

**Abbreviated
Preliminary Assessment for
Viana Mine
(aka Viana 39, Yiana)**

Blaine County



**State of Idaho
Department of Environmental Quality**

December 2013



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Curt Fransen, Director

December 10, 2013

Mr. Ken Marcy
U.S. Environmental Protection Agency
Region 10
12928 SW 276th Street
Vashon, WA 98070

Subject: Abbreviated Preliminary Assessment Report for the Viana Mine
(aka Viana 39, Yiana), Blaine County, Idaho

Dear Mr. Marcy:

The Idaho Department of Environmental Quality (DEQ) completed the enclosed Abbreviated Preliminary Assessment (APA) for the Viana Mine under a cooperative agreement with Region 10 of the United States Environmental Protection Agency (EPA). Under this cooperative agreement, DEQ provides technical support for completion of preliminary assessments.

The Viana Mine is located on private property. This assessment was conducted with landowner permission. DEQ inspected the site on May 2, 2013. The landowner will receive a copy of this APA report.

At the time of the site inspection, the Viana Mine had no active surface water sources and no identified releases or potentials for release. No on-site, adjacent or nearby targets were identified since the mine is not located near any occupied dwellings, towns, or inhabitants and there are no direct access roads to the waste dump. Potential risks to human or ecological receptors associated with this mine site are minimal.

As a result of DEQ's research and observations, a No Remedial Action Planned (NRAP) designation is recommended for the Viana Mine. This APA report can also be found on DEQ's Preliminary Assessment web page: <http://www.deq.idaho.gov/preliminary-assessments>

If you have any questions, please feel free to give me a call me at (208) 373-0296 or email (dana.swift@deq.idaho.gov).

Sincerely,

A handwritten signature in blue ink that reads "Dana Swift".

Dana Swift
Mine Waste Project Coordinator

Attachments

cc: Mr. Kyle Kimball
Mr. Richard Bupp, DEQ

Acknowledgments

DEQ would like to thank Kyle Kimball for permitting access to the mine site.

Contents

Introduction.....	2
Section 1. APA Checklist	3
Task 1—Superfund Eligibility Evaluation	3
Task 2—Initial Site Evaluation	4
Task 3—DEQ Site Assessment Decision.....	5
Section 2. Historical and Geologic Information	6
Section 3. Current Site Conditions and Photographs.....	7
Section 4. Maps.....	11
Section 5. References.....	17
GIS Coverages.....	17

Tables

Table 1. Site assessment decision guidelines for a site.....	5
--	---

Figures

Figure 1. Location of the Viana Mine in Blaine County, Idaho.	12
Figure 2. Map of major lithology in the vicinity of the Viana Mine.	13
Figure 3. Domestic well and public water system locations.....	14
Figure 4. Wetland Locations.....	15
Figure 5. Plant, nongame animal, and fishery sensitive species within 4-mile radius and surrounding area of the Viana Mine.	16

Photos

Photo 1. View of Viana Mine waste dump from Imperial Gulch Road; looking north/northwest.....	7
Photo 2. Abandoned adit associated with waste dump.	8
Photo 3. Old “dog hole” in the draw between the hillsides.	9
Photo 4. View of draw leading to the waste dump.	9
Photo 5. View from the “dog hole” looking back to Imperial Gulch Road.....	10

Introduction

This abbreviated preliminary assessment (APA) for the Viana Mine near Hailey, Idaho provides the rationale for the No Remedial Action Planned (NRAP) determination that no additional assessments or site inspections are necessary at this time. Section 1 provides the APA checklist (modified from EPA, 1999) filled out by the assessor to determine that an APA was warranted. The following sections contain additional relevant information and evidence to support the APA, including historical and geologic information (Section 2); current site conditions and photographs (Section 3); maps (Section 4); and references (Section 5). During this assessment, DEQ used references from historic reports which often have different spellings for claim names, town sites, and/or geographic features. DEQ has retained the spelling from the original source document.

Preparer: Dana Swift **Date:** 11/6/2013
Mine Waste Project Coordinator
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706
208-373-0296
dana.swift@deq.idaho.gov

Site Inspectors: Don Carpenter and Rob Hanson, DEQ State Office; Richard Bupp,
DEQ Twin Falls Regional Office

Site Name: Viana Mine

Previous Names (aka): Viana 39, Yiana

Site Owner: Mr. Kyle Kimball
PO Box 502
Bellevue, ID 83313

Site Location: The Viana Mine is accessible by vehicle. From Hwy 75 (approximately 5 miles north of Hailey) head west on Greenhorn Gulch Road/NF-117 for approximately 2.5 miles. Head south on Imperial Gulch Road, approximately 1 mile until the road widens to a small cabin, picnic table, and fire ring. The 20 acre parcel containing this mine site is currently listed for sale by Legacy Group, LLC (MLS#10-309715).
Township 03 North, Range 17 East, Section 15

Latitude: 43.584359°N **Longitude:** -114.409539°W

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

The Viana Mine was investigated by the Idaho Department of Environmental Quality (DEQ) on May 2, 2013 for potential releases of heavy metals or other deleterious materials (such as petroleum products and ore processing chemicals) by airborne, surface water, or ground water

pathways. Limited historical information is available for this site. The Idaho Geologic Survey (IGS) lists the following approximate ranges of production: lead (1,001-5000 lbs), silver (101-500 oz), and gold (0-50 oz) (IGS 2013). The only historical reference document identified by IGS was Umpleby et al., 1930. The Viana Mine is not specifically mentioned in this document; therefore, an assumption of mining history can be made based on the Imperial Group Mine (located approximately 1/3 of a mile to the southeast). Production at the Imperial Group Mine was larger than Viana (range for lead was 100,001-500,000 lbs) and included several underground workings (one long 200 foot tunnel and several short tunnels).

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 reconnaissance level preliminary assessment was conducted to determine if any potential sources or associated releases could be identified due to historical mining practices. No concerns were identified during desktop research. Observations during the site inspection include:

- No open adits or shafts. One abandoned adit and one shallow “dog hole”.
- One unvegetated waste dump that is less than 1,000 cubic yards.
- No concerns for airborne pathways to residences.

- No evidence of contaminant migration from the adit, “dog hole” or waste dump to surface water or suspected evidence of migration to ground water. The Imperial Gulch drainage was dry at the time of the site visit. The site visit was conducted in the spring at a time of the year when water is expected to be present.
- Other hazardous or deleterious materials were not present at the site.

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:

At the time of the site inspection, the Viana Mine site had no mining related water present, no active surface water sources and no identified releases or potentials for release. No on-site, adjacent or nearby targets were identified since the Viana Mine is not located near any occupied dwellings, towns, or inhabitants and there are no direct access roads to the waste dump. Potential risks to human or ecological receptors associated with this mine site are minimal.

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:

- | | |
|---|--|
| <input checked="" type="checkbox"/> No Remedial Action Planned (NRAP) | <input type="checkbox"/> Defer to NRC |
| <input type="checkbox"/> Higher Priority SI | <input type="checkbox"/> Refer to Removal Program |
| <input type="checkbox"/> Lower Priority SI | <input type="checkbox"/> Site is being addressed as part of another CERCLIS site |
| <input type="checkbox"/> Defer to RCRA Subtitle C | <input type="checkbox"/> Other: _____ |

DEQ Preparer:

Dana Swift
Dana Swift

12/10/13
Date

Please explain the rationale for your decision:

As a result of DEQ’s research and site observations, a NRAP designation is recommended for the Viana Mine. Desktop research and site inspection observations confirm that there are no

current releases of heavy metals or other deleterious materials by airborne, surface water, or ground water pathways. In addition, risks to human or ecological receptors from future potential releases are minimal since the Viana Mine had low production values for lead, silver and gold, and the remaining waste dump is less than 1,000 cubic yards. Additional information supporting this designation is included in the following sections.

Section 2. Historical and Geologic Information

Since limited historic information is available for the Viana Mine, geologic information is summarized from the Imperial Group Mine, as reported in the *Imperial Lode Mine and Mill Site Preliminary Assessment Report* (DEQ 2009). DEQ cannot improve or expand upon geologic information included in historic reports; therefore, information from these reports is included as direct quotations.

Umpleby et al. (1930) describes the topography of the Wood River region as “the mountain slopes rise steeply from the valley bottoms to narrow interstream divides” (p. 7) and the general lithology of the Wood River formation “... consists in the main of calcareous and quartzitic beds but contains also conglomerate, shale, and dolomite.”

The following from Anderson et al. (1950, p. 2) is a geologic description specific to the Imperial Group Mine area:

The Hailey-Bellevue mineral belt is underlain by a varied assemblage of sedimentary and igneous rocks, which, except for volcanics of mid-Tertiary age and some still younger unconsolidated sedimentary rocks, are all older than the ore deposits. The earlier rocks include fairly wide exposures of the Milligen and Wood River formations--host many of the ore deposits in the Wood River region--and also rather large intrusive bodies of diorite and quartz monzonitic rock which are regarded as outliers of the Idaho batholith. There is also a younger group of intrusive rocks which are of more pertinent interest because of their close association with the mineralization.

In addition to the Milligen formation (Mississippian age) and the Wood River formation (Pennsylvanian age), the area contains some strata in and beneath a series of Tertiary volcanics (Oligocene) and much poorly consolidated and unconsolidated slope wash, terrace gravels, and stream alluvium of Quaternary age.

The structure in this area is summarized by Anderson et al. (1950, pp. 65-66) as:

The most obvious and significant structural features of the area are the major faults or fault zones which divide the area into a number of distinct blocks...The age of the oldest faults are to be placed as pre-intrusive and possibly all the major faulting is pre-intrusive...All of the major faults are probably pre-mineral as well as pre-intrusive.

Umpleby et al. (1930, p. 169) noted that the short tunnels at the Imperial Group Mine “follow lodes that have an average strike of about N. 25° W., with considerable variation, and dip steeply to the west. The lodes consist of sheared and brecciated country rock that contains layers of white quartz with massive calcite in places.” Quartz stringers were observed that strike nearly east and dip steeply north.

Section 3. Current Site Conditions and Photographs

Viana Mine site observations and photographs were collected during the DEQ site inspection on May 2, 2013. The weather was approximately 60°F, clear, and sunny. Historical evidence of mining activities include one unvegetated waste dump (Photo 1), an abandoned adit associated with the waste dump (Photo 2), and a shallow “dog hole” in the draw between the hillsides (Photo 3). No remnants of hazardous or deleterious materials from mining activities were observed on the ground surface surrounding the waste dump, adit or “dog hole”. The terrain downgradient of the waste dump is shown in Photo 4 and downgradient from the “dog hole” in Photo 5.



Photo 1. View of Viana Mine waste dump from Imperial Gulch Road; looking north/northwest.

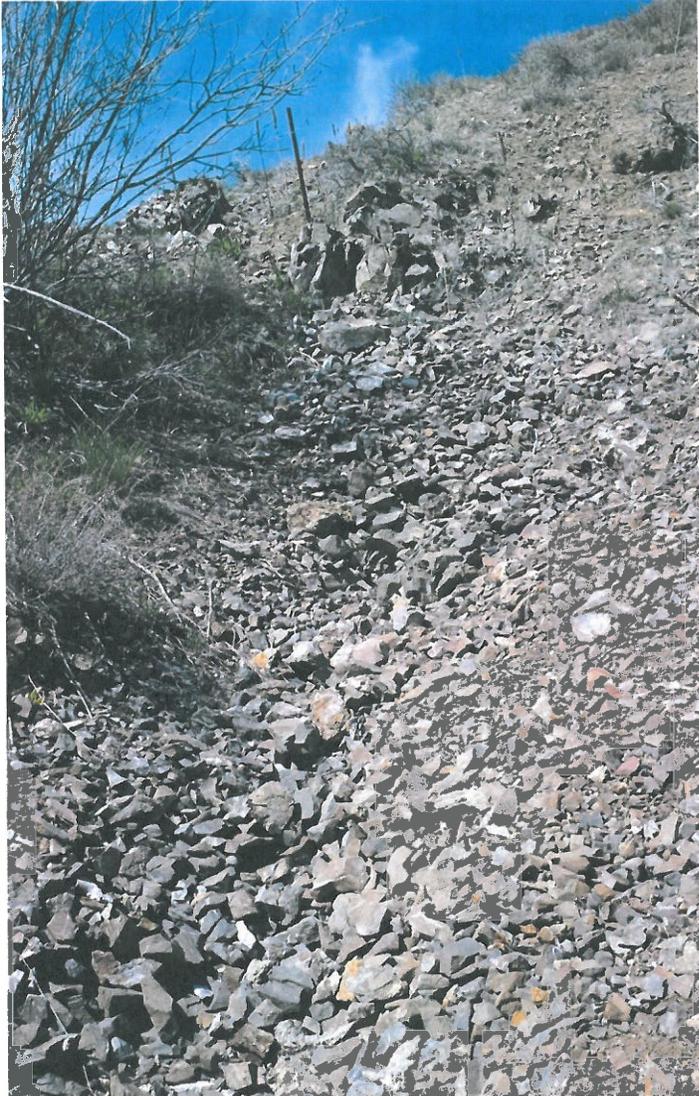


Photo 2. Abandoned adit associated with waste dump.



Photo 3. Old "dog hole" in the draw between the hillsides.



Photo 4. View of draw leading to the waste dump.



Photo 5. View from the "dog hole" looking back to Imperial Gulch Road.

Section 4. Maps

The Viana Mine is located northwest of Hailey, Idaho (Figure 1). Specific site location details are included in the above checklist. The generalized geology of this area is shown in Figure 2 with a description included in Section 2 of this report. Since the geologic description is based on the Imperial Group Mine, a reference marker for this mine is provided in Figure 1.

Desktop research and site inspection observations for the Viana Mine indicate that there are no current releases of heavy metals or other deleterious materials. The maps included in this section provide supporting information to demonstrate that risks to human or ecological receptors from a potential release are minimal. Risks are minimal due to limited on-site, adjacent or nearby targets that could be impacted by a release.

The Viana Mine is located along the Imperial Gulch drainage within the Big Wood River subbasin. The Imperial Gulch drainage, an ephemeral stream, feeds into Greenhorn Creek which is a tributary to the Big Wood River. At the time of the site visit, the Imperial Gulch drainage was dry. The site visit was conducted in the spring at a time of the year when water is expected to be present. For the surface water pathway, the probable point of entry (PPE) into the Imperial Gulch drainage is approximately 0.13 mile to the south of the waste dump. The 15-mile target distance limit (TDL) follows Imperial Gulch to Greenhorn Creek and ends approximately 2.5 miles south of the Hailey city limits on the Big Wood River (Figure 3). There are no wetlands in the immediate vicinity of the Viana Mine and 2.6 acres of wetlands are present downstream of the mine site along Greenhorn Creek within a 2-mile radius (Figure 4). Potential ground water pathways include 12 public drinking water systems and several domestic wells located within a 4-mile radius of the mine, including two domestic wells located along the Imperial Gulch drainage (Figure 3).

Sensitive plant, animal, and fishery species identified within a 4-mile radius of the mine include: Bugleg Goldenweed/Camas Goldenweed (*Pyrrcoma insecticruris*), long-toed salamander (*Ambystoma macrodactylum*), and Bull Trout (*Salvelinus confluentus*) (Figure 5). However, all of these sensitive species (except Bull Trout) are classified as “No Status” under the Endangered Species Act and by Idaho Department of Fish and Game. The presence of Bull Trout was observed on the East Fork Big Wood River, which is a tributary to the Big Wood River, but is not part of the 15-mile TDL and is located upgradient of the confluence of Greenhorn Creek and the Big Wood River.

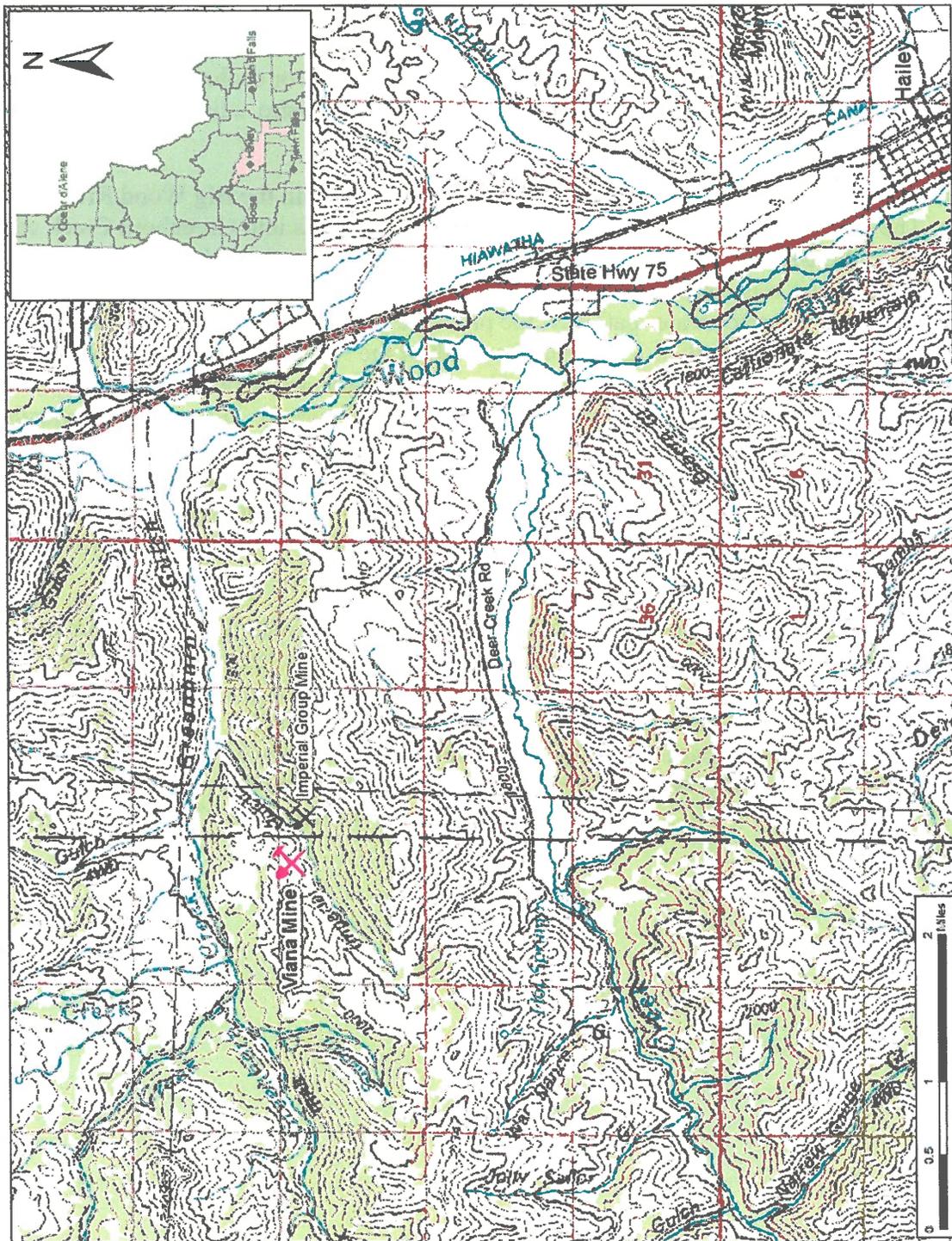


Figure 1. Location of the Viana Mine in Blaine County, Idaho.

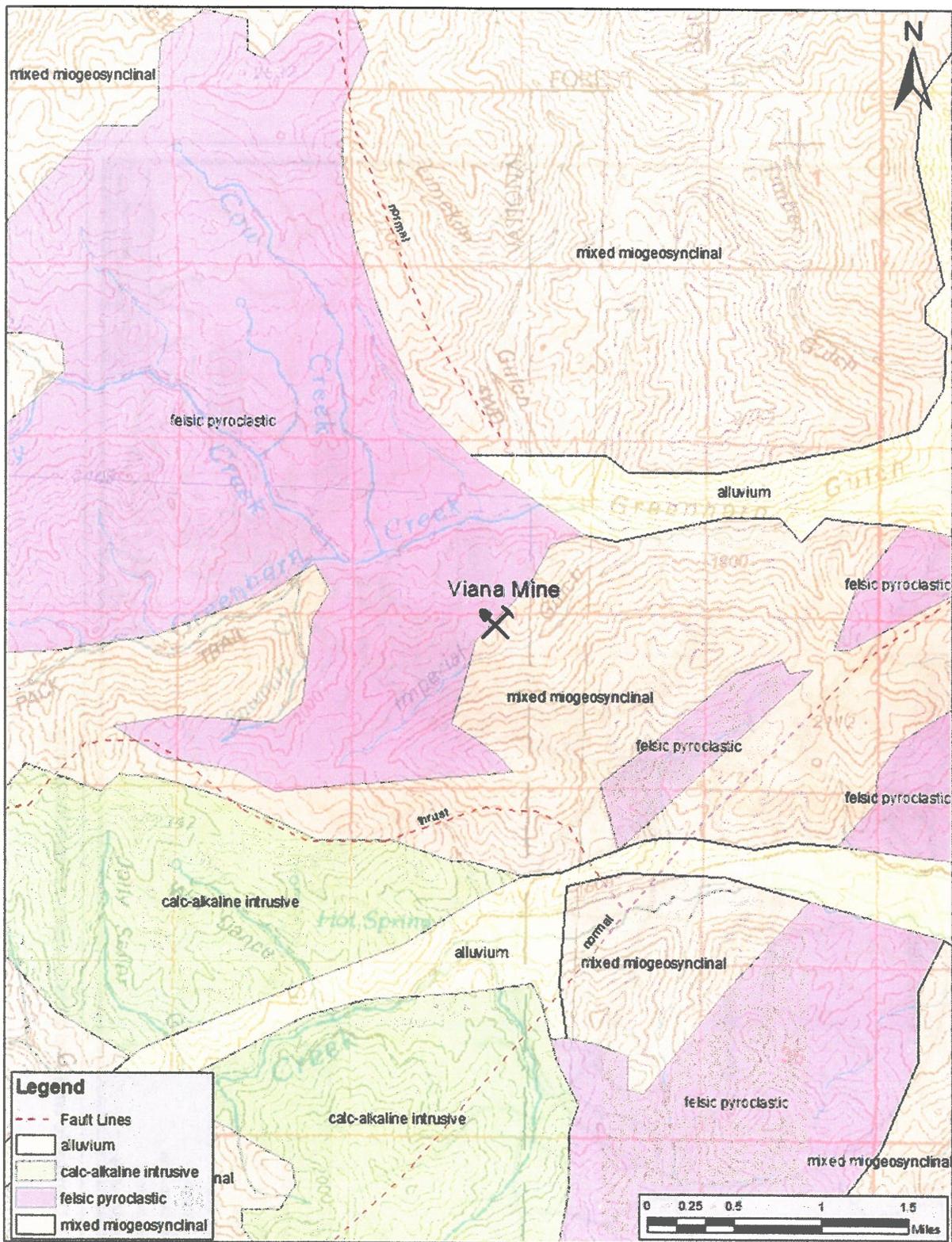


Figure 2. Map of major lithology in the vicinity of the Viana Mine.

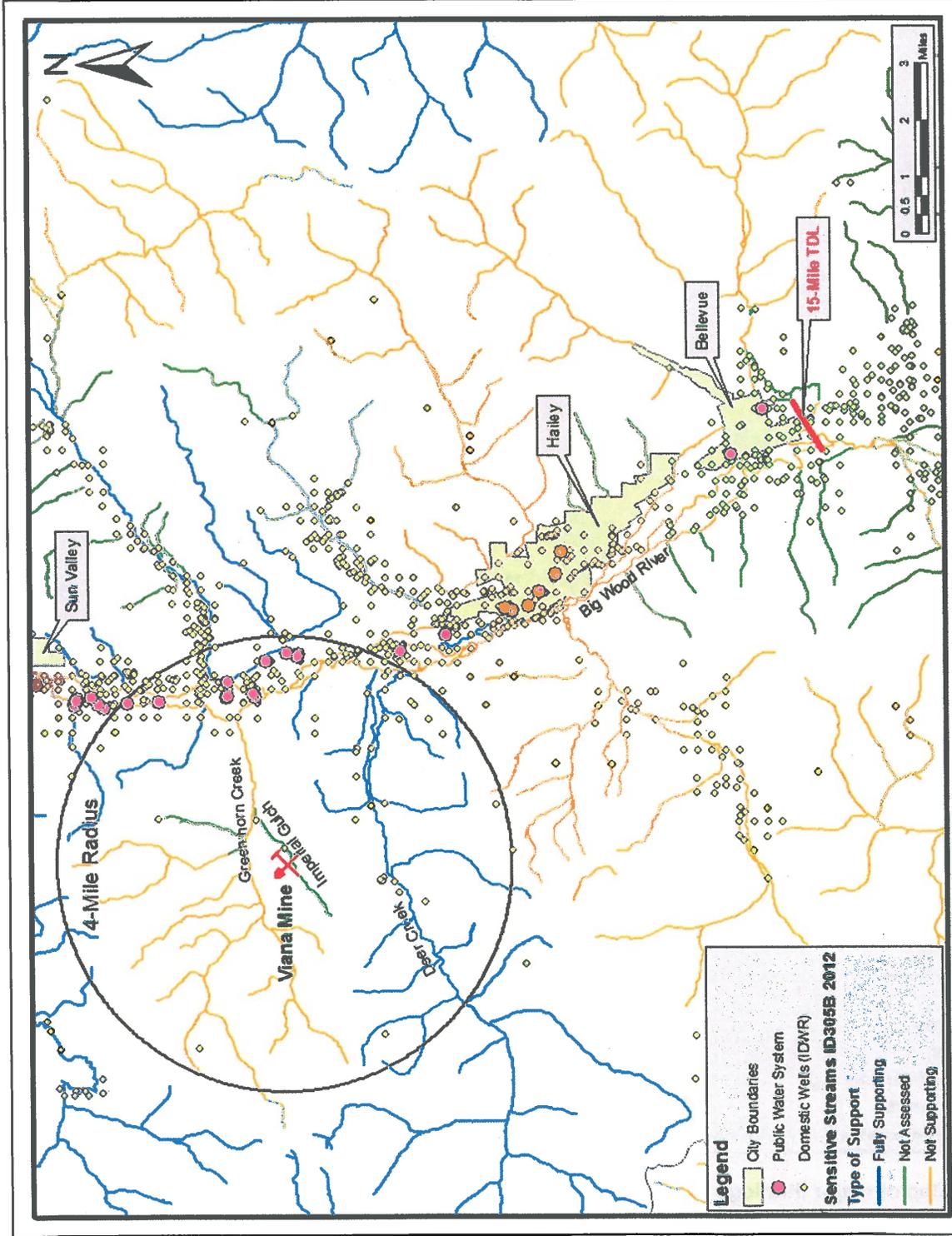


Figure 3. Domestic well and public water system locations.

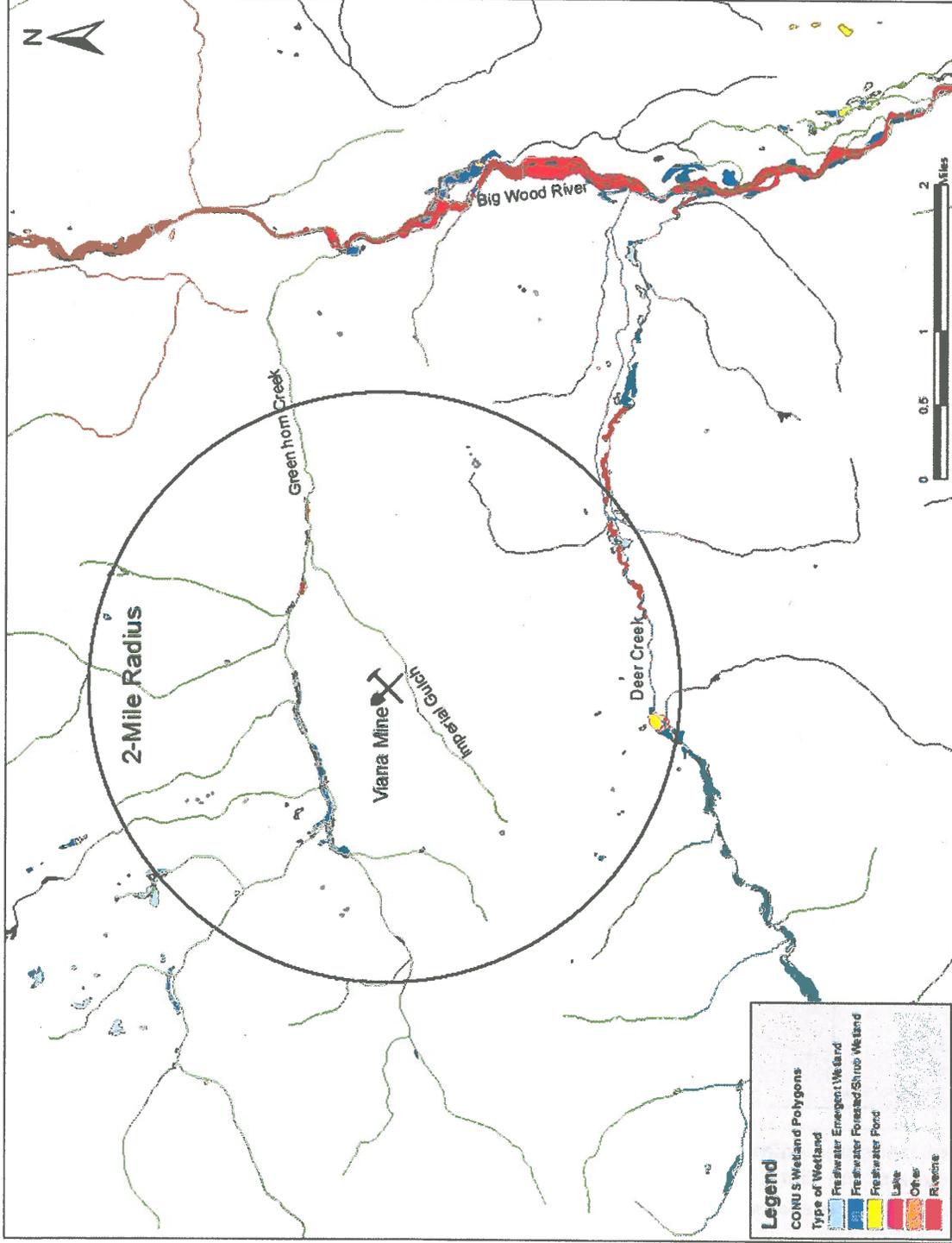


Figure 4. Wetland Locations.

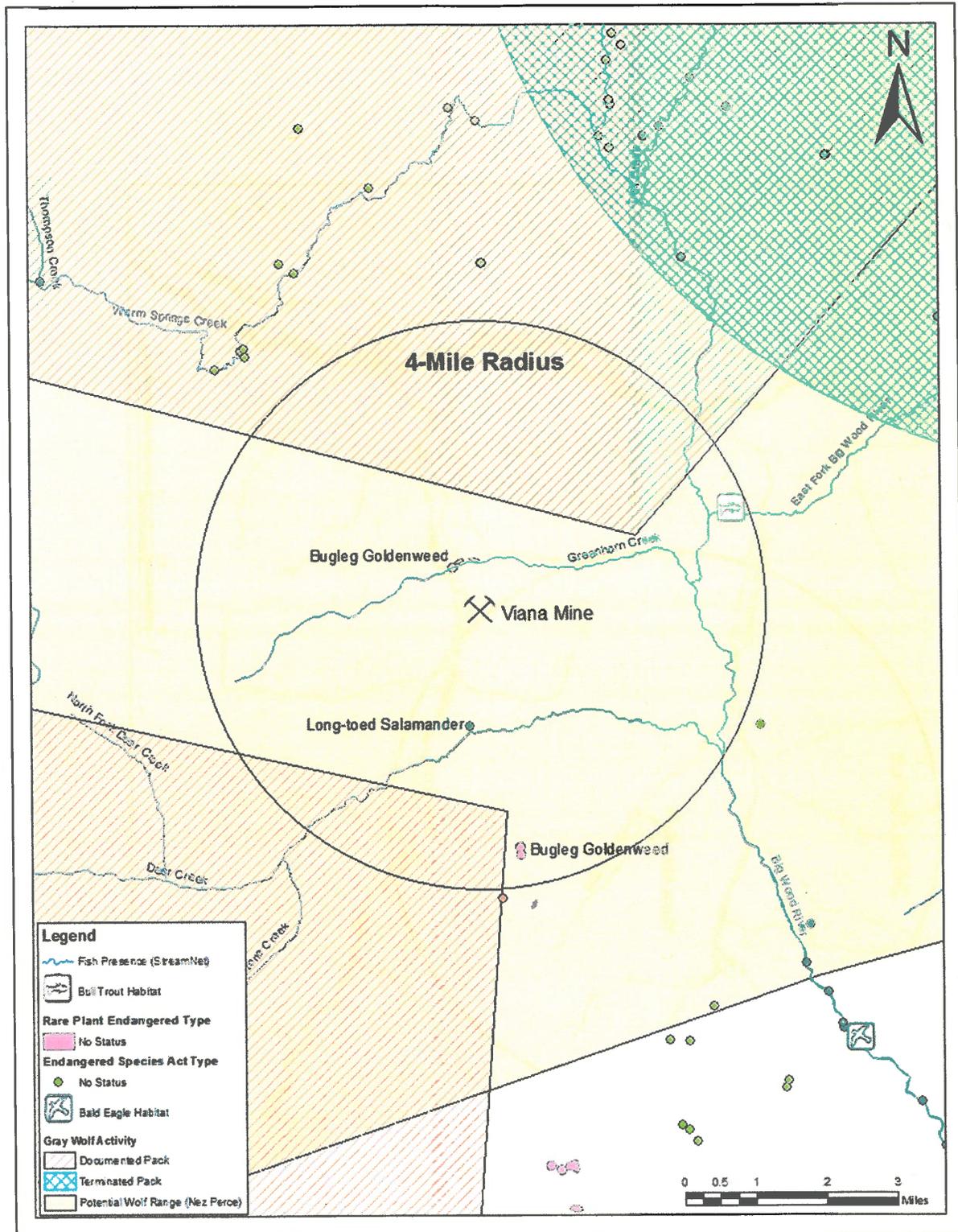


Figure 5. Plant, nongame animal, and fishery sensitive species within 4-mile radius and surrounding area of the Viana Mine.

Note: Locations of sensitive species outside of the 4-mile radius are marked; however, the species name is not identified with each marked location.

Section 5. References

- Anderson, A.L., T.H. Kiisgaard, and V.C. Fryklund, Jr. 1950. *Detailed Geology of Certain Areas in the Mineral Hill and Warms Springs Mining Districts, Blaine County, Idaho*; Idaho Bureau of Mines and Geology, Pamphlet No. 90, 37 p.
- DEQ (Idaho Department of Environmental Quality). 2009. *Imperial Lode Mine and Mill Site (aka Imperial Group) Preliminary Assessment Report, Blaine County, Idaho*. Available at: <http://www.deq.idaho.gov/preliminary-assessments>
- EPA (U.S. Environmental Protection Agency). 1999. *Improving Site Assessment: Abbreviated Preliminary Assessments*. Quick Reference Guidance Series. Office of Emergency and Remedial Response Site Assessment Team. EPA-540-F-98-037. OSWER 9375.2-09FS. PB98-963308.
- IGS (Idaho Geological Survey). 2013. Mine Database. Available at: <http://www.idahogeology.org/Services/MinesAndMinerals/Search/>
- Umpleby, J.B., L.G. Westgate, and C.P. Ross. 1930. *Geology and Ore Deposits of the Wood River Region, Idaho with a Description of the Minnie Moore and Near-by Mines by D.F. Hewett*. Washington, DC: U.S. Department of the Interior Geological Survey. Bulletin 814.

GIS Coverages

- IDWR (Idaho Department of Water Resources). Domestic Wells (deqgis83.DBO.Domestic_Wells). Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- Major Lithology (deqgis83.DBO.Major_Lithology). Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- Public Water Systems (deqgis83.DBO.Public_Water_Systems). Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- Rare Plants, Endangered Species, Fish Presence (deqgis83.DBO.ESA_FISH_WILDLIFE). Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- Sensitive Streams (deqgis83.DBO.ID305B_2012). Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- USFWS (US Fish and Wildlife Service). 2012. National Wetlands Inventory. Available at: <http://www.fws.gov/wetlands/index.html>
- USGS (US Geological Survey). 100K Quad Map. Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992-1999.

This page intentionally left blank for correct double-sided printing.