

# **Abbreviated Preliminary Assessment for Hornet Mine (aka Hornet Lode)**

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Idaho County



**State of Idaho  
Department of Environmental Quality**

**November 2012**





November 15, 2012

Mr. Ken Marcy  
U.S. Environmental Protection Agency  
12928 SW 276<sup>th</sup> Street  
Vashon, WA 98070

RE: Abbreviated Preliminary Assessment Report for the Hornet Mine (Hornet Lode),  
Idaho County, Idaho

Dear Mr. Marcy:

The Hornet Mine site is comprised of mixed ownership with both patented private property and Federal property. The site visited was partially on private property and partially on U.S. Forest Service land. The Idaho Department of Environmental Quality (DEQ) requested access to the private property, and received permission from Mr. Malcolm Layman. Mr. Layman will receive a copy of this report.

Attached are two copies of DEQ's Abbreviated Preliminary Assessment report for the Hornet Mine. As discussed in the report, toxicological risks to human and ecological receptors are unlikely at the Hornet Mine. This is due to the lack of residences or structures, no site workers present, and limited use of this area by the public.

The air, soil, and water pathways are not complete. All historic mine related disturbances are well vegetated and stable. Although no evidence existed of any recent disturbances or activity, the mine site is accessible. U.S. Forest Service Road 1182 parallels Siegel Creek through the mining area. No evidence of livestock or grazing was observed. No sediment, soil or water samples were taken.

The Hornet Mine is not located within the source water delineation zone. No drinking water sources, wells, or ground water sources exist on the Hornet Mine site.

Based on existing conditions and uses, historic information, observations made during the site visit, and visual analysis of the mine wastes; potential pathway of contaminants to receptors and potential exposures to ecological and human receptors do not exist. **DEQ recommends the determination of the Hornet Mine and the associated Hornet lode claim as No Remedial Action Planned (NRAP).**

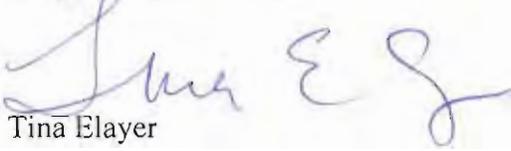
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A link to the Preliminary Assessment and Site Inspection Report for the Hornet Mine can also be found on DEQ's Mining Preliminary Assessment Web page at:

<http://www.deq.idaho.gov/waste-mgmt-remediation/remediation-activities/mining-preliminary-assessments.aspx>

If you have any questions about these sites, the report, or DEQ's recommendations, please do not hesitate to call me at (208) 373-0563.

Respectfully,

A handwritten signature in blue ink, appearing to read "Tina Elayer". The signature is written in a cursive style and is positioned above the printed name.

Tina Elayer  
Mine Waste Specialist

attachments

cc: Clint Hughes, USFS  
Malcolm Layman  
Hornet Mine PA File

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## Introduction

This is an abbreviated preliminary assessment (APA) for the Hornet Mine near Elk City, Idaho. This document provides the rationale for the No Remedial Action Planned (NRAP) determination and that no additional analysis or site investigation is necessary for the Hornet Mine. Section 1 provides the APA checklist filled out by the assessor to determine that an APA was warranted and that no further action is required from the Idaho Department of Environmental Quality (DEQ). The following sections contain additional relevant information and evidence to support the APA, including historical and geologic information (Section 2), photographs (Section 3), maps (Section 4), and references generated during the site visit or desktop research (Section 5).

**Preparer:** Daniel D. Stewart **Date:** 10/3/2012  
Idaho Department of Environmental Quality  
300 West Main  
Grangeville, ID 83530  
(208) 983-0808  
daniel.stewart@deq.idaho.gov

**Site Name:** Hornet Mine

**Previous Names (aka):** Hornet Lode

**Site Owner:** Malcolm Layman

**Address:** P.O. Box 503  
Elk City, ID 83525

**Site Owner:** U.S. Forest Service

**Address:** Nez Perce National Forest  
104 Airport Road  
Grangeville, ID 83530

**Site Location:** The Hornet Mine is just east of Siegel Creek. The mine is 1.2 miles northeast up Siegel Creek on Forest Service Road 1182 from County Road 222 (Red River Road). It is approximately 75 feet west of Forest Service Road 1182 on U.S. Forest Service land.

Township 28N, Range 9E, Sections 5 and 8

**Latitude:** 45.78612°N **Longitude:** -115.36932°W

### Description of release (or potential release) and its probable nature:

The Hornet Mine (and Hornet Lode claim) was investigated by DEQ on May 29, 2012, for potential releases of heavy metals by airborne, surface water, or ground water pathways. Additionally, DEQ investigated potential discharges of other deleterious materials, such as petroleum products and ore processing chemicals. No deleterious materials, petroleum products,

or ore processing chemicals were evident at the site. No discharges were observed. The collapsed dry adit was located. Extensive historic mining has occurred in this area.

## Section 1. APA Checklist

### Task 1—Superfund Eligibility Evaluation

Assessor, if all answers are “no,” continue to task 2; otherwise, explain any “yes” answers below and then skip to task 3.

- |  | YES                                 | NO                                  |
|--|-------------------------------------|-------------------------------------|
| 1. Is the site currently in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) or an “alias” of another site?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 2. Is the site being addressed by some other remediation program (i.e., federal, state, or tribal)?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 3. Are the hazardous substances that may be released from the site regulated under a statutory exclusion (e.g., petroleum, natural gas, natural gas liquids, synthetic gas usable for fuel, normal application of fertilizer, release located in a workplace, naturally occurring, or regulated by the Nuclear Regulatory Commission, Uranium Mill Tailings Radiation Control Act, or Occupational Safety and Health Administration)?          | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 4. Are the hazardous substances that may be released from the site excluded by policy considerations (i.e., deferred to Resource Conservation and Recovery Act corrective action)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 5. Is there sufficient documentation to demonstrate that there is no potential for a release that constitutes risk to human or ecological receptors (e.g., comprehensive remedial investigation equivalent data showing no release above applicable or relevant and appropriate requirements (ARARs), completed removal action, documentation showing that no hazardous substance releases have occurred, or an EPA-approved risk assessment)? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

Assessor, please explain all “yes” answer(s):

**Regarding question 5:** A site inspection involving direct observations confirmed that contaminants of concern, including hazardous materials and petroleum products, do not exist in concentrations that present a threat to human health or the environment. No contaminants or hazardous substances remain on the site. A collapsed adit and a possible collapsed shaft were observed. No discharges were observed on site. The closest residence to the Hornet Mine is downstream approximately 1.5 miles.

### Task 2—Initial Site Evaluation

If information is not available to make a “yes” or “no” response below, further investigation may be needed. In these cases, the assessor should determine whether an APA is appropriate.

**If the answer is “no” to any of questions 1, 2, or 3, proceed directly to task 3.**      **YES**    **NO**

- |  |                          |                                     |
|--|--------------------------|-------------------------------------|
| 1. Does the site have a release or a potential to release?                       | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Does the site have uncontained sources containing CERCLA-eligible substances? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Does the site have documented on-site, adjacent, or nearby targets?           | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**If the answers to questions 1, 2, and 3 above were all “yes,” then answer questions 4–7 before proceeding to task 3.**      **YES**    **NO**

- |   |                          |                          |
|---|--------------------------|--------------------------|
| 4. Does documentation indicate that a target (e.g., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site?                             | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is there an apparent release at the site with no documentation of exposed targets, but targets are on site or immediately adjacent to the site?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Is there an apparent release and no documented on-site targets or targets immediately adjacent to the site, but targets are nearby (e.g., within 1 mile)?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Are there uncontained sources containing CERCLA hazardous substances, a potential to release with targets present on site or in proximity to the site, but no indication of a hazardous substance release? | <input type="checkbox"/> | <input type="checkbox"/> |

**Notes:**

The Hornet Mine is not located near any occupied dwellings, towns, or inhabitants. No hazardous materials were evident during the site visit. No water discharges from the collapsed adit or the mining site were detected.

During the site assessment, DEQ used references from several different documents, including United States Geological Survey (USGS) maps, county tax rolls, and historical reports. These documents often have different spellings for claim names, town sites, and/or geographic features. DEQ has retained the spelling from the original source document.

Table 1 parallels the questions above and should be used by the assessor to make decisions during task 3. Table 1 identifies different types of site information and provides some possible recommendations for further site assessment activities based on that information. The assessor should use Table 1 in determining the need for further action at the site, based on the answers to the questions in task 2. Assessors should use professional judgment when evaluating a site. An assessor’s individual judgment may be different from the general recommendations for a site given below.

**Table 1. Site assessment decision guidelines for a site.**

Suspected/Documented Site Conditions	EPA-Recommended Site Assessment Activities
1. There are no releases or potential to release.	APA
2. No uncontained sources with CERCLA-eligible substances are present on site.	APA
3. There are no on-site, adjacent, or nearby targets.	APA
4. There is documentation indicating that a target (e.g., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site.	APA → SI or PA/SI
5. There is an apparent release at the site with no documentation of exposed targets, but there are targets on site or immediately adjacent to the site.	APA → SI or PA/SI
6. There is an apparent release and no documented on-site targets and no documented targets immediately adjacent to the site, but there are nearby targets. Nearby targets are those targets that are located within 1 mile of the site and have a relatively high likelihood of exposure to a hazardous substance migration from the site.	Full PA
7. There is no indication of a hazardous substance release, and there are uncontained sources containing CERCLA hazardous substances, but there is a potential to release with targets present on site or in proximity to the site.	Full PA

**Task 3—DEQ Site Assessment Decision**

When completing task 3, the assessor should use task 2 and Table 1 to select the appropriate decision. For example, if the answer to question 1 in task 2 was “no,” then an APA is appropriate and the “NRAP” box below should be checked. Additionally, if the answer to question 4 in task 2 is “yes,” then two options are available (as indicated in Table 1): (1) proceed with an APA and check the “Lower Priority SI” or “Higher Priority SI” box below or (2) proceed with a combined PA/SI.

**Check the box that applies based on the conclusions of the APA checklist:**

- No Remedial Action Planned (NRAP)     Defer to NRC
- Higher Priority SI     Refer to Removal Program
- Lower Priority SI     Site is being addressed as part of another CERCLIS site
- Defer to RCRA Subtitle C     Other: \_\_\_\_\_

**DEQ Reviewer:**

 \_\_\_\_\_ Date 11/26/12

**Please explain the rationale for your decision:**

A site inspection involving direct observations confirmed that contaminants of concern, including hazardous materials and petroleum products, do not exist in concentrations that present

a threat to human health or the environment. The Hornet Mine is not located near any occupied dwellings, towns, or inhabitants.

The closest residence to the Hornet Mine is approximately 1.5 miles downstream and is not located adjacent to Siegel Creek or Red River which Siegel Creek flows in to.

No water, soil or sediment samples were taken at the mine site. No flowing water pathways were detected in the mined area. No airborne pathways existed to any home or structures.

The area around the collapsed adit and tailings/waste pile was well vegetated and showed no signs of vegetation stress.

As a result of DEQ's research and observations, the department recommends an NRAP designation for the Hornet Mine. Sections 2 through 5 provide further support for this determination.

## **Section 2. Historical and Geologic Information**

Numerous sources were used during desktop research prior to visiting the site. DEQ could not improve or expand upon these reports by writing additional historical or geological text, so they are directly quoted below.

**Mine History:** Erdman et al (2003) described the Hornet Mine as follows:

The French Creek Gold Mining & Milling Company, Ltd., was incorporated in 1923. This company did some development work. The mine was leased to a Spokane company from 1929 to 1931, during which time the upper tunnel was advanced about 375 feet. In 1932, the property had two tunnels (575 feet and 206 feet). Little work was done on the property after the early 1930s. French Creek Gold forfeited its corporate charter in 1948.

**Geologic Features:** The following is the description of the Hornet Mine from Erdman et al (2003):

The Hornet Mine adit is in the Middle Proterozoic augen gneiss of Red River. The dump, however, contains predominantly stream-rounded boulders of moderate size. The origin of the boulders was not determined.

## **Section 3. Site Conditions and Photographs**

There are no structures at the Hornet Mine site and no safety hazards exist on the site. Extensive mining has occurred throughout this area. DEQ observed a small shaft several hundred feet down gradient from the Hornet Mine. This shaft may have been on the original Hornet Lode claim. Siegel Creek has been extensively placer mined as well DEQ also located the collapsed adit and tailings pile noted below by Erdman et al (2003).

This site is very small, with one collapsed adit and a small dump. The dump is about 25 feet long, 10 feet wide, and 10 feet thick, and is covered mostly with stream cobbles and boulders. The source of the gravels was not determined. The total disturbed area at this site is less than 0.1 acre.

All of the Hornet Mine photographs in this section were taken by DEQ on May 29, 2012. Photo 1 is looking uphill at the Hornet Mine collapsed adit and part of the tailings/waste pile.



**Photo 1. Hornet Mine collapsed adit and part of the tailings/waste pile.**

The Hornet Mine area is well vegetated and shows no sign of vegetation stress. Photo 2 is looking uphill at the Hornet Mine tailings/waste pile.



**Photo 2. Hornet Mine tailings/waste pile.**

Photo 3 was taken from the Hornet Mine site looking downstream. Siegel Creek is approximately 15 yards from the road. The creek has been extensively placer mined. This entire area has been mined.



**Photo 3. Hornet Mine site looking downstream.**

The hole in the center of Photo 4 was filled with debris. It may be a collapsed shaft not associated with the Hornet Mine or it may be a dog hole (exploratory hole/shaft).



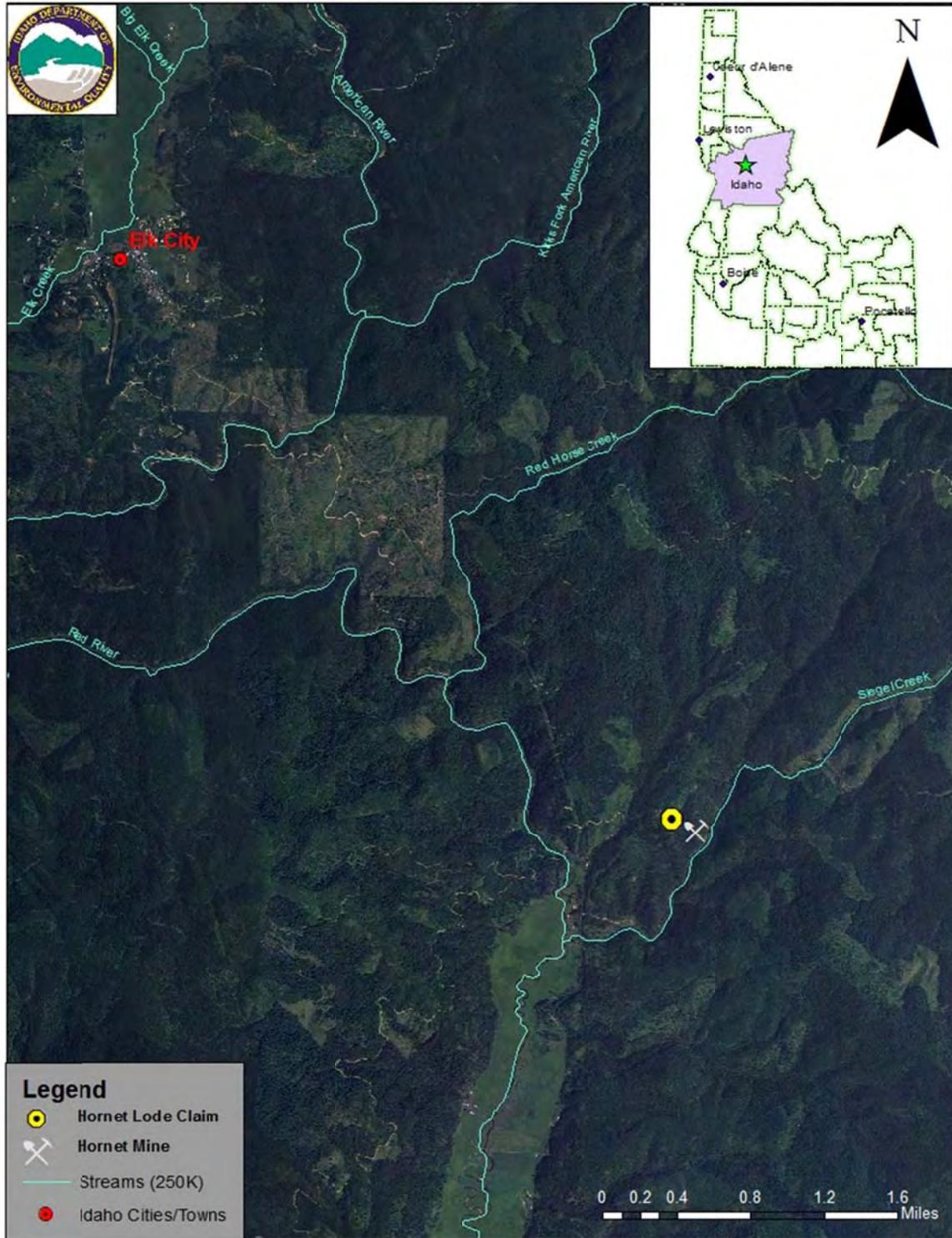
**Photo 4. Debris filled hole near Hornet Mine site.**

DEQ observed a small shaft several hundred feet down gradient from the Hornet Mine (Photo 5). This shaft may have been on the original Hornet Lode claim.



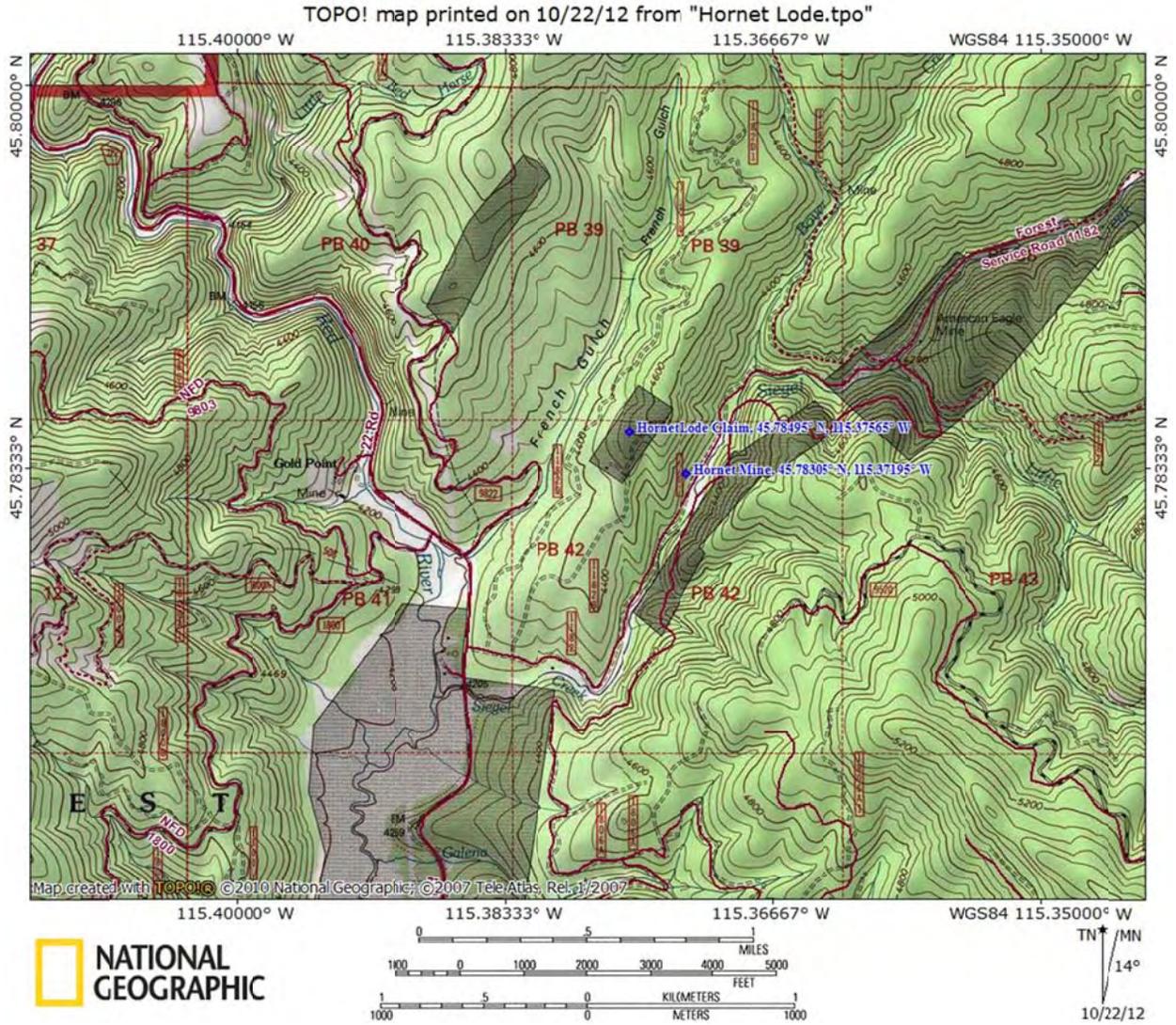
**Photo 5. Small shaft several hundred feet down gradient of Hornet Mine.**

## Section 4. Maps

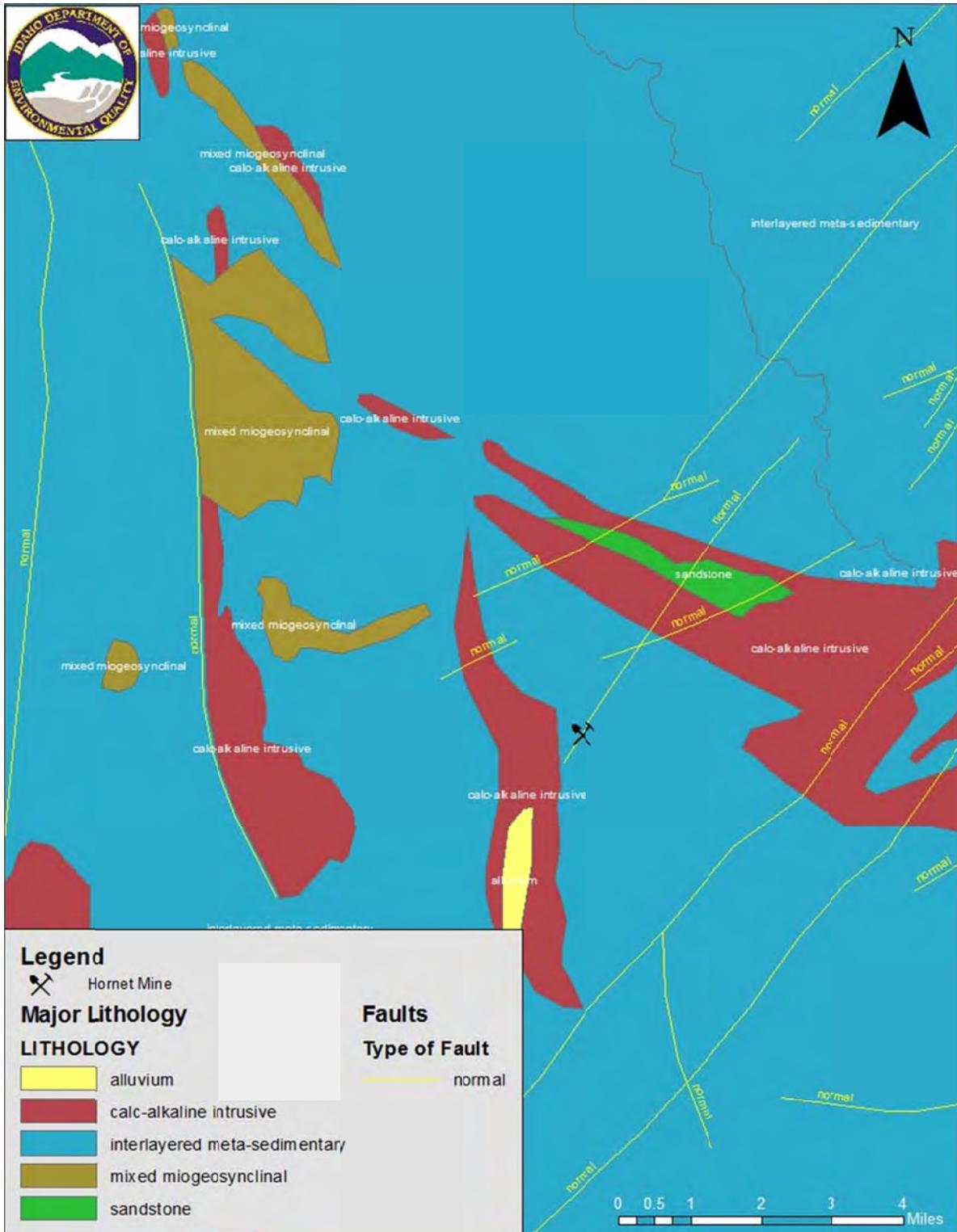


**Figure 1. Location of the Hornet Mine in Idaho County, Idaho.**

(Source: USGS 100K quads)

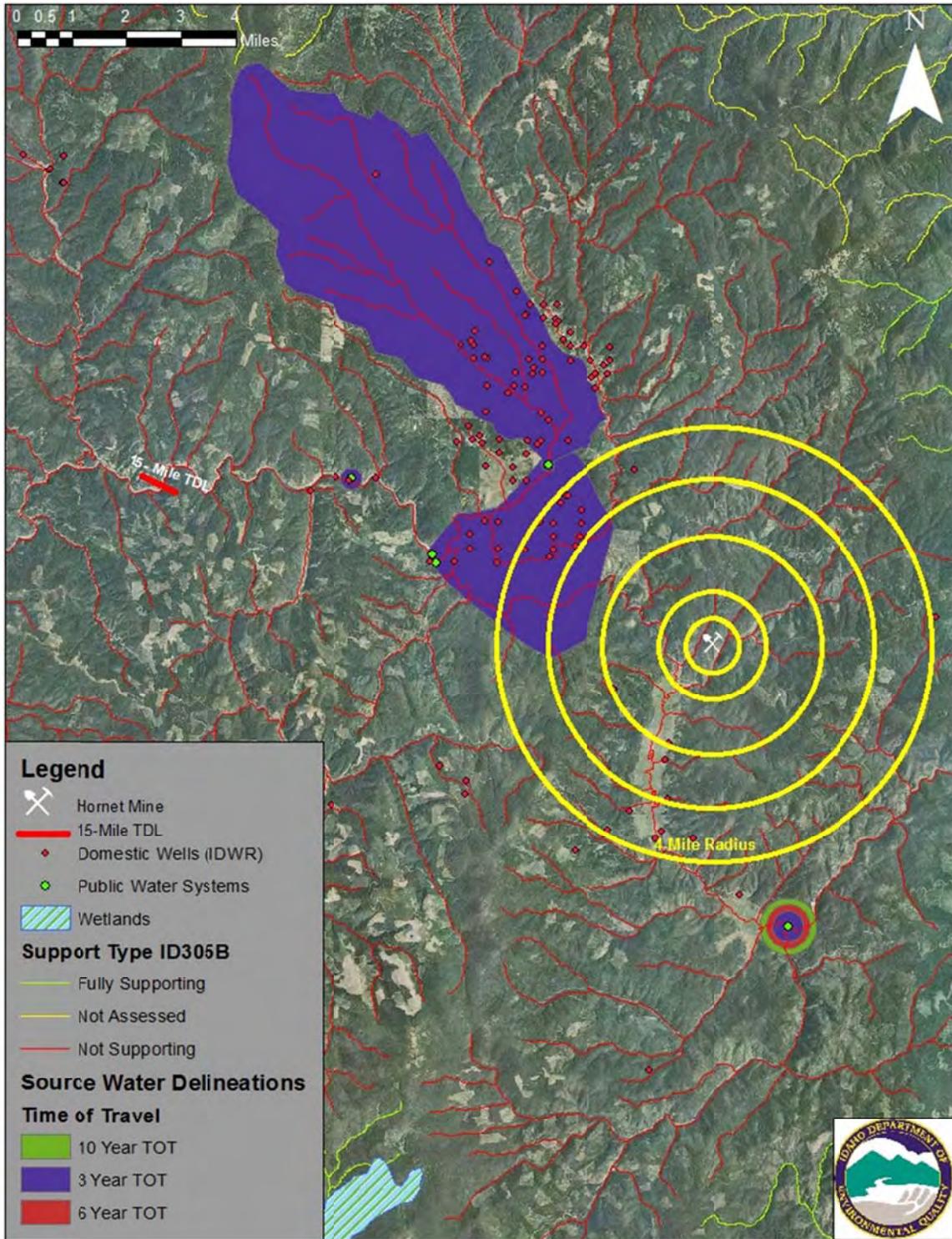


**Figure 2. Location of the Hornet Lode patented claim and Hornet Mine in Idaho County, Idaho.**  
(Source: National Geographic topo map)



**Figure 3. Map of major lithology in the vicinity of the Hornet Mine.**

(Source: SDE Feature Class, USGS 1995. Idaho GIS ArcSDE 9.2 Geodatabase)



**Figure 4. Domestic well locations.**

There are domestic well locations within the 4-mile radius, but they are separated by structural geology. There are three public water systems within the 15-mil TDL. No significant wetlands are located within a 2-mile radius. Sensitive streams located in the vicinity of the Hornet Mine are also shown (indicated as "not supporting").

(Source: Idaho GIS ArcSDE 9.3 Geodatabase, National Agricultural Imagery Program 2009)

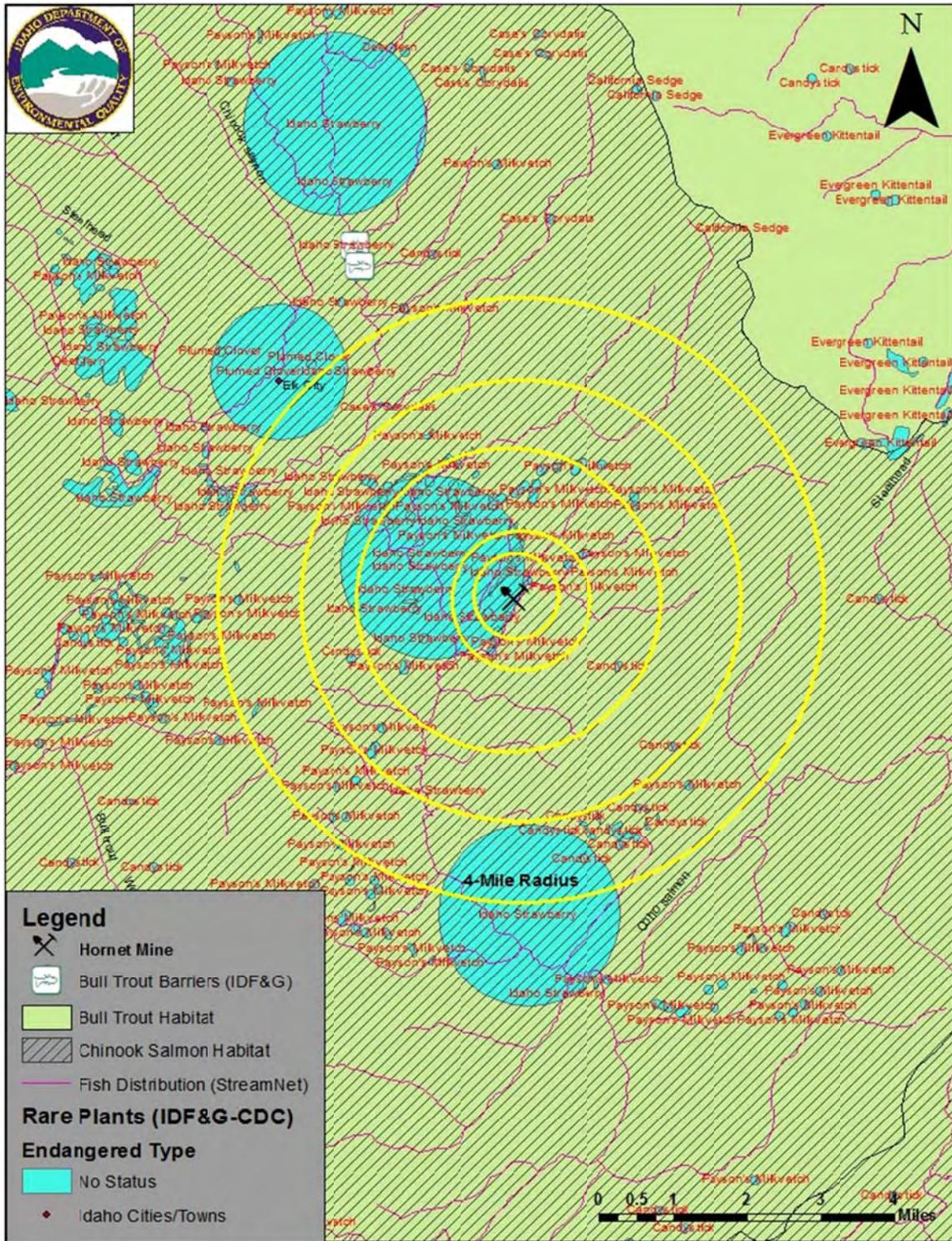
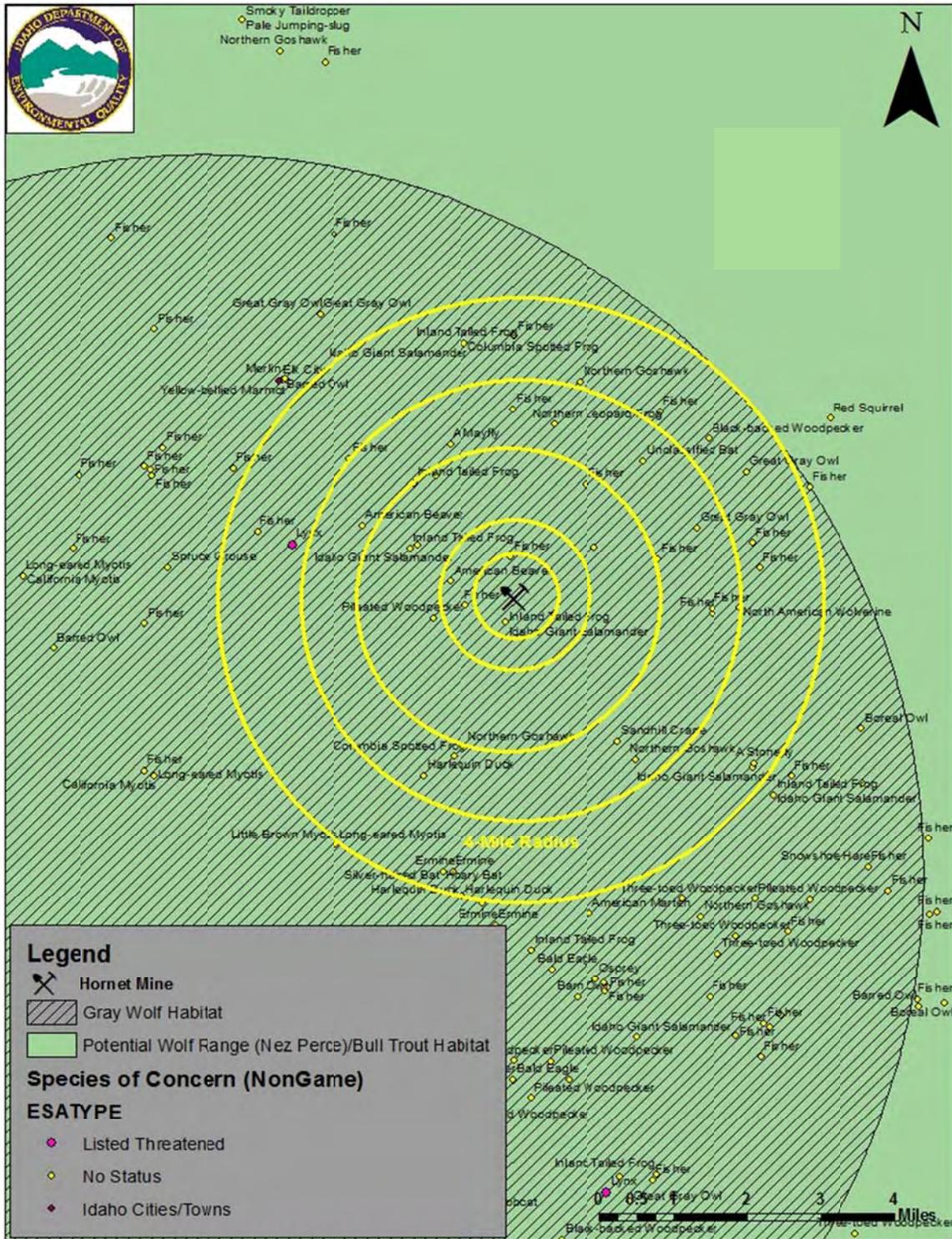


Figure 5. Plant and fish sensitive species within 4-mile radius and surrounding area of the Hornet Mine.

(Source: SDE Feature Dataset, Animal Conservation Database. Idaho GIS ArcSDE 9.2 Geodatabase)



**Figure 6. Animal species of concern within 4-mile radius and surrounding area of the Hornet Mine.**  
 (Source: SDE Feature Dataset, Animal Conservation Database. Idaho GIS ArcSDE 9.2 Geodatabase)

## Section 5. References

- BLM (US Bureau of Land Management). 2011. *Land Patent Details—BLM GLO Records*. Available at: [http://www.gloreports.blm.gov/details/survey/default.aspx?dm\\_id=54699&sid=t3x1qzjb.gk1#surveyDetailsTabIndex=1](http://www.gloreports.blm.gov/details/survey/default.aspx?dm_id=54699&sid=t3x1qzjb.gk1#surveyDetailsTabIndex=1)
- DEQ (Idaho Department of Environmental Quality). 2011. *Idaho's 2010 Integrated Report*. Boise, ID: DEQ. Available at: <http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report.aspx#2012-IR>.
- DEQ (Idaho Department of Environmental Quality). 2011. Safe Drinking Water Information System (SDWIS).
- DEQ and EPA (Idaho Department of Environmental Quality and US Environmental Protection Agency). 2003. *South Fork Clearwater River Subbasin Assessment and Total Maximum Daily Loads*. Boise, ID: DEQ.
- Erdman, T., J. Kauffman, E.H. Bennett, and V.E. Mitchell. 2003. *Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Forest Service Lands (Region 1), Nez Perce National Forest: Volume III, Section A: Elk City, Orogrande, Buffalo Hump, and Surrounding Areas, Idaho County, Idaho*. Moscow, ID: Idaho Geological Survey. Staff Report 03-21. Prepared for the US Forest Service Under Participating Agreement No. FS-01-96-14-2800.

## GIS Coverages

- Animal Conservation Database. Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- IDFG (Idaho Department of Fish and Game). 2002. Fisheries information GIS layer.
- IDWR (Idaho Department of Water Resources). 1997. COVERAGE IDOWN—Idaho Surface Ownership.
- IDWR (Idaho Department of Water Resources). 2010. GIS shapefile of well database.
- Major Lithology (DEQGIS83.DBO). Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- NAIP (National Agricultural Imagery Program). 2004. Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- NAIP (National Agricultural Imagery Program). 2009. Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- USGS (US Geological Society). 100K Quad Map. Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992-1999.