STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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

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

March 28, 2012

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

RE: Abbreviated Preliminary Assessment Report for the Buster Mine, Idaho County, Idaho

Dear Mr. Marcy:

Attached is an Abbreviated Preliminary Assessment (APA) for the Buster Mine near Elk City, Idaho. The Idaho Department of Environmental Quality (DEQ) requested access for multiple years to the private property but permission was not received from the landowners.

Do to access issues, neither the Idaho Geological Survey (IGS) nor DEQ were able to do a site inspection with subsequent sampling. In 1983 it was falsely reported that cyanide from the operation had contaminated Elk Creek, the drinking water source for the Elk City. Through personal communication on March 19, 2012 with Anna Moody, DEQ Lewiston Regional Office Drinking Water Compliance Lead, she indicated the Elk City drinking water source was tested for cyanide in 1993, 1994, 1995, 1996, and 2001. No cyanide was ever detected.

As a result of the above information, **DEQ is recommending that this site be identified as a low priority site which may require a site inspection.** The surface water testing in Elk Creek indicated no presence of cyanide. DEQ recommends the Elk Creek drinking water source be tested for cyanide periodically.

The IGS report gave no specific reason to assume the presence of hazardous or deleterious materials on the site. The primary concern would be safe drinking water for Elk City, which could be accomplished by sampling and analysis of Elk Creek, the city's water supply.

A link to DEQ's Buster Mine APA 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 this site, the report, or DEQ's recommendations, please do not hesitate to call me at (208) 373-0563.

Respectfully,

Tina Elayer
Mine Waste Specialist

attachment

cc: Scott Sanner, BLM
Anna Moody, LRO
Buster Mine File

ABBREVIATED PRELIMINARY ASSESSMENT

This is an Abbreviated Preliminary Assessment (APA) for the Buster Mine near Elk City, Idaho. This document provides the rationale for the determination of No Remedial Action Planned (NRAP) and that no additional analysis or site investigation is necessary for the Buster Mine. The information to produce this document was taken from the 2003 Idaho Geological Survey (IGS) report. Maps generated during desktop research are attached.

Preparer: Daniel D. Stewart **Date:** 3/19/12
Idaho Department of Environmental Quality
300 W. Main
Grangeville, ID 83530
(208) 983-0808
daniel.stewart@deq.idaho.gov

Site Name: Buster Mine

Previous Names (aka): Golden Rule, Protection

Site Owner: Gregory and Kathleen Coon
Address: 181 Randlyn Road
Magalia, CA 95954

Site Owner: Gerald Mollenhauer (Living Trust)
Address: c/o Jory Mollenhauer
7302 N. Palmer Road
Spokane, WA 99217

Site Location: From IGS 2003:

The Buster Mine is just north of Elk City. The mine can be reached via FS Road 443 and is about 1/2-3/4 mile north of town on the slope east of Elk Creek.

Township 29 North, Range 8 East, Section 23

Latitude: 45.83658°N **Longitude:** -115.43072°W

Describe the release (or potential release) and its probable nature:

DEQ was unable to access the property after various attempts to contact the property owners were unsuccessful. IGS reported this was private property and was not visited.

The Buster Mine was investigated by IGS on May 31, 1999. The IGS report does not supply sufficient information for DEQ to fully evaluate this site.

Part 1 - Superfund Eligibility Evaluation

If all answers are "no" go on to Part 2, otherwise proceed to Part 3.	**YES**	**NO**
1. Is the site currently in CERCLIS or an "alias" of another site?		**x**
2. Is the site being addressed by some other remedial program (Federal, State, or Tribal)?		**x**
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 NRC, UMTRCA, or OSHA)?		**x**
4. Are the hazardous substances that may be released from the site excluded by policy considerations (i.e., deferred to RCRA corrective action)?		**x**
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 ARARs, completed removal action, documentation showing that no hazardous substance releases have occurred, or an EPA approved risk assessment completed)?*	**x**	

Please explain all "yes" answer(s):

IGS recorded a video segment taken from a distance of the site. The IGS report does not confirm 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 IGS report does not confirm that no contaminants or hazardous substances remain on the site. No homes or cabins exist on the claim.

Part 2 - Initial Site Evaluation

For Part 2, if information is not available to make a "yes" or "no" response, further investigation may be needed. In these cases, determine whether an APA is appropriate. Exhibit 1 parallels the questions in Part 2. Use Exhibit 1 to make decisions in Part 3.

If the answer is "no" to any of questions 1, 2, or 3, proceed directly to Part 3.	**YES**	**NO**
1. Does the site have a release or a potential to release?		**x**
2. Does the site have uncontained sources containing CERCLA eligible substances?		**x**
3. Does the site have documented on-site, adjacent, or nearby targets?		**x**

If the answers to questions 1, 2, and 3 above were all "yes" then answer the questions below before proceeding to Part 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?		
5. Is there an apparent release at the site with no documentation of exposed targets, but there are targets on site or immediately adjacent to the site?		
6. Is there an apparent release and no documented on-site targets or targets immediately adjacent to the site, but there are nearby targets (e.g., targets within one mile)?		
7. Is there 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?		

Notes:

The IGS report does not provide sufficient information to evaluate the presence of hazardous or deleterious materials. Their presence is unlikely; with the exception that cyanide was present in the mines' monitoring wells.

During the site assessment, DEQ used references from several different documents including U.S. Geological Survey (USGS) maps, county tax rolls, and historical reports that have spelled numerous claim names, town sites, and/or geographic features differently from one and another. DEQ's use of the different spellings is to remain in context with the reference used for each given section of text or written in this report.

Exhibit 1 – Site Assessment Decision Guidelines for a Site

Exhibit 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 Exhibit 1 in determining the need for further action at the site, based on the answers to the questions in Part 2. Please use your professional judgment when evaluating a site. Your judgment may be different from the general recommendations for a site given below.

Suspected/Documented Site Conditions		**APA**	**Full PA**	**PA/SI**	**SI**
1. Releases or potential to release are not documented at the site. **NO**					Yes
2. Uncontained sources with CERCLA-eligible substances have not been documented as being present on the site. (i.e., they do exist at site) **CYANIDE**					Yes
3. On-site, adjacent, or nearby receptors are not present. **NO – Nearby Receptors – Drinking Water Wells**					Yes
4. There is no documentation or observations made leading to the conclusion that a sensitive receptor is present or may have been exposed (e.g., drinking water system user inside four mile TDL). **YES**	Option 1: APA	Yes			Yes
5. There is documentation that a sensitive receptor has been exposed to a hazardous substance released from the site. **NO**	Option 2: Full PA or PA/SI	Yes			
6. There is an apparent release at the site with no documentation of targets, but there are targets on site or immediately adjacent to the site. **YES**	Option 1: APA SI	Yes			
	Option 2: PA/SI	Yes			
7. 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 one mile of the site and have a relatively high likelihood of exposure to a hazardous substance migration from the site. **YES**					Yes
8. There are: no indications of a hazardous substance release; uncontained sources containing CERCLA hazardous substances; but there is a potential to release with targets present on site or in proximity to the site. **YES**					Yes

Part 3 - DEQ Site Assessment Decision

When completing Part 3, use Part 2 and Exhibit 1 to select the appropriate decision. For example, if the answer to question 1 in Part 2 was "no," then an APA may be performed and the "NRAP" box below should be checked. Additionally, if the answer to question 4 in Part 2 is "yes," then you have two options (as indicated in Exhibit 1): Option 1 -- conduct an APA and check the "Lower Priority SI" or "Higher Priority SI" box below; or Option 2 -- proceed with a combined PA/SI assessment.

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

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

DEQ Reviewer:

Daniel D. Stewart for 3/22/12

Daniel D. Stewart Date

Please Explain the Rationale for Your Decision:

Do to access issues, neither IGS nor DEQ were able to conduct a site inspection with subsequent sampling. In 1983 it was falsely reported that cyanide from the operation had contaminated Elk Creek, the drinking water source for the Elk City. A personal communication with Anna Moody, Lewiston DEQ Drinking Water Compliance Lead was done on March 19, 2012. Ms. Moody indicated the Elk City drinking water source was tested for cyanide in 1993, 1994, 1995, 1996, and 2001. No cyanide was detected.

As a result of the above information, DEQ is recommending that this site be identified as a Low Priority Site which may require a Site Inspection. The surface water testing in Elk Creek indicated no presence of cyanide. DEQ recommends the Elk Creek drinking water source be tested for cyanide periodically.

The IGS report gave no specific reason to assume the presence of hazardous or deleterious materials on the site. The primary concern would be safe drinking water for Elk City, which could be accomplished by sampling and analysis of Elk Creek, the city's water supply.

Notes:

The italicized text below was taken directly from the 2003 IGS report.

> ***Site Description**: The site was not visited by IGS due to access issues.*

Geologic Features: *The Buster Mine is in the biotite gneiss and schist unit of the Middle or Early Proterozoic Elk City metamorphic sequence (Lewis and others, 1990, 1993).*

History*: The Buster Mine was discovered in 1870 (Shenon and Reed, 1934). Bennett and others (1999, p. 42) described the history of the mine as follows:*

The early history of the Buster mine is hazy. Shenon and Reed (1934) quote Thomson and Ballard (1924) for a description of the deposit. The mine was one of the early producers in the area and is located about one-half mile north of Elk City. The orebody is in a[n] east-west striking quartz vein. The USBM recorded no production from the mine from 1901 to 1906.

In 1906, the property was purchased by the Buster Mining and Milling Company with Fred W. Bradley one of the principals. Bradley was president of the Bunker Hill and Sullivan Mining and Concentrating Company and owned the Alaska Treadwell Company that developed the low-grade (for the time) gold mines near Juneau, Alaska. According to Jellum (1909), the Buster was developed by two tunnels, the upper 200 feet long and the lower, 400 feet long when he visited the property. The lower tunnel cut rich ore. The new company started sinking a winze from the lower tunnel (200 level) to develop a new 300 level. The ore body was 15 feet wide on this level. A 10-stamp mill and cyanide plant was installed (Jellum includes a flow diagram of this mill in his report) that could process about 40 tons-per-day. The winze was sunk to the 400 level and a crosscut from this level had not reached the vein at the time of Jellum's visit. Production peaked in 1908 and '09 with 7,032 ounces of gold and 6,707 ounces of silver won from 11,916 tons of ore in 1909. There was no further work until 1936 when the Idaho Buster Mining Company mined 45 tons of ore containing 7 ounces of gold and 9 ounces of silver. In 1939, Bradley's company mined 62 tons of ore, the last operation at the mine until recently.

In 1983, Resources Engineering and Development Company completed construction of a cyanide heap-leach project near Elk City to process dump material from the Buster mine. The plant was next to Big Elk Creek that serves as the water supply for Elk City's 200 residents. The following year, Hoskins-Western-Sonderegger (HWS Gold and Silver Ltd.) shut down the heap leach operation. The closure was caused by a scare late in 1983, when it was reported that cyanide from the operation had contaminated Big Elk Creek. The false alarm was caused by bad analyses of water samples. Although cyanide was present in the mine's monitoring wells, none had entered the creek. The company acted responsibly in dealing with the false alarm but in the face of adverse public opinion decided to close the operation.

References:

BLM (U.S. Bureau of Land Management) 2011. *Land Patent Details* – BLM GLO Records. http://www.glorecords.blm.gov/results/default.aspx?searchCriteria=type=survey|st=ID|cty=049|twp_nr=29|twp_dir=N|rng_nr=08|rng_dir=E#resultsTabIndex=0

DEQ (Idaho Department of Environmental Quality) 2002. South Fork Clearwater River Subbasin Assessment and TMDL.

DEQ (Idaho Department of Environmental Quality) 2011. Safe Drinking Water Information System (SDWIS).

DEQ (Idaho Department of Environmental Quality) 2012. 2012 305(b) list. Available URL: http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report.aspx#2012-IR

DEQ (Idaho Department of Environmental Quality) 2003. Source Water Assessment.

Gaston, M.P. and E.H. Bennett. 1979. Geologic Map of the Elk City Quadrangle, Idaho, Scale 1:250,000. Idaho Bureau of Mines and Geology.

IDFG (Idaho Department of Fish and Game) 2002. Available URL: http://www2.state.id.us/fishgame/info/cdc/plants/vasc_plants&status_n-r.htm

IDFG (Idaho Department of Fish and Game) 2002. Fisheries information GIS layer.

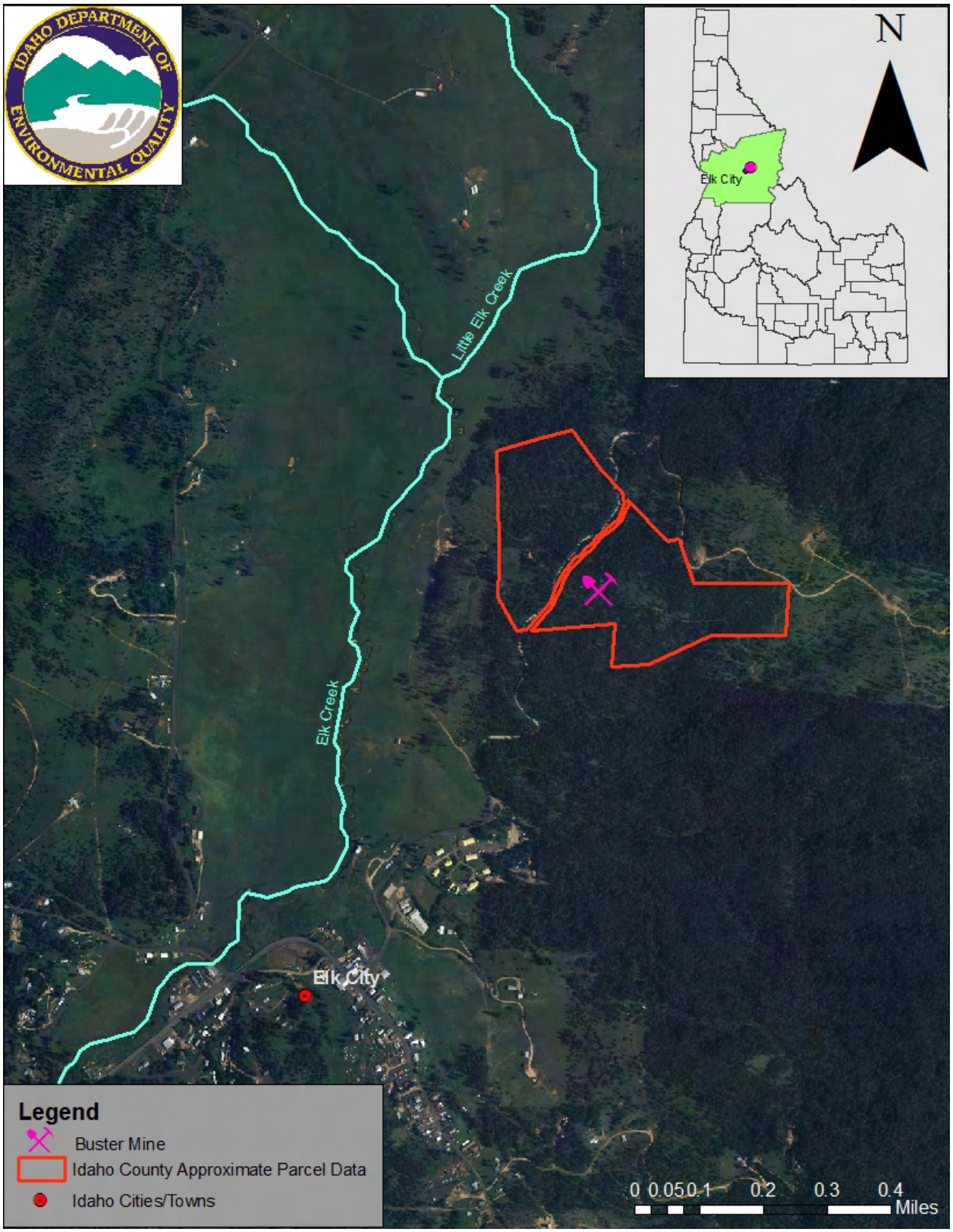
IDWR (Idaho Department of Water Resources) 1997. COVERAGE IDOWN -- Idaho Surface Ownership.

IDWR2, 2010. GIS shape file of well database.

IGS (Idaho Geological Survey). Erdman, Ted, John Kauffman, Earl H. Bennett, and Victoria 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 C: Elk City, Orogrande, Buffalo Hump, and Surrounding Areas, Idaho County, Idaho.* Prepared for the U.S. Forest Service Under Participating Agreement No. FS-01-96-14-2800. Staff Report 03-23.

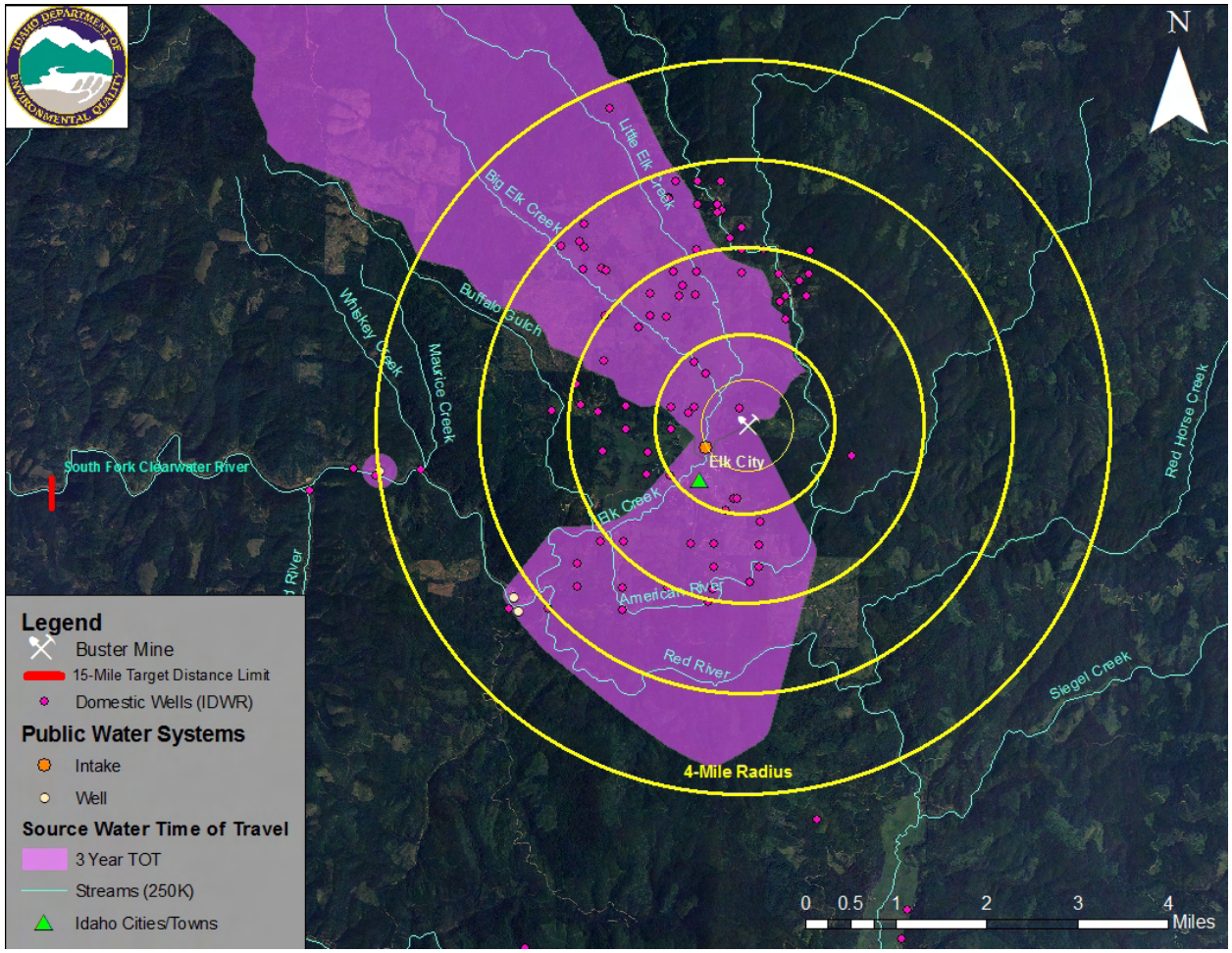
Attachment:

Maps

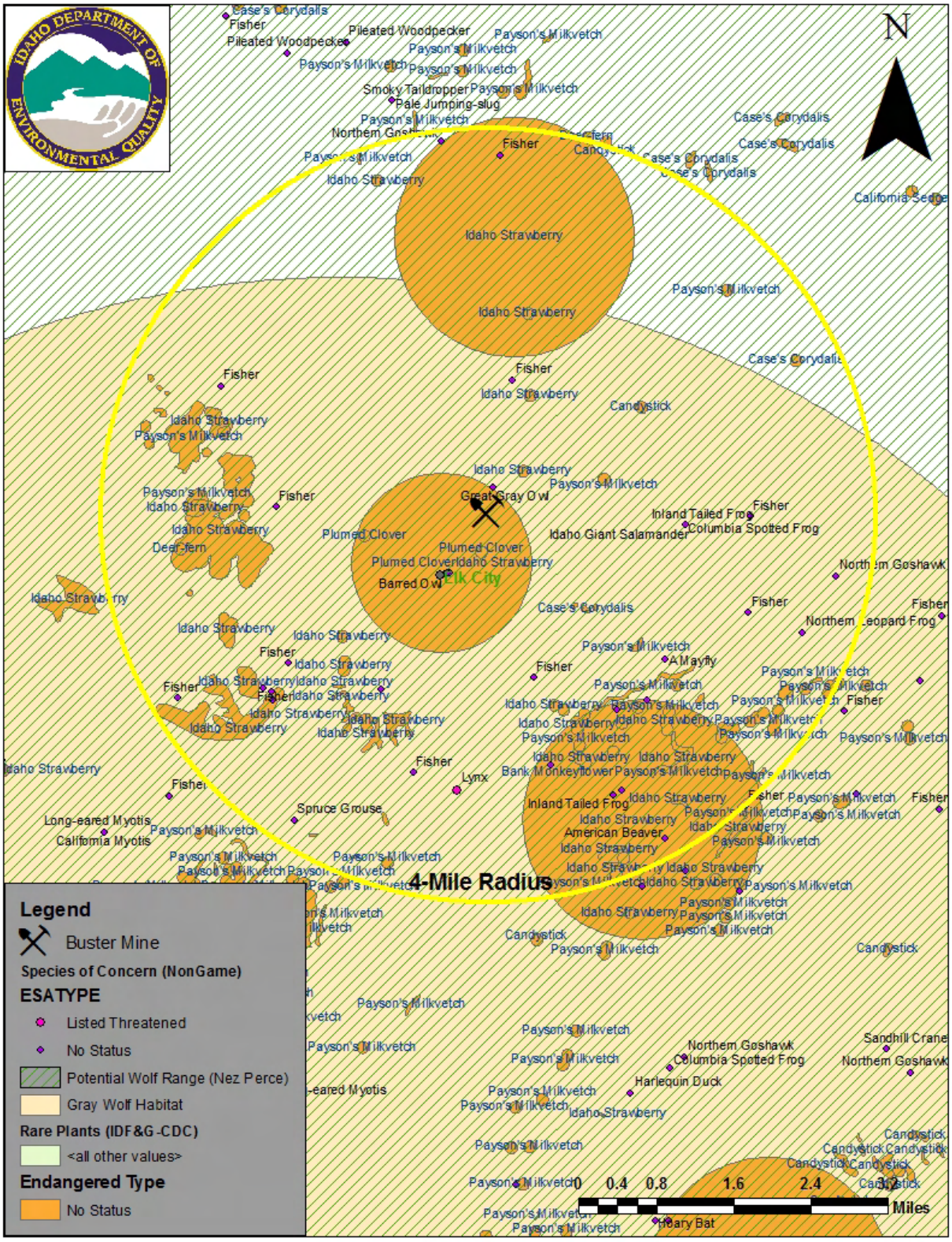


Map 1. Aerial Overview Map of the Buster Mine
Parcel data from Idaho County Assessor's Office. (Map Source: Idaho County 2004 NAIP)

Map 2. Map of Major Lithology in the Vicinity of the Buster Mine
(Map Source: ArcSDE.DEQ.GIS83.DBO.major lithology)



Map 3. Domestic Wells and Public Water Systems Located Within the 4-Mile Radius, 15-Mile TDL of the Buster Mine. There are no significant wetlands recognized by the U.S. Fish and Wildlife Service in the vicinity. (Map Source: 2009 Natural Color 1-meter NAIP Idaho



Map 4. Sensitive Species In and Around the Buster Mine; Species of Concern (Plants and Animals)
(Map Sources: SDE Feature Dataset, Animal Conservation Database; Idaho DEQ GIS ArcSDE 9.2 Geodatabase)

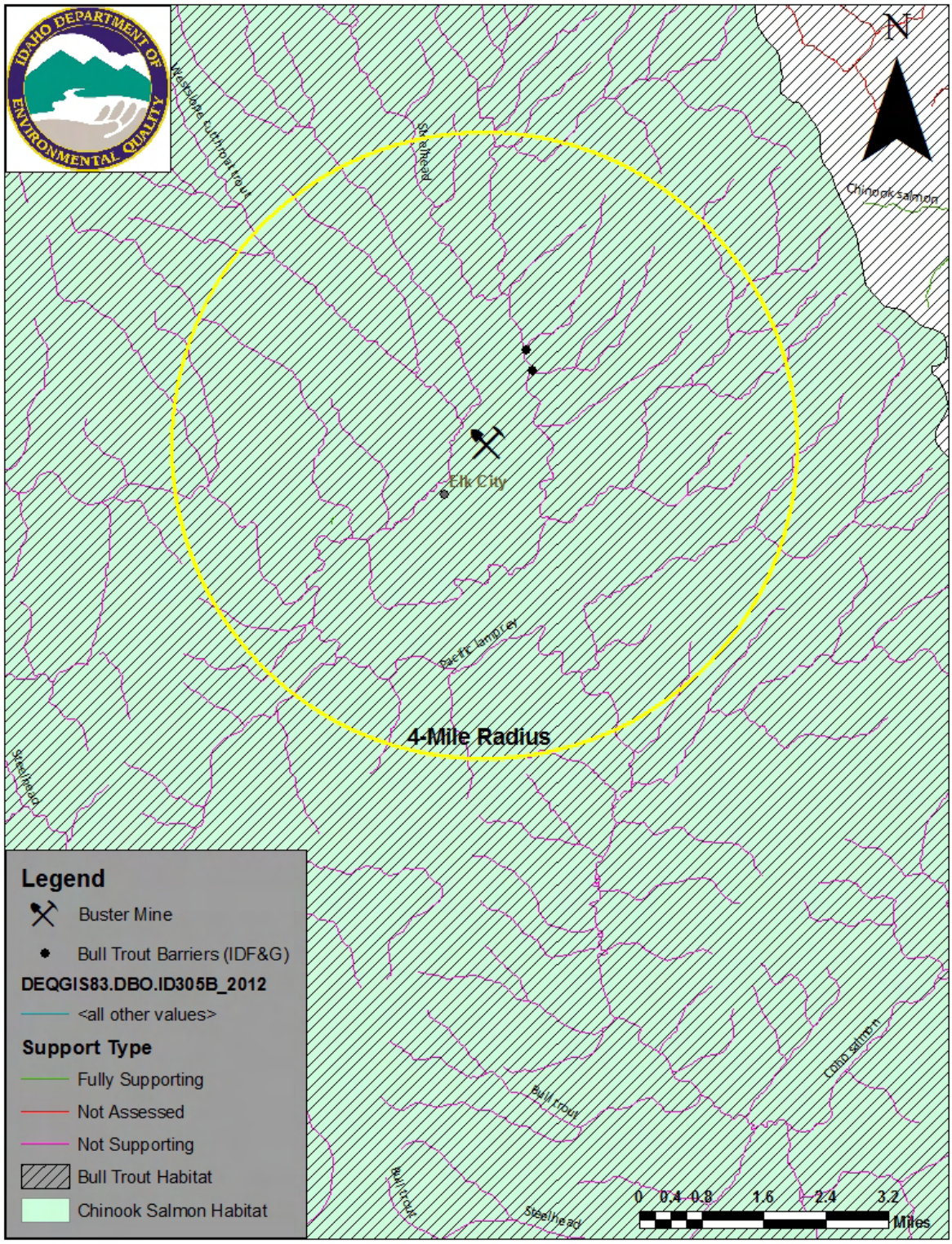


Figure 5. Fisheries Within 4-Mile Radius and in the Vicinity of the Buster Mine. State of Idaho 305(b) Map for Impaired Waters Not Supporting Cold Water Aquatic Life and Salmonid Spawning Due to Temperature
(Map source: SDE Feature Dataset, Idaho DEQ GIS ArcSDE 9.2 Geodatabase)