	6.8
27...	.75	--	--	--	--	--	--
JUN							
02...	.81	--	--	--	--	--	--
15...	.69	.66	8	3.3	.18	<.10	6.2
JUL							
08...	1.2	.81	16	4.3	.16	<.10	6.4
AUG							
05...	2.5	1.3	28	11	.36	<.10	8.1
30...	3.2	1.4	35	15	E.25	<.10	8.5

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
26...	1315	21	18	31	43	2400	2300
NOV							
18...	1200	31	--	32	49	4300	3900
DEC							
15...	1225	28	31	29	52	4300	4400
28...	1415	30	32	31	230	4400	4200
MAR							
23...	0845	26	26	40	120	3600	3560
APR							
19...	1100	14	15	22	370	1800	1890
MAY							
05...	1255	9	9.4	22	55.1	1290	1280
24...	1630	6	10.8	26	2000	671	1440
27...	0900	5	5.1	17	251	604	663
JUN							
02...	1030	4	4.6	23	98.9	571	568
15...	0915	4	4.1	18	151	451	466
JUL							
08...	1045	5	5.4	20	33.2	702	664
AUG							
05...	1240	12	12.6	31	58.9	1480	1390
30...	1325	15	15.0	37	50.5	1790	1780

E Positive detection, but below detection limit.

12413127 EAST FORK NINEMILE CREEK ABOVE MOUTH NEAR BLACKCLOUD, ID

LOCATION.--Lat 47°33'47", long 115°53'33", in NW1/4NE1/4NW1/4, sec. 13, T. 48N., R. 4E., Shoshone County, Hydrologic Unit 17010302, at county road crossing 0.3 mi upstream from Ninemile Creek, and 0.8 mi northeast of Blackcloud.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
27...	1420	12.1	112	7.1	9.5	8.0	31	10
NOV								
19...	0717	1.9	150	8.4	1.0	2.5	42	14
DEC								
10...	0955	2.0	169	6.8	.5	.0	39	13
JAN								
21...	1015	3.3	115	6.8	.0	1.0	31	10
MAR								
22...	1305	17	101	7.0	9.0	4.5	27	8.6
APR								
20...	1440	30	85	6.3	8.5	6.0	22	6.9
MAY								
05...	1200	22	71	7.0	7.5	5.0	17	5.5
23...	0940	45	37	6.8	14.5	5.7	11	3.3
JUN								
15...	1205	44	28	7.1	28.0	10.5	8	2.6
JUL								
07...	1210	16	44	7.1	19.5	10.4	12	3.8
AUG								
04...	1350	6.2	64	6.3	30.0	19.0	19	6.2
SEP								
01...	0710	3.0	81	6.5	5.0	6.5	22	7.2

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
27...	1.4	--	--	--	--	--	--
NOV							
19...	1.9	--	--	--	--	--	--
DEC							
10...	1.8	--	--	--	--	--	--
JAN							
21...	1.4	--	--	--	--	--	--
MAR							
22...	1.3	--	--	--	--	--	--
APR							
20...	1.0	--	--	--	--	--	--
MAY							
05...	.86	1.8	--	20	.89	<.10	14
23...	.55	1.5	6	9.0	.28	<.10	12
JUN							
15...	.40	1.2	8	5.4	.19	<.10	9.7
JUL							
07...	.57	1.5	9	8.5	.18	<.10	11
AUG							
04...	.87	1.9	8	17	.21	<.10	13
SEP							
01...	1.0	2.1	13	23	E.17	<.10	14

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
27...	1420	40	42	93	110	7200	7300
NOV							
19...	0717	67	--1	110	140	13000	12000
DEC							
10...	0955	83	80	140	200	14000	15000
JAN							
21...	1015	52	49	110	140	9300	9500
MAR							
22...	1305	44	43	85	220	6900	6840
APR							
20...	1440	38	39	58	400	6200	6230
MAY							
05...	1200	27	27.5	46	85.2	4540	4460
23...	0940	10	11.5	33	445	1600	1900
JUN							
15...	1205	6	5.7	31	93.4	867	853
JUL							
07...	1210	11	10.7	37	50.4	1660	1820
AUG							
04...	1350	20	20.8	59	82.5	2980	2910
SEP							
01...	0710	28	29.2	74	95.5	4820	5060

E Positive detection, but below stated detection limit.

PERIOD OF RECORD.--July 1972 to October 1972, October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
27...	1135	3.2	157	7.5	14.5	7.0	61	17
NOV								
19...	0855	4.0	182	7.3	2.5	3.5	75	21
DEC								
10...	0805	6.0	201	7.8	-1.0	1.0	74	20
JAN								
21...	1125	13	158	7.4	3.5	3.0	71	19
MAR								
22...	1405	78	130	7.5	11.0	6.0	56	15
APR								
19...	1300	80	117	7.6	8.0	5.5	48	13
MAY								
05...	1400	34	109	7.5	10.0	6.0	43	12
23...	1355	61	63	7.3	29.0	12.0	24	6.7
26...	0845	123	42	6.8	10.5	5.2	16	4.4
27...	0745	110	43	7.1	5.0	5.0	16	4.5
31...	1230	55	48	7.3	12.0	7.3	17	4.7
JUN								
15...	1415	49	44	7.3	29.5	15.2	16	4.5
JUL								
07...	1425	17	74	7.2	24.0	14.0	27	7.8
AUG								
04...	1540	8.6	109	7.1	28.0	22.0	44	13
SEP								
01...	1000	5.0	129	7.1	10.0	7.5	53	15

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
27...	4.3	--	--	--	--	--	--
NOV							
19...	5.1	--	--	--	--	--	--
DEC							
10...	5.5	--	--	--	--	--	--
JAN							
21...	5.4	--	--	--	--	--	--
MAR							
22...	4.7	--	--	--	--	--	--
APR							
19...	3.9	--	--	--	--	--	--
MAY							
05...	3.5	1.6	--	16	.88	<.10	13
23...	1.8	--	18	--	--	--	--
26...	1.1	1.2	13	6.7	.26	<.10	10
27...	1.1	--	--	--	--	--	--
31...	1.2	--	--	--	--	--	--
JUN							
15...	1.1	1.2	13	6.4	.24	<.10	10
JUL							
07...	1.9	1.5	24	10	.34	<.10	12
AUG							
04...	3.1	1.9	32	19	.61	<.10	14
SEP							
01...	3.7	2.0	39	23	.37	<.10	14

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
27...	1135	28	31	28	46	4900	--
NOV							
19...	0855	39	--	36	50	7500	7100
DEC							
10...	0805	31	39	36	68	6600	7000
JAN							
21...	1125	22	21	44	54	3800	3800
MAR							
22...	1405	12	14	23	330	2000	2300
APR							
19...	1300	14	17	13	260	2400	2580
MAY							
05...	1400	16	16.8	26	52.2	2690	2580
23...	1355	8	9.3	23	223	1240	1300
26...	0845	6	9.3	23	804	981	1480
27...	0745	6	7.3	23	267	1020	1100
31...	1230	6	6.5	22	104	974	946
JUN							
15...	1415	6	6.0	25	80.5	864	870
JUL							
07...	1425	10	10.6	29	45.6	1570	1760
AUG							
04...	1540	17	17.7	33	48.2	2280	2250
SEP							
01...	1000	21	--	29	--	3570	--

SPOKANE RIVER BASIN

12413140 PLACER CREEK AT WALLACE, ID

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1980, October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
26...	1535	4.1	101	7.8	6.5	7.0	48	14
NOV								
17...	1422	12	97	7.8	6.0	5.5	45	13
DEC								
14...	1230	21	80	7.8	4.0	3.4	37	11
JAN								
21...	0825	35	82	7.4	.0	3.0	39	11
FEB								
25...	0835	55	71	7.6	2.0	3.5	34	10
MAR								
22...	1545	103	69	7.7	4.0	3.5	34	10
APR								
21...	1300	163	59	6.9	11.0	4.5	29	8.7
MAY								
04...	1530	106	60	7.5	4.0	4.5	30	8.9
24...	1000	219	47	7.8	12.0	6.2	21	6.4
JUN								
16...	0715	182	40	7.1	14.5	5.5	19	5.8
JUL								
08...	1300	33	63	7.6	19.5	10.0	30	9.3
AUG								
05...	1420	13	82	7.6	21.5	14.0	40	12
31...	0920	8.2	89	7.9	7.0	9.5	43	13

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
26...	3.1	--	--	--	--	--	--
NOV							
17...	2.9	--	--	--	--	--	--
DEC							
14...	2.3	--	--	--	--	--	--
JAN							
21...	2.5	--	--	--	--	--	--
FEB							
25...	2.2	--	--	--	--	--	--
MAR							
22...	2.2	--	--	--	--	--	--
APR							
21...	1.8	--	--	--	--	--	--
MAY							
04...	1.8	.96	--	1.6	.16	<.10	8.1
24...	1.2	.74	22	1.3	.17	<.10	7.1
JUN							
16...	1.1	.65	19	.93	<.29	<.10	6.9
JUL							
08...	1.8	.86	23	.83	.13	<.10	8.0
AUG							
05...	2.4	1.1	41	1.3	.28	<.10	9.0
31...	2.6	1.1	46	1.7	E.21	<.10	9.3

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
26...	1535	<1	<1	1	1	<20	<10
NOV							
17...	1422	<1	<1	<1	<1	<20	<10
DEC							
14...	1230	<1	<1	<1	<1	<20	<10
JAN							
21...	0825	<1	<1	<1	<1	<20	<10
FEB							
25...	0835	<1	<1	<1	--	<20	<40
MAR							
22...	1545	<1	<1	<1	<1	<20	<40
APR							
21...	1300	<1	<1	<1	<1	<20	--
MAY							
04...	1530	<1	--	<1	--	2	--
24...	1000	<1	--	<1	4.1	<1	8.9
JUN							
16...	0715	<1	--	<1	.89	1	--
JUL							
08...	1300	<1	--	<1	1.1	1	--
AUG							
05...	1420	<1	--	<1	.78	<1	--
31...	0920	<1	--	<1	.58	3	--

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
22...	1540	43	174	7.9	14.0	9.5	69	19
NOV								
17...	0925	68	175	7.1	5.5	5.0	69	19
DEC								
10...	1210	81	184	7.4	2.0	3.5	64	17
29...	1300	129	164	7.9	5.0	2.0	59	16
MAR								
24...	0830	525	122	7.3	11.0	3.8	46	13
APR								
19...	1515	731	85	7.6	12.0	5.0	48	13
MAY								
05...	1445	479	85	7.6	10.0	6.0	37	9.9
24...	1030	1220	52	7.2	26.5	6.5	22	6.1
26...	08100	1570	44	6.8	10.5	4.5	18	5.0
27...	0945	1230	51	7.1	14.0	5.0	21	5.8
JUN								
01...	0845	1040	53	7.5	12.5	5.5	23	6.2
16...	0950	1180	43	7.4	25.0	8.0	18	5.0
JUL								
15...	0800	282	75	7.9	12.0	9.0	32	8.7
AUG								
05...	1540	133	112	7.7	27.0	18.0	48	13
SEP								
01...	0840	77	140	7.2	7.0	8.0	61	17

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
22...	5.5	--	--	--	--	--	--
NOV							
17...	5.2	--	--	--	--	--	--
DEC							
10...	5.1	--	--	--	--	--	--
29...	4.6	--	--	--	--	--	--
MAR							
24...	3.6	--	--	--	--	--	--
APR							
19...	4.0	--	--	--	--	--	--
MAY							
05...	2.9	1.9	--	7.2	1.7	<.10	8.5
24...	1.6	--	21	--	--	--	--
26...	1.3	.84	16	3.7	.46	<.10	6.7
27...	1.6	--	--	--	--	--	--
JUN							
01...	1.7	--	--	--	--	--	--
16...	1.3	.82	22	3.2	.40	<.10	6.4
JUL							
15...	2.4	1.5	27	6.8	.98	<.10	7.2
AUG							
05...	3.8	2.4	39	12	1.8	<.10	8.6
SEP							
01...	4.9	3.2	48	18	2.3	<.10	9.1

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
22...	1540	8	8	11	18	1200	1100
NOV							
17...	0925	12	11	10	23	1900	1700
DEC							
10...	1210	11	11	14	24	1700	1700
29...	1300	8	8	6	33	1300	--
MAR							
24...	0830	7	8	8	49	1100	1050
APR							
19...	1515	5	5	4	13	700	689
MAY							
05...	1445	3	3.6	7	17.1	543	503
24...	1030	2	3.3	5	387	244	453
26...	0800	1	4.1	5	539	204	520
27...	0945	2	2.2	4	107	247	292
JUN							
01...	0845	2	1.9	5	36.9	253	265
16...	0950	1	1.6	4	108	181	216
JUL							
15...	0800	3	3.2	7	18.9	427	417
AUG							
05...	1540	5	5.0	15	42.4	564	539
SEP							
01...	0840	7	6.9	13	18.6	1040	901

12413190 MOON CREEK ABOVE MOUTH AT ELK CREEK, ID

LOCATION.--Lat 47°32'02", long 116°03'28", in NW1/4SW1/4SE1/4 sec. 3, T. 48N., R. 3E., Shoshone County, Hydrologic Unit 17010302, at bridge crossing at Elk Creek, 0.1 mi upstream from South Fork Coeur d' Alene River.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
28...	0745	1.3	95	7.2	7.0	8.0	34	7.6
NOV								
18...	1355	1.6	92	7.8	6.0	7.5	37	8.1
DEC								
14...	1055	4.8	90	7.5	9.0	5.1	33	7.3
JAN								
21...	0710	21	63	7.3	-.5	3.5	23	5.1
MAR								
22...	0905	63	46	6.8	6.0	4.0	16	3.8
APR								
20...	1235	43	43	6.5	12.0	7.0	15	3.6
MAY								
04...	1335	17	51	7.2	4.5	7.1	18	4.2
23...	1540	8.7	58	7.4	30.5	14.0	21	5.0
JUN								
16...	1320	4.2	74	7.5	23.5	9.5	26	6.0
JUL								
20...	0800	2.1	81	7.0	16.5	11.7	32	7.2
AUG								
04...	1155	1.5	90	7.3	27.5	14.0	35	8.0
31...	1425	1.4	101	7.2	13.5	12.0	38	8.5

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
28...	3.7	--	--	--	--	--	--
NOV							
18...	4.0	--	--	--	--	--	--
DEC							
14...	3.6	--	--	--	--	--	--
JAN							
21...	2.4	--	--	--	--	--	--
MAR							
22...	1.7	--	--	--	--	--	--
APR							
20...	1.5	--	--	--	--	--	--
MAY							
04...	1.8	2.0	--	11	.24	<.10	16
23...	2.2	2.2	12	13	.27	<.10	16
JUN							
16...	2.7	2.4	17	15	.28	<.10	18
JUL							
20...	3.3	2.6	20	16	.47	<.10	18
AUG							
04...	3.7	2.8	20	20	.59	<.10	18
31...	4.1	2.9	20	24	E.28	<.10	19

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
28...	0745	<1	<1	1	2	130	120
NOV							
18...	1355	<1	<1	<1	2	120	120
DEC							
14...	1055	<1	<1	<1	2	170	160
JAN							
21...	0710	<1	<1	<1	3	100	100
MAR							
22...	0905	<1	<1	<1	47	57	110
APR							
20...	1235	<1	<1	<1	5	45	41.1
MAY							
04...	1335	<1	--	<1	1.1	56	57.2
23...	1540	<1	--	<1	.49	61	69.0
JUN							
16...	1320	<1	--	<1	.75	74	67.6
JUL							
20...	0800	<1	--	<1	.49	93	90.5
AUG							
04...	1155	<1	--	<1	.34	81	78.0
31...	1425	<1	--	<1	.60	85	82.9

E Positive detection, but below stated detection limit.

PERIOD OF RECORD.--October 1992 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
19...	1610	68	210	7.7	5.0	10.5	72	19
NOV								
17...	1600	94	196	7.8	5.5	6.5	70	19
DEC								
15...	1445	200	162	7.5	4.0	4.5	58	16
JAN								
21...	1320	358	135	7.5	5.5	4.5	50	13
FEB								
10...	0715	235	159	7.6	-1.0	2.0	58	15
MAR								
09...	0745	254	148	7.4	3.0	2.5	58	15
APR								
12...	1515	355	126	7.6	11.0	6.9	35	9.5
20...	0740	1320	74	7.1	6.0	5.5	30	8.0
MAY								
06...	0745	664	97	7.4	.0	4.0	38	10
25...	1345	2460	44	7.3	25.0	9.0	18	5.1
27...	1500	1740	55	7.2	27.5	10.0	22	6.0
JUN								
01...	1610	1450	56	7.4	17.0	8.5	22	6.1
JUL								
15...	1015	406	86	7.2	18.0	10.5	34	9.1
AUG								
09...	1645	168	147	7.6	28.0	19.0	54	14
30...	1505	113	178	7.3	19.5	16.5	65	17

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
19...	5.9	--	--	--	--	--	--
NOV							
17...	5.6	--	--	--	--	--	--
DEC							
15...	4.7	--	--	--	--	--	--
JAN							
21...	4.1	--	--	--	--	--	--
FEB							
10...	4.8	--	--	--	--	--	--
MAR							
09...	4.7	--	--	--	--	--	--
APR							
12...	2.7	--	--	--	--	--	--
20...	2.4	--	--	--	--	--	--
MAY							
06...	3.1	3.0	--	12	1.7	<.10	9.1
25...	1.4	1.1	18	4.9	.58	<.10	8.6
27...	1.7	--	--	--	--	--	--
JUN							
01...	1.7	1.4	20	<.10	<.10	<.10	8.6
JUL							
15...	2.6	2.5	29	11	1.1	<.10	7.9
AUG							
09...	4.3	6.1	39	26	2.0	<.10	9.4
30...	5.4	8.1	43	36	2.3	<.10	9.8

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
19...	1610	8	9	5	10	1100	1000
NOV							
17...	1600	10	9	5	14	1400	1400
DEC							
15...	1445	7	7	4	8	1100	1100
JAN							
21...	1320	5	5	4	8	780	820
FEB							
10...	0715	7	7	3	8	1100	1000
MAR							
09...	0745	6	7	4	11	1100	1000
APR							
12...	1515	4	5	5	130	660	727
20...	0740	3	5	4	260	510	668
MAY							
06...	0745	4	3.7	4	16.2	561	505
25...	1345	1	4.2	3	336	184	598
27...	1500	2	2.4	4	180	228	327
JUN							
01...	1610	2	1.9	4	38.9	237	248
JUL							
15...	1015	3	3.5	6	14.6	444	432
AUG							
09...	1645	6	5.8	8	14.4	714	655
30...	1505	6	6.6	8	11.6	819	728

12413290 GOVERNMENT GULCH NEAR MOUTH AT SMELTERVILLE, ID

LOCATION.--Lat 47°32'42", long 116°09'59", in SW1/4SW1/4SE1/4 sec. 35, T. 49N., R. 2E., Shoshone County, Hydrologic Unit 17010302, 0.3 mi upstream from South Fork Coeur d'Alene River at Smelterville.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
28...	0905	1.2	139	6.9	9.5	8.0	39	11
NOV								
19...	1108	1.5	208	6.6	6.5	5.5	61	18
DEC								
14...	0920	4.7	189	6.5	2.0	4.2	57	16
29...	0850	6.3	170	6.7	4.8	3.5	53	15
FEB								
24...	1205	15	168	7.1	6.5	5.0	51	15
APR								
20...	1020	18	47	6.5	9.5	6.5	14	3.9
MAY								
04...	1200	13	50	7.0	6.0	8.6	14	4.0
23...	1305	15	40	7.0	27.0	14.2	11	3.0
JUN								
16...	1000	3.4	74	6.9	26.0	16.0	21	6.0
JUL								
20...	0925	2.1	82	6.5	19.0	14.0	24	6.9
AUG								
04...	0900	1.8	84	7.0	21.0	11.5	25	7.3
31...	1300	1.5	87	6.7	15.0	12.5	26	7.4

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
28...	2.6	--	--	--	--	--	--
NOV							
19...	4.0	--	--	--	--	--	--
DEC							
14...	3.9	--	--	--	--	--	--
29...	3.6	--	--	--	--	--	--
FEB							
24...	3.4	--	--	--	--	--	--
APR							
20...	.98	--	--	--	--	--	--
MAY							
04...	1.1	1.5	--	14	1.0	<.10	13
23...	.78	1.4	6	10	.26	<.10	12
JUN							
16...	1.5	1.5	8	21	.63	<.10	14
JUL							
20...	1.7	1.5	9	24	.37	<.10	13
AUG							
04...	1.7	1.5	10	24	.41	<.10	13
31...	1.8	1.5	9	26	E.26	<.10	13

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
28...	0905	290	--	3	6	9500	--
NOV							
19...	1108	420	--	5	8	14000	14000
DEC							
14...	0920	360	--	16	42	11000	12000
29...	0850	280	270	6	43	9900	9900
FEB							
24...	1205	310	--	<1	400	10000	10900
APR							
20...	1020	41	47	3	58	1400	1430
MAY							
04...	1200	46	47.8	5	12.4	1530	1500
23...	1305	29	29.3	4	22.8	872	913
JUN							
16...	1000	90	87.2	4	11.2	2870	2960
JUL							
20...	0925	112	118	3	12.7	3780	4420
AUG							
04...	0900	114	118	3	10.6	3610	3750
31...	1300	117	124	3	7.6	4350	4620

E Positive detection, but below stated detection limit.

12413445 PINE CREEK BELOW AMY GULCH NEAR PINEHURST, ID

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

PERIOD OF DAILY RECORD.--February to September current year.

PERIOD OR DAILY RECORD.--
WATER TEMPERATURES: February to September current year.
SPECIFIC CONDUCTANCE: February to September current year.

INSTRUMENTATION.--Water-quality data recorder since February 1999.

REMARKS.--Missing data due to equipment damage.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 15.5 °C Aug. 2-4, 6, 8-10, 18-20, 23, 26; minimum recorded, 2.0 °C on March 6-8.
SPECIFIC CONDUCTANCE: Maximum recorded daily mean, 34 micromhos/cm Sep. 22; minimum recorded daily mean, 15 micromhos/cm May 24-30, June 16-17.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	HARD-NESS TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
21...	1715	13	40	7.1	10.5	11.5	15	3.8
NOV								
19...	1353	33	47	6.7	5.0	9.0	16	4.0
DEC								
09...	0845	73	47	7.1	.0	6.0	12	3.1
29...	0815	145	34	7.7	1.5	4.0	12	3.0
FEB								
24...	1440	788	26	7.1	6.0	3.0	9	2.3
APR								
20...	0745	833	21	6.9	8.0	5.0	7	1.7
MAY								
06...	0710	298	21	6.3	3.0	4.0	7	1.8
19...	1545	569	20	6.5	15.0	8.0	7	1.7
25...	1100	1340	16	7.3	6.7	8.2	5	1.4
27...	1310	716	17	6.9	17.5	8.5	6	1.5
JUN								
01...	1815	593	17	6.6	16.0	8.0	6	1.5
16...	1215	594	17	7.1	27.5	10.4	6	1.6
JUL								
20...	1045	55	25	6.8	22.5	12.5	9	2.4
AUG								
11...	1550	36	31	6.7	23.0	13.0	11	2.8
31...	1200	21	32	6.7	12.5	11.5	12	3.0

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
21...	1.2	--	--	--	--	--	--
NOV							
19...	1.4	--	--	--	--	--	--
DEC							
09...	1.1	--	--	--	--	--	--
29...	1.0	--	--	--	--	--	--
FEB							
24...	.82	--	--	--	--	--	--
APR							
20...	.58	--	--	--	--	--	--
MAY							
06...	.60	.85	--	2.4	.16	<.10	8.8
19...	.54	--	--	--	--	--	--
25...	.42	.74	6	1.3	.17	<.10	6.9
27...	.45	--	--	--	--	--	--
JUN							
01...	.47	--	--	--	--	--	--
16...	.48	.68	7	.97	.12	<.10	7.1
JUL							
20...	.78	.94	10	2.3	.14	<.10	9.0
AUG							
11...	.93	1.1	10	3.3	.18	<.10	10
31...	.99	1.2	11	4.3	E.16	<.10	10

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
21...	1715	<1	<1	<1	<1	140	--
NOV							
19...	1353	<1	<1	<1	<1	140	140
DEC							
09...	0845	<1	<1	<1	<1	140	140
29...	0815	<1	<1	<1	2	170	--
FEB							
24...	1440	<1	<1	<1	14	140	151
APR							
20...	0745	<1	<1	<1	4	120	127
MAY							
06...	0710	<1	--	<1	.93	95	94.5
19...	1545	<1	--	<1	.78	68	67.9
25...	1100	<1	--	<1	31.2	39	76.1
27...	1310	<1	--	<1	4.0	40	42.3
JUN							
01...	1815	<1	--	<1	1.4	40	41.5
16...	1215	<1	--	<1	.80	35	33.9
JUL							
20...	1045	<1	--	<1	--	87	84.0
AUG							
11...	1550	<1	--	<1	--	96	94.3
31...	1200	<1	--	<1	.59	108	102

E Positive detection, but below stated detection limits.

12413470 SOUTH FORK COEUR D'ALENE RIVER NEAR PINEHURST, ID

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1989 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: May 19 to September 1998, March to September 1999 (discontinued).
SPECIFIC CONDUCTANCE: March 4 to September 30 1999.

INSTRUMENTATION.--Water quality data logger from March to September 1999.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.7 °C July 27, 1998.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURES: Maximum, 21.7 °C Aug. 3.
SPECIFIC CONDUCTANCE: Maximum daily mean, 327 microsiemens, Sep. 27, 1999, minimum daily mean, 47 microsiemens May 25, 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT											
26...	1015	98	252	7.1	11.5	10.0	--	--	--	--	--
NOV											
17...	1250	164	268	7.2	6.0	7.0	--	--	--	--	--
DEC											
30...	1445	1200	105	7.4	4.0	3.0	--	--	--	--	--
FEB											
08...	1500	527	140	7.0	2.0	5.0	--	--	--	--	--
MAR											
09...	0925	440	144	7.2	8.0	3.5	--	--	--	--	--
APR											
13...	0730	610	147	7.2	6.0	4.1	1.3	11.8	97	K2	K8
MAY											
06...	1330	1160	95	7.3	18.0	8.8	1.8	11.8	111	<1	K6
JUN											
02...	0745	2160	56	6.2	13.5	7.0	4.0	--	--	K5	28
JUL											
15...	1200	508	109	7.1	24.0	13.0	2.0	10.2	106	K1	K4
AUG											
09...	1415	237	176	7.3	30.0	19.0	.65	7.7	91	K3	K3
SEP											
07...	1430	140	305	7.2	18.0	14.5	.44	10.8	113	<1	K16

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	ANC UNFLTRD CARB FET FIELD MG/L AS CO3 (00445)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT											
26...	90	23	7.7	--	--	--	--	--	--	--	--
NOV											
17...	96	25	8.3	--	--	--	--	--	--	--	--
DEC											
30...	36	10	2.7	--	--	--	--	--	--	--	--
FEB											
08...	51	13	4.3	--	--	--	--	--	--	--	--
MAR											
09...	54	14	4.6	--	--	--	--	--	--	--	--
APR											
13...	53	14	4.4	--	--	--	--	--	--	--	--
MAY											
06...	35	9.3	2.9	2.4	--	--	27	0	22	18	2.2
JUN											
02...	22	5.9	1.6	1.3	--	--	16	0	14	9.4	.54
JUL											
15...	41	11	3.3	2.5	--	--	--	--	25	21	1.1
AUG											
09...	64	17	5.3	5.3	--	--	--	--	32	42	2.5
SEP											
07...	120	32	10	6.5	10	1.4	39	0	32	100	2.3

K Results based on counts outside ideal colony range.

112413470 SOUTH FORK COEUR D' ALENE RIVER NEAR PINEHURST, ID--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT										
26...	--	--	--	--	--	.348	.348	.50	.095	.035
NOV										
17...	--	--	--	--	--	.363	.310	.42	.048	.019
DEC										
30...	--	--	--	--	--	.176	.061	.16	.041	.009
FEB										
08...	--	--	--	--	--	.211	.068	.11	.025	.010
MAR										
09...	--	--	--	--	--	.203	.061	.23	.024	.008
APR										
13...	--	--	--	--	--	.139	.047	E.06	.018	.006
MAY										
06...	<.10	9.5	--	--	--	.061	.036	E.08	.016	.006
JUN										
02...	<.10	7.3	--	--	--	.035	.013	.12	.023	.004
JUL										
15...	.10	8.5	--	--	--	.044	.052	E.09	.021	.007
AUG										
09...	.20	10	--	--	--	.178	.119	.16	.040	.011
SEP										
07...	.29	11	186	.25	70.3	.252	.228	.33	.050	.016

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT									
26...	1015	11	14	14	150	2130	2300	--	--
NOV									
17...	1250	15	16	5.7	63	1910	2000	--	--
DEC									
30...	1445	4.9	6	2.7	200	661	700	--	--
FEB									
08...	1500	11	11	3.3	16	1180	1300	--	--
MAR									
09...	0925	8.7	9	5.1	15	1310	1200	--	--
APR									
13...	0730	6.2	7	3.6	21	979	950	3	4.9
MAY									
06...	1330	3.8	4	5.0	44	601	590	7	22
JUN									
02...	0745	2.1	3	3.6	130	317	360	31	181
JUL									
15...	1200	4.2	5	6.7	29	714	660	3	4.1
AUG									
09...	1415	7.4	8	7.9	26	1210	1100	2	1.3
SEP									
07...	1430	7.5	8	4.5	19	1340	1400	1	.38

E Positive detection but below stated detection limiSPOKANE RIVER BASIN

PERIOD OF RECORD.--Water year 1987 to current year.

WATER-QUALITY DATA, OCTOBER 1998 TO OCTOBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT 22...	0850	343	143	7.1	3.0	7.0	56	14
NOV 18...	1525	819	93	7.3	6.0	7.0	36	9.2
DEC 15...	1100	2390	65	7.3	4.5	4.0	27	6.6
JAN 27...	1415	2140	64	7.2	.0	2.0	26	6.4
FEB 09...	1450	1910	68	7.4	1.0	3.0	27	6.8
MAR 09...	1200	2260	62	7.2	5.5	3.5	27	6.6
APR 13...	1410	3380	59	7.4	10.5	5.5	24	6.0
MAY 10...	1300	5620	43	7.2	13.0	6.1	18	4.5
25...	1410	16000	32	6.8	26.5	11.0	13	3.4
JUN 08...	1130	5130	44	7.0	8.5	7.5	18	4.7
JUL 13...	1505	1440	69	7.0	28.0	15.0	29	7.5
AUG 11...	1435	716	96	7.2	23.0	17.0	38	9.9
SEP 01...	1245	471	108	7.3	24.0	13.0	43	11
22...	1600	371	126	7.3	27.0	13.5	51	13
OCT 20...	1010	365	135	7.0	6.5	7.5	55	14

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	CHLO-SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	FLUO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, RIDE, DIS-SOLVED (MG/L AS F) (00950)	DIS-SOLVED (MG/L AS SIO2) (00955)
OCT 22...	5.2	--	--	--	--	--	--	--
NOV 18...	3.3	--	--	--	--	--	--	--
DEC 15...	2.4	--	--	--	--	--	--	--
JAN 27...	2.4	--	--	--	--	--	--	--
FEB 09...	2.5	--	--	--	--	--	--	--
MAR 09...	2.4	1.8	.49	21	8.0	1.6	<.10	11
APR 13...	2.2	--	--	--	--	--	--	--
MAY 10...	1.7	1.2	--	--	3.9	.34	<.10	9.5
25...	1.1	.86	--	11	3.1	.22	<.10	13
JUN 08...	1.6	1.1	--	16	5.3	.30	<.10	8.5
JUL 13...	2.4	1.6	--	21	9.6	.51	<.10	9.3
AUG 11...	3.3	2.5	--	26	17	.77	<.10	10
SEP 01...	3.8	2.9	--	26	22	.48	.11	10
22...	4.5	3.0	--	26	31	.90	.11	11
OCT 20...	4.7	2.6	--	26	34	.97	.12	10

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT 22...	0850	4	3	2	6	650	630
NOV 18...	1525	3	3	1	9	460	450
DEC 15...	1100	2	2	<1	8	250	250
JAN 27...	1415	2	2	1	4	280	270
FEB 09...	1450	3	3	1	5	330	330
MAR 09...	1200	2	2	1	5	290	278
APR 13...	1410	1	1	<1	6	190	195
MAY 10...	1300	<1	.75	1	10.0	111	113
25...	1410	<1	2.1	3	233	67	209
JUN 08...	1130	<1	.84	2	15.6	128	127
JUL 13...	1505	2	1.7	3	9.3	252	249
AUG 11...	1435	2	2.4	3	7.1	367	356
SEP 01...	1245	3	2.8	3	7.0	478	457
22...	1600	3	2.9	2	5.7	528	542
OCT 20...	1010	3	2.9	1	4.9	535	498

PERIOD OF RECORD.--March 1994 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT								
23...	1330	--	103	7.3	14.0	9.7	40	9.9
NOV								
16...	0845	994	84	7.3	7.0	7.0	34	8.6
DEC								
14...	0900	2080	80	7.0	2.0	4.7	29	7.2
MAR								
23...	1445	9040	45	7.1	14.0	5.0	18	4.4
APR								
21...	1430	13200	36	7.2	9.5	5.1	15	3.7
MAY								
06...	0945	7490	45	7.0	11.5	6.2	18	4.5
26...	1350	15600	30	6.6	23.0	8.0	12	3.1
JUN								
17...	0715	6870	38	7.1	17.0	13.0	15	4.0
JUL								
07...	0830	2400	67	7.4	18.0	14.0	26	6.8
AUG								
11...	1130	795	91	7.2	25.5	19.5	37	9.5
SEP								
02...	0815	635	118	7.3	5.5	16.0	48	12

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT							
23...	3.8	--	--	--	--	--	--
NOV							
16...	3.1	--	--	--	--	--	--
DEC							
14...	2.7	--	--	--	--	--	--
MAR							
23...	1.6	--	--	--	--	--	--
APR							
21...	1.4	--	--	--	--	--	--
MAY							
06...	1.7	1.2	--	5.0	.43	<.10	9.7
26...	1.1	.85	14	3.1	<.10	<.10	7.2
JUN							
17...	1.3	.95	16	4.4	E.20	<.10	8.1
JUL							
07...	2.2	1.5	20	8.7	.51	<.10	9.0
AUG							
11...	3.2	2.2	25	16	.73	<.10	10
SEP							
02...	4.2	2.9	26	27	.54	.11	10

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
23...	1330	2	3	4	9	530	500
NOV							
16...	0845	2	3	3	26	460	420
DEC							
14...	0900	2	3	2	14	390	690
MAR							
23...	1445	<1	1	2	49	150	178
APR							
21...	1430	<1	<1	2	67	97	139
MAY							
06...	0945	<1	.75	2	11.2	113	116
26...	1350	<1	1.7	5	231	78	--
JUN							
17...	0715	<1	.89	4	36.1	109	126
JUL							
07...	0830	1	1.5	3	8.5	244	239
AUG							
11...	1130	2	2.1	5	24.4	318	313
SEP							
02...	0815	2	2.4	6	18.0	407	395

PERIOD OF RECORD.--January 1991 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT										
23...	0930	--	118	7.3	6.0	9.0	48	12	4.4	--
NOV										
16...	1130	1100	121	7.1	8.5	7.5	47	12	4.3	--
DEC										
14...	1115	2440	87	7.0	3.0	4.0	32	7.9	3.0	--
MAR										
23...	1215	7850	46	7.0	14.5	6.5	17	4.3	1.6	--
APR										
21...	1115	10700	37	7.2	13.0	6.4	14	3.6	1.3	--
MAY										
06...	1330	8320	44	7.3	19.5	7.5	18	4.4	1.7	1.3
27...	0900	12400	33	6.7	17.5	10.0	13	3.3	1.2	.94
JUN										
17...	0945	6150	39	7.0	19.5	13.5	16	4.1	1.3	.96
JUL										
14...	1645	1890	74	7.2	18.5	19.0	30	7.8	2.5	1.6
AUG										
11...	0815	627	96	7.1	21.0	22.0	39	10	3.4	2.2
SEP										
09...	1645	362	113	7.3	23.0	22.0	45	11	4.0	2.7

DATE	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT										
23...	--	--	--	--	--	.044	.002	.14	.007	.002
NOV										
16...	--	--	--	--	--	.114	.029	.10	.008	.001
DEC										
14...	--	--	--	--	--	.139	.042	<.10	.013	.002
MAR										
23...	--	--	--	--	--	.032	.004	--	.023	.003
APR										
21...	--	--	--	--	--	.033	.011	E.05	.053	.003
MAY										
06...	--	4.9	.39	<.10	9.9	.014	.004	E.05	.008	.003
27...	12	3.5	.25	<.10	8.6	--	--	--	--	--
JUN										
17...	14	3.9	.26	<.10	8.1	.017	<.002	.11	.009	.002
JUL										
14...	21	12	.51	<.10	8.9	.009	<.002	.14	.006	.001
AUG										
11...	24	19	.71	<.10	9.4	<.005	.003	.17	.006	.002
SEP										
09...	26	24	.49	<.10	9.7	.020	.006	.21	.010	.002

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT							
23...	0930	3	3	6	27	540	560
NOV							
16...	1130	3	3	6	27	580	600
DEC							
14...	1115	2	2	2	22	370	380
MAR							
23...	1215	1	2	7	110	170	212
APR							
21...	1115	<1	2	11	430	120	304
MAY							
06...	1330	<1	.71	4	22.0	110	117
27...	0900	<1	1.9	14	296	90	241
JUN							
17...	0945	<1	1.0	4	31.9	137	142
JUL							
14...	1645	1	1.6	10	27.2	239	237
AUG							
11...	0815	2	2.0	4	30.4	296	312
SEP							
09...	1645	2	2.1	3	17.9	331	340

E Positive detection, but below positive detection limit.

Water quality partial-record stations and miscellaneous sites are locations where chemical-quality, biological, or sediment data are collected once only, intermittently, or systematically but at limited frequency over a period of years for use in hydrologic analyses.

WATER QUALITY DATA, MAY TO JUNE 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)
SPOKANE RIVER BASIN											
12411950 BEAVER CR AB CARPENTER GULCH NR PRICHARD, ID (LAT 47 37 59N LONG 115 58 46W)											
MAY											
24...	0920	140	49.0	7.06	16.0	8.00	21	5.5	1.7	1.2	14
12413025 LITTLE NORTH FORK AT HALE FISH HATCHERY AB MOUTH, ID (LAT 47 27 54N LONG 115 43 18W)											
MAY											
22...	1030	47	19.0	6.90	16.5	5.00	7	1.7	.68	.9	7
12413030 SF COEUR D ALENE R BL OBRIEN GULCH NR LARSON, ID (LAT 47 28 00N LONG 115 43 58W)											
MAY											
22...	1355	110	33.0	7.11	18.0	7.50	13	3.4	1.0	1.3	11
25...	1750	154	26.0	7.30	22.5	6.30	8	2.3	.67	.9	10
12413103 SF COEUR D ALENE R AB SLAUGHTERHSE GULCH AT MULLAN, ID (LAT 47 27 58N LONG 115 48 48W)											
MAY											
24...	1450	470	43.0	7.80	26.4	7.30	18	5.2	1.3	1.0	20
12413104 SF COEUR D ALENE R BL TROWBRIDGE GULCH NR WALLACE, ID (LAT 47 28 27N LONG 115 52 07W)											
MAY											
24...	1600	470	55.0	7.70	25.3	7.80	23	6.3	1.8	1.1	23
12413120 CANYON CREEK AT GEM, ID (LAT 47 30 30N LONG 115 52 01W)											
MAY											
24...	1100	310	27.0	6.66	23.5	6.20	10	2.7	.68	.7	10
12413126 NINEMILE CR AB MOUTH OF EF NINEMILE CR NR BLACKCLOUD, ID (LAT 47 30 51N LONG 115 53 52W)											
MAY											
23...	1120	5.6	180	8.01	22.5	8.80	95	23	9.4	1.1	88
124131267 EF NINEMILE CREEK NR BLACKCLOUD, ID (LAT 47 31 27N LONG 115 52 49W)											
MAY											
23...	0810	38	35.0	6.34	9.50	4.50	10	3.2	.53	1.4	6
12413131 SF COEUR D ALENE R ABV PLACER CR AT WALLACE, ID (LAT 47 28 30N LONG 115 55 39W)											
MAY											
24...	1300	1200	52.0	7.60	20.0	8.10	21	5.8	1.6	1.1	21
12413151 LAKE CREEK AB MOUTH NR SILVERTON, ID (LAT 47 29 24N LONG 115 57 06W)											
MAY											
22...	0950	30	64.0	7.83	15.0	7.00	27	7.0	2.3	1.9	22
12413168 TWOMILE CREEK AB MOUTH AT OSBURN, ID (LAT 47 30 35N LONG 115 59 43W)											
MAY											
22...	1145	4.8	58.0	7.18	20.5	11.5	23	6.9	1.4	1.6	16
12413169 SF COEUR D ALENE R BLW TWOMILE CR NR OSBURN, ID (LAT 47 30 36N LONG 115 59 47W)											
MAY											
05...	1610	533	--	--	--	--	38	10	3.0	2.0	--
24...	1210	1400	53.0	7.27	28.0	8.70	22	6.2	1.7	--	21
26...	1030	1800	47.0	6.88	18.0	8.50	19	5.2	1.4	.9	21
27...	1200	1400	48.0	7.47	24.5	7.80	22	6.0	1.6	--	--
JUN											
01...	1215	1000	56.0	7.52	16.5	7.20	23	6.4	1.8	--	--
12413174 TERROR GULCH CREEK AB MOUTH NR OSBURN, ID (LAT 47 30 52N LONG 116 01 17W)											
MAY											
22...	1355	1.0	95.0	7.33	23.0	14.5	35	7.4	3.9	3.2	19
12413175 SF COEUR D ALENE R AT TERROR GULCH AT OSBURN, ID (LAT 47 30 52N LONG 116 01 20W)											
MAY											
24...	1425	1500	54.0	7.51	31.0	9.50	22	6.2	1.7	1.0	22
3412413179 SF COEUR D ALENE R AB BIG CREEK NR BIG CREEK, ID (LAT 47 31 38N LONG 116 02 56W)											
MAY											
24...	1640	1700	55.0	7.60	31.5	10.5	23	6.3	1.7	1.0	22

WATER QUALITY DATA, MAY TO JUNE 1999

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
SPOKANE RIVER BASIN										
12411950 BEAVER CR AB CARPENTER GULCH NR PRICHARD, ID (LAT 47 37 59N LONG 115 58 46W)										
MAY										
24...	6.4	.3	<.1	11	<1	.31	<1	4.4	59	69.3
12413025 LITTLE NORTH FORK AT HALE FISH HATCHERY AB MOUTH, ID (LAT 47 27 54N LONG 115 43 18W)										
MAY										
22...	1.7	.1	<.1	7.2	<1	<.1	<1	.20	1	<1.0
12413030 SF COEUR D ALENE R BL OBRIEN GULCH NR LARSON, ID (LAT 47 28 00N LONG 115 43 58W)										
MAY										
22...	1.7	1.3	<.1	7.3	<1	<.1	<1	1.6	3	5.1
25...	1.3	.7	<.1	6.7	<1	.14	<1	11.2	5	25.7
12413103 SF COEUR D ALENE R AB SLAUGHTERHSE GULCH AT MULLAN, ID (LAT 47 27 58N LONG 115 48 48W)										
MAY										
24...	2.1	.8	<.1	6.2	<1	.31	<1	82.7	7	78.0
12413104 SF COEUR D ALENE R BL TROWBRIDGE BULCH NR WALLACE, ID (LAT 47 28 27N LONG 115 52 07W)										
MAY										
24...	3.5	.8	<.1	6.3	<1	.88	<1	84.6	45	126
12413120 CANYON CREEK AT GEM, ID (LAT 47 30 30N LONG 115 52 01W)										
MAY										
24...	3.8	.5	<.1	6.5	3	3.9	14	477	340	481
12413126 NINEMILE CR AB MOUTH OF EF NINEMILE CR NR BLACKCLOUD, ID (LAT 47 30 51N LONG 115 53 52W)										
MAY										
23...	.2	.4	<.1	12	<1	.17	1	2.5	22	22.3
124131267 EF NINEMILE CREEK NR BLACKCLOUD, ID (LAT 47 31 27N LONG 115 52 49W)										
MAY										
23...	8.2	.2	<.1	11	8	10.5	25	619	1380	1730
12413131 SF COEUR D ALENE R ABV PLACER CR AT WALLACE, ID (LAT 47 28 30N LONG 115 55 39W)										
MAY										
24...	4.7	.8	<.1	7.2	2	4.1	9	480	319	558
12413151 LAKE CREEK AB MOUTH NR SILVERTON, ID (LAT 47 29 24N LONG 115 57 06W)										
MAY										
22...	7.9	.9	<.1	7.6	<1	<.1	<1	4.4	10	6.2
12413168 TWOMILE CREEK AB MOUTH AT OSBURN, ID (LAT 47 30 35N LONG 115 59 43W)										
MAY										
22...	9.3	.5	<.1	15	<1	<.1	<1	.31	2	1.5
12413169 SF COEUR D ALENE R BLW TWOMILE CR NR OSBURN, ID (LAT 47 30 36N LONG 115 59 47W)										
MAY										
05...	8.4	1.8	<.1	8.8	4	3.8	6	16.4	552	507
24...	--	--	--	--	2	3.6	5	376	250	501
26...	4.5	.5	<.1	<.1	2	3.9	4	500	222	629
27...	--	--	--	--	2	2.5	4	159	257	346
JUN										
01...	--	--	--	--	2	2.1	6	38.9	267	284
12413174 TERROR GULCH CREEK AB MOUTH NR OSBURN, ID (LAT 47 30 52N LONG 116 01 17W)										
MAY										
22...	21	1.2	<.1	21	<1	<.1	<1	.47	23	23.6
12413175 SF COEUR D ALENE R AT TERROR GULCH AT OSBURN, ID (LAT 47 30 52N LONG 116 01 20W)										
MAY										
24...	4.7	.7	<.1	7.1	2	3.9	6	477	251	534
12413179 SF COEUR D ALENE R AB BIG CREEK NR BIG CREEK, ID (LAT 47 31 38N LONG 116 02 56W)										
MAY										
24...	5.1	1.4	<.1	6.8	2	5.8	7	854	263	692

WATER QUALITY DATA, MAY TO JUNE 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)
SPOKANE RIVER BASIN											
12413185 BIG CREEK AB MOUTH NR BIG CREEK, ID (LAT 47 31 46N LONG 116 03 04W)											
MAY 25...	0805	600	31.0	6.88	13.5	5.00	12	3.2	.95	1.2	11
12413204 MONTGOMERY CREEK AB MOUTH NR ELIZABETH PARK, ID (LAT 47 31 51N LONG 116 05 18W)											
MAY 22...	1525	7.9	40.0	7.04	21.0	12.5	13	3.2	1.2	2.2	8
12413209 ELK CREEK AB MOUTH AT ELIZABETH PARK, ID (LAT 47 31 48N LONG 116 05 24W)											
MAY 23...	1515	20	41.0	7.32	29.0	9.00	16	4.3	1.4	.7	13
12413250 SF COEUR D ALENE R AT BUNKER AV BRDG AT KELLOGG, ID (LAT 47 32 43N LONG 116 08 00W)											
MAY 25...	1600	2600	45.0	7.44	24.5	9.60	19	5.3	1.4	1.1	18
12413300 SF COEUR D ALENE RIVER AT SMELTERVILLE, ID (LAT 47 32 55N LONG 116 10 25W)											
MAY 25...	0900	2600	56.0	7.60	20.5	6.10	23	6.3	1.6	1.1	17
12413360 EF PINE CREEK ABV GILBERT CR NEAR PINEHURST, ID (LAT 47 26 25N LONG 116 10 28W)											
MAY 23...	0755	63	13.0	6.75	12.5	5.00	5	1.3	.36	.7	5
12413440 PINE CREEK AB MOUTH OF EF PINE CR AT PINE, ID (LAT 47 29 14N LONG 116 14 26W)											
MAY 23...	1030	410	16.0	6.35	21.5	7.00	6	1.5	.44	.7	5
12413460 PINE CREEK AB MOUTH NR PINEHURST, ID (LAT 47 33 02N LONG 116 13 27W)											
MAY 25...	1300	1400	20.0	7.30	24.9	8.70	5	1.4	.43	.7	7

WATER QUALITY DATA, MAY TO JUNE 1999

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
SPOKANE RIVER BASIN										
12413185 BIG CREEK AB MOUTH NR BIG CREEK, ID (LAT 47 31 46N LONG 116 03 04W)										
MAY 25...	3.7	.2	<.1	7.2	<1	.13	<1	27.9	1	70.0
12413204 MONTGOMERY CREEK AB MOUTH NR ELIZABETH PARK, ID (LAT 47 31 51N LONG 116 05 18W)										
MAY 22...	8.2	<.1	<.1	15	<1	<.1	<1	.41	3	2.5
12413209 ELK CREEK AB MOUTH AT ELIZABETH PARK, ID (LAT 47 31 48N LONG 116 05 24W)										
MAY 23...	6.2	.3	<.1	8.9	<1	.16	<1	14.4	3	8.6
12413250 SF COEUR D ALENE R AT BUNKER AV BRDG AT KELLOGG, ID (LAT 47 32 43N LONG 116 08 00W)										
MAY 25...	4.9	.6	<.1	7.3	1	4.4	5	724	187	671
12413300 SF COEUR D ALENE RIVER AT SMELTERVILLE, ID (LAT 47 32 55N LONG 116 10 25W)										
MAY 25...	9.2	.5	<.1	7.3	2	--	5	--	253	--
12413360 EF PINE CREEK ABV GILBERT CR NEAR PINEHURST, ID (LAT 47 26 25N LONG 116 10 28W)										
MAY 23...	.5	<.1	<.1	6.5	<1	<.1	<1	.53	4	3.5
12413440 PINE CREEK AB MOUTH OF EF PINE CR AT PINE, ID (LAT 47 29 14N LONG 116 14 26W)										
MAY 23...	.9	.1	<.1	6.8	<1	<.1	<1	.13	<1	<1.0
12413460 PINE CREEK AB MOUTH NR PINEHURST, ID (LAT 47 33 02N LONG 116 13 27W)										
MAY 25...	1.3	.2	<.1	7.4	<1	.29	<1	30.5	40	81.3