Appendix A

Federal Register Notices

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issues raised during the protest period and how they were addressed, please refer to the Director's Protest Resolution Reports for all four ARMPAs, which are available at the following Web site: *http://www.blm.gov/wo/st/en/prog/planning/planning_overview/protest_resolution/protestreports.html*.

The BLM received notifications of inconsistencies and recommendations as to how to resolve them during the Governor's consistency review period from the States of Idaho, Montana, Nevada, Oregon, and Utah. The BLM also received a concurrence letter of consistency from the State of California. On August 6, 2015, the BLM State Directors for Idaho, Montana, Nevada, Oregon, and Utah sent notification letters to their respective States as to whether they accepted or rejected their recommendations for consistency. The States were then given thirty days to appeal the State Directors' decisions. The States of Idaho, Nevada, and Utah appealed the BLM State Directors' decisions. The BLM Director affirmed the State Directors' decisions on these recommendations as the recommendations did not provide the balance required by 43 CFR 1610.3–2(e). The Director communicated his decisions on the appeals in writing to the Governors concurrently with the release of the RODS.

The Proposed LUPAs/Final EISs were selected in the ROD as the ARMPAs, with some minor modifications and clarifications based on protests received, the Governors' consistency reviews, and internal agency deliberations.

Copies of the Idaho and Southwestern Montana GRSG ROD and ARMPA are available upon request and are available for public inspection at:

- BLM Idaho State Office, 1387 S. Vinnell Way, Boise ID 83709;
- BLM Boise District Office, 3948 Development Avenue, Boise, ID 83705;
- BLM Owyhee Field Office, 20 First Avenue West, Marsing, ID 83639;
- BLM Idaho Falls District Office, 1405 Hollipark Drive, Idaho Falls, ID 83401;
- BLM Salmon Field Office, 1206 South Challis Street, Salmon, ID 83467;
- BLM Challis Field Office, 1151 Blue Mountain Road, Challis, ID 83226;
- BLM Pocatello Field Office, 4350 Cliffs Drive, Pocatello, ID 83204;
- BLM Twin Falls District Office, 2536 Kimberly Road, Twin Falls, ID 83301;
- BLM Shoshone Field Office, 400 West F Street, Shoshone, ID 83352;
- BLM Burley Field Office, 15 East 200 South, Burley, ID 83318;
- BLM Coeur d'Alene District Office, 3815 Schreiber Way, Coeur d'Alene, ID 83815;
- BLM Cottonwood Field Office, 1 Butte Drive, Cottonwood, ID 83522;
- BLM Montana State Office, 5001 Southgate Drive, Billings, MT 59101;
- BLM Butte District Office, 106 North Parkmont, Butte, MT 59701; and
- BLM Dillon Field Office, 1005 Selway Drive, Dillon, MT 59725–9431.

Copies of the Nevada and Northeastern California GRSG ROD and ARMPA are available upon request and are available for public inspection at:

- BLM Nevada State Office, 1340 Financial Boulevard, Reno, NV, 89502;
- BLM Winnemucca District Office, 5100 E. Winnemucca Boulevard, Winnemucca, NV, 89445;
- BLM Ely District Office, 702 North Industrial Way, Ely, NV, 89301;
- BLM Elko District Office, 3900 E. Idaho Street, Elko, NV, 89801;
- BLM Carson City District Office, 5665 Morgan Mill Road, Carson City, NV, 89701;
- BLM Battle Mountain District Office, 50 Bastian Road, Battle Mountain, NV, 89820;
- BLM California State Office, 2800 Cottage Way, Suite W–1623, Sacramento, CA, 95825;
- BLM Alturas Field Office, 708 W. 12th Street, Alturas, CA, 96101;
- BLM Eagle Lake Field Office, 2950 Riverside Drive, Susanville, CA, 96130; and
- BLM Surprise Field Office, 602 Cressler Street, Cedarville, CA, 96104.

Copies of the Oregon GRSG ROD and ARMPA are available upon request and are available for public inspection at:

- BLM Oregon State Office, 1220 SW. 3rd Avenue, Portland, OR 97204;
- BLM Baker Resource Area Office, 3100 H Street, Baker City, OR 97814;
- BLM Burns District Office, 28910 Highway 20 West, Hines, OR 97738;
- BLM Lakeview District Office, 1301 S. G Street, Lakeview, OR 97630;
- BLM Prineville District Office, 3050 NE. 3rd Street, Prineville, OR 97754; and
- BLM Vale District Office, 100 Oregon Street, Vale, OR 97918.

Copies of the Utah GRSG ROD and ARMPA are available upon request and are available for public inspection at:

- BLM Utah State Office, 440 West 200 South, Suite 500, Salt Lake City, UT, 84101;
- BLM Cedar City Field Office, 176 East D.L. Sargent Drive, Cedar City, UT 84721;
- BLM Fillmore Field Office, 95 East 500 North, Fillmore, UT 84631;
- BLM Kanab Field Office and Grand Staircase-Escalante National Monument, 669 South Highway 89A, Kanab, UT 84741;
- BLM Price Field Office, 125 South 600 West, Price, UT 84501;
- BLM Richfield Field Office, 150 East 900 North, Richfield, UT 84701;
- BLM Salt Lake Field Office, 2370 S. Decker Lake Boulevard, West Valley City, UT 84119; and
- BLM Vernal Field Office, 170 South 500 East, Vernal, UT 84078.

Authority: 36 CFR 219.59, 40 CFR 1506.6, 40 CFR 1506.10, 43 CFR 1610.2; 43 CFR 1610.5.

Amy Lueders,

Acting Assistant Director, Renewable Resources & Planning.

[FR Doc. 2015–24213 Filed 9–22–15; 4:15 pm]

BILLING CODE 4310–22–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLWO210000.15X.L11100000.PH0000 LXSISGST0000]

Notice of Proposed Withdrawal; Sagebrush Focal Areas; Idaho, Montana, Nevada, Oregon, Utah, and Wyoming and Notice of Intent To Prepare an Environmental Impact Statement

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: The Assistant Secretary of the Interior for Land and Minerals Management has approved an application to withdraw approximately 10 million acres of public and National Forest System lands identified as Sagebrush Focal Areas in Idaho, Montana, Nevada, Oregon, Utah, and Wyoming from location and entry under the United States mining laws to protect the Greater Sage-Grouse and its habitat from adverse effects of locatable mineral exploration and mining, subject to valid existing rights. This notice temporarily segregates the lands for up to 2 years while the application is processed. This notice also provides the public with an opportunity to comment on the proposed withdrawal application. In addition, this notice initiates the public scoping process for an Environmental Impact Statement (EIS) to analyze and disclose impacts of the proposed withdrawal.

DATES: Comments on the proposed withdrawal application or scoping comments on issues to be analyzed in the EIS must be received by December

23, 2015. Please clearly indicate whether comments are in regard to the withdrawal application or scoping comments on the EIS. The date(s) and location(s) of any scoping meetings will be announced at least 15 days in advance through local media, newspapers and the BLM Web site at: *http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html*. In order to be included in the Draft EIS, all comments must be received prior to the close of the 90-day scoping period or 15 days after the last public meeting, whichever is later. Additional opportunities for public participation will be available upon publication of the Draft EIS.

ADDRESSES: Written comments should be sent to the BLM Director, 1849 C Street NW., (WO–200), Washington, DC 20240 or electronically to *sagebrush_withdrawals@blm.gov*.

FOR FURTHER INFORMATION CONTACT: Mark A. Mackiewicz, PMP, Senior National Project Manager BLM, by telephone at 435–636–3616, or by email at *mmackiew@blm.gov;* or one of the BLM state offices listed below. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 to reach the BLM contact person. The FIRS is available 24 hours a day, 7 days a week, to leave a message or question with the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: The Bureau of Land Management (BLM) filed an application requesting the Assistant Secretary of the Interior for Land and Minerals Management to withdraw, subject to valid existing rights, approximately 10 million acres of public and National Forest System lands located in the States of Idaho, Montana, Nevada, Oregon, Utah and Wyoming from location and entry under the United States mining laws, but not from leasing under the mineral or geothermal leasing or mineral materials laws. Copies of the map entitled "BLM Petition/Application for Sagebrush Focal Areas Withdrawal" depicting the lands proposed for withdrawal are posted on our Web site at *http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html* and are also available from the BLM offices listed below:

Idaho State Office, 1387 S. Vinnell Way, Boise, Idaho 83709.

Montana State Office, 5001 Southgate Drive, Billings, Montana 59101–4669.

Nevada State Office, 1340 Financial Boulevard, Reno, Nevada 89502.

Oregon State Office, 1220 SW 3rd Avenue, Portland, Oregon 97204.

Utah State Office, 440 West 200 South, Suite 500, Salt Lake City, Utah 84101.

Wyoming State Office, 5353 Yellowstone Road, Cheyenne, Wyoming 82009.

The Sagebrush Focal Areas include all public and National Forest System lands identified in the townships below:

Idaho

Boise Meridian

T. 1 N., Rs. 17 and 29 E.,
Tps. 1 and 10 N., R. 18 E.,
Tps. 1 and 9 to 12 N., R. 19 E.,
Tps. 1, 2, and 8 to 12 N., R. 20 E.,
Tps. 1, 2, and 5 to 12 N., R. 21 E.,
Tps. 1, 2, and 4 to 11 N., R. 22 E.,
Tps. 1 to 13 N., Rs. 23 and 24 E.,
Tps. 9, 10, and 12 N., R. 24½ E.,
Tps. 2 to 12, 15 and 16 N., R. 25 E.,
Tps. 2 to 5, 8 to 11, and 13 to 16 N., R. 26 E.,
Tps. 1, 2, 4 to 11, and 13 to 16 N., R. 27 E.,
Tps. 1, 4 to 9, and 13 to 15 N., R. 28 E.,
Tps. 1 and 6 to 9 N., R. 30 E.,
Tps. 8 and 9 N., Rs. 31 and 32 E.,
Tps. 7 to 9 N., Rs. 34 and 35 E.,
Tps. 9 to 12 N., R. 36 E.,
Tps. 10 to 12 N., R. 37 E.,
Tps. 10 and 11 N., R. 38 E.,
Tps. 9 to 11 N., R. 39 E.,
Tps. 8 to 11 N., R. 40 E.,
Tps. 8 to 10 N., R. 41 E.,
Tps. 8 to 16 S., R. 1 W.,
Tps. 9 to 16 S., R. 2 W.,
Tps. 10 to 16 S., R. 3 W.,
Tps. 11 to 16 S., R. 4 W.,
Tps. 12 to 16 S., R. 5 W.,
Tps. 13 to 16 S., R. 6 W.,
Tps. 8 to 14, and 16 S., R. 1 E.,
Tps. 7 to 14 S., R. 2 E.,
Tps. 8 to 14 S., R. 3 E.,
Tps. 8 to 16 S., R. 4 E.,
Tps. 9, and 11 to 16 S., R. 5 E.,
Tps. 11 to 16 S., R. 6 E.,
Tps. 13 to 16 S., Rs. 7 and 8 E.,
Tps. 14 to 16 S., Rs. 9 and 10 E.,
Tps. 3 and 4 and 14 to 16 S., Rs. 11E.,
Tps. 2 to 4 and 13 to 16 S., R. 12 E.,
Tps. 2 to 4 and 12 to 16 S., Rs. 13 and 14 E.,
Tps. 1 to 4 and 12 to 16 S., Rs. 15 and 17 E.,
Tps. 1 to 4, and 13 to 16 S., R. 16 and 18 E.,
Tps. 1 to 3 S., R. 19 E.,
Tps. 1 to 4 S., Rs. 20 and 24 E.,
Tps. 1 to 4, and 14 S., R. 21 E.,
Tps. 1 to 5, and 14 S., R. 22 E.,
Tps. 1 to 6 S., R. 23 E.,
Tps. 1 to 3 S., Rs. 25, and 27 to 29 E.,
T. 1 S., R. 30 E.

The areas described contain approximately 3,854,622 acres in Bingham, Blaine, Butte, Camas, Cassia, Clark, Custer, Elmore, Fremont, Gooding, Jefferson, Lemhi, Lincoln, Minidoka, Owyhee, Power, and Twin Falls Counties.

Montana

Principal Meridian

Tps. 21 to 23 N., R. 20 E.,
Tps. 20 to 23 N., R. 21 E.,
Tps. 20 N., R. 22 E.,
Tps. 19 to 21, 23 and 24 N., R. 23 E.,
Tps. 18 to 21, 23 and 24 N., Rs. 24 and 25 E.,
Tps. 18 to 20, 22 to 25, 27 and 28 N., R. 26 E.,
T. 24 N., R. 26½ E.,
Tps. 19 to 29 N., R. 27 E.,
Tps. 20, 22 to 24 and 26 to 29 N., R. 28 E.,
Tps. 22 to 27 N., R. 29 E.,
Tps. 22 to 26 N., R. 30 E.,
Tps. 23 to 26 N., Rs. 31 and 32 E.,
Tps. 23 to 29 N., Rs. 33, 35 and 36 E.,
Tps. 24 to 29 N., Rs. 34 and 37 E.,
Tps. 26 and 27 N., R. 36½ E.,
Tps. 24 to 28 N., R. 38 E.,
Tps. 24 to 27 N., R. 39 E.,
T. 26 N., R. 40 E.

The areas described contain approximately 983,156 acres in Fergus, Garfield, Petroleum, Phillips, and Valley Counties.

Nevada

Mount Diablo Meridian

Tps. 44, 46, and 47 N., R. 20 E.,
Tps. 43 to 47 N., Rs. 21, 40, 45, 53, 54, 55, 69, and 70 E.,
Tps. 43, 44, and 47 N., R. 22 E.,
T. 47 N., R. 23 and 23½ E.,
T. 45 N., R. 31 E.,
Tps. 44 to 47 N., Rs. 32, 33, 41 and 42 E.,
Tps. 44 to 48 N., Rs. 34 to 36 E.,
Tps. 45 to 47 N., R. 37 E.,
Tps. 42 to 44 N., R. 38 E.,
Tps. 42 to 47 N., Rs. 39, 46, 49, 50, 57, 58, 60 to 62, 67 and 68 E.,
Tps. 44 to 46 N., R. 43 E.,
Tps. 40 to 47 N., R. 47 E.,
Tps. 41 to 47 N., Rs. 48, and 63 to 66 E.,
T. 44 N., R. 52 E.,
Tps. 46 and 47 N., R. 54½ E.,
Tps. 42 to 45, and 47 N., R. 56 E.,
Tps. 42 to 44, 46 and 47 N., R. 59 E.,

The areas described contain approximately 2,797,399 acres in Elko, Humboldt, and Washoe Counties.

Oregon

Willamette Meridian

Tps. 35 and 36 S., R. 21 E.,
Tps. 32 to 40 S., R. 22 E.,
Tps. 31 to 40 S., Rs. 23 and 24 E.,
Tps. 34 to 41 S., Rs. 25, 29, and 46 E.,
Tps. 33 and 34, 38 to 41 S., R. 26 E.,
Tps. 32 to 41 S., R. 27 and 28 E.,
Tps. 35 to 41 S., R. 30 E.,
Tps. 36 to 41 S., Rs. 31, 40 to 43, 47 and 48 E.,
Tps. 37 to 40 S., R. 32 E.,
T. 37 S., R. 32½ E.,
Tps. 38 to 40 S., R. 33 E.,
Tps. 40 and 41 S., R. 36 E.,
Tps. 36 and 37, 39 to 41 S., R. 37 E.,
Tps. 38 to 41 S., Rs. 38 and 39 E.,
Tps. 33 to 41 S., Rs. 44 and 45 E.,
Tps. 37 to 41 S., R. 49 E.

The areas described contain approximately 1,929,580 acres in Harney, Lake, and Malheur Counties.

Utah

Salt Lake Meridian

Tps. 9 and 10 N., R. 3 E.,
Tps. 9, 10, 10½, and 11 N., R. 4 E.,
Tps. 9 to 12 N., R. 5 E.,
Tps. 9 to 13 N., Rs. 6 to 8 E.,
Tps. 12, 14, and 15 N., R. 17 W.,
Tps. 11 to 15 N., R. 18 W.,
Tps. 10 to 15 N., R. 19 W.

The areas described contain approximately 230,808 acres in Box Elder, Cache, and Rich Counties.

Wyoming

6th Principal Meridian

Tps. 27 and 28 N., R. 99 W.,
Tps. 27 to 29 N., R. 100 W.,
Tps. 25, 28, and 29 N., R. 101 W.,
Tps. 28 N., R. 102 W.,
Tps. 22 N., Rs. 104 and 120 W.,
Tps. 22, and 25 to 27 N., R. 105 W.,
Tps. 26 and 27 N., Rs. 106 to 108 W.,
T. 24 N., R. 112 W.,
Tps. 23 and 24 N., Rs. 113 and 115 W.,
Tps. 22 to 24 N., Rs. 114 and 119 W.,
Tps. 20 to 24 N., R. 117 W.,
Tps. 21 to 24 N., R. 118 W.,
Tps. 19 and 20 N., R. 121 W.

The areas described contain approximately 252,162 acres in Fremont, Lincoln, Sublette, Sweetwater, and Uinta Counties.

The total areas described aggregate approximately 10 million acres of public and National Forest System lands in the six states and counties listed above.

The Assistant Secretary of the Interior for Land and Minerals Management has approved the BLM's application. Therefore, this document constitutes a withdrawal proposal of the Secretary of the Interior (43 CFR 2310.1–3(e)).

The purpose of the proposed withdrawal of the Sagebrush Focal Areas in Priority Habitat Management Areas is to protect the Greater Sage-Grouse and its habitat from adverse effects of locatable mineral exploration and mining subject to valid existing rights.

The use of a right-of-way, interagency or cooperative agreement, or surface management by the BLM under 43 CFR part 3715 or 43 CFR part 3809 regulations or by the Forest Service under 36 CFR part 228 would not adequately constrain nondiscretionary uses, which could result in loss of critical sage-grouse habitat.

There are no suitable alternative sites for the withdrawal.

No water rights would be needed to fulfill the purpose of the requested withdrawal.

Records relating to the application may be examined by contacting the BLM offices listed above.

For a period until December 23, 2015, all persons who wish to submit comments, suggestions, or objections in connection with the proposed withdrawal may present their views in writing to the BLM Director, 1849 C Street NW., (WO–210), Washington, DC 20240, or electronically to *sagebrush_withdrawals@blm.gov*.

All comments received will be considered before any final action is taken on the proposed withdrawal.

The purpose of the public scoping process is to determine relevant issues that will influence the scope of the environmental analysis, including alternatives, and guide the process for developing the EIS. At present, the BLM has identified the following preliminary issues: Air quality/climate, American Indian resources, cultural resources, wilderness, mineral resources, public health and safety, recreation, socio-economic conditions, soil resources, soundscapes, special status species, vegetation resources, visual resources, water resources, and fish and wildlife resources.

Because of the nature of a withdrawal of public lands from operation of the mining law, mitigation of its effects is not likely to be an issue requiring detailed analysis. However, consistent with Council on Environmental Quality regulations implementing NEPA (40 CFR 1502.14), the BLM will consider whether and what kind of mitigation measures may be appropriate to address the reasonably foreseeable impacts to resources from the approval of this proposed withdrawal.

The BLM will utilize and coordinate the NEPA scoping process to help fulfill the public involvement process under the National Historic Preservation Act (54 U.S.C. 306108) as provided in 36 CFR 800.2(d)(3). The information about historic and cultural resources within the area potentially affected by the proposed action will assist the BLM in identifying and evaluating impacts to such resources.

The BLM will consult with Indian tribes on a government-to-government basis in accordance with Executive Order 13175 and other policies. Tribal concerns, including impacts to Indian trust assets and potential impacts to cultural resources, will be given due consideration. Federal, State, and local agencies, along with tribes and other stakeholders that may be interested in or affected by the proposed withdrawal that the BLM is evaluating, are invited to participate in the scoping process and, if eligible, may request or be requested by the BLM to participate in the development of the environmental analysis as a cooperating agency.

Comments including names and street addresses of respondents will be available for public review at the BLM Washington Office at the address noted above, during regular business hours Monday through Friday, except Federal holidays. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

For a period until September 24, 2017, subject to valid existing rights, the lands described in this notice will be segregated from location and entry under the United States mining laws, unless the application/proposal is denied or canceled or the withdrawal is approved prior to that date. Licenses, permits, cooperative agreements, or discretionary land use authorizations may be allowed during the temporary segregative period, but only with approval of the authorized officer of the BLM or the USFS.

The application will be processed in accordance with the regulations set forth in 43 CFR part 2300.

Neil Kornze,

Director, Bureau of Land Management.

[FR Doc. 2015–24212 Filed 9–22–15; 4:15 pm]

BILLING CODE 4310–84–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLWO350000.L14400000.PN0000]

Renewal of Approved Information Collection

AGENCY: Bureau of Land Management, Interior.

ACTION: 30-day notice and request for comments.

SUMMARY: The Bureau of Land Management (BLM) has submitted an information collection request to the Office of Management and Budget (OMB) to continue the collection of information from owners of surface estates who apply for title to underlying Federally-owned mineral estates. The Office of Management and Budget (OMB) previously approved this information collection activity, and assigned it control number 1004–0153.

information from public review, we cannot guarantee that we will be able to do so.

Authority

This notice is published under the authority of the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 668dd *et seq.*).

Dated: October 14, 2015.

Richard P. Ingram,

Acting Regional Chief, National Wildlife Refuge System.

[FR Doc. 2015–26614 Filed 10–19–15; 8:45 am]

BILLING CODE 4333–15–P

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

[156A2100DD/AAKC001030/A0A501010.999900 253G]

Acceptance of Retrocession of Jurisdiction for the Yakama Nation

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice.

SUMMARY: The Department of Interior (Department) has accepted retrocession to the United States of partial civil and criminal jurisdiction over the Yakama Nation from the State of Washington.

DATES: The Department accepted retrocession on October 19, 2015. Complete implementation of jurisdiction will be effective April 19, 2016.

FOR FURTHER INFORMATION CONTACT: Mr. Darren Cruzan, Deputy Director—Office of Justice Services, Bureau of Indian Affairs, (202) 208–5787.

SUPPLEMENTARY INFORMATION: Under the authority of 25 U.S.C. 1323, vested in the Secretary of the Interior by Executive Order No. 11435 of November 21, 1968, 33 FR 17339, and re-delegated to the Assistant Secretary—Indian Affairs, the United States accepts partial civil and criminal jurisdiction over the Yakama Nation which was acquired by the State of Washington, under Public Law 83–280, 67 Stat. 588, codified as amended at 18 U.S.C. 1162, 28 U.S.C. 1360, and as provided in Revised Code of Washington 37.12.010, 37.12.021, 37.12.030, 37.12.040, and 37.12.060 (1963), and 37.12.050 (1957).

This retrocession was offered by the State of Washington in Proclamation by the Governor 14–01, signed on January 17, 2014, and transmitted to the Assistant Secretary-Indian Affairs in accordance with the process in Revised Code of Washington 37.12.160 (2012), and as provided by Tribal Council Resolution No. T–117–12, dated July 5, 2012, in which the Yakama Nation requested that the State of Washington retrocede partial civil and criminal jurisdiction to the Tribe.

Dated: October 14, 2015.

Kevin K. Washburn,

Assistant Secretary—Indian Affairs.

[FR Doc. 2015–26620 Filed 10–19–15; 8:45 am]

BILLING CODE 4337–15–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLWO210000.16X.L11100000.PH0000 LXSISGST0000]

Notice of Proposed Withdrawal; Sagebrush Focal Areas; Idaho, Montana, Nevada, Oregon, Utah, and Wyoming and Notice of Intent To Prepare an Environmental Impact Statement

Correction

AGENCY: Bureau of Land Management, Interior.

ACTION: Correction Notice.

SUMMARY: This action corrects the language found in the **SUPPLEMENTARY INFORMATION** section of a notice published in the **Federal Register** on Thursday, September 24, 2015 (80 FR 57635 to 57637).

On page 57636, column 2, beginning on line 9, the text which reads "The Sagebrush Focal Areas include all public and National Forest System lands identified in the townships below:", is hereby corrected to read, "The Sagebrush Focal Areas consist of those public and National Forest System lands within the townships below that are identified as Sagebrush Focal Areas on the map posted on the BLM Web site at *http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html*:"

Steven A. Ellis,

Deputy Director, Operations.

[FR Doc. 2015–26633 Filed 10–19–15; 8:45 am]

BILLING CODE 4310–84–P

DEPARTMENT OF THE INTERIOR

National Park Service

[NPS–WASO–NAGPRA–19337: PPWOCRADN0–PCU00RP14.R50000]

Notice of Inventory Completion: History Colorado, Formerly Colorado Historical Society, Denver, CO

AGENCY: National Park Service, Interior.

ACTION: Notice.

SUMMARY: History Colorado, formerly Colorado Historical Society, has completed an inventory of human remains, in consultation with the appropriate Indian tribes or Native Hawaiian organizations, and has determined that there is no cultural affiliation between the human remains and any present-day Indian tribes or Native Hawaiian organizations. Representatives of any Indian tribe or Native Hawaiian organization not identified in this notice that wish to request transfer of control of these human remains should submit a written request to History Colorado. If no additional requestors come forward, transfer of control of the human remains to the Indian tribes or Native Hawaiian organizations stated in this notice may proceed.

DATES: Representatives of any Indian tribe or Native Hawaiian organization not identified in this notice that wish to request transfer of control of these human remains should submit a written request with information in support of the request to History Colorado at the address in this notice by November 19, 2015.

ADDRESSES: Sheila Goff, NAGPRA Liaison, History Colorado, 1200 Broadway, Denver, CO 80203, telephone (303) 866–4531, email *sheila.goff@state.co.us*.

SUPPLEMENTARY INFORMATION: Notice is here given in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3003, of the completion of an inventory of human remains under the control of History Colorado, Denver, CO.

This notice is published as part of the National Park Service's administrative responsibilities under NAGPRA, 25 U.S.C. 3003(d)(3) and 43 CFR 10.11(d). The determinations in this notice are the sole responsibility of the museum, institution, or Federal agency that has control of the Native American human remains. The National Park Service is not responsible for the determinations in this notice.

Consultation

A detailed assessment of the human remains was made by History Colorado professional staff in consultation with representatives of the Arapaho Tribe of the Wind River Reservation, Wyoming; Cheyenne and Arapaho Tribes, Oklahoma (previously listed as the Cheyenne-Arapaho Tribes of Oklahoma); Comanche Nation, Oklahoma; Fort Sill Apache Tribe of Oklahoma; Jicarilla Apache Nation, New Mexico; Kiowa Indian Tribe of Oklahoma; Mescalero Apache Tribe of

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Northeast quarter of Section 8 for a distance of 921.75 feet to the Point of Beginning; thence continuing along said North line, South 88°10'18" East 921.26 feet; thence South 01°29'02" West parallel with the West line of said Northeast quarter, 1316.97 feet to the South line of the North half of said Northeast quarter; thence North 88°07'39" West along said South line, 921.26 feet; thence North 01°29'02" East, 1316.26 feet to the Point of Beginning.

EXCEPT the right of way of NW 319th Street.

The above-described lands contain a total of 156.401 acres, more or less, which are subject to all valid rights, reservations, rights-of-way, and easements of record.

This proclamation does not affect title to the lands described above, nor does it affect any valid existing easements for public roads, highways, public utilities, railroads, and pipelines, or any other valid easements of rights-of-way or reservations of record.

Dated: November 6, 2015.

Kevin Washburn,

Assistant Secretary—Indian Affairs.

[FR Doc. 2015–28805 Filed 11–12–15; 8:45 am]

BILLING CODE 4337–15–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLWO210000.16X.L11100000.PH0000 LXSISGST0000]

Extension of Public Comment Period and Schedule of Public Scoping Meetings and Public Meetings for the Proposed Withdrawal of Sagebrush Focal Areas in Idaho, Montana, Nevada, Oregon, Utah, and Wyoming, and an Associated Environmental Impact Statement

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: On September 24, 2015, the Bureau of Land Management (BLM) published a Notice of Proposed Withdrawal; Sagebrush Focal Areas; Idaho, Montana, Nevada, Oregon, Utah, and Wyoming and Notice of Intent to Prepare an Environmental Impact Statement for the Proposed Withdrawal in the **Federal Register**. This notice extends the comment period for both the proposed withdrawal and initial scoping for the environmental impact statement (EIS) being prepared to consider the merits of the proposed withdrawal and announces the times, dates, and locations of public meetings.

DATES: Written or emailed comments for scoping for the EIS and on the proposed withdrawal may be submitted through January 15, 2016. In addition, through this Notice the BLM is also announcing that it will hold public meetings in December 2015 to focus on relevant issues and environmental concerns, identify possible alternatives, help determine the scope of the EIS, and provide an opportunity for public comments on the proposed withdrawal. For dates and locations for the scoping meetings, please see the **SUPPLEMENTARY INFORMATION** section below.

ADDRESSES: Written comments should be sent to the BLM Director, 1849 C Street NW. (WO–200), Washington, DC 20240 or emailed to *sagebrush_withdrawals@blm.gov*.

FOR FURTHER INFORMATION CONTACT: Contact Mark Mackiewicz, BLM, by telephone at 435–636–3616. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 to reach the BLM contact person. The FIRS is available 24 hours a day, 7 days a week, to leave a message or question with the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: The BLM filed an application requesting the Assistant Secretary of the Interior for Land and Minerals Management to withdraw, subject to valid existing rights, approximately 10 million acres of BLM-managed public and National Forest System lands located in the States of Idaho, Montana, Nevada, Oregon, Utah and Wyoming from location and entry under the United States mining law, but not from leasing under the mineral or geothermal leasing or mineral materials laws.

Pursuant to Section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), the BLM will prepare an EIS and conduct public scoping meetings on the withdrawal from the mining law of approximately 10 million acres of BLM- and United States Forest Service-administered public lands, in 6 western states as identified in the **Federal Register** notice of September 24, 2015 (80 FR 57635). The period for initial scoping comments from the public has been extended from December 23, 2015, to January 15, 2016. These public scoping meetings will also meet the requirements under 43 CFR 2310 to provide public meetings for comment on the Notice of Proposed Withdrawal that published on September 24, 2015.

The dates, times, and locations of the meetings are as follows:

Dates & times	Locations	BLM contact
Dec. 14, 2051:		
5 p.m. to 7 p.m.	Harney County Chamber of Commerce, 484 North Broadway, Burns, OR 97720.	Jody Weil, 503–808–6287.
5 p.m. to 7 p.m.	Lakeview BLM District Office, 1301 South G Street, Lakeview, OR 97630.	Jody Weil, 503–808–6287.
5 p.m. to 7 p.m.	Salt Lake City BLM Office, 2370 South Decker Lake Drive, West Valley City, UT 84119.	Megan Crandall, 801–539–4020.
Dec. 15, 2015:		
4 p.m. to 6 p.m.	Best Western Vista Inn & Conference Center, 2645 Airport Way, Boise, ID 83709.	Erin Curtis, 208–373–4016.
5 p.m. to 7 p.m.	Rock Springs BLM Field Office, 280 Highway 191 North, Rock Springs, WY 82901.	Kristen Lenhardt, 307–775–6015.
5 p.m. to 7 p.m.	The Nugget, 1100 Nugget Avenue, Sparks, NV 89431	Steve Clutter, 775–861–6629.
Dec. 16, 2015.		
2 p.m. to 4 p.m.	Great Northern Hotel, 2 South 1st Street East, Malta, MT 59538	Al Nash, 406–896–5260.
4 p.m. to 6 p.m.	Shiloh Suites Conference Hotel, 780 Lindsay Blvd., Idaho Falls, ID 83402.	Erin Curtis, 208–373–4016.

Dates & times	Locations	BLM contact
5 p.m. to 7 p.m.	Elko Conference Center, 724 Moren Way, Elko, NV 89801	Steve Clutter, 775–861–6629.

The EIS will consider a No Action alternative and consider reasonably foreseeable mineral development activities. The EIS does not support a land-use plan or a land-use plan amendment. It will provide a comprehensive programmatic NEPA analysis for the proposed action of the Secretary of the Interior withdrawing these public lands from operation of the mining law for the conservation benefit of the Greater Sage-grouse.

The BLM has initially identified the following issues for analysis in this EIS: Air quality/climate, American Indian resources, cultural resources, wilderness and wilderness characteristics, mineral resources, public health and safety, recreation, social and economic conditions, soil resources, soundscapes, special status species, vegetation resources, visual resources, water resources, and fish and wildlife habitat.

In addition, the BLM expects to address economic effects of withdrawing these public lands from operation of the mining law, wildlife habitat conservation; improvement, restoration of ecosystem processes; protection of cultural resources, watershed and vegetative community health, new listings of threatened and endangered species and consideration of other sensitive and special status species.

Steve Ellis,

Deputy Director, Bureau of Land Management.

[FR Doc. 2015–28877 Filed 11–12–15; 8:45 am]

BILLING CODE 4310–84–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLNVC00000.L16100000.DR0000; 14–08807; MO# 4500080864]

Opportunity To Comment on Changes to the Nevada and California Greater Sage-Grouse Bi-State Distinct Population Segment Carson City Field Office Consolidated Resource Management Plan and the Tonopah Field Office Resource Management Plan Amendment, Nevada

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: The Bureau of Land Management (BLM) is soliciting comments on significant changes to the Proposed Plan as set forth in the Greater Sage-Grouse Bi-State Distinct Population Segment (BSSG) Forest Plan Amendment and Final Environmental Impact Statement (EIS), announced on February 13, 2015. Following consideration of any comments on these changes, the BLM intends to issue a Record of Decision (ROD) amending the Carson City Field Office Consolidated Resource Management Plan and the Tonopah Field Office Resource Management Plan.

DATES: Written comments on the changes to the Proposed Plan will be accepted until December 14, 2015.

ADDRESSES: You may submit comments related to the significant changes to the Proposed Plan by any of the following methods:

- *Email: blm_nv_ccdowebmail@blm.gov.*
- *Fax:* 775–885–6147.
- *Mail:* BLM Carson City District, Attn: Colleen Sievers, Project Manager, 5665 Morgan Mill Rd., Carson City, NV 89701.

FOR FURTHER INFORMATION CONTACT: Colleen Sievers, Project Manager, telephone: 775–885–6168; address: 5665 Morgan Mill Rd., Carson City, NV 89701; email: *blm_nv_ccdowebmail@blm.gov.* Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 to contact the above individual during normal business hours. The FIRS is available 24 hours a day, 7 days a week, to leave a message or question with the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: The United States Forest Service (USFS) was the lead agency for preparing the BSSG Forest Plan Amendment (Plan Amendment) and Final EIS. As part of that effort and based on the analysis in the Final EIS, the BLM, a cooperating agency, proposes to amend the Carson City Field Office Consolidated Resource Management Plan and the Tonopah Field Office Resource Management Plan. Following the release of the Proposed Plan and the conclusion of the protest process, the BLM identified changes and a clarification for the Proposed Plan as explained below and determined, pursuant to the applicable authorities (43 CFR 1610.2(f)(5) and 43 CFR 1610.5–1(b)), that public comment on those measures is necessary. The environmental consequences of the proposed changes and clarification have been analyzed as part of the Plan Amendment and Final EIS. After considering any comments on these changes, the BLM expects to issue a ROD amending the Carson City Field Office Consolidated Resource Management Plan and the Tonopah Field Office Resource Management Plan.

The Environmental Protection Agency (EPA) published the Notice of Availability (NOA) for the BSSG Forest Plan Amendment/Draft EIS in the **Federal Register** on August 23, 2013 (78 FR 52524), which initiated a 90-day comment period. An NOA for the BSSG Forest Plan Amendment/Revised Draft EIS was published by the EPA on July 11, 2014 (79 FR 40100), which initiated a second 90-day comment period. The EPA published the NOA for the BSSG Forest Plan Amendment and Final EIS in the **Federal Register** on February 13, 2015 (80 FR 8081), which initiated a 30-day BLM protest period and 60-day Governors consistency review period. The Plan Amendment and Final EIS identified the BLM Plan as the Proposed Plan. The BLM received three protest letters. In response to those protests and based on additional policy discussions, the BLM has determined that it will clarify and make changes to the Proposed Plan.

The clarification and changes include: (1) Identifying disturbance levels within BSSG habitat; (2) Adjusting buffers for tall structures near active or pending leks; (3) Adding a restriction for new high-power transmission lines; and (4) Changing on-the-ground management for habitat connectivity. This notice identifies those clarifications and changes and initiates a 30-day public comment period (43 CFR 1610.2(f)(5) and 43 CFR 1610.5–1(b)).

Habitat Disturbance—Proposed Change

The BLM is changing the Proposed Plan, as it was set forth in the Plan Amendment and Final EIS, to set a total anthropogenic disturbance of no more than 3 percent of the total BSSG habitat on Federal lands within the Bodie Mountain/Grant, Desert Creek/Fales, and White Mountains population management unit boundaries (C–Wild–S–04), and a total anthropogenic disturbance of no more than 1.5 percent of the total BSSG habitat on Federal lands within the Pine Nut Mountains population management unit (PMU)

Appendix B

Reasonably Foreseeable Development

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CONTENTS

FIGURES

TABLES

ACRONYMS

AEMA	American Exploration and Mining Association
BLM	Bureau of Land Management
EIS	Environmental Impact Statement
GIS	Geographic Information System
MSHA	Mine Safety and Health Administration
NBMG	Nevada Bureau of Mines and Geology
NEPA	National Environmental Policy Act
NMIC	National Mineral Information Center
PLSS	Public Land Survey System
RFD	Reasonably Foreseeable Development
SaMiRA	Sagebrush Mineral Resource Assessment
SEDAR	System for Electronic Document Analysis and Retrieval
SFA	Sagebrush Focal Area
USGS	U.S. Geological Survey
USMIN	USGS Mineral Deposit Database

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1. INTRODUCTION

The Proposed Action considered in the Environmental Impact Statement (EIS), to which this Reasonably Foreseeable Development (RFD) report is appended, is the withdrawal from location and entry under the United States mining laws of up to approximately 10 million acres of Federal lands administered by the United States Department of Interior, Bureau of Land Management (BLM) and United States Department of Agriculture, Forest Service (Forest Service) for 20 years, subject to valid existing rights. The lands included in the withdrawal proposal are located in Idaho, Montana, Nevada, Oregon, Utah, and Wyoming. The purpose of this RFD report is to provide an estimate of the amount and type of future locatable mineral exploration and development that could occur in the proposed withdrawal area over the 20-year duration of the withdrawal. As discussed further below, there are several different kinds of variables that make developing such an estimate difficult, and this estimate relies upon several assumptions, also detailed below, and is provided solely to establish an analytical basis for the purpose of informing an evaluation of the environmental consequences associated with the Proposed Action in comparison with the other alternatives described in the EIS. The outputs of this analysis are:

- Estimated numbers and sizes of future mines, and
- Estimated numbers and sizes of future exploration projects.

The estimate of future exploration and mining is provided for the No Action Alternative (what is reasonably expected to occur in the absence of the withdrawal). The methods and results of this analysis can then be adjusted based on the constraints of the Proposed Action and each action alternative to provide a uniform set of assumptions about reasonably foreseeable future locatable mineral exploration and development under these various constraints. These activity assumptions, in conjunction with existing conditions, serve as the basis for the resource impact analysis of each alternative, as presented in Chapter 4 of the EIS. The importance of this RFD is not the exact estimated number of future mines but, rather, the relative levels of estimated future mining-related activity across the alternatives. While it attempts to predict future mining activity, this document is intended only to help the agency make a decision on the Proposed Action and alternatives and cannot be used to assert or refute the validity of a particular mining claim or for any other purpose.

1.1 Study Approach and Uncertainties

This RFD was prepared as an estimation based on past events, currently available data, and a series of assumptions about future economic, regulatory, legal, and technological conditions. Figure 1 contains a flow chart that shows the data sources, assumptions, and end results.

To help assess the reasonably foreseeable environmental impacts of the withdrawal proposal and alternatives (including the No Action Alternative), this RFD makes assumptions about past and present mining-related activity, mineral potential, and future mineral development. These assumptions are necessary and broad due to the diversity of locatable minerals on Federal lands, variety of mining and exploration methods, geographic scope, inherent uncertainty of the commodities markets, and the principle of self-initiation under the Mining Law. The assumptions and analysis produced in this RFD were designed to focus on the technical information that is needed to quantify the impacts that will be analyzed for the two main resources that are being carried forward in the EIS for further analysis, including wildlife and socio-economics. For example, an in-situ mining method may be very different from an underground mining method, but it is the surface disturbance area of each that is the primary driver for evaluating wildlife impacts so mine size was evaluated but not mining method.

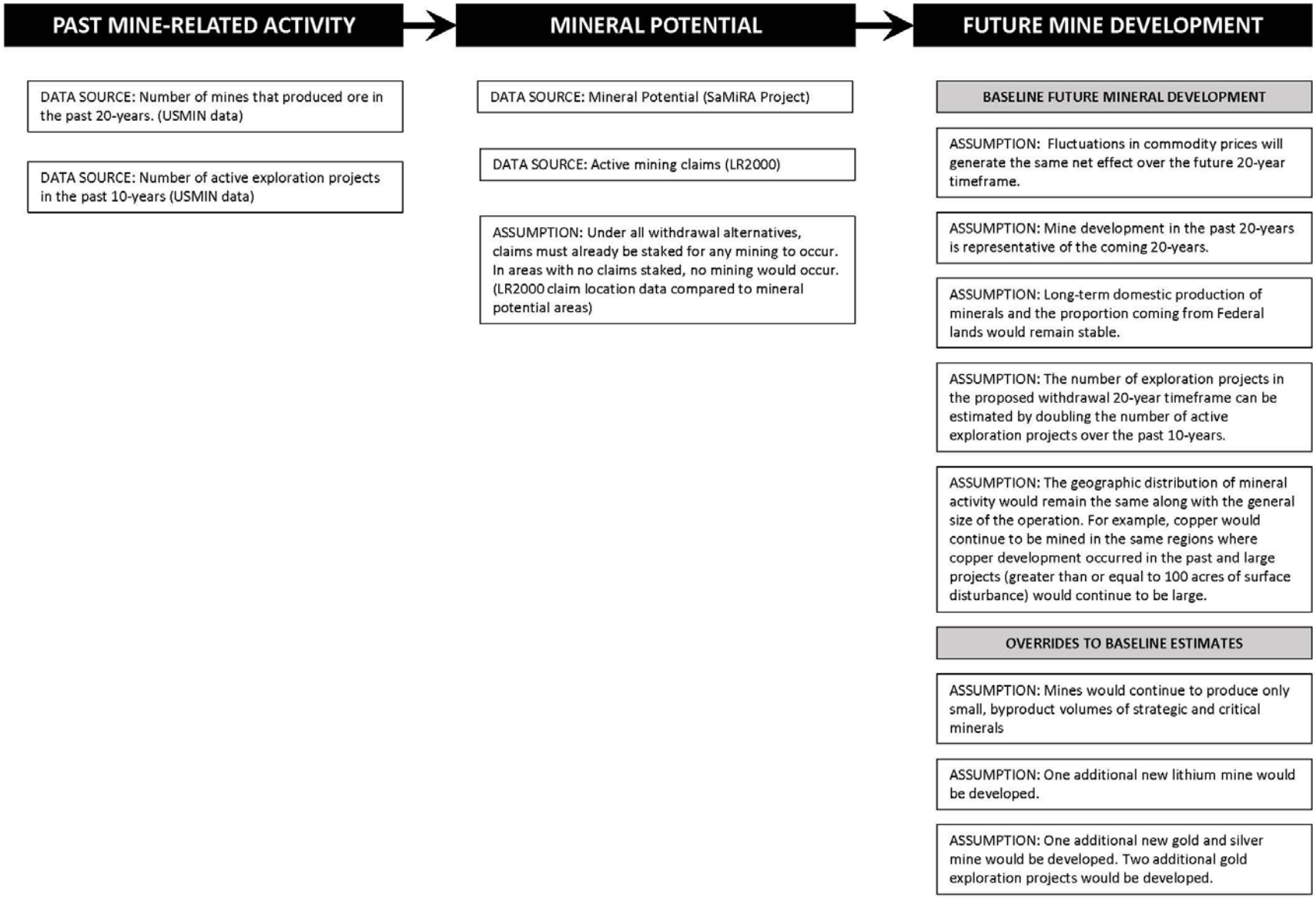


Figure 1. Reasonable Foreseeable Development Analysis.

Specific assumptions are listed throughout the RFD and are numbered sequentially for ease of reference. The overarching assumptions are discussed below.

The location of past exploration projects and mines is fundamentally based on the existence of mineral deposits and the likelihood of those lands to yield minerals in economically viable quantities. This likely remains true for the future, so the general geographic location of projects was estimated using mapped mineral potential in conjunction with past project location.

How and when minerals were mined and exploration projects were completed in the past was based in large part on the price of the target commodity being mined. Past economic conditions included significant swings in commodity prices, which created swings in the development of exploration projects and mines. The fact of these variations suggests that it would not be useful to base an analysis on a fixed estimate of future commodity prices. Instead, this RFD considers past events as a prediction of future development under the assumption that future swings in commodity prices would be similar to past swings over a similar timeframe. Other factors that may impact future project development include changes in technology, market conditions, and geopolitical climate. Mine development and exploration projects that occurred over the past 20 years were used as the primary basis for estimating the baseline number and size of mineral development projects that would potentially occur in the proposed 20-year withdrawal period. In some cases, conditions in a particular industry or region necessitated overriding the baseline future mineral development estimates. The rationale for, and results of, these overrides were discussed individually. Finally, tables were prepared that estimate the number and size of mineral development projects over the 20-year timeframe within the proposed withdrawal area by states and counties.

1.2 Study Area

The proposed withdrawal area encompasses portions of six states, as shown on Figure 2. This proposed withdrawal covers irregular, patchy areas over a large geographic region which makes spatial analysis difficult. Additionally, it is not possible to predict the exact location of a future mine or exploration project. Factors determining the optimal place to explore or mine may include historic exploration records, estimated ore body geometry, surface topography, regional hydrology, land ownership, permitting constraints, and access to necessary infrastructure. Thus, this RFD studies a larger, more contiguous area compared to the proposed withdrawal area. The larger extent of the study area provides a conservative estimate of the number and geographic distribution of possible future development. The study area also includes lands adjacent to the original proposed withdrawal area that were proposed by the State of Nevada as an alternative to the proposed withdrawal. Figure 2 shows the larger study area as well as the extent of the proposed withdrawal. The RFD focuses on Federal surface and minerals administered by the BLM, and Forest Service-administered surface. Activities on private or state lands were included where informative, but are not subject to the proposed withdrawal.

1.3 Mineral Deposit Types and Commodities Evaluated

This RFD analysis includes only locatable minerals; salable and leasable mineral resources were not considered because they would not be subject to the proposed withdrawal. Leasable and saleable mineral resources are subjects to constraints with the Sagebrush Focal Area (SFA) as a result of the approved land use plan amendments. Table 1 provides a list of the locatable minerals that have the potential to occur within the study area and were evaluated in this RFD.

Table 1. Locatable minerals with the potential to occur in the study area

Element Symbol	Locatable Metals / Metalliferous Minerals
Ag	Silver
Au	Gold
Ba	Barium
Cu	Copper
Fe	Iron
Ga	Gallium
Hg	Mercury
Li	Lithium
Mo	Molybdenum
Pb	Lead
Sb	Antimony
U	Uranium
W	Tungsten
Zn	Zinc
CaF_2	Fluorspar (Fluorite)
Pd	Palladium
Pt	Platinum
Te	Tellurium
Ti	Titanium
Rare Earth Elements	
Th	Thorium
Nb	Niobium
Ta	Tantalum
Zr	Zirconium
Hf	Hafnium
U	Uranium

Locatable Minerals / Nonmetallic Minerals
Bentonite
Diatomite
Diamond
Zeolite
Potentially Locatable Nonmetallic (Industrial) Minerals, Depending on Quality
Clay, specialty
Gemstone
Gypsum
Sunstone

2. DATA SOURCES

In order to provide a systematic basis for analysis of the No Action Alternative, as well as the other alternatives, this RFD relies on existing, publicly available datasets that were standardized across the six-state area. Spatial and tabular data developed by the U.S. Geological Survey (USGS) and the BLM were the primary sources of information. These data were compiled, analyzed, and reported using Geographic Information System (GIS) tools and methods.

2.1 USGS SaMiRA

For a withdrawal of more than 5,000 acres from mineral entry, as has been proposed, the BLM must complete a mineral resource assessment to identify mineral resources within the proposed area of withdrawal (43 CFR 2310.3-2). The analysis must provide information on the general geology, known mineral deposits, past, and present mineral production, mining claims, mineral leases, evaluation of mineral potential, and review of mineral economics. Thus, at the request of the BLM, USGS prepared the Sagebrush Mineral Resource Assessment (SaMiRA) with the primary focus of providing qualitative mineral resource assessments for the significant locatable mineral commodities. The SaMiRA report also informs development of this RFD, as the basis of analysis of the environmental consequences of the proposed withdrawal, including the alternatives.

> *The USGS Sagebrush Mineral-Resource Assessment (SaMiRA) project was initiated in November 2015 and supported by the BLM to (1) assess locatable mineral-resource potential and (2) to describe leasable and salable mineral resources for the seven SFAs and Nevada additions. Because of the limited duration of the SaMiRA project, the effort focused on publically available geoscience data. Additionally, the State geological surveys of Idaho, Montana, Nevada, Oregon, Utah, and Wyoming provided valuable mineral resource and geologic data, as well as scientific expertise. Information was solicited directly by the USGS from the mineral industry, as well as through BLM's public comment process, regarding any information the mineral industry wished to make public and have considered in the assessment* (Day et al. 2016).

The timeframe for data considered in the SaMiRA analysis was extensive but is difficult to quantify given the wide variety of source material incorporated. No definitive analysis starting date was chosen; historic resources were evaluated based on their quality and incorporated with more current analysis, as scientifically applicable.

The USGS mineral resource assessments for locatable mineral commodities were based on integration of available digital geospatial information that addressed the favorability criteria defined by specific mineral deposit models applicable to the USGS study area. "A mineral deposit is a mineral concentration of sufficient size and quality that it might, under the most favorable of circumstances, be considered to have potential for economic development" (Day et al. 2016). The deposit models compiled for the SaMiRA project relied on large, regional-scale geoscience datasets to delineate tracts that were considered "permissive" of locatable mineral commodities and resulted in landscape-scale qualitative mineral resource assessments. Permissive, in this case, is used to refer to areas that have the geologic building blocks necessary to allow the minerals of interest to exist (Neuendorf et al. 2011). USGS mineral-resource specialists determined permissive (also referred to as favorable) geologic environments by integrating and assessing different lines of evidence (USDI BLM 1985). This included favorable rocks, favorable geologic structure, evidence of rock alteration, geochemical evidence, geophysical evidence, evidence from mineral occurrences, and evidence from other sources like mineralogy. The USGS team brought together these lines of evidence to define spatial extents which were individually referred to as tracts permissive for the deposit type. In addition, the tract was drawn to include direct evidence of

mineral occurrences, such as deposits that had a defined resource. "Among valuable sources of data on active mines in the SaMiRA region are State agency data for mine permits and BLM and Forest Service Plans of Operations" (Day et al. 2016). For additional data sources used to prepare the SaMiRA project, see Chapter A of the USGS document.

The SaMiRA project delineated 151 individual tracts with deposit types likely to occur in the SFAs, which are the focus of the proposed withdrawal (Day et al. 2016). Like geologic layers, an area delineated as one tract with a given deposit type may overlap an area delineated as another deposit type. Assorted tracts may fall into one deposit type, and assorted deposit types in turn fall into groupings called mineral systems. The deposit types within a mineral system share broad genetic characteristics or processes of formation. Figure 3 shows the aerial extent of the mapped tracts symbolized by mineral system, along with the study area (which is the same for the SaMiRA project and this RFD analysis).

Relating deposit types to commodities adds complexity to the analysis because one deposit type may contain many commodities. "Most mineral commodities occur in a variety of different types of mineral deposits. Gold, for example, occurs in surficial concentrations as placer deposits, in some volcanic environments as epithermal vein deposits, in metamorphic terrains as orogenic gold deposits, and as a coproduct in porphyry copper deposits that form in shallowly emplaced igneous intrusions" (Day et al. 2016). Conversely, a polymetallic vein may contain silver, gold, lead, copper, zinc, antimony, molybdenum, and/or barium in varying quantities. An individual tract may contain more or less of these elements and the probability of mining the deposit would depend on the commodity prices, ore grades, and other project-specific factors. Table 2 lists mineral systems and deposit types in the SaMiRA project study area along with the commodities that may exist within them.

Table 2. Mineral systems, deposit types, and potential commodities in the proposed withdrawal area

Mineral Systems and Deposit Types	Potential Commodities
Heavy mineral placer	Ti, rare earth elements, Th, Nb, Ta, Zr, U, Hf
Placer gold	Au
Lacustrine diatomite	Diatomite
Bentonite	Bentonite
Sediment-hosted stratabound copper	Cu, Ag
Sandstone uranium (rollfront) in intermontane basins	U
Zeolite	Zeolite
MVT lead-zinc-silver	Zn, Pb, Ag
Stanley District sandstone-type uranium	U
Orogenic low-sulfide gold-quartz vein	Au, Ag
SEDEX lead-zinc-silver	Zn, Pb, Ag
Bedded barite	Ba

Table 2. (continued)

Mineral Systems and Deposit Types	Potential Commodities
Hydrothermal-exhalative-magmatic processes	
Volcanogenic massive sulfide (Besshi-subtype)	Cu, Pb, Zn, Au, Ag
Hydrothermal-volcanic rock associated	
Epithermal gold-silver (mercury)	Au, Ag, Cu, Pb, Zn, Hg, Sb, Ga
Epithermal gypsum	Gypsum
Volcanogenic uranium (Aurora and Kings River type)	U
Hydroallogenic volcanic-hosted uranium	U
Specialty gemstone	Gemstone
Hectorite (lithium-rich clay)	Li
Specialty clay	Clay
Hydrothermal-volcanic or -plutonic rock associated	
Jasperoid precious metal	Ag, Au
Hydrothermal-plutonic rock associated	
Porphyry	Ag, Pb, Zn, Cu, Au, W, Sb
Porphyry copper, Climax-type porphyry molybdenum, and Copper skarn	Cu, Mo, etc.
Climax-type porphyry molybdenum	Mo, Au, Ag, Cu, Zn, Pb
Arc-related porphyry molybdenum (low-fluorine)	Mo, (Cu)
Porphyry copper, Copper skarn	Cu, Mo, Au
Porphyry, skarn	Cu, Zn, Ag, Au, Pb
Copper skarn	Cu, Ag, Au, Pb, Mo
Molybdenum-tungsten greisen	W, (Mo)
Tungsten skarn	W, Pb, Ag, Au
Polymetallic replacement	Ag, Pb, Au, Cu, Sb, Zn
Polymetallic vein, polymetallic replacement, skarn	Au, Ag, Cu, Pb, Zn, Fe, W
Polymetallic vein, skarn	Ag, Pb, Au, Cu, Zn, Sb
Polymetallic vein, polymetallic replacement	Ag, Pb, Cu, Zn, Au
Polymetallic vein	Ag, Au, Pb, Cu, Zn, Sb, Mo, Ba
Distal-disseminated silver-gold	Ag, Au, Pb, Cu, Sb, Hg
Distal-disseminated silver-gold, polymetallic vein	Au, Ag, Sb, Pb, Zn, Hg, Mo, Cu
Tungsten and molybdenum skarn	Mo, W, Pb, Ag, Au
Tungsten vein	W
Carlin-type gold (silver, mercury, antimony)	Au, Ag, Hg, Sb
multiple	(blank)
Magmatic - directly related to igneous processes	
Diatreme-hosted diamond	Diamond
Basalt-hosted sunstone	Sunstone

Additional information from the SaMiRA project was included in the RFD analysis. A locatable mineral market-demand analysis including an assessment of deposit types that may contain strategic and critical materials was developed.

2.2 USMIN

A core part of the USGS Mineral Resources Program's mission is to inventory the mineral resources of the United States. The first USGS digital mineral resource database began to be built in the late 1960s (Day et al. 2016). USGS mineral-related databases have evolved since then, incorporating a variety of mining information into databases with different names and structures. In 2012, the USGS Mineral Deposit Database (USMIN) project began with the objective of providing an up-to-date, comprehensive, site-specific, geospatial database of the mines, mineral regions, and mineral occurrences of the United States. The following year, an interagency agreement covering the USMIN project was implemented with the BLM Solid Minerals Program, whereby BLM provided additional funding for the project (Day et al. 2016). Personnel working on USMIN were temporarily retasked to work exclusively on the SaMiRA project, and the products of the USMIN project were tailored to meet the needs of the SaMiRA project.

Data compilation efforts for the USMIN project were extensive.

> *The data were compiled from all publicly available sources including USGS publications, data from other Federal agencies, State geological surveys, other State agencies, geological societies, and mineral-industry data. A considerable amount of additional data came from sources such as industry Web sites, press releases, presentations, annual reports, and technical reports filed with regulatory agencies. An important example is the technical reports prepared in accordance with Canadian National Instrument 43-101, referred to as "NI 43-101 Reports." Completed preliminary maps of active mines and exploration sites were sent to the State geological surveys of Montana, Wyoming, Idaho, Utah, Nevada and Oregon for review and comment. Data were also sent to BLM and U.S. Forest Service geologists in the affected regions. Maps of active mine and exploration sites were also displayed at the annual meeting of the American Exploration and Mining Association (AEMA) in December 2015. Industry and government agency personnel at the meeting were invited to review the maps and the site listings and identify missing sites. In April 2016, BLM provided the USGS with copies of public comments received on the proposed land withdrawals. Comments specific to mineral resources were reviewed to insure that any specific mineral occurrences, mines, and (or) exploration sites mentioned were in the data being used by the assessment teams* (Day et al. 2016).

As indicated, information was collected from BLM as well Forest Service sources, making the resulting analysis representative of activity throughout the proposed withdrawal area. Two of the datasets that were produced as part of the USMIN project were incorporated into this RFD analysis. These included active exploration projects and mine sites.

2.2.1 Recently Active Exploration Sites

Information on active exploration sites were compiled as follows:

> *The collection of information on the location and nature of active mineral-exploration projects in the United States was one of the principal components of the USMIN data compilation effort before the SaMiRA project. Previously collected and newly compiled data for exploration projects within the SaMiRA areas were compiled into the Exploration Sites data theme. Exploration projects were classed as "active" if data on exploration*

> *activity within the past 10 years could be found. Key sources for the SaMiRA project area were the annual exploration reports and other reports of the [Nevada Bureau of Mines and Geology] NBMG, Idaho Geological Survey, Utah Geological Survey, Wyoming Geological Survey, Oregon Department of Mineral Industries, and Montana Bureau of Mines and Geology. Other data were collected from mining trade publications, such as the Canadian and American Mines Handbook, the Northern Miner, and Mining News. Additional important sources of information were the individual mining company Web sites and technical reports filed in the Canadian System for Electronic Document Analysis and Retrieval (SEDAR) on-line database* (Day et al. 2016).

The analysis timeframe of this RFD includes the past 20 years while this dataset covers only the past 10 years, which may create a disconnect in the analysis. Subsequent sections discuss how this data gap has been addressed. This RFD analysis attempts to classify past exploration projects as small or large based on the surface area that they disturbed, but disturbance area was not provided in the USMIN dataset. Mineral resource specialists from BLM and Forest Service offices throughout the six states, as well as Washington D.C. headquarters offices, were assembled into a team, referred to as the Mineral Working Group, and asked to fill this data gap. A list was prepared of the active exploration sites within the study area by state and county; the list was distributed to the Mineral Working Group, and they were asked to indicate which projects generated a disturbance area of greater than 5 acres. The 5-acre cutoff was selected because BLM regulations require any operations disturbing greater than 5 acres to be conducted under an approved mining plan of operations. A Mineral Working Group member added one exploration project to the analysis because of local knowledge that the exploration project existed within the study area and was active in the past 10 years. The exploration project information gathered from USMIN and the Mineral Working Group was used in subsequent sections to categorize past exploration projects in a given location as small, disturbing less than or equal to 5 acres of surface area, or large, disturbing greater than 5 acres of surface area.

2.2.2 Mine Sites

Information on mine sites was compiled as follows:

> *Data on mines, both active and closed, in the assessment areas were compiled from a number of sources to form the Mines data theme. The USGS National Mineral Information Center (NMIC) publishes data on active mines and mineral processing plants in the United States (USGS 2016) and provided the 2011 version of these data to the SaMiRA project. These data include only mines that voluntarily report data to NMIC. In the USMIN project these data are augmented by data collected from other sources such as the Mine Safety and Health Administration (MSHA) and other Federal and State agencies so that as complete an inventory of mines as possible could be compiled. Amongst valuable sources of data on active mines in the SaMiRA region are State agency data for mine permits and BLM and USFS Plans of Operations. The data-capture process for mines emphasized accurate locations and status data that were as timely as possible. Permit data were checked using digital air photos, and locations were corrected to the actual site of the mining activity. Where applicable, notes on the current level of activity, as visible on air photos, were made* (Day et al. 2016).

Information about the last time these mines operated was not included in the Mine Sites dataset. In order to use this information to inform this RFD analysis, it was necessary to determine which of the mines in the study area had operated within the past 20 years. Similar to the active exploration projects, a list was prepared of the mine sites within the study area by state and county. The Mineral Working Group was asked to indicate if a project produced ore after 1995 (past 20 years). During some circumstances, a mine

may be considered "active" during periods of reclamation and temporary suspension; other circumstances may not warrant characterizing such a mine as "active," so the data request focused on the production of ore, as this focus would generate more consistent results. This approach also meant that mines would be included in the analysis irrespective of when they began authorized operations. Mineral Working Group members added six additional mines to the analysis because they had local knowledge that those mines existed within the study area and produced ore in the past 20 years.

In addition to determining if the mine produced ore within the 20 year timeframe, the Minerals Working Group was asked to indicate if the mines' disturbance area was equal to or greater than 100 acres. The 100-acre cutoff was selected based on disturbance area information retrieved from the BLM Legacy Rehost System (LR2000). The LR2000 database was queried for BLM plans and notices that contained disturbance area information. The resulting data was statistically evaluated (using tools such as histogram, median, average and count) at different size thresholds and 100 acres appeared to be a logical demarcation between large and small mines. The resulting information was used in subsequent sections to categorize mines as small, disturbing less than 100 acres of surface area, or large, disturbing greater than or equal to 100 acres of surface area.

2.3 BLM LR2000

In addition to the data sources listed above, USGS relied on the BLM's electronic database, the Legacy Rehost System (LR2000), for information on evidence of mineral occurrences, mining claims, and surface management (43 CFR 3809) authorizations (Day et al. 2016). The BLM extracted information from LR2000 on March 6, 2016, for the purpose of incorporation into the SaMiRA analysis. This dataset was also used in this RFD analysis to map the location of active mining claims as of the date that the notice of the proposed withdrawal was published in the Federal Register (September 24, 2015). Mining claims can be dropped at any time throughout the year so these data will be updated as necessary during the National Environmental Policy Act (NEPA) process. No mining claims can be located on lands subject to the segregation and proposed withdrawal so, during the segregation, the number of active mining claims and area covered by them can only remain the same or be reduced.

3. PAST AND PRESENT MINING-RELATED ACTIVITY

As discussed above, mine development and exploration projects that occurred over the past 20 years were used in this RFD analysis as the primary basis for estimating the number and size of mine development projects that would potentially occur in the proposed 20-year withdrawal period.

The location of past exploration projects and mines is fundamentally based on the existence of mineral deposits and the likelihood of those lands to yield minerals in economically viable quantities. This likely remains true for the future, so the general geographic location of future projects was estimated using mapped mineral potential in conjunction with past project locations.

How and when minerals were mined in the past was based in large part on the price of the target commodity being mined. Past economic conditions have included significant swings in commodity prices, which created drastic changes in rates of development of exploration projects and mines. This RFD analysis assumes that future swings in commodity prices would be similar to past development rates over a similar timeframe.

The following methodologies were used to determine past and present mining-related activity:

- **Methodology 1:** Past exploration project locations, captured in the USMIN "Active Exploration" dataset were used to determine the future location and number of exploration projects.

- **Methodology 2:** The specialized knowledge of the Mineral Working Group was used to determine if the exploration projects were large or small based on a 5-acre disturbance area cutoff.

- **Methodology 3:** USMIN past mine location data was used to determine the location and number of mines that produced ore within the study area.

- **Methodology 4:** The specialized knowledge of the Mineral Working Group was used to determine if the selected mines produced ore within the last 20 years. They also determined if the mines were large or small based on a 100-acre disturbance area cutoff.

- **Methodology 5:** This assessment evaluated mining activity – not new mines or inactive mines – that occurred within the past 20 years. The reason for this assumption is that the resources carried forward for detailed analysis in the EIS are dependent, in large part, on ground disturbance and economic gain. Both of these would receive little if any positive or negative impact when mineral development projects are inactive. Periods of ore production were considered most likely to have the greatest extent of ground disturbance and economic gain.

USMIN exploration and mine data were limited to the study area, restricted to focus on locatable mineral commodities, then intersected with state and county boundaries to allow the data to be reported by functional areas in the EIS. The results of this process are provided in Tables 3 and 4.

Table 3. Number of mines in the study area by state and county

State	County	Number of Mines*	Mine Size**	Commodities
Idaho	Butte	1	Large	Gold; silver
	Custer	5	Small	Jasper
		1	Small	Plume agate
		1	Small	Zeolite
		1	Small	Gold; silver; copper; lead; zinc
Idaho Total		**9**		
Montana	Valley	1	Large	Bentonite
Montana Total		**1**		
Nevada	Elko	1	Large	Barite
Nevada Total		**1**		
Oregon	Lake	7	Small	Gemstone
		2	Small	Gemstone; sunstone
	Malheur	1	Small	Gemstone
Oregon Total		**10**		
Wyoming	Fremont	2	Small	Gold
		1	Small	Tungsten
Wyoming Total		**3**		
Grand Total		**24**		

* Mines that produced ore in past 20 years.

** Small: less than 100 acres of surface disturbance; Large: greater than or equal to 100 acres of surface disturbance. Mines with unknown size and production dates were assumed to be legacy and removed.

Table 4. Number of active exploration projects in the study area by state and county

State	County	Commodities	Exploration Project Size*			
			Large	Small	Unknown	Total
Idaho	Butte	Gold; silver	1	2		**3**
	Cassia	Gold		2		**2**
	Clark	Copper; lead; zinc		2		**2**
		Gold; silver		1		**1**
	Custer	Gold; silver; copper; zinc		1		**1**
	Lemhi	Gold; silver		1		**1**
	Lincoln	Gold; platinum; palladium		1		**1**
		Gold; silver; platinum		1		**1**
	Owyhee	Gold; copper; zinc		1		**1**
Idaho Total			**1**	**12**		**13**
Montana	Valley	Bentonite	1			**1**
Montana Total			**1**			**1**
Nevada	Elko	Copper	1			**1**
		Gold	3	8	9	**20**
		Gold, silver	1			**1**
		Gold; molybdenum		1		**1**
		Gold; silver		2	1	**3**
		Gold; silver; copper		1		**1**
		Gold; silver; copper; tellurium		1		**1**
		Silver; lead; zinc		1		**1**
		Tungsten	1			**1**
		Uranium; molybdenum		1		**1**
	Humboldt	Gold			3	**3**
		Gold; silver		1	1	**2**
		Gold; silver; copper; lead; iron			1	**1**
		Gold; silver; mercury; gallium			1	**1**
		Lithium			1	**1**
Nevada Total			**6**	**16**	**17**	**39**
Oregon	Lake	Gold; silver; copper; mercury		1		**1**
	Malheur	Lithium		1		**1**
		Uranium	1			**1**
Oregon Total			**1**	**2**		**3**
Grand Total			**10**	**29**	**17**	**56**

* Small: less than or equal to 5 acres of surface disturbance; Large: greater than 5 acres of surface disturbance; active exploration in the past 10-years.

4. MINERAL POTENTIAL

To determine the potential for future mineral development, it is necessary to evaluate both the likelihood of the occurrence of desirable mineral resources (presence of target minerals) and the potential for development of a mine or exploration project (physical and economic ability to access the deposit). This section focuses on the former and utilizes information provided by the USGS SaMiRA project.

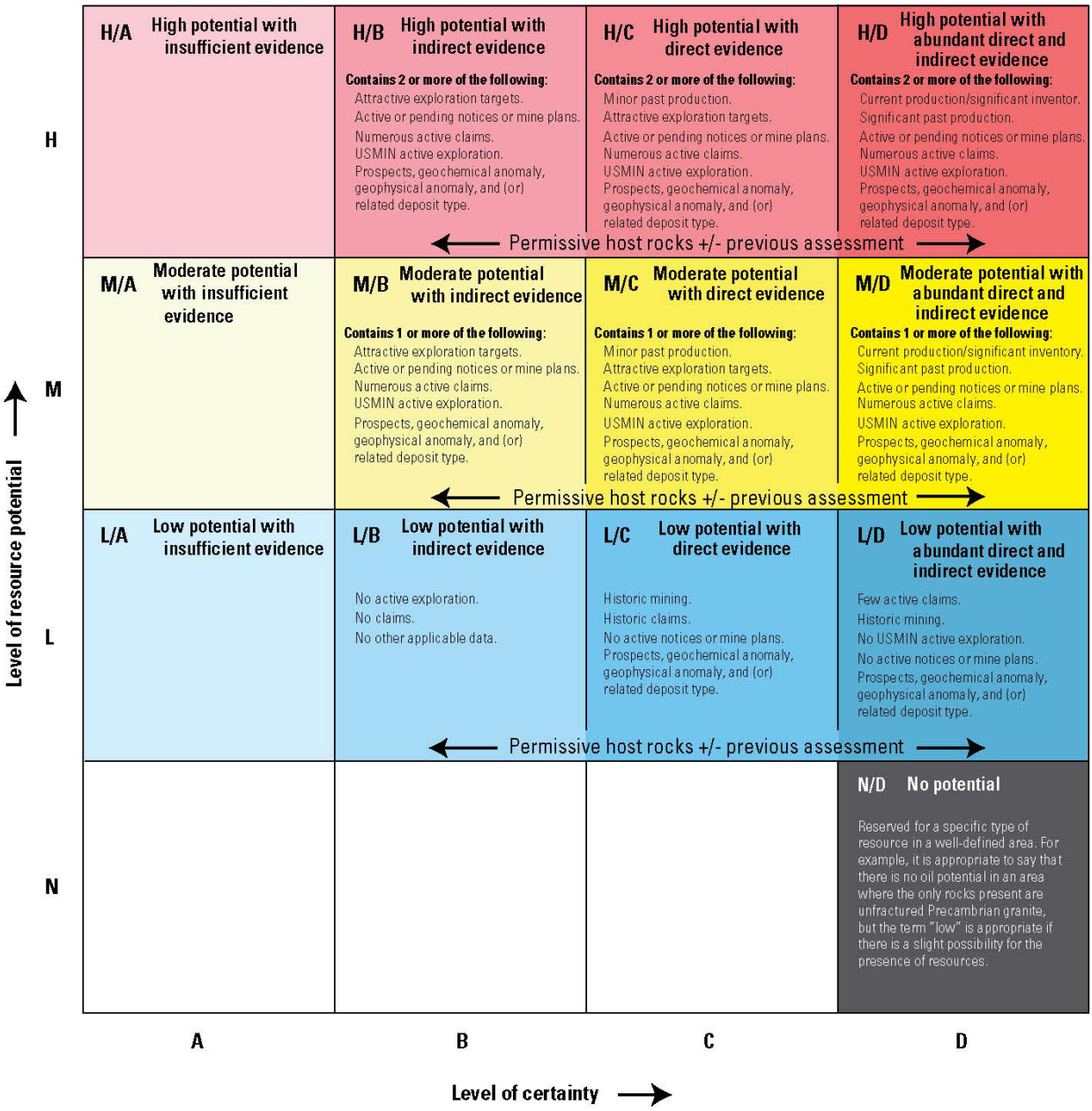
As discussed in Chapter A of the SaMiRA report,

> *The potential for mineral resources is a prediction of the likelihood of the occurrence of these resources. The specific form of the assessment qualitatively classifies mineral potential into categories based on the level of potential and the level of certainty as specified in the BLM Manual 3031 and 3060. The level of potential is based on favorable geologic environment, inferred geological processes, mineral occurrences, and other evidential data such as geochemistry and geophysics. The level of certainty is based on the amount of direct and indirect evidence to support the interpretation of the level of potential. For this study, a geologically based assessment method used the interrelated concepts of mineral deposit types and mineral systems to evaluate mineral resource potential. Models based on these concepts provide a predictive capability largely based on analogy with well characterized mineral deposits and research on geologic processes of ore formation.*
>
> *In this study, we report mineral potential by deposit type, rather than commodity, to facilitate the evaluation of reasonably foreseeable development. We use our understanding of geologic processes to define favorable geologic environments and elevated mineral potential. This assessment addresses the potential for deposits that may occur within the upper 1 kilometer of the Earth's surface. Exploration and development of deeper-seated deposits is technically feasible, but extremely costly.*
>
> *Individual mineral deposits are small parts of much larger mineralizing systems. Knowledge of processes that control where mineral deposits form at regional- and local-scales is used to describe favorable geologic environments and can be expressed by mineral systems models. The mineral system concept provides a framework for considering what could occur in a given setting* (Day et al. 2016).

4.1 Simplifying Mineral Potential Within the Study Area

The graphic below (Figure H3 from Chapter A of the SaMiRA report) depicts the matrix of possible mineral potential and certainty designations and criteria used for the mineral resource assessment. The levels of resource potential include:

- N, not determined or no potential;
- L, low;
- M, moderate; and
- H, high.



The levels of certainty include:

- A, insufficient evidence;
- B, indirect evidence;
- C, direct evidence; and
- D, abundant evidence.

In order to utilize this mineral potential characterization to inform this RFD and EIS analyses, assumptions were made and a resulting compiled spatial dataset was generated.

The following methodologies were used to assess mineral potential:

- **Methodology 6:** Areas of high, moderate, and low mineral potential were simplified and evaluated as a block, regardless of their individual deposit type. The complexity of the deposit types mapped in the study area, the large study area size, and the anticipated alternatives analysis necessitate this simplification. The drawback of utilizing this methodology is that it blurs the connection between a mineral deposit's potential to yield the commodities it is thought to contain, and the mine or exploration project that may have existed in that tract in the past.

- **Methodology 7:** The analysis of mineral potential included all four levels of certainty evaluated by USGS. Including all levels of certainty focused this analysis on the maximum extent of potential future mining because changes in geologic ideas, technology, market conditions, and geopolitical climate may drive the areas less studied in the past to become the focus of greater study and resulting certainty in the future.

In order to implement the above assumptions, areas were merged based on mineral potential categories – high, moderate and low – giving precedence to the higher potential category when overlaps were encountered. More precisely, areas of high, moderate, and low potential were selected, regardless of their deposit type or certainty, and merged into composite layers of high, moderate, and low potential. These three layers were then combined, and if an area of high potential overlapped an area of moderate or low potential, the higher designation was retained.

Using this simplified dataset, mineral potential in the study area was intersected with state boundaries and the proposed withdrawal area to generate Table 5 and Figures 4a through 4f.

Table 5. Area in acres of mineral potential by state in the study area and proposed withdrawal area

State	Analysis Area*	High	Moderate	Low	Not Determined or No Potential	Grand Total
Idaho	Withdrawal Area	25,988	216,472	1,634,529	2,084,836	**3,961,824**
	Surrounding Area	81,039	288,518	1,600,343	1,990,069	**3,959,969**
Montana	Withdrawal Area	57,761	43,466	405,738	370,659	**877,624**
	Surrounding Area	45,950	149,068	1,227,409	275,720	**1,698,147**
Nevada	Withdrawal Area	403,808	100,371	860,055	1,403,317	**2,767,552**
	Surrounding Area	254,821	184,845	541,223	1,402,461	**2,383,350**
Oregon	Withdrawal Area	66,581	21,133	73,562	1,682,263	**1,843,539**
	Surrounding Area	34,335	40,023	79,827	1,626,418	**1,780,603**

Table 5. (continued)

State	Analysis Area*	High	Moderate	Low	Not Determined or No Potential	Grand Total
Utah	Withdrawal Area	3,452	34,025	39,044	157,304	**233,824**
	Surrounding Area	7,242	48,777	105,094	303,522	**464,635**
Wyoming	Withdrawal Area	1,328	109,723	79,126	74,907	**265,085**
	Surrounding Area	27,456	269,370	155,203	323,809	**775,837**
Total	**Withdrawal Area**	**558,918**	**525,191**	**3,092,053**	**5,773,287**	**9,949,448**
	Surrounding Area	**450,843**	**980,601**	**3,709,098**	**5,921,999**	**11,062,541**
Study Area Grand Total		**1,009,761**	**1,505,792**	**6,801,150**	**11,695,286**	**21,011,989**

* The Surrounding Area is the margin between the withdrawal area and the study area boundary.

4.2 Existing Mining Claims

Under the No Action Alternative, mineral development can take place throughout the study area, subject to compliance with BLM and Forest Service regulations governing mining under the Mining Law. So long as the lands remain open to location under the Mining Law, mining claims can be staked or "located" at any time, then subsequently the mineral deposits subject to those claims may be explored and mined. While locating a mining claim is not required in order to mine on lands open to mineral entry, it is common practice to do so and it is informative to consider the number of active mining claims in the area as compared to the number of mines and exploration projects. LR2000 tracks the geographic location of a mining claim by the Public Land Survey System (PLSS) Section(s) that it occurs in. That generally equates to a larger area than the exact extent of the mining claim, however it is the best, readily available geographic information. Table 6 provides the number of mines, exploration projects and active claims in the study area.

Table 6. Numbers of mines, exploration projects, and active claims in the study area

State	Number of Mines*	Number of Exploration Projects**	Number of Active Claims***
Idaho	9	13	1,939
Montana	1	1	946
Nevada	1	39	14,687
Oregon	10	3	985
Utah			79
Wyoming	3		106
Total	**24**	**56**	**18,742**

* Mines that produced ore in the past 20-years.
** Active exploration projects within the past 10-years.
*** Extracted from LR2000 on March 6, 2016 and processed by USGS during the SaMiRA analysis.

An analysis of the above table indicates that the number of claims located in an area cannot be used to predict the number of mines or exploration projects that might be located in the area and/or when mineral development activity would take place. Some reasons for this unpredictability include:

- Mining claims may be located based on little or no evidence of locatable minerals and, consequently, never developed.
- Mining claimants may locate mining claims over a much larger area than the geographic extent of the mineral deposit known at that time, in order to make certain that no mineable ore is missed and to allow for flexibility in mine design options.
- Some lands are subject to multiple mining claims. This practice of locating mining claims on lands already subject to existing mining claims allows a subsequent "junior" locator to assert rights to a mineral deposit if the original "senior" mining claimant abandons or forfeits the mining claim. Thus the number of unique acres claimed might be smaller than the number of mining claims might suggest.
- The variable nature of commodity prices means that ore may be discovered and mining claims staked even though the commodity price would not make recovery of the ore profitable at that time. Mining claimants may continue to hold their mining claims and pay annual maintenance fees for many years in hopes that a future commodity price increase or new technology would make them economical to develop.
- Mining claims vary widely in size, from fractional lode claims under 5 acres to 160-acre placer mining claims.
- Table 6 only includes mining claims and not mill sites, the number and availability of which may impact whether mining operations occur and the amount of disturbance they cause.
- Variations in the size and value of the deposit may lead to very different numbers of claims. For example, one ore body may be quite small, resulting in fewer claims whereas a different type of ore body may be very large, resulting in a large number of claims.
- The principle of self-initiation under the Mining Law means that the mining claimant, rather than BLM or the Forest Service chooses whether and when to develop the mineral deposit in the mining claims.

When lands are withdrawn or segregated from the operation of the Mining Law, subject to valid existing rights, no new claims may be located on those lands and any new mining operations on those lands can only be conducted on valid mining claims. This means that under all withdrawal alternatives, the number of mining claims existing as of the date the notice of proposed withdrawal was published in the *Federal Register* and the lands were segregated from the operation of the Mining Law (September 24, 2015) would be the maximum number of mining claims that could be developed on those lands during the withdrawal period[1]. Therefore, in areas containing no active mining claims as of that date, including areas where mining claims are closed (abandoned, forfeited, or declared null and void) during the segregation or withdrawal, no mining would occur. Table 7 provides information on the area in each state within the proposed withdrawal that contains active mining claims and the area that does not, by mineral potential.

[1] If a withdrawal is not made by September 24, 2017, the lands will reopen to location and the number of active claims may change. However, this analysis assumes that the lands will not reopen and that the maximum is presented here.

Table 7. Area containing active mining claims by state and mineral potential in the proposed withdrawal area

State	Mineral Potential	Area (in Acres) Containing		
		Active Claims	**No Active Claims**	**Total**
Idaho	High	6,315	19,673	**25,988**
	Moderate	8,569	207,903	**216,472**
	Low	13,794	1,620,734	**1,634,529**
	Not Determined or No Potential	29,413	2,055,423	**2,084,836**
	Idaho Total	**58,091**	**3,903,734**	**3,961,824**
Montana	High	13,534	44,227	**57,761**
	Moderate		43,466	**43,466**
	Low	8,253	397,484	**405,738**
	Not Determined or No Potential	16,625	354,035	**370,659**
	Montana Total	**38,411**	**839,212**	**877,624**
Nevada	High	143,134	260,674	**403,808**
	Moderate	14,879	85,492	**100,371**
	Low	25,764	834,292	**860,055**
	Not Determined or No Potential	5,831	1,397,486	**1,403,317**
	Nevada Total	**189,608**	**2,577,944**	**2,767,552**
Oregon	High	14,969	51,612	**66,581**
	Moderate	5,731	15,401	**21,133**
	Low		73,562	**73,562**
	Not Determined or No Potential	1,029	1,681,234	**1,682,263**
	Oregon Total	**21,730**	**1,821,809**	**1,843,539**
Utah	High	382	3,070	**3,452**
	Moderate		34,025	**34,025**
	Low	7	39,036	**39,044**
	Not Determined or No Potential	6	157,298	**157,304**
	Utah Total	**395**	**233,430**	**233,824**
Wyoming	High		1,328	**1,328**
	Moderate	405	109,318	**109,723**
	Low		79,126	**79,126**
	Not Determined or No Potential	2,265	72,642	**74,907**
	Wyoming Total	**2,670**	**262,415**	**265,085**
	Grand Total	**310,905**	**9,638,544**	**9,949,448**

5. FUTURE MINERAL DEVELOPMENT

This RFD analysis was prepared to support the assessment of the reasonably foreseeable environmental impacts of the withdrawal proposal and alternatives. The assumptions developed and datasets used were necessary and broad due to the diversity of locatable minerals on Federal lands, variety of mining and exploration methods, geographic scope, inherent uncertainty of the commodities markets, and the principle of self-initiation under the Mining Law. The importance of this RFD is not the exact estimated number of future mines but, rather, the relative levels of estimated future mining-related activity across the alternatives. It is acknowledged that changes in geologic ideas, technology, market conditions, and geopolitical climate may, in reality, create very different future outcomes; however, at this time, those changes cannot be predicted sufficiently to utilize them to generate quantitative analyses.

Using the past and present mining-related activity discussed above, assumptions were developed that applied generally to the full study area and target commodities. These baseline assumptions and resulting analyses are presented in the section below. Subsequent sections discuss modifications made to the baseline analysis in order to better represent particular commodity markets and locational conditions.

5.1 Baseline Future Mineral Development Estimates

The following assumptions were made in order to develop baseline estimates about future mineral development:

- **Assumption 1:** Fluctuations in commodity prices would generate the same net effect to mineral development over the future 20-year timeframe as they did over the past 20-year timeframe.

- **Assumption 2:** Long-term domestic production of minerals and the proportion coming from Federal lands would remain stable.

- **Assumption 3:** The geographic distribution of mineral activity would remain the same along with the general size of the operation. For example, copper would continue to be mined in the same regions where copper development occurred in the past and large projects (greater than or equal to 100 acres of surface disturbance) would continue to be large. This assumption does not take into account new discoveries in areas previously thought to contain little or no potential (sometimes referred to as off-trend discoveries). Predicting these new discoveries is rare and not attempted in this RFD analysis.

- **Assumption 4:** The active exploration data provided by USMIN represents the timeframe from 2005 to 2015. This is half of the 20-year timeframe, so the number of estimated exploration projects per state and county were doubled to estimate a 20-year timeframe. While this assumption is necessary in order to compensate for the gap in data, it does not take into account the geographic variability of exploration that may have taken place during the timeframe for which real data were not included.

- **Assumption 5:** Public comments have been received that discuss the increases in Federal lands subject to withdrawal from location and entry under the Mining Law, and in mine permitting restrictions that encourage environmental preservation. It is not possible at this time to quantify past or future impacts of these conditions on mineral development due to the large number of variables that lead to decisions to mine or not to mine. Thus, this RFD analysis assumes that the regulatory environment of the past 20-years will continue unchanged. As a result, the analysis may estimate that a greater number of mines would be developed than might be expected under the existing and future regulatory climate because it is not possible to accurately predict the effects of the changing regulatory climate.

These assumptions were used, in conjunction with the data analysis methodologies prepared in Section 3, to estimate the baseline number and size of mines and exploration projects in the study area over the proposed 20-year withdrawal timeframe.

5.2 Overrides to Baseline Estimates

In some cases, it was determined by the Mineral Working Group that conditions in a particular industry or region necessitated modifying the baseline estimates of future mineral development. The rationale for and results of these exceptions are discussed below.

5.2.1 Strategic and Critical Minerals

Concern was expressed during public scoping of the EIS about the proposed withdrawal's potential impact on the availability of mineable strategic and critical minerals. The BLM requested that the SaMiRA project evaluate the likely presence of these minerals in order to better evaluate potential impacts. The SaMiRA report states:

> *There is no global consensus on a definition for "strategic and critical" commodities. In general, it has been accepted as those materials that are considered vital to support societal requirements and Government policy. The Defense Logistics Agency, Strategic Materials, in the U.S. Department of Defense, is the leading U.S. agency for the analysis, planning, procurement, and management of materials critical to national security. Among the agency's many functions, is the acquiring, upgrading, rotating, and disposing of materials needed to support national defense as authorized under the Strategic and Critical Material Act (50 U.S.C. 98 et seq.) (Defense Logistics Agency 2016). The stocks held by the agency include mineral-based commodities (alloys, compounds, metals, and minerals) that are not found or produced in sufficient quantity in the United States to meet the Nation's requirements and results in a dependence on foreign sources* (Day et al. 2016).

The SaMiRA report includes tables listing the elements of the non-fuel mineral-based commodities held as stock by the Defense Logistics Agency, as of September 30, 2015 as well as proposed additions of non-fuel mineral commodities in fiscal year 2016 (Day et al. 2016). Table 8 was limited to the commodities on either list that have the potential to occur within the proposed withdrawal area.

Table 8. Commodities with potential to be found within the assessment area held by the Defense Logistics Agency due to strategic or critical value

Element Symbol	Locatable Metals/ Metalliferous Minerals
Li	Lithium
Hg	Mercury
Mo	Molybdenum
Ti	Titanium
Th, Nb, Ta, Zr, Hf, U	Rare Earth Elements (Thorium, Niobium, Tantalum, Zirconium, Hafnium, Uranium)
W	Tungsten
Zn	Zinc

"None of the locatable mineral commodities containing the elements listed in (Table 8) are currently produced in significant amount and (or) as the primary source of revenue from mines operating within the assessment area; however, they may be produced as minor byproducts" (Day et al. 2016). Table 9 lists the areas with potential to contain strategic or critical commodities that could be produced as minor byproducts.

Table 9. Areas with high, moderate, or low potential to contain strategic or critical commodities produced as minor byproducts

State	Mineral Potential (Acres)
Idaho	1,472,066
Montana	55
Nevada	871,769
Oregon	111,117
Utah	9,391
Wyoming	455,803
Total	**2,920,203**

Strategic and critical commodities were evaluated to determine if an exception needed to be made in the baseline future mineral development estimates. Because these commodities have the potential to occur within the withdrawal area but are currently produced in only minor byproduct amounts, no adjustments were made to the baseline future mineral development estimates. Should a geopolitical event occur to necessitate increased domestic production of these commodities, it is possible for Congress or the Secretary of the Interior to reopen lands previously administratively withdrawn.

5.2.2 Lithium Mines and Exploration Projects

Concern was expressed in public scoping about the proposed withdrawal's potential impact on the newly-developing lithium mining industry. Lithium is used in the production of batteries, and the availability of this commodity in Nevada has spurred new economic development. "Tesla broke ground on the Gigafactory in June 2014 outside Sparks, Nevada, and we expect to begin [battery] cell production in 2017. By 2020, the Gigafactory will reach full capacity and produce more lithium ion batteries annually than were produced worldwide in 2013" (Tesla 2016). Given the relatively young market for this commodity and the increasing trend in domestic demand, an increase in the number of mines over the 20-year proposed withdrawal period was estimated by BLM mineral resource specialists in Nevada. Table 10 lists the maximum number of estimated mineral development projects containing lithium over the 20-year timeframe. This estimate was arrived at based on the professional experience and industry knowledge of Nevada BLM mineral resource specialists. The past exploration projects were carried over directly and one new mine in Humboldt County, Nevada was added.

Table 10. Estimated future numbers of lithium mines and exploration projects

State	County	Project Type	Number of Mineral Development Projects
Nevada	Humboldt	Lithium exploration project	2
		Lithium mines	1
Oregon	Malheur	Lithium exploration project	2
		Lithium mines	0
		Total	**5**

5.2.3 Gold Mines and Exploration Projects

Two large, well-defined gold resources have been developed through exploration drilling in the past 20 years in Elko County, Nevada. The Doby George deposit is in the study area but outside the proposed withdrawal area while the Island Mountain deposit is in the proposed withdrawal area. Each of these deposits may be mined when the gold price is somewhat higher than the current price. Historic trends in gold price in the past 20 years suggests that it may fluctuate upward sufficiently to cause one or both of these resources to become reserves and be mined in the next 20 years (Elliott 2016). Therefore, one large gold/silver mine was added to the estimated future mineral development in Elko County, Nevada.

In Oregon, there is currently a large epithermal gold mine in the permitting process just north of the study area in Malheur County. If this mine is successfully permitted, it may increase exploration activity in the area (Houston 2016). As a result, two large gold exploration projects were added to the estimated future mineral development in Malheur County, Oregon. Table 11 lists the additional number of estimated mineral development projects containing gold over the 20-year timeframe. These additional estimates were arrived at based on the professional experience and industry knowledge of Nevada Forest Service mineral resource specialists and a specialist from the Oregon Department of Geology and Mineral Industries.

Table 11. Additionally estimated future numbers of gold mines and exploration projects

State	County	Project Type	Number of Mineral Development Projects
Nevada	Elko	Gold; silver mine	1
Oregon	Malheur	Gold exploration project	2
		Total	**3**

5.3 Estimated Future Mineral Development

Taking into account the baseline future mineral predictions prepared at the beginning of this section and the overrides necessary to account for special circumstances, Tables 12 and 13 were prepared, which estimate the number and size of mineral development projects over the 20-year timeframe within the proposed withdrawal area states and counties. States that are not included in Tables 12 and 13 contain no estimated future mineral development projects in the 20-year withdrawal timeframe. No future mines are estimated to occur in Utah and no future exploration projects are estimated to occur in Utah or Wyoming.

Table 12. Estimated number of future mines in the proposed withdrawal area by state and county

State	County	Number of Mines	Mine Size*	Commodities
Idaho	Butte	1	Large	Gold; silver
	Custer	5	Small	Jasper
		1	Small	Plume agate
		1	Small	Zeolite
		1	Small	Gold; silver; copper; lead; zinc
Idaho Total		**9**		

Table 12. (continued)

State	County	Number of Mines	Mine Size*	Commodities
Montana	Valley	1	Large	Bentonite
Montana Total		**1**		
Nevada	Elko	1	Large	Barite
		1	Large	Gold; silver
	Humboldt	1	Large	Lithium
Nevada Total		**3**		
Oregon	Lake	7	Small	Gemstone
		2	Small	Gemstone; sunstone
	Malheur	1	Small	Gemstone
Oregon Total		**10**		
Wyoming	Fremont	2	Small	Gold
		1	Small	Tungsten
Wyoming Total		**3**		
Grand Total		**26**	**Large: 5 Small: 21**	

* Small: less than 100 acres of surface disturbance; Large: greater than or equal to 100 acres of surface disturbance

Table 13. Estimated number of future exploration projects in the proposed withdrawal area by state and county

State	County	Commodities	Exploration Project Size*			
			Large	Small	Unknown	Total
Idaho	Butte	Gold; silver	2	4		**6**
	Cassia	Gold		4		**4**
	Clark	Copper; lead; zinc		4		**4**
		Gold; silver		2		**2**
	Custer	Gold; silver; copper; zinc		2		**2**
	Lemhi	Gold; silver		2		**2**
	Lincoln	Gold; platinum; palladium		2		**2**
		Gold; silver; platinum		2		**2**
	Owyhee	Gold; copper; zinc		2		**2**
Idaho Total			**2**	**24**		**26**
Montana	Valley	Bentonite	2			**2**
Montana Total			**2**			**2**

Table 13. (continued)

State	County	Commodities	Exploration Project Size*			
			Large	**Small**	**Unknown**	**Total**
Nevada	Elko	Copper	2			**2**
		Gold	6	16	18	**40**
		Gold; molybdenum		2		**2**
		Gold; silver	2	4	2	**6**
		Gold; silver; copper		2		**2**
		Gold; silver; copper; Tellurium		2		**2**
		Silver; lead; zinc		2		**2**
		Tungsten	2			**2**
		Uranium; molybdenum		2		**2**
	Humboldt	Gold			6	**6**
		Gold; silver		2	2	**4**
		Gold; silver; copper; lead; iron			2	**2**
		Gold; silver; mercury; gallium			2	**2**
		Lithium			2	**2**
Nevada Total			**12**	**32**	**34**	**78**
Oregon	Lake	Gold; silver; copper; mercury		2		**2**
	Malheur	Lithium		2		**2**
		Gold	2			**2**
		Uranium	2			**2**
Oregon Total			**4**	**4**		**8**
Grand Total			**20**	**60**	**34**	**114**

* Small: less than or equal to 5 acres of surface disturbance; Large: greater than 5 acres of surface disturbance.

6. REFERENCES

43 CFR 2310, *Code of Federal Regulations*, Title 43, "Public Lands: Interior," Part 2310, "Withdrawals, General: Procedure," Office of the Federal Register.

43 CFR 3809, *Code of Federal Regulations*, Title 43, "Public Lands: Interior," Part 3809, "Surface Management," Office of the Federal Register.

Day, W.C., Hammarstrom, J.M., Zientek, M.L., and Frost, T.P., eds., 2016, Overview with methods and procedures of the U.S. Geological Survey mineral-resource assessment of the Sagebrush Focal Areas of Idaho, Montana, Nevada, Oregon, Utah, and Wyoming: U.S. Geological Survey Scientific Investigations Report 2016–5089–A, 211 p., http://dx.doi.org/10.3133/sir20165089A.

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Figures

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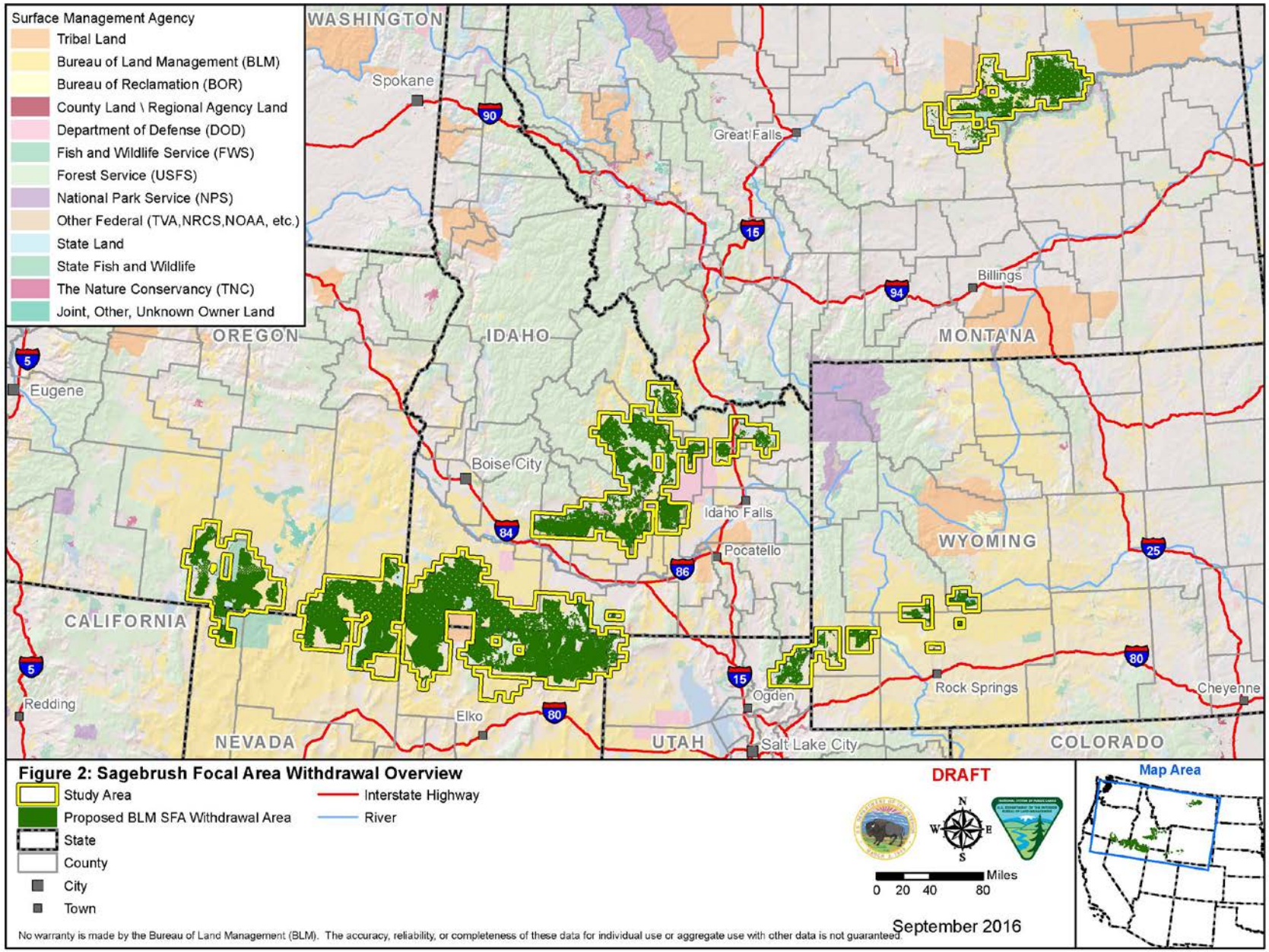
Surface Management Agency
Tribal Land
Bureau of Land Management (BLM)
Bureau of Reclamation (BOR)
County Land \ Regional Agency Land
Department of Defense (DOD)
Fish and Wildlife Service (FWS)
Forest Service (USFS)
National Park Service (NPS)
Other Federal (TVA,NRCS,NOAA, etc.)
State Land
State Fish and Wildlife
The Nature Conservancy (TNC)
Joint, Other, Unknown Owner Land
WASHINGTON
OREGON
IDAHO
MONTANA
WYOMING
CALIFORNIA
NEVADA
UTAH
COLORADO
Spokane
Great Falls
Billings
Eugene
Boise City
Idaho Falls
Pocatello
Rock Springs
Cheyenne
Ogden
Salt Lake City
Elko
Redding
90
15
94
5
84
86
25
80
Figure 2: Sagebrush Focal Area Withdrawal Overview
Study Area
Proposed BLM SFA Withdrawal Area
State
County
City
Town
Interstate Highway
River
DRAFT
N
W
E
S
Miles
0 20 40 80
September 2016
Map Area
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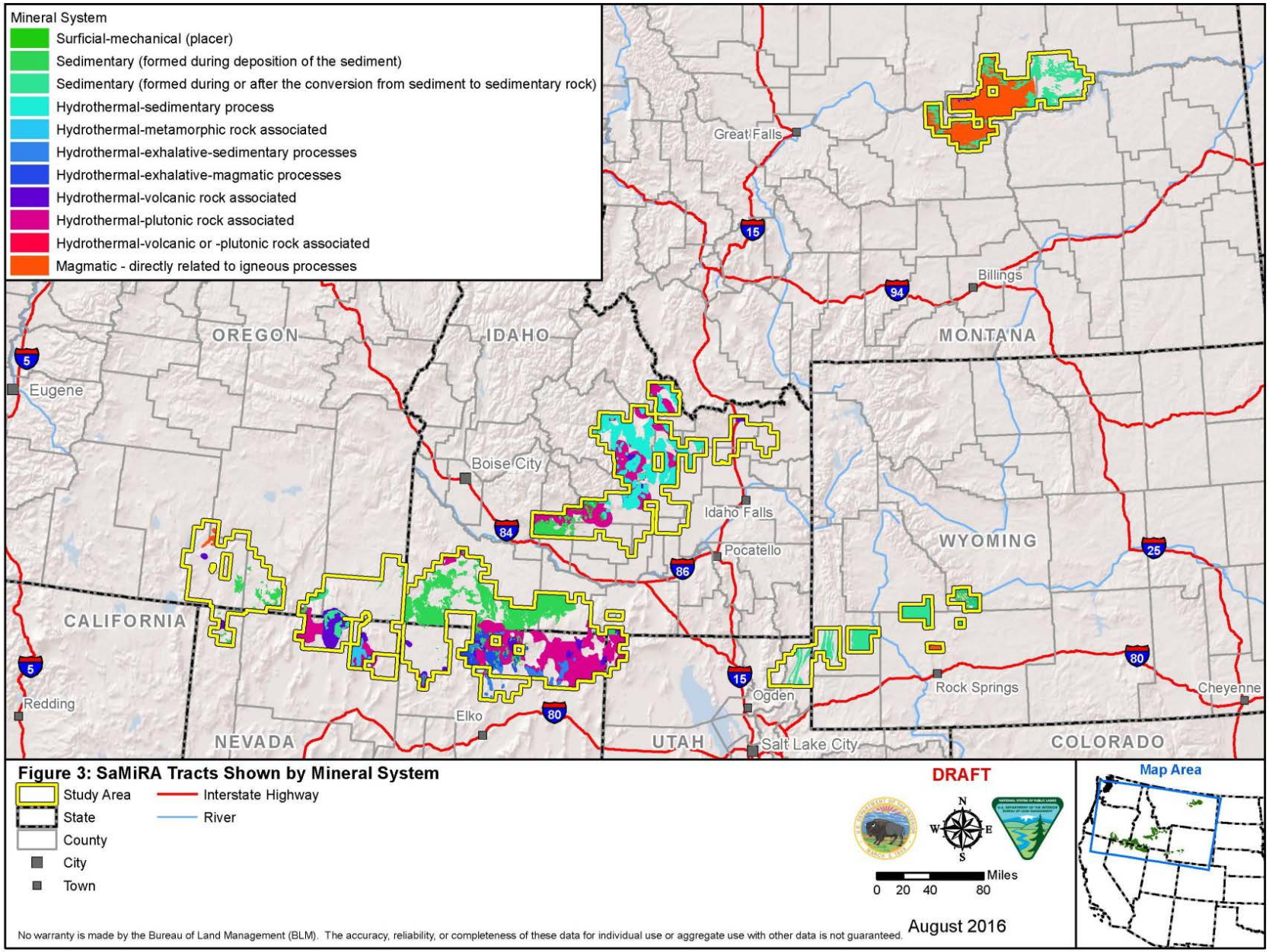
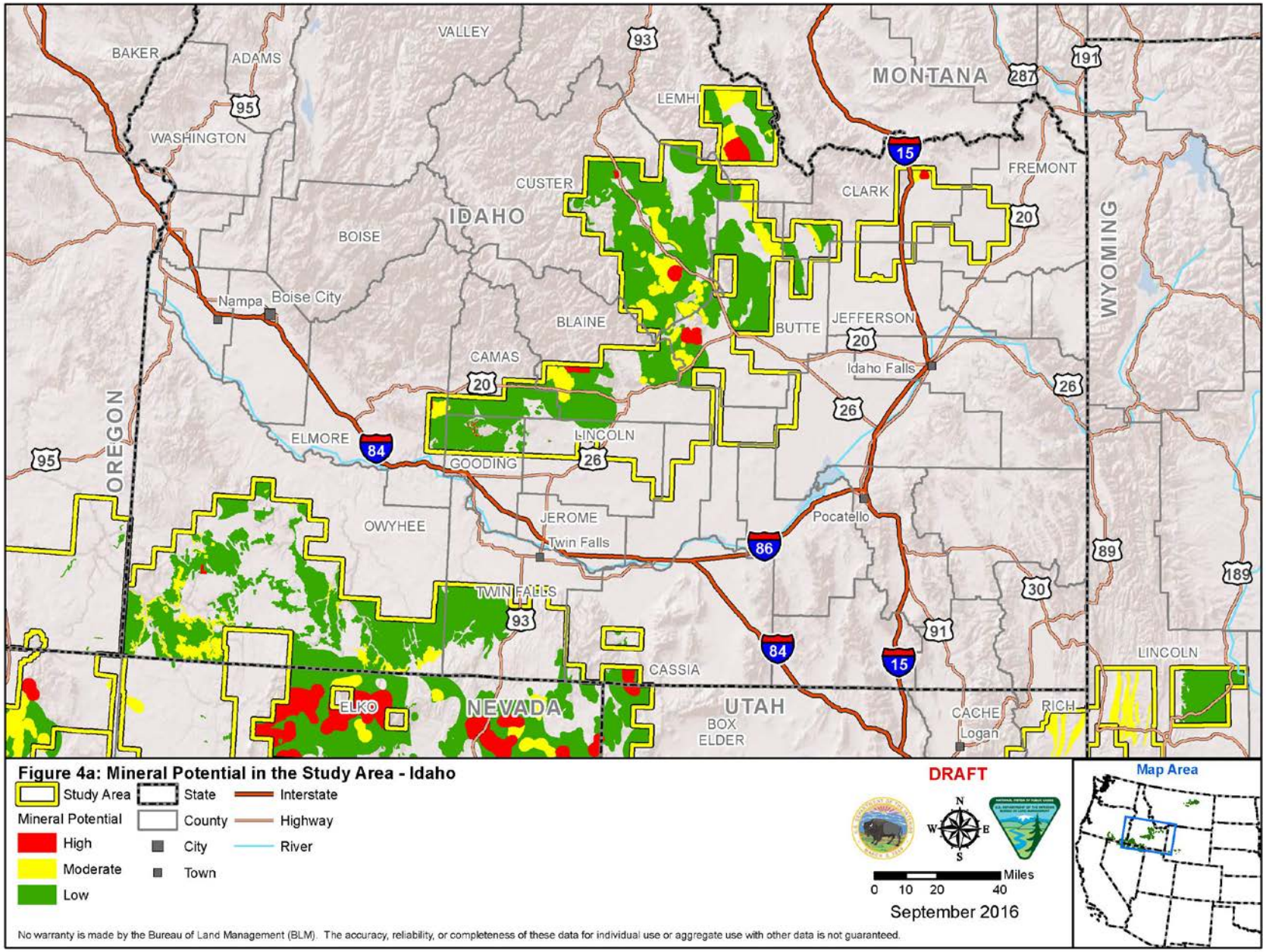
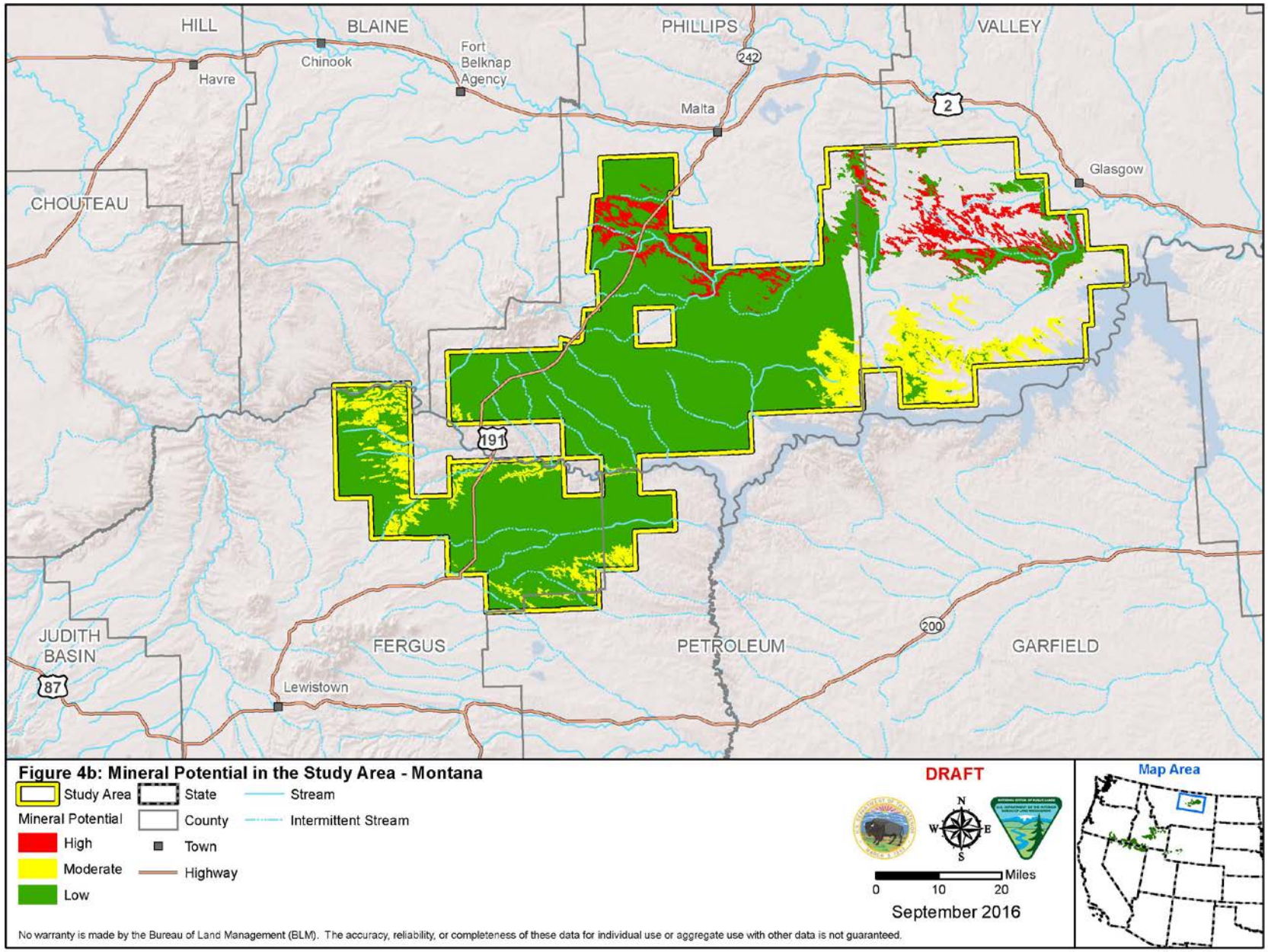

Mineral System
Surficial-mechanical (placer)
Sedimentary (formed during deposition of the sediment)
Sedimentary (formed during or after the conversion from sediment to sedimentary rock)
Hydrothermal-sedimentary process
Hydrothermal-metamorphic rock associated
Hydrothermal-exhalative-sedimentary processes
Hydrothermal-exhalative-magmatic processes
Hydrothermal-volcanic rock associated
Hydrothermal-plutonic rock associated
Hydrothermal-volcanic or -plutonic rock associated
Magmatic - directly related to igneous processes
Great Falls
Billings
OREGON
IDAHO
MONTANA
Eugene
Boise City
Idaho Falls
Pocatello
WYOMING
CALIFORNIA
Redding
Elko
Ogden
Rock Springs
Cheyenne
NEVADA
UTAH
Salt Lake City
COLORADO
Figure 3: SaMiRA Tracts Shown by Mineral System
Study Area
State
County
City
Town
Interstate Highway
River
DRAFT
N
W
E
S
Miles
0 20 40 80
August 2016
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Map Area


VALLEY
BAKER
ADAMS
WASHINGTON
LEMHI
MONTANA
CUSTER
CLARK
FREMONT
IDAHO
BOISE
WYOMING
Nampa
Boise City
BLAINE
BUTTE
JEFFERSON
Idaho Falls
CAMAS
OREGON
ELMORE
LINCOLN
GOODING
JEROME
OWYHEE
Twin Falls
Pocatello
TWIN FALLS
CASSIA
ELKO
NEVADA
UTAH
BOX ELDER
CACHE
RICH
Logan
LINCOLN
Figure 4a: Mineral Potential in the Study Area - Idaho
Study Area
State
Interstate
Mineral Potential
County
Highway
High
City
River
Moderate
Town
Low
DRAFT
N
W
E
S
Miles
0 10 20 40
September 2016
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Map Area


HILL
BLAINE
PHILLIPS
VALLEY
Havre
Chinook
Fort Belknap Agency
Malta
Glasgow
242
2
CHOUTEAU
191
JUDITH BASIN
FERGUS
PETROLEUM
GARFIELD
200
87
Lewistown
Figure 4b: Mineral Potential in the Study Area - Montana
Study Area
State
Stream
Mineral Potential
County
Intermittent Stream
High
Town
Moderate
Highway
Low
DRAFT
N
W
E
S
Miles
0
10
20
September 2016
Map Area
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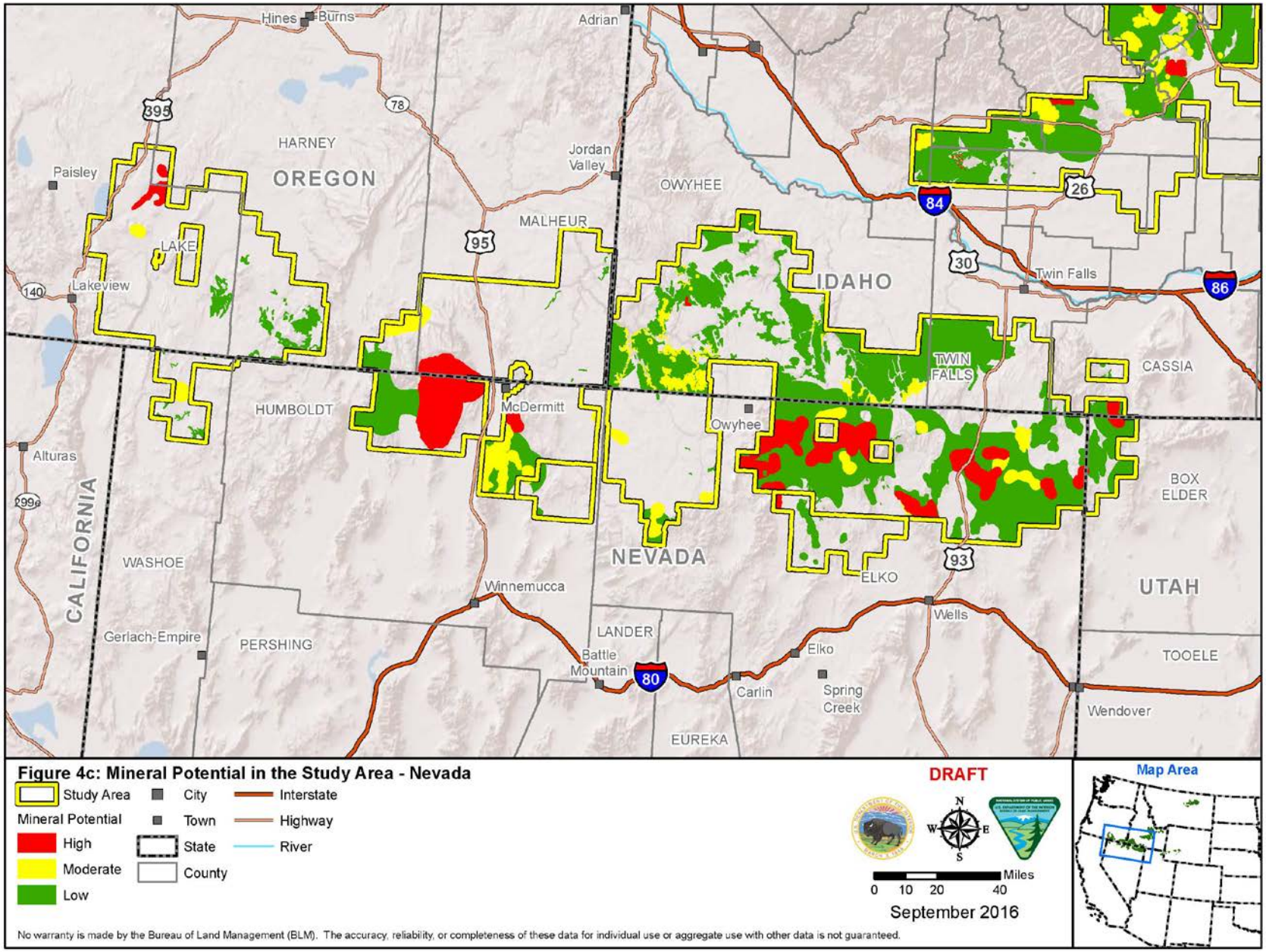
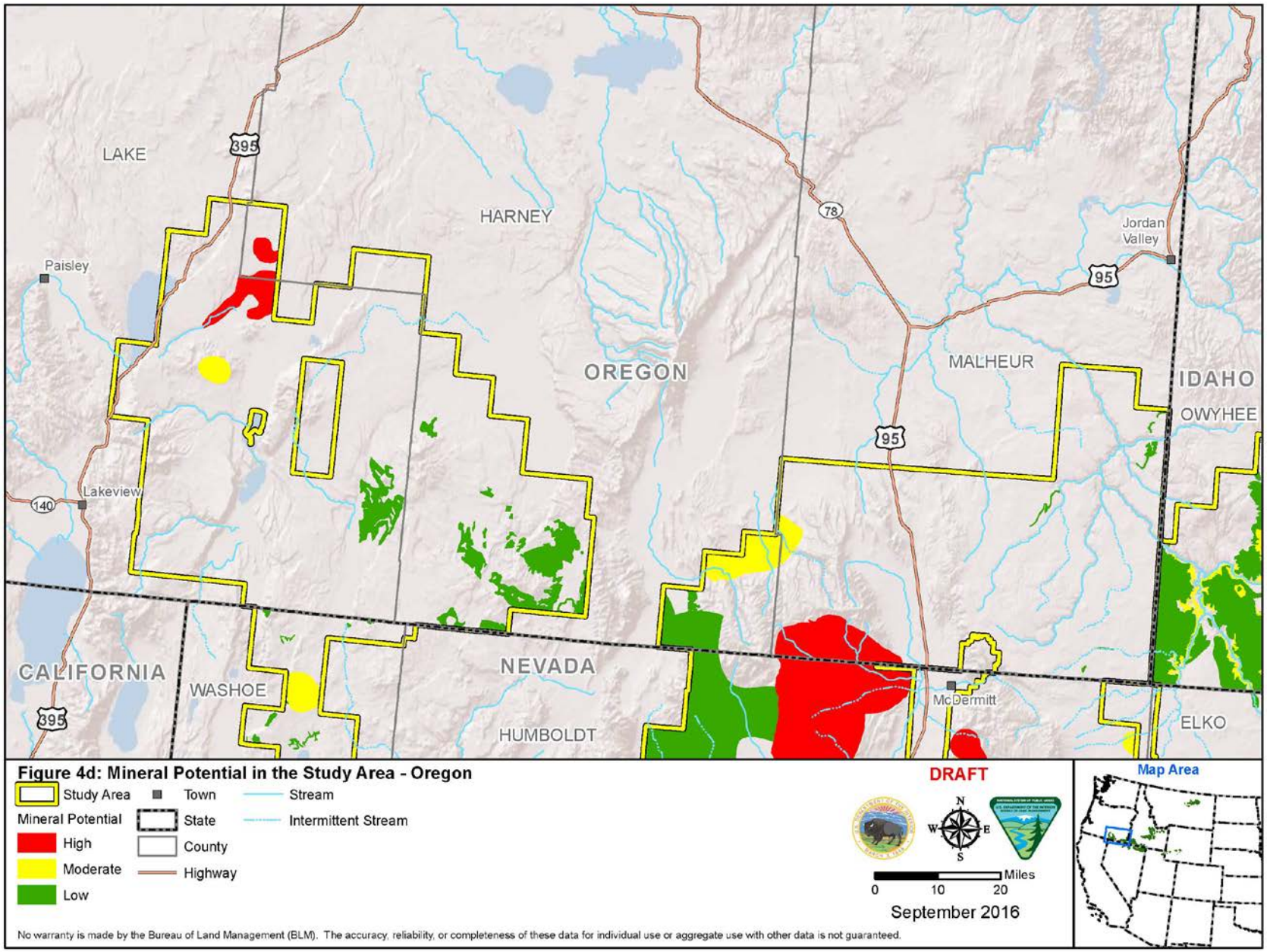

Hines
Burns
Adrian
395
78
HARNEY
OREGON
Jordan Valley
OWYHEE
Paisley
MALHEUR
84
26
LAKE
95
30
Twin Falls
140
Lakeview
IDAHO
86
TWIN FALLS
CASSIA
HUMBOLDT
McDermitt
Owyhee
Alturas
BOX ELDER
299
CALIFORNIA
WASHOE
NEVADA
93
ELKO
Winnemucca
UTAH
Wells
Gerlach-Empire
PERSHING
LANDER
Elko
TOOELE
Battle Mountain
80
Carlin
Spring Creek
Wendover
EUREKA
Figure 4c: Mineral Potential in the Study Area - Nevada
Study Area
City
Interstate
Mineral Potential
Town
Highway
High
State
River
Moderate
County
Low
DRAFT
N
W
E
S
Miles
0 10 20 40
September 2016
Map Area
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.


LAKE
395
HARNEY
78
Jordan Valley
Paisley
95
OREGON
MALHEUR
IDAHO
OWYHEE
95
Lakeview
140
CALIFORNIA
WASHOE
NEVADA
McDermitt
ELKO
395
HUMBOLDT
Figure 4d: Mineral Potential in the Study Area - Oregon
Study Area
Town
Stream
Mineral Potential
State
Intermittent Stream
High
County
Moderate
Highway
Low
DRAFT
N
W
E
S
Miles
0
10
20
September 2016
Map Area
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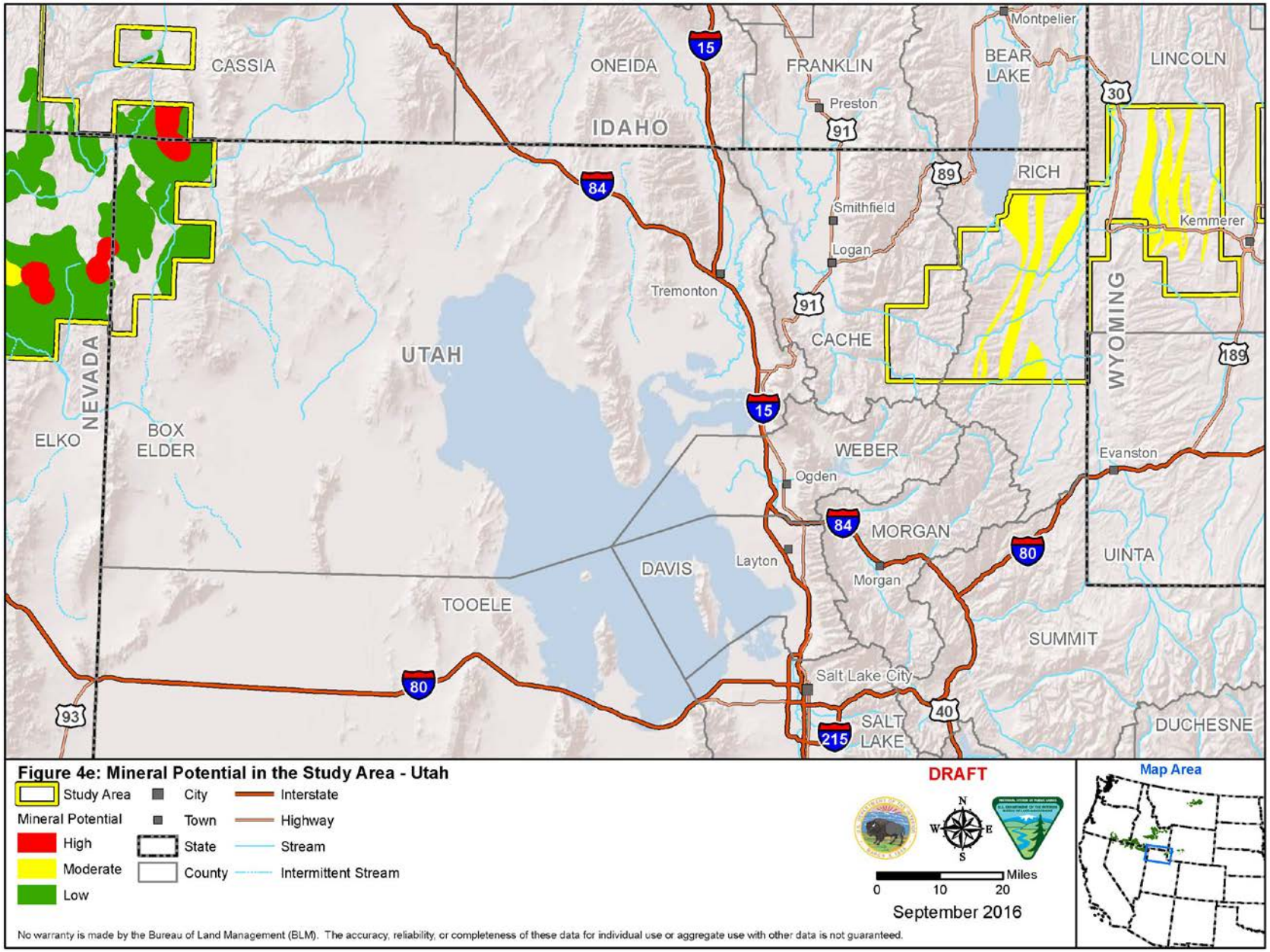
CASSIA
ONEIDA
IDAHO
FRANKLIN
Montpelier
BEAR LAKE
LINCOLN
Preston
RICH
Smithfield
Logan
Kemmerer
Tremonton
CACHE
WYOMING
NEVADA
UTAH
ELKO
BOX ELDER
WEBER
Ogden
Evanston
MORGAN
Morgan
UINTA
DAVIS
Layton
TOOELE
SUMMIT
Salt Lake City
SALT LAKE
DUCHESNE
15
84
91
89
30
189
80
40
215
93
Figure 4e: Mineral Potential in the Study Area - Utah
Study Area
Mineral Potential
High
Moderate
Low
City
Town
State
County
Interstate
Highway
Stream
Intermittent Stream
DRAFT
N
W
E
S
0
10
20
Miles
September 2016
Map Area
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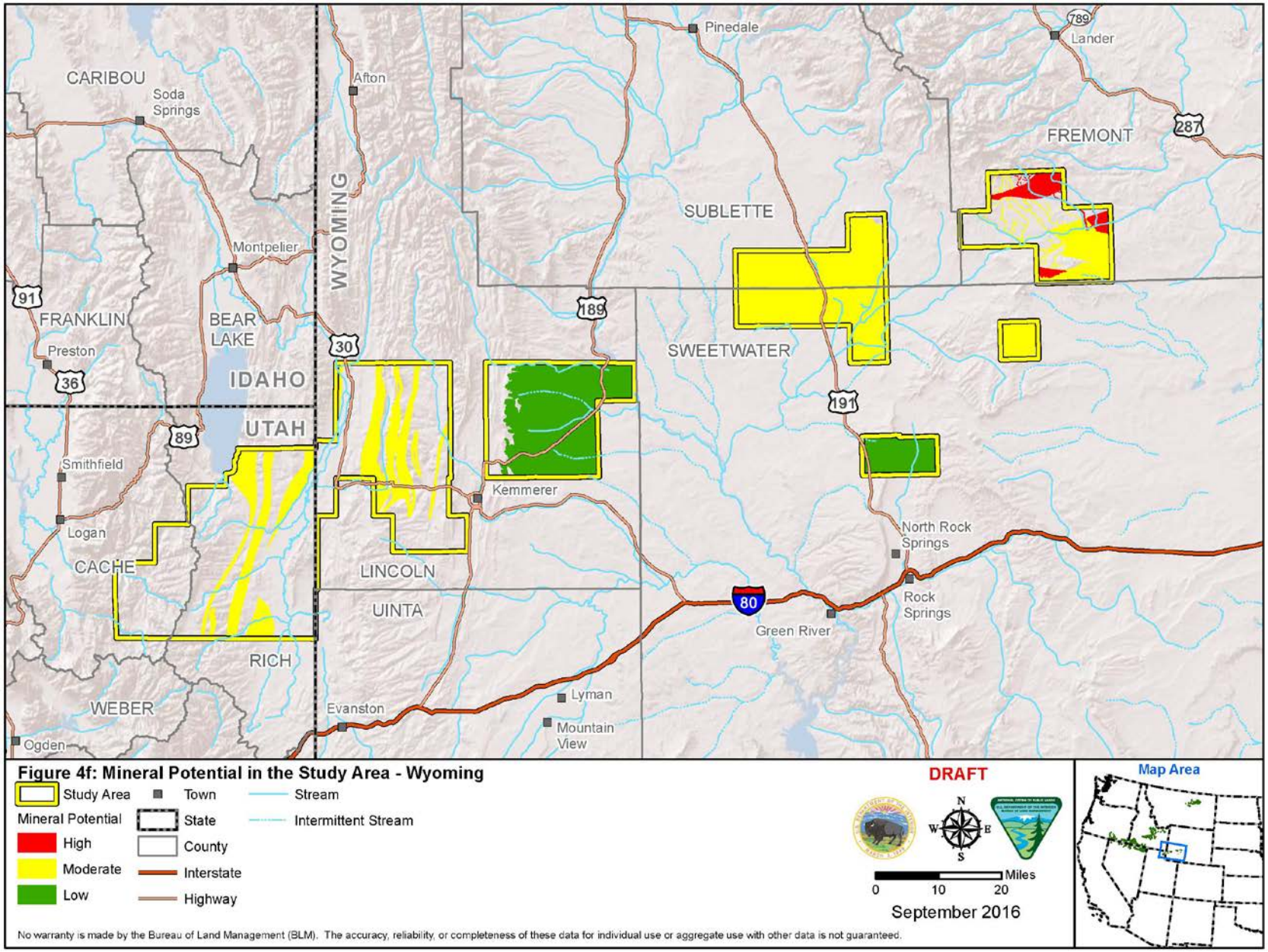
CARIBOU
Soda Springs
Afton
Pinedale
Lander
789
287
FREMONT
SUBLETTE
WYOMING
Montpelier
91
FRANKLIN
BEAR LAKE
Preston
36
IDAHO
30
189
SWEETWATER
191
UTAH
89
Smithfield
Kemmerer
Logan
CACHE
LINCOLN
North Rock Springs
Rock Springs
80
UINTA
Green River
RICH
WEBER
Evanston
Lyman
Mountain View
Ogden
Figure 4f: Mineral Potential in the Study Area - Wyoming
Study Area
Town
Stream
Mineral Potential
State
Intermittent Stream
High
County
Moderate
Interstate
Low
Highway
DRAFT
N
W
E
S
Miles
0
10
20
September 2016
Map Area
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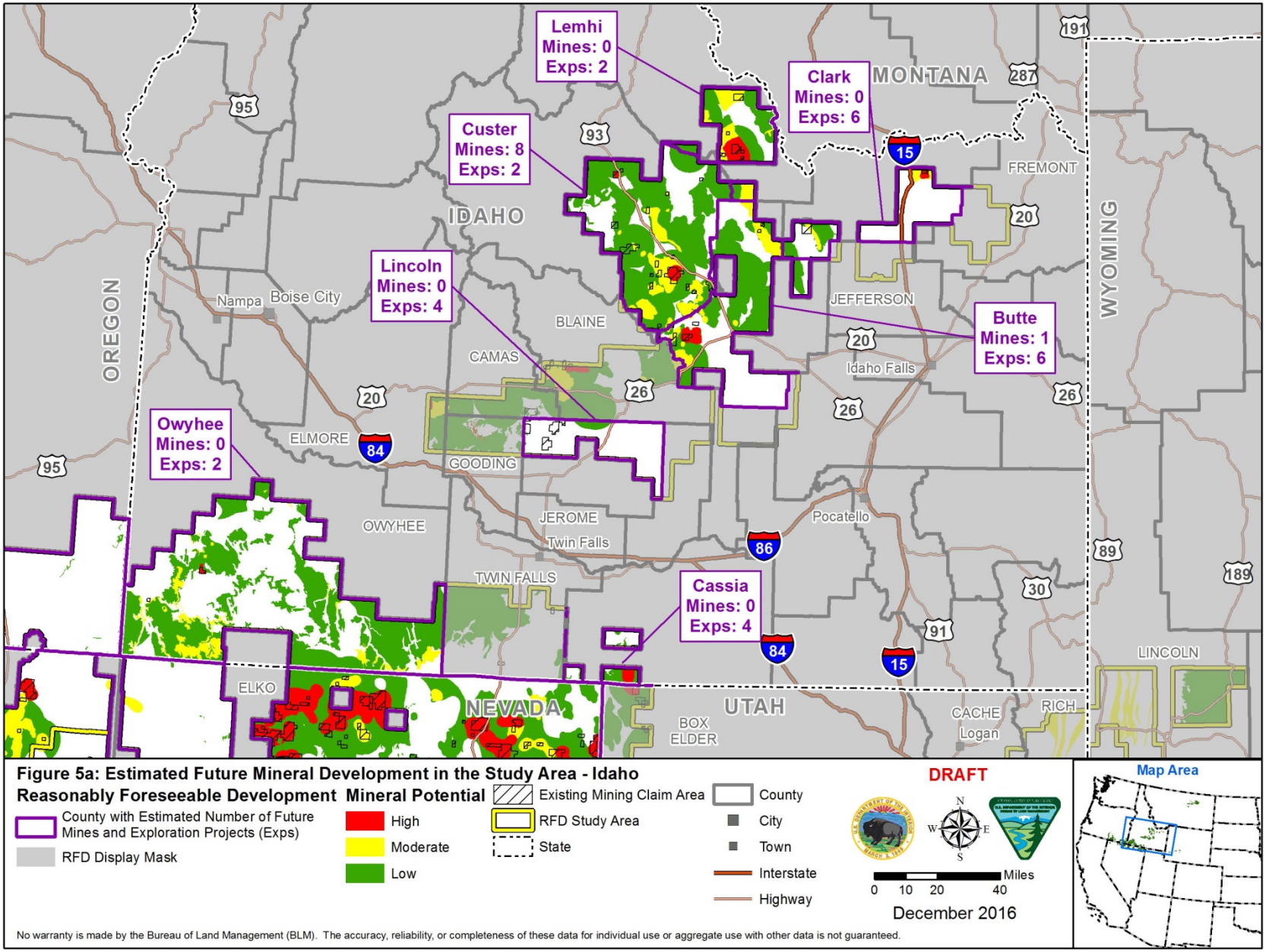
Lemhi
Mines: 0
Exps: 2
Clark
Mines: 0
Exps: 6
Custer
Mines: 8
Exps: 2
Lincoln
Mines: 0
Exps: 4
Butte
Mines: 1
Exps: 6
Owyhee
Mines: 0
Exps: 2
Cassia
Mines: 0
Exps: 4
MONTANA
IDAHO
WYOMING
OREGON
NEVADA
UTAH
FREMONT
JEFFERSON
BLAINE
CAMAS
ELMORE
GOODING
JEROME
TWIN FALLS
OWYHEE
ELKO
BOX ELDER
CACHE
RICH
LINCOLN
Nampa
Boise City
Idaho Falls
Pocatello
Twin Falls
Logan
Figure 5a: Estimated Future Mineral Development in the Study Area - Idaho
Reasonably Foreseeable Development
Mineral Potential
County with Estimated Number of Future Mines and Exploration Projects (Exps)
RFD Display Mask
High
Moderate
Low
Existing Mining Claim Area
RFD Study Area
State
County
City
Town
Interstate
Highway
DRAFT
Miles
0 10 20 40
December 2016
Map Area
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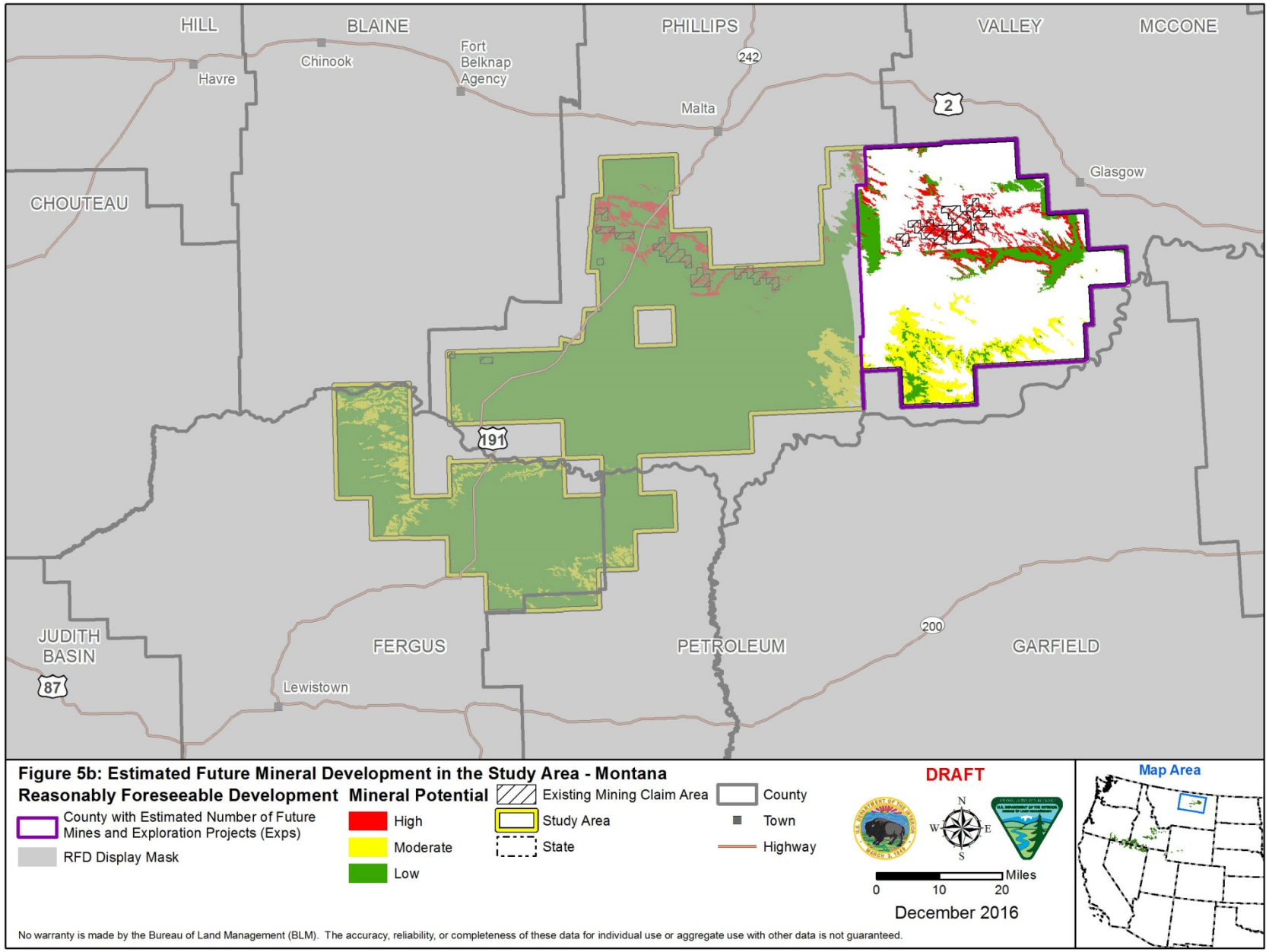
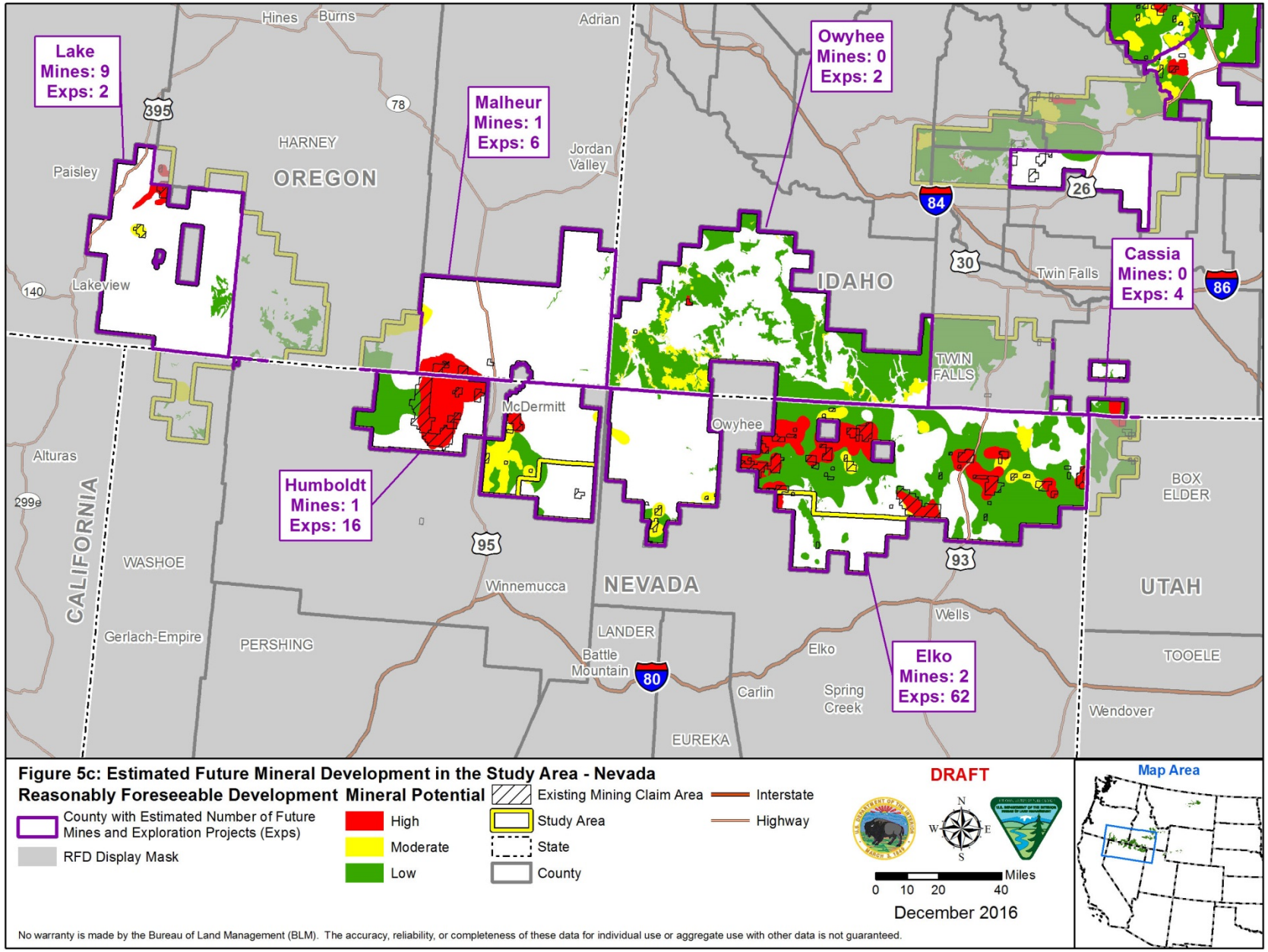
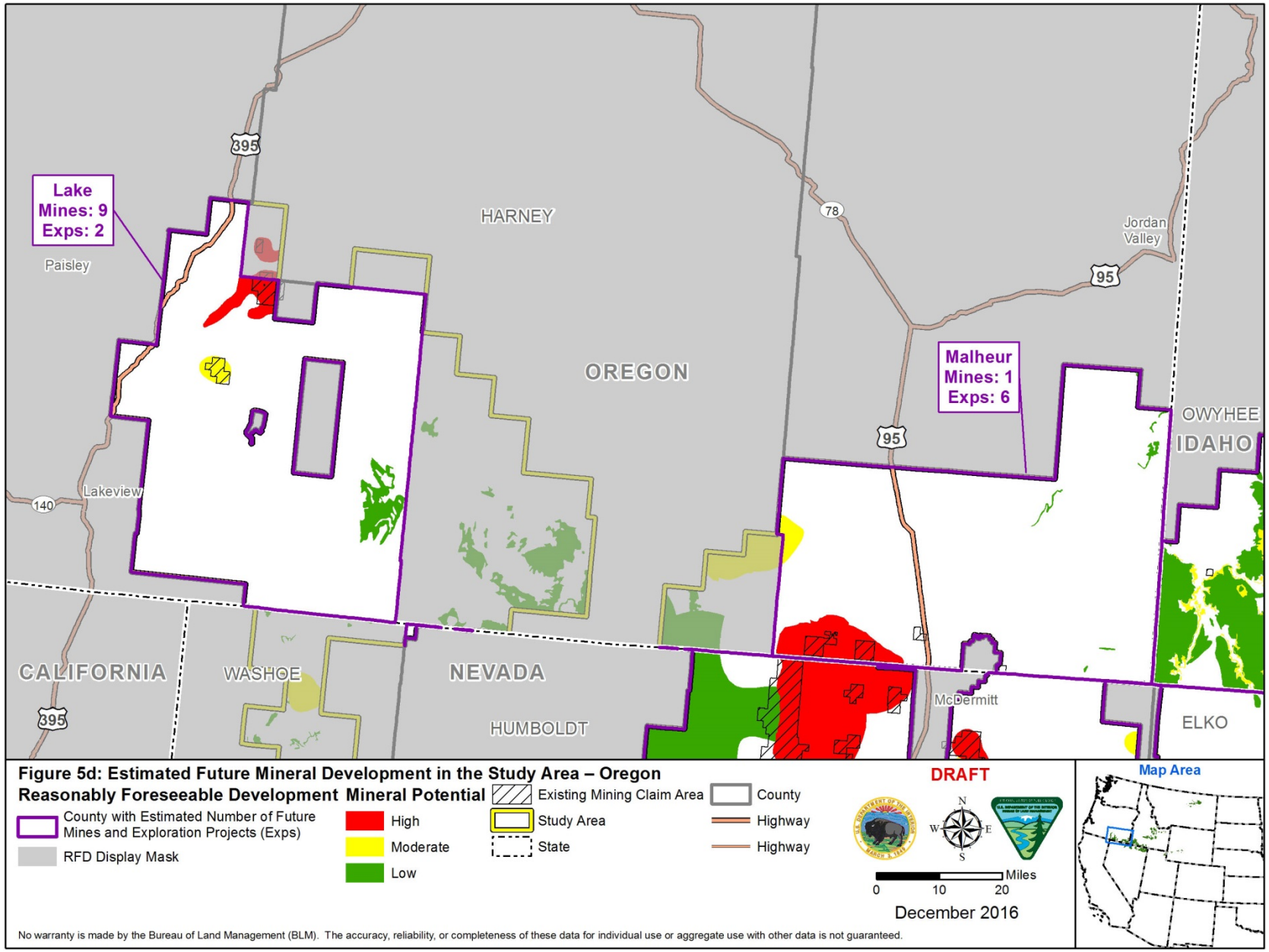
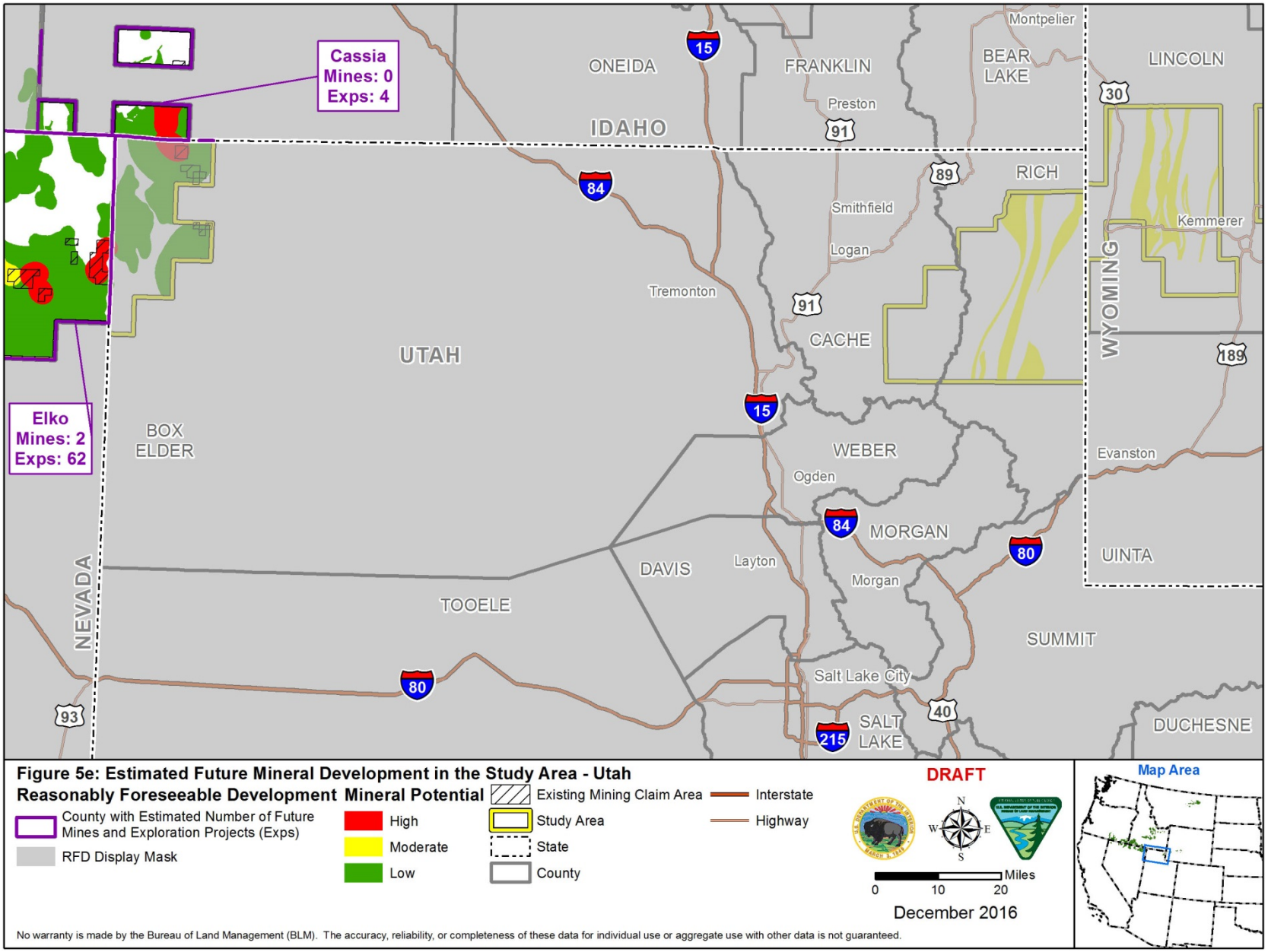
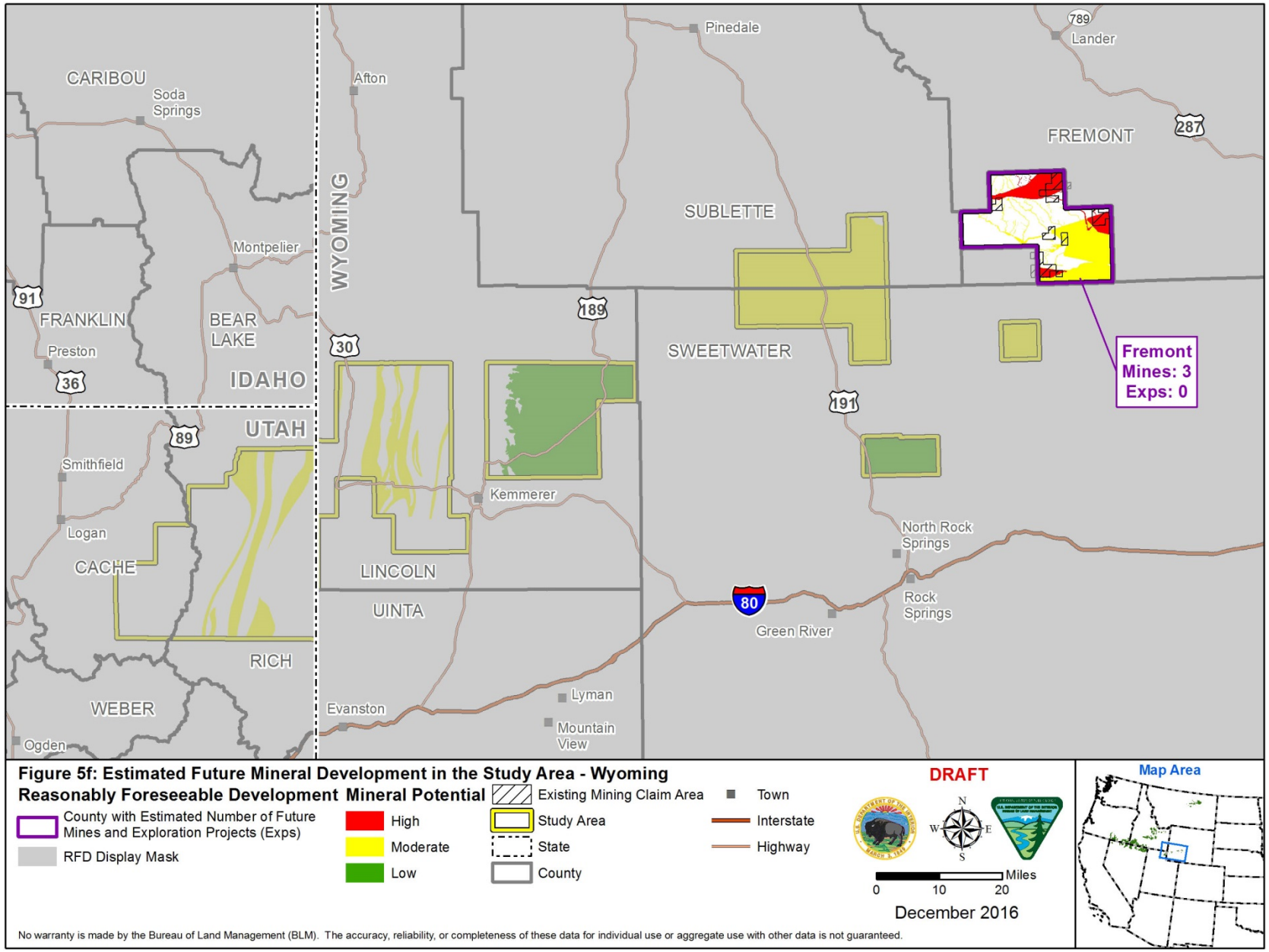

HILL
BLAINE
PHILLIPS
VALLEY
MCCONE
Havre
Chinook
Fort Belknap Agency
Malta
242
2
Glasgow
CHOUTEAU
191
JUDITH BASIN
FERGUS
PETROLEUM
GARFIELD
200
87
Lewistown
Figure 5b: Estimated Future Mineral Development in the Study Area - Montana
Reasonably Foreseeable Development
County with Estimated Number of Future Mines and Exploration Projects (Exps)
RFD Display Mask
Mineral Potential
High
Moderate
Low
Existing Mining Claim Area
Study Area
State
County
Town
Highway
DRAFT
N
W
E
S
Miles
0
10
20
December 2016
Map Area
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.


Lake
Mines: 9
Exps: 2
Malheur
Mines: 1
Exps: 6
Owyhee
Mines: 0
Exps: 2
Cassia
Mines: 0
Exps: 4
Humboldt
Mines: 1
Exps: 16
Elko
Mines: 2
Exps: 62
Hines
Burns
Adrian
Paisley
HARNEY
OREGON
Jordan Valley
Lakeview
IDAHO
Twin Falls
TWIN FALLS
McDermitt
Owyhee
Alturas
CALIFORNIA
WASHOE
Winnemucca
NEVADA
BOX ELDER
UTAH
Wells
Gerlach-Empire
PERSHING
LANDER
Battle Mountain
Elko
TOOELE
Carlin
Spring Creek
Wendover
EUREKA
395
78
84
26
30
86
140
299e
95
93
80
Figure 5c: Estimated Future Mineral Development in the Study Area - Nevada
Reasonably Foreseeable Development Mineral Potential
County with Estimated Number of Future Mines and Exploration Projects (Exps)
RFD Display Mask
High
Moderate
Low
Existing Mining Claim Area
Study Area
State
County
Interstate
Highway
DRAFT
N
W
E
S
Miles
0 10 20 40
December 2016
Map Area
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.


Lake
Mines: 9
Exps: 2
Paisley
HARNEY
OREGON
Malheur
Mines: 1
Exps: 6
Jordan
Valley
OWYHEE
IDAHO
Lakeview
CALIFORNIA
WASHOE
NEVADA
HUMBOLDT
McDermitt
ELKO
395
78
95
140
Figure 5d: Estimated Future Mineral Development in the Study Area – Oregon
Reasonably Foreseeable Development Mineral Potential
County with Estimated Number of Future Mines and Exploration Projects (Exps)
RFD Display Mask
High
Moderate
Low
Existing Mining Claim Area
Study Area
State
County
Highway
Highway
DRAFT
N
W
E
S
Miles
0
10
20
December 2016
Map Area
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.


Cassia
Mines: 0
Exps: 4
Elko
Mines: 2
Exps: 62
ONEIDA
FRANKLIN
BEAR LAKE
Montpelier
LINCOLN
Preston
IDAHO
RICH
Smithfield
Kemmerer
Logan
WYOMING
Tremonton
CACHE
UTAH
BOX ELDER
WEBER
Evanston
Ogden
MORGAN
UINTA
DAVIS
Layton
Morgan
NEVADA
TOOELE
SUMMIT
Salt Lake City
SALT LAKE
DUCHESNE
15
84
91
89
30
189
80
40
215
93
Figure 5e: Estimated Future Mineral Development in the Study Area - Utah
Reasonably Foreseeable Development Mineral Potential
County with Estimated Number of Future Mines and Exploration Projects (Exps)
RFD Display Mask
High
Moderate
Low
Existing Mining Claim Area
Study Area
State
County
Interstate
Highway
DRAFT
N
W
E
S
Miles
0
10
20
December 2016
Map Area
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.


CARIBOU
Soda Springs
Afton
Pinedale
789
Lander
FREMONT
287
WYOMING
SUBLETTE
Montpelier
91
FRANKLIN
BEAR LAKE
189
30
SWEETWATER
Fremont
Mines: 3
Exps: 0
Preston
36
IDAHO
191
89
UTAH
Smithfield
Kemmerer
Logan
North Rock Springs
CACHE
LINCOLN
UINTA
80
Rock Springs
Green River
RICH
WEBER
Evanston
Lyman
Mountain View
Ogden
Figure 5f: Estimated Future Mineral Development in the Study Area - Wyoming
Reasonably Foreseeable Development Mineral Potential
County with Estimated Number of Future Mines and Exploration Projects (Exps)
RFD Display Mask
High
Moderate
Low
Existing Mining Claim Area
Study Area
State
County
Town
Interstate
Highway
DRAFT
N
W
E
S
Miles
0
10
20
December 2016
Map Area
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

Appendix C

Additional Economic Tables

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Appendix C

Additional Economic Data Tables

This appendix provides additional data tables referenced throughout Section 3.5 of the main volume of the environmental impact statement (EIS). Because of the large amount of data presented in Section 3.5, these tables are presented in this appendix to improve the readability and flow of Chapter 3 of the EIS.

The following tables (C-1 through C-36) include information for the socioeconomic analysis in each of the states with potential withdrawal areas under the action alternatives:

1. Economic output and value-added by sector and county (from 2013 IMPLAN baseline county data files).

2. Employment and changes in employment by sector and county (from BEA Regional Economic Information System data).

3. Earnings and changes in earnings by sector and county (from BEA Regional Economic Information System data).

The tables are presented by state, in the same sequence in which they are referenced in Section 3.5: Idaho, Montana, Nevada, Oregon, Utah, and Wyoming.

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Table C-1. Gross Economic Output and Value Added for SFA Counties in the Idaho Socioeconomic Study Area, 2013

Description	Bingham County		Blaine County		Butte County	
	Output	Value Added	Output	Value Added	Output	Value Added
Total	$3,437,148,076	$1,462,437,791	$2,158,382,271	$1,148,732,155	$2,402,203,812	$1,218,536,770
Agriculture, forestry, fish, & hunting	$588,296,047	$324,191,507	$53,930,949	$24,121,475	$59,647,781	$25,988,856
Extraction of natural gas and crude petroleum	$934,335	-$1,056,301	$3,018,434	$638,943	$3,142,082	$894,221
Sand and gravel mining	$1,944,005	$1,234,751	$4,025,717	$2,260,717	$0	$0
Drilling oil and gas wells	$306,291	$104,607	$613,862	$373,062	$348,212	$119,721
Support activities for oil and gas operations	$555,837	$281,731	$314,190	$123,964	$32,056	$15,582
Utilities	$69,699,101	$13,989,955	$25,321,152	$7,546,686	$0	$0
Construction	$206,373,093	$64,274,084	$301,439,960	$101,631,743	$18,224,629	$3,370,703
Manufacturing	$1,036,004,968	$176,794,130	$141,551,675	$35,137,772	$25,153,772	$6,583,682
Wholesale trade	$250,037,949	$153,619,173	$54,334,415	$30,464,607	$5,947,427	$3,921,838
Retail trade	$125,623,966	$68,601,981	$140,862,294	$87,980,958	$8,864,724	$4,704,956
Transportation & warehousing	$83,929,947	$36,631,581	$28,743,861	$10,920,659	$8,600,349	$3,861,349
Information	$14,071,182	$4,268,148	$81,596,378	$28,377,097	$11,325,168	$3,855,340
Finance & insurance	$86,167,112	$25,853,780	$141,628,829	$41,989,325	$30,869,943	$687,418
Real estate & rental	$220,290,217	$158,181,780	$396,049,092	$284,202,978	$238,980,007	$173,746,230
Professional, scientific & tech services	$94,158,969	$38,225,176	$192,412,859	$104,364,389	$1,829,457,363	$889,825,766
Management of companies	$3,342,213	$1,372,373	$8,095,889	$3,329,358	$1,630,832	$1,268,739
Administrative & waste services	$39,711,439	$21,977,398	$61,318,080	$41,555,927	$120,198,629	$70,602,894
Educational services	$3,672,489	$1,141,966	$13,212,393	$8,259,822	$1,769,631	$687,147
Health & social services	$159,585,120	$85,885,083	$125,180,090	$79,991,508	$9,677,646	$4,498,419
Arts, entertainment, & recreation	$9,344,134	$2,931,226	$50,353,857	$24,582,746	$520,602	$84,511
Accommodation & food services	$47,970,456	$23,100,447	$148,044,080	$84,260,520	$3,733,996	$1,603,783
Other services	$69,696,858	$42,916,739	$77,339,179	$45,888,377	$5,958,608	$4,340,961
Government & non-NAICs	$325,432,351	$217,916,478	$108,618,767	$100,526,798	$18,120,354	$17,874,655

Source: Minnesota IMPLAN Group, Inc. 2013.

Table C-2. Gross Economic Output and Value Added for SFA Counties in the Idaho Socioeconomic Study Area, 2013

Description	Camas County		Cassia County		Clark County	
	Output	Value Added	Output	Value Added	Output	Value Added
Total	$118,079,527	$3,997,364,327	$2,694,614,082	$1,104,659,090	$140,761,685	$57,329,470
Agriculture, forestry, fish, & hunting	$25,035,972	$1,330,746,672	$862,829,815	$410,311,897	$39,648,935	$17,956,025
Extraction of natural gas and crude petroleum	$176,249	$4,488,550	$1,284,509	$827,551	$2,293,006	$83,485
Stone mining and quarrying	$0	$31,727,633	$20,283,127	$11,444,507	$0	$0
Sand and gravel mining	$0	$1,142,590	$720,348	$422,242	$0	$0
Support activities for oil and gas operations	$0	$1,232,839	$907,656	$325,183	$0	$0
Utilities	$0	$85,096,563	$65,518,939	$19,577,624	$0	$0
Construction	$11,291,219	$130,638,226	$97,166,895	$29,557,581	$3,543,591	$370,159
Manufacturing	$3,087,301	$814,553,182	$695,327,627	$107,791,095	$10,307,532	$1,126,929
Wholesale trade	$28,583,206	$138,684,630	$83,039,108	$46,826,977	$5,538,310	$3,280,235
Retail trade	$2,429,056	$189,376,734	$117,246,619	$69,553,036	$1,739,459	$837,620
Transportation & warehousing	$150,154	$226,314,422	$148,211,262	$60,174,913	$12,471,669	$5,456,578
Information	$4,488,519	$70,237,963	$36,482,190	$12,800,318	$15,827,660	$5,127,795
Finance & insurance	$13,793,780	$112,293,160	$74,931,445	$19,765,067	$16,101,244	$1,495,404
Real estate & rental	$6,690,446	$214,705,327	$121,328,596	$86,681,775	$4,455,862	$2,239,094
Professional, scientific, & tech services	$8,146,241	$73,956,595	$48,033,884	$18,791,575	$4,748,697	$2,382,438
Management of companies	$0	$3,915,337	$2,958,689	$956,647	$0	$0
Administrative & waste services	$343,505	$53,816,253	$23,569,108	$17,042,141	$7,940,454	$5,264,550
Educational services	$853,189	$4,251,126	$2,255,187	$791,823	$839,980	$364,136
Health & social services	$670,079	$178,665,589	$112,583,320	$61,082,303	$3,022,059	$1,977,908
Arts, entertainment, & recreation	$1,984,557	$9,066,120	$6,171,218	$2,305,498	$572,656	$16,747
Accommodation & food services	$1,482,404	$54,885,552	$36,922,431	$17,153,739	$538,279	$271,102
Other services	$2,225,189	$64,389,444	$38,434,120	$23,483,459	$1,647,085	$824,780
Government & non-NAICs	$6,648,459	$202,792,446	$98,181,937	$86,830,817	$9,525,207	$8,254,484

Source: Minnesota IMPLAN Group, Inc. 2013.

Table C-3. Gross Economic Output and Value Added for SFA Counties in the Idaho Socioeconomic Study Area, 2013

Description	Custer County		Elmore County		Fremont County	
	Output	Value Added	Output	Value Added	Output	Value Added
Total	$401,800,847	$195,251,522	$1,885,684,336	$1,031,429,041	$737,450,409	$350,527,726
Agriculture, forestry, fish, & hunting	$54,583,958	$30,428,547	$312,408,534	$142,751,029	$193,605,007	$93,536,251
Extraction of natural gas and crude petroleum	$155,629	-$234,965	$10,465	-$14,883	$858,448	$153,796
Gold ore mining	$20,841,713	$7,042,833	$0	$0	$0	$0
Other metal ore mining	$21,384,710	$13,906,373	$0	$0	$0	$0
Sand and gravel mining	$0	$0	$0	$0	$406,822	$238,680
Drilling oil and gas wells	$54,674	$16,127	$0	$0	$93,764	$22,124
Other nonmetallic minerals services	$1,025,755	$714,341	$1,437,193	$780,203	$0	$0
Utilities	$69,858,383	$17,141,749	$29,136,902	$12,615,010	$70,115,969	$11,800,064
Construction	$23,763,622	$4,860,623	$57,005,496	$15,175,635	$76,112,417	$22,139,036
Manufacturing	$3,069,698	$669,662	$325,497,635	$32,597,866	$25,960,652	$3,139,692
Wholesale trade	$5,749,549	$2,963,732	$19,263,815	$10,278,204	$42,380,184	$22,943,652
Retail trade	$17,066,430	$9,191,876	$78,516,350	$45,749,024	$31,792,186	$17,216,091
Transportation & warehousing	$5,566,272	$2,713,385	$39,422,941	$16,573,233	$36,266,685	$11,945,977
Information	$17,853,560	$5,389,447	$32,134,808	$11,179,129	$12,607,165	$3,699,755
Finance & insurance	$16,151,134	$3,523,310	$44,688,897	$16,664,642	$17,538,367	$5,966,028
Real estate & rental	$30,557,212	$21,629,287	$149,073,692	$106,847,948	$82,101,540	$57,515,137
Professional, scientific, & tech services	$28,707,307	$18,403,283	$54,437,423	$26,916,904	$19,601,040	$7,367,471
Management of companies	$2,783,116	$1,726,863	$0	$0	$1,265,201	$409,885
Administrative & waste services	$4,837,803	$3,149,944	$32,863,877	$18,143,069	$6,727,575	$4,522,683
Educational services	$839,540	$286,418	$5,748,021	$2,686,752	$369,358	$31,275
Health & social services	$21,754,300	$12,154,977	$57,257,188	$30,464,883	$15,273,355	$7,083,192
Arts, entertainment, & recreation	$6,056,735	$2,582,592	$4,219,876	$1,167,513	$4,709,906	$1,402,325
Accommodation & food services	$14,312,666	$6,957,167	$41,585,387	$21,076,964	$17,143,062	$8,201,964
Other services	$6,302,314	$2,772,009	$37,773,872	$17,485,170	$20,429,622	$10,150,347
Government & non-NAICs	$27,997,184	$26,955,293	$563,201,964	$502,290,747	$62,092,082	$61,042,301

Source: Minnesota IMPLAN Group, Inc. 2013.

Table C-4. Gross Economic Output and Value Added for SFA Counties in the Idaho Socioeconomic Study Area, 2013

Description	Gooding County		Jefferson County		Lemhi County	
	Output	Value Added	Output	Value Added	Output	Value Added
Total	$2,335,334,235	$878,639,418	$1,633,999,825	$684,316,046	$444,980,057	$225,442,523
Agriculture, forestry, fish, & hunting	$1,105,736,252	$519,902,862	$338,484,833	$161,758,062	$62,518,157	$31,604,165
Extraction of natural gas and crude petroleum	$348,110	-$352,621	$2,564,051	$316,782	$0	$0
Stone mining and quarrying	$300,288	$169,964	$0	$0	$0	$0
Sand and gravel mining	$0	$0	$1,867,390	$67,485	$0	$0
Other nonmetallic minerals	$0	$0	$0	$0	$2,428,340	$1,367,045
Drilling oil and gas wells	$109,523	$39,012	$277,898	$49,407	$0	$0
Metal mining services	$156,833	$95,569	$0	$0	$264,398	$184,495
Utilities	$29,259,208	$20,988,965	$39,384,681	$8,755,005	$5,672,688	$1,413,842
Construction	$45,473,925	$10,983,180	$140,011,670	$38,785,783	$46,998,916	$12,399,361
Manufacturing	$777,506,966	$93,237,018	$425,198,717	$94,515,931	$37,108,707	$8,413,431
Wholesale trade	$43,325,680	$25,247,874	$65,009,575	$35,871,980	$10,140,553	$5,093,801
Retail trade	$35,962,840	$19,360,180	$65,521,584	$36,463,394	$30,270,899	$17,476,938
Transportation & warehousing	$35,138,690	$13,212,829	$88,017,413	$28,394,717	$13,484,616	$3,254,581
Information	$2,791,045	$682,194	$7,517,644	$2,466,188	$15,250,541	$5,172,192
Finance & insurance	$20,612,133	$7,029,418	$37,319,733	$9,220,194	$23,707,809	$5,853,637
Real estate & rental	$71,652,779	$51,553,641	$143,630,402	$102,579,048	$54,163,368	$38,408,470
Professional, scientific, & tech services	$28,888,521	$16,399,826	$108,170,603	$46,023,027	$18,359,658	$6,655,894
Management of companies	$2,806,399	$1,887,153	$6,073,050	$2,588,101	$921,786	$300,049
Administrative & waste services	$4,436,072	$2,173,157	$10,714,125	$5,723,950	$5,189,984	$2,432,606
Educational services	$972,022	$114,390	$1,634,789	$553,104	$1,175,881	$302,805
Health & social services	$20,850,738	$9,835,857	$33,038,257	$16,408,731	$20,364,946	$12,638,166
Arts, entertainment, & recreation	$5,019,185	$2,158,387	$9,796,426	$3,577,460	$5,212,522	$2,262,580
Accommodation & food services	$17,197,053	$7,989,372	$18,577,864	$8,686,740	$15,813,152	$6,894,335
Other services	$28,133,425	$17,952,182	$26,236,763	$17,547,174	$18,444,399	$10,425,574
Government & non-NAICs	$58,349,310	$57,857,504	$64,952,357	$63,963,781	$57,488,737	$52,888,556

Source: Minnesota IMPLAN Group, Inc. 2013.

Table C-5. Gross Economic Output and Value Added for SFA Counties in the Idaho Socioeconomic Study Area, 2013

Description	Lincoln County		Minidoka County		Owyhee County		Twin Falls County	
	Output	Value Added	Output	Value Added	Output	Value Added	Output	Value Added
Total	$504,553,527	$203,317,669	$1,985,801,438	$779,094,498	$737,304,735	$356,994,684	$6,908,292,740	$2,935,976,195
Agriculture, forestry, fish, & hunting	$213,033,946	$97,601,633	$448,088,710	$245,433,864	$366,923,170	$168,054,500	$713,689,386	$335,968,533
Extraction of natural gas and crude petroleum	$297,613	$83,024	$0	$0	$2,306,287	$74,080	$238,594	-$962,632
Gold ore mining	$0	$0	$0	$0	$1,163,903	$437,180	$0	$0
Silver ore mining	$0	$0	$0	$0	$1,319,874	$791,922	$0	$0
Copper ore mining	$0	$0	$0	$0	$46,163,296	$31,541,854	$15,776,802	$9,886,705
Other metal ore mining	$0	$0	$0	$0	$242,236	$166,394	$0	$0
Stone mining and quarrying	$0	$0	$0	$0	$103,355	$58,879	$0	$0
Sand and gravel mining	$173,128	$10,357	$0	$0	$0	$0	$727,326	$396,424
Other clay, ceramic, refractory minerals mining	$0	$0	$0	$0	$202,425	$99,369	$0	$0
Drilling oil and gas wells	$32,957	$11,144	$0	$0	$0	$0	$153,370	$31,931
Support activities for oil and gas operations	$0	$0	$0	$0	$62,958	$32,747	$0	$0
Metal mining services	$0	$0	$0	$0	$0	$0	$551,293	$287,458
Construction	$27,180,976	$5,967,797	$82,733,801	$24,255,962	$26,903,005	$7,956,429	$318,312,953	$88,743,702
Manufacturing	$132,266,992	$16,673,944	$737,609,759	$140,113,812	$56,903,147	$12,118,023	$2,238,600,745	$413,662,956
Wholesale trade	$4,293,765	$2,305,082	$126,275,711	$73,234,984	$23,113,554	$13,880,453	$246,894,135	$141,828,078
Retail trade	$9,431,291	$5,000,347	$48,055,605	$26,902,112	$19,318,062	$10,440,529	$393,356,746	$233,910,414
Transportation & warehousing	$8,997,500	$3,250,271	$64,141,148	$29,073,141	$9,874,934	$5,208,979	$244,093,401	$107,053,462
Information	$1,025,450	$516,424	$59,976,864	$18,429,277	$8,493,475	$3,155,489	$140,900,681	$45,952,115
Finance & insurance	$4,135,075	$1,114,515	$26,144,645	$8,488,573	$6,674,395	$2,252,750	$225,600,069	$92,909,456
Real estate & rental	$21,723,397	$15,710,923	$98,196,823	$70,457,240	$35,968,412	$25,853,601	$548,633,845	$383,494,634
Professional, scientific, & tech services	$5,397,062	$2,481,086	$26,984,488	$11,782,920	$21,977,024	$6,617,002	$249,546,434	$135,808,182
Management of companies	$0	$0	$19,715,254	$3,030,049	$2,809,655	$1,354,618	$32,026,794	$13,725,438
Administrative & waste services	$12,598,499	$6,345,926	$1,482,248	$738,830	$15,182,904	$7,304,415	$187,065,637	$123,651,960
Educational services	$1,770,697	$1,010,736	$2,258,216	$871,307	$2,542,397	$650,391	$10,543,682	$5,202,383
Health & social services	$11,193,099	$6,369,831	$25,517,337	$13,545,148	$10,053,115	$5,691,419	$516,226,413	$293,151,746
Arts, entertainment, & recreation	$858,993	$74,530	$2,826,000	$996,452	$2,078,650	$381,678	$24,533,854	$8,985,110
Accommodation & food services	$2,687,889	$1,292,897	$21,976,446	$10,529,203	$9,772,046	$4,339,340	$169,845,873	$86,736,351
Other services	$3,697,453	$1,833,326	$31,890,787	$17,214,501	$9,102,191	$5,216,522	$166,538,625	$84,921,267
Government & non-NAICs	$33,918,767	$29,061,700	$93,280,535	$70,930,369	$48,118,653	$36,296,754	$302,905,661	$281,240,872

Source: Minnesota IMPLAN Group, Inc. 2013.

Table C-6. Change in Employment by Industry for Idaho and the SFA Counties in the Idaho Socioeconomic Study Area, 2001 and 2014

Industry	Idaho State Total			Bingham County			Blaine County			Butte County		
	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)
Total employment (number of jobs)	783,166	922,989	139,823	19,807	21,451	1,644	18,482	19,648	1,166	9,647	8,192	-1,455
Farm employment	40,569	39,793	-776	2,450	2,213	-237	463	348	-115	295	267	-28
Forestry, fishing, and related activities	12,083	13,101	1,018	(D)	(D)	(D)	105	(D)	(D)	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	3,013	5,552	2,539	(D)	(D)	(D)	135	(D)	(D)	12	38	26
Utilities	1,906	3,145	1,239	(D)	57	(D)	14	25	11	(D)	(L)	(D)
Construction	58,194	56,581	-1,613	1,331	1,392	61	2,991	2,023	-968	(D)	66	(D)
Manufacturing	72,529	66,611	-5,918	2,427	2,414	-13	484	590	106	(D)	160	(D)
Wholesale trade	28,131	31,927	3,796	1,626	1,196	-430	316	325	9	26	(D)	(D)
Retail trade	93,551	104,206	10,655	1,978	1,898	-80	1,913	1,782	-131	151	141	-10
Transportation and warehousing	22,564	27,404	4,840	(D)	671	(D)	232	229	-3	(D)	(D)	(D)
Information	11,518	12,069	551	152	100	-52	285	251	-34	(D)	(L)	(D)
Finance and insurance	26,796	38,689	11,893	493	742	249	576	896	320	(D)	146	(D)
Real estate and rental and leasing	25,324	43,072	17,748	283	580	297	1,572	2,051	479	(D)	82	(D)
Professional, scientific, and technical services	44,221	54,112	9,891	447	563	116	1,435	1,707	272	7,986	6,553	-1,433
Management of companies and enterprises	8,068	6,086	-1,982	54	30	-24	40	20	-20	0	(D)	(D)
Administrative and support and waste management and remediation services	40,335	53,347	13,012	371	518	147	1,246	1,189	-57	25	(D)	(D)
Educational services	9,095	16,255	7,160	68	190	122	185	341	156	(L)	49	(D)
Health care and social assistance	63,870	97,385	33,515	961	1,842	881	818	1,099	281	(D)	111	(D)
Arts, entertainment, and recreation	13,222	19,478	6,256	196	223	27	581	859	278	(D)	19	(D)
Accommodation and food services	50,367	61,126	10,759	748	732	-16	2,610	2,836	226	(D)	70	(D)
Other services (except public administration)	38,700	45,735	7,035	996	1,211	215	1,288	1,244	-44	(D)	69	(D)
Government and government enterprises	119,110	127,315	8,205	4,062	4,147	85	1,193	1,559	366	247	249	2
Federal, civilian	12,948	12,350	-598	320	219	-101	102	99	-3	39	72	33
Military	9,596	9,235	-361	170	163	-7	79	77	-2	18	27	9
State and local	96,566	105,730	9,164	3,572	3,765	193	1,012	1,383	371	190	150	-40

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-7. Change in Employment by Industry for SFA Counties in the Idaho Socioeconomic Study Area, 2001 and 2014

Industry	Camas County			Cassia County			Clark County		
	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)
Total employment (number of jobs)	575	994	419	12,508	14,599	2,091	840	982	142
Farm employment	128	149	21	1,695	2,022	327	168	126	-42
Forestry, fishing, and related activities	(D)	(D)	(D)	429	505	76	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	0	(L)	(D)	129	178	49	(D)	38	(D)
Utilities	0	(D)	(D)	43	59	16	(L)	(L)	(D)
Construction	45	(D)	(D)	606	679	73	(L)	(D)	(D)
Manufacturing	(D)	(D)	(D)	1,181	1,394	213	(D)	(D)	(D)
Wholesale trade	(L)	128	(D)	441	522	81	(D)	(D)	(D)
Retail trade	31	54	23	1,775	1,779	4	52	(D)	(D)
Transportation and warehousing	(D)	(D)	(D)	587	1,072	485	(D)	79	(D)
Information	(D)	(D)	(D)	164	109	-55	(D)	(D)	(D)
Finance and insurance	(D)	(D)	(D)	384	452	68	27	113	86
Real estate and rental and leasing	(D)	37	(D)	265	425	160	10	47	37
Professional, scientific, and technical services	(D)	(D)	(D)	297	(D)	(D)	(D)	(D)	(D)
Management of companies and enterprises	0	0	0	(D)	(D)	(D)	0	0	0
Administrative and support and waste management and remediation services	(D)	(D)	(D)	(D)	356	(D)	(L)	(D)	(D)
Educational services	0	(D)	(D)	(D)	107	(D)	0	(D)	(D)
Health care and social assistance	(D)	(D)	(D)	(D)	1,431	(D)	(D)	(D)	(D)
Arts, entertainment, and recreation	(D)	(D)	(D)	196	152	-44	0	28	28
Accommodation and food services	(D)	(D)	(D)	539	636	97	27	(D)	(D)
Other services (except public administration)	(D)	21	(D)	606	685	79	(D)	(D)	(D)
Government and government enterprises	117	122	5	1,712	1,704	-8	170	130	-40
Federal, civilian	22	27	5	180	125	-55	41	30	-11
Military	(L)	(L)	(D)	86	84	-2	(L)	(L)	(D)
State and local	91	91	0	1,446	1,495	49	125	97	-28

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-8. Change in Employment by Industry for SFA Counties in the Idaho Socioeconomic Study Area, 2001 and 2014

Industry	Custer County			Elmore County			Fremont County		
	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)
Total employment (number of jobs)	2,714	2,973	259	13,838	13,054	-784	4,686	5,532	846
Farm employment	357	348	-9	969	859	-110	808	842	34
Forestry, fishing, and related activities	(D)	(D)	(D)	(D)	183	(D)	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	(D)	(D)	(D)	(D)	38	(D)	(D)	(D)	(D)
Utilities	30	(D)	(D)	(L)	39	(D)	(D)	(D)	(D)
Construction	(D)	169	(D)	546	398	-148	359	544	185
Manufacturing	(D)	(D)	(D)	480	604	124	108	114	6
Wholesale trade	88	36	-52	125	108	-17	(D)	(D)	(D)
Retail trade	296	269	-27	1,433	1,201	-232	428	503	75
Transportation and warehousing	47	(D)	(D)	245	284	39	150	240	90
Information	(D)	59	(D)	105	98	-7	(D)	28	(D)
Finance and insurance	40	155	115	260	264	4	106	116	10
Real estate and rental and leasing	90	124	34	309	439	130	152	266	114
Professional, scientific, and technical services	(D)	111	(D)	(D)	268	(D)	187	149	-38
Management of companies and enterprises	(D)	(D)	(D)	(D)	(L)	(D)	0	0	0
Administrative and support and waste management and remediation services	61	(D)	(D)	302	390	88	105	136	31
Educational services	(L)	(D)	(D)	152	155	3	21	22	1
Health care and social assistance	(D)	(D)	(D)	444	1,100	656	227	235	8
Arts, entertainment, and recreation	91	121	30	83	93	10	56	69	13
Accommodation and food services	244	298	54	726	779	53	349	343	-6
Other services (except public administration)	(D)	127	(D)	534	523	-11	(D)	363	(D)
Government and government enterprises	503	458	-45	6,762	5,230	-1,532	1,002	1,043	41
Federal, civilian	175	152	-23	1,150	808	-342	103	75	-28
Military	17	15	-2	4,312	3,373	-939	47	45	-2
State and local	311	291	-20	1,300	1,049	-251	852	923	71

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-9. Change in Employment by Industry for SFA Counties in the Idaho Socioeconomic Study Area, 2001 and 2014

Industry	Gooding County			Jefferson County			Lemhi County		
	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)
Total employment (number of jobs)	7,792	8,492	700	8,018	10,587	2,569	10,386	9,797	-589
Farm employment	2,128	2,121	-7	1,284	1,147	-137	1,446	1,525	79
Forestry, fishing, and related activities	366	628	262	(D)	571	(D)	514	487	-27
Mining, quarrying, and oil and gas extraction	12	44	32	12	46	34	12	38	26
Utilities	34	39	5	29	30	1	50	51	1
Construction	389	364	-25	853	998	145	449	552	103
Manufacturing	671	840	169	742	1,154	412	1,883	1,117	-766
Wholesale trade	161	228	67	355	401	46	818	714	-104
Retail trade	573	578	5	858	1,051	193	740	733	-7
Transportation and warehousing	420	308	-112	222	553	331	523	467	-56
Information	(D)	(D)	(D)	(D)	46	(D)	165	178	13
Finance and insurance	141	159	18	212	305	93	157	198	41
Real estate and rental and leasing	(D)	(D)	(D)	180	442	262	166	281	115
Professional, scientific, and technical services	224	228	4	229	301	72	250	215	-35
Management of companies and enterprises	(D)	(D)	(D)	(D)	66	(D)	(D)	(D)	(D)
Administrative and support and waste management and remediation services	(D)	(D)	(D)	(D)	260	(D)	(D)	(D)	(D)
Educational services	(D)	(D)	(D)	(D)	(D)	(D)	(D)	63	(D)
Health care and social assistance	(D)	(D)	(D)	(D)	(D)	(D)	(D)	433	(D)
Arts, entertainment, and recreation	(D)	152	(D)	178	284	106	56	74	18
Accommodation and food services	304	327	23	196	324	128	520	423	-97
Other services (except public administration)	397	451	54	387	656	269	496	555	59
Government and government enterprises	1,152	1,234	82	1,248	1,424	176	1,517	1,489	-28
Federal, civilian	71	63	-8	45	50	5	72	84	12
Military	57	54	-3	78	98	20	79	73	-6
State and local	1,024	1,117	93	1,125	1,276	151	1,366	1,332	-34

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-10. Change in Employment by Industry for SFA Counties in the Idaho Socioeconomic Study Area, 2001 and 2014

Industry	Lincoln County			Minidoka County			Owyhee County			Twin Falls County		
	2001	2001	2014	Change (2001 to 2014)	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)
Total employment (number of jobs)	4,238	2,078	2,677	599	4,175	-63	4,059	4,438	379	40,339	48,196	7,857
Farm employment	457	494	640	146	430	-27	1,242	1,299	57	2,775	2,541	-234
Forestry, fishing, and related activities	(D)	(D)	(D)	(D)	(D)	(D)	(D)	199	(D)	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	(D)	12	(L)	(D)	(D)	(D)	(D)	62	(D)	(D)	(D)	(D)
Utilities	(L)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	119	228	109
Construction	312	(D)	(D)	(D)	329	17	277	195	-82	2,385	2,152	-233
Manufacturing	207	(D)	(D)	(D)	142	-65	147	212	65	3,641	4,286	645
Wholesale trade	54	95	(D)	(D)	(D)	(D)	57	120	63	1,459	1,450	-9
Retail trade	564	84	153	69	451	-113	306	336	30	5,514	5,819	305
Transportation and warehousing	77	(D)	71	(D)	100	23	(D)	(D)	(D)	1,345	1,908	563
Information	47	(L)	(D)	(D)	52	5	28	49	21	532	540	8
Finance and insurance	101	22	(D)	(D)	106	5	(D)	(D)	(D)	1,397	1,631	234
Real estate and rental and leasing	164	(D)	(D)	(D)	176	12	(D)	(D)	(D)	1,281	1,895	614
Professional, scientific, and technical services	139	(D)	43	(D)	(D)	(D)	(D)	(D)	(D)	1,775	2,138	363
Management of companies and enterprises	(D)	0	0	0	(D)	(D)	(D)	(D)	(D)	282	191	-91
Administrative and support and waste management and remediation services	(D)	(D)	148	(D)	(D)	(D)	84	144	60	2,608	4,703	2,095
Educational services	23	(L)	29	(D)	(D)	(D)	(D)	(D)	(D)	320	363	43
Health care and social assistance	250	169	179	10	(D)	(D)	(D)	(D)	(D)	3,287	6,131	2,844
Arts, entertainment, and recreation	119	15	(D)	(D)	132	13	(D)	64	(D)	520	694	174
Accommodation and food services	319	78	(D)	(D)	285	-34	(D)	190	(D)	2,690	3,329	639
Other services (except public administration)	306	(D)	94	(D)	331	25	162	178	16	2,103	2,368	265
Government and government enterprises	883	516	470	-46	820	-63	691	715	24	5,511	4,933	-578
Federal, civilian	276	115	78	-37	206	-70	32	43	11	406	358	-48
Military	31	17	19	2	28	-3	44	41	-3	258	291	33
State and local	576	384	373	-11	586	10	615	631	16	4,847	4,284	-563

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-11. Change in Employment by Industry for Trade Counties in the Idaho Socioeconomic Study Area, 2001 and 2014

Industry	Franklin County			Jerome County			Oneida County			Payette County			Washington County		
	2001	2014	Change (2001 - 2014)	2001	2014	Change (2001 - 2014)	2001	2014	Change (2001 - 2014)	2001	2014	Change (2001 - 2014)	2001	2014	Change (2001 - 2014)
Total employment (number of jobs)	4,770	6,130	1,360	9,699	11,492	1,793	1,865	2,329	464	8,644	9,787	1,143	4,447	4,554	107
Farm employment	1,017	1,169	152	1,798	1,787	-11	506	530	24	964	1,066	102	712	700	-12
Forestry, fishing, and related activities	(D)	(D)	(D)	251	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	304	250	-54
Mining, quarrying, and oil and gas extraction	(D)	(D)	(D)	12	38	26	(D)	(D)	(D)	(D)	(D)	(D)	12	38	26
Utilities	(D)	59	(D)	(D)	(D)	(D)	(D)	(L)	(D)	22	103	81	(D)	(D)	(D)
Construction	268	456	188	589	474	-115	68	(D)	(D)	460	513	53	244	186	-58
Manufacturing	258	268	10	1,077	1,520	443	(D)	46	(D)	1,400	1,350	-50	565	567	2
Wholesale trade	165	246	81	(D)	(D)	(D)	(D)	41	(D)	297	240	-57	141	160	19
Retail trade	580	751	171	1,238	1,028	-210	186	(D)	(D)	879	752	-127	372	376	4
Transportation and warehousing	(D)	229	(D)	860	1,241	381	59	96	37	406	299	-107	(D)	(D)	(D)
Information	92	83	-9	70	94	24	(D)	34	(D)	74	(D)	(D)	106	116	10
Finance and insurance	165	206	41	165	231	66	(D)	106	(D)	182	354	172	68	106	38
Real estate and rental and leasing	113	218	105	224	357	133	(D)	82	(D)	239	415	176	135	169	34
Professional, scientific, and technical services	88	(D)	(D)	256	254	-2	(D)	58	(D)	(D)	(D)	(D)	129	117	-12
Management of companies and enterprises	0	(D)	(D)	24	(L)	(D)	0	0	0	(D)	(D)	(D)	(D)	(D)	(D)
Administrative and support and waste management and remediation services	68	(D)	(D)	232	391	159	(D)	27	(D)	440	495	55	(D)	(D)	(D)
Educational services	(L)	(D)	(D)	49	108	59	0	13	13	34	(D)	(D)	(L)	(D)	(D)
Health care and social assistance	223	(D)	(D)	411	642	231	94	92	-2	588	(D)	(D)	(D)	(D)	(D)
Arts, entertainment, and recreation	51	61	10	122	164	42	(D)	(D)	(D)	(D)	104	(D)	45	47	2
Accommodation and food services	266	235	-31	359	408	49	(D)	(D)	(D)	(D)	271	(D)	218	180	-38
Other services (except public administration)	332	350	18	457	582	125	(D)	102	(D)	596	(D)	(D)	166	207	41
Government and government enterprises	855	1,041	186	986	1,107	121	440	451	11	1,149	1,151	2	768	780	12
Federal, civilian	31	33	2	51	45	-6	27	18	-9	47	30	-17	55	49	-6
Military	46	47	1	75	82	7	17	15	-2	84	83	-1	40	36	-4
State and local	778	961	183	860	980	120	396	418	22	1,018	1,038	20	673	695	22

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-12. Labor Income by Sector in Idaho and the SFA Counties in the Idaho Socioeconomic Study Area (Thousands of Dollars)

Total Compensation of Employees	State of Idaho			Bingham County			Blaine County			Butte County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Compensation of employees	$21,031,752	$33,143,253	58%	$427,361	$676,624	58%	$493,187	$634,246	29%	$585,304	$700,507	20%
Average compensation per job (dollars)	$34,435	$48,272	40%	$28,950	$44,337	53%	$37,714	$49,737	32%	$64,560	$95,632	48%
Farm compensation	$407,335	$827,098	103%	$14,037	$54,837	291%	$4,333	$7,668	77%	$3,915	$2,767	-29%
Forestry, fishing, and related activities	$208,398	$323,919	55%	(D)	(D)	(D)	$792	(D)	(D)	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	$96,698	$217,772	125%	(D)	(D)	(D)	$1,663	(D)	(D)	$0	$0	(D)
Utilities	$119,410	$314,943	164%	(D)	$5,975	(D)	$538	$2,683	399%	(D)	$0	(D)
Construction	$1,490,661	$1,692,534	14%	$25,107	$32,862	31%	$94,144	$68,635	-27%	(D)	$2,425	(D)
Manufacturing	$3,201,699	$4,317,325	35%	$81,562	$119,549	47%	$18,265	$31,362	72%	(D)	$2,919	(D)
Wholesale trade	$1,062,132	$1,785,624	68%	$42,306	$52,149	23%	$11,271	$13,896	23%	$507	(D)	(D)
Retail trade	$1,788,549	$2,719,258	52%	$28,168	$32,738	16%	$47,301	$53,453	13%	$1,430	$1,880	31%
Transportation and warehousing	$660,129	$1,000,605	52%	(D)	$19,075	(D)	$6,726	$8,966	33%	(D)	$457	(D)
Information	$394,728	$553,835	40%	$3,138	$1,432	-54%	$8,475	$8,929	5%			(D)
Finance and insurance	$797,404	$1,471,380	85%	$9,201	$20,322	121%	$16,086	$28,273	76%	(D)	$2,557	(D)
Real estate and rental and leasing	$171,154	$279,478	63%	$489	$3,190	552%	$11,638	$12,771	10%	(D)	$74	(D)
Professional, scientific, and technical services	$1,462,395	$2,263,780	55%	$5,358	$14,146	164%	$46,953	$75,845	62%	$549,509	$660,841	20%
Management of companies and enterprises	$631,782	$509,983	-19%	$3,683	$2,668	-28%	$4,313	$1,429	-67%	$0	(D)	(D)

Table C-12. (continued).

Total Compensation of Employees	State of Idaho			Bingham County			Blaine County			Butte County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Administrative and support and waste management and remediation services	$675,886	$1,339,204	98%	$3,945	$9,947	152%	$31,007	$30,486	-2%	$155	(D)	(D)
Educational services	$161,780	$390,969	142%	$379	$1,527	303%	$2,640	$8,893	237%	$0	$688	(D)
Health care and social assistance	$1,743,990	$4,001,249	129%	$18,245	$68,532	276%	$23,103	$69,428	201%	(D)	$4,356	(D)
Arts, entertainment, and recreation	$161,856	$235,601	46%	$483	$1,130	134%	$47,683	$19,509	-59%	(D)	$0	(D)
Accommodation and food services	$620,599	$1,072,277	73%	$6,284	$8,445	34%	$50,045	$71,569	43%	(D)	$810	(D)
Other services (except public administration)	$521,979	$818,376	57%	$11,827	$20,961	77%	$17,421	$24,406	40%	(D)	$884	(D)
Government and government enterprises	$4,653,188	$7,008,043	51%	$149,791	$184,522	23%	$48,790	$94,470	94%	$7,925	$15,940	101%
Federal, civilian	$758,243	$1,124,794	48%	$20,177	$16,561	-18%	$5,661	$7,876	39%	$2,127	$6,835	221%
Military	$276,303	$469,255	70%	$2,204	$4,864	121%	$1,027	$2,296	124%	$659	$3,275	397%
State and local	$3,618,642	$5,413,994	50%	$127,410	$163,097	28%	$42,102	$84,298	100%	$5,139	$5,830	13%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-13. Labor Income by Sector in the SFA Counties in the Idaho Socioeconomic Study Area (Thousands of Dollars)

Total Compensation of Employees	Camas County			Cassia County			Clark County			Custer County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Compensation of employees	$7,174	$25,571	256%	$267,345	$467,519	75%	$17,275	$21,633	25%	$56,798	$82,677	46%
Average compensation per job (dollars)	$23,142	$59,745	158%	$28,029	$41,986	50%	$27,119	$49,278	82%	$32,035	$49,096	53%
Farm compensation	$1,058	$3,013	185%	$28,237	$71,016	151%	$2,243	$2,361	5%	$2,032	$3,943	94%
Forestry, fishing, and related activities	(D)	(D)	(D)	$5,214	$11,296	117%	(D)	(D)	(D)	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	$0	$0	(D)	$3,462	$5,429	57%	(D)	$0	(D)	(D)	(D)	(D)
Utilities	$0	(D)	(D)	$2,306	$6,242	171%	$0	$0	(D)	$1,801	(D)	(D)
Construction	$823	(D)	(D)	$13,011	$20,071	54%	$0	(D)	(D)	(D)	$2,346	(D)
Manufacturing	(D)	(D)	(D)	$37,493	$69,667	86%	(D)	(D)	(D)	(D)	(D)	(D)
Wholesale trade	$0	$11,597	(D)	$10,933	$23,459	115%	(D)	(D)	(D)	$2,109	$1,128	-47%
Retail trade	$212	$317	50%	$32,266	$39,975	24%	$471	(D)	(D)	$2,756	$3,493	27%
Transportation and warehousing	(D)	(D)	(D)	$15,434	$43,731	183%	(D)	$2,750	(D)	$957	(D)	(D)
Information	(D)	(D)	(D)	$4,610	$5,972	30%	(D)	(D)	(D)	(D)	$2,245	(D)
Finance and insurance	(D)	(D)	(D)	$8,593	$14,134	64%	$463	$820	77%	$684	$804	18%
Real estate and rental and leasing	(D)	$0	(D)	$852	$1,016	19%	$0	$0	(D)	$369	$257	-30%
Professional, scientific, and technical services	(D)	(D)	(D)	$3,951	(D)	(D)	(D)	(D)	(D)	(D)	$1,712	(D)
Management of companies and enterprises	$0	$0	(D)	(D)	(D)	(D)	$0	$0	(D)	(D)	(D)	(D)
Administrative and support and waste management and remediation services	(D)	(D)	(D)	(D)	$6,088	(D)	$0	(D)	(D)	$563	(D)	(D)
Educational services	$0	(D)	(D)	(D)	$533	(D)	$0	(D)	(D)	$0	(D)	(D)
Health care and social assistance	(D)	(D)	(D)	(D)	$49,065	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Arts, entertainment, and recreation	(D)	(D)	(D)	$1,340	$1,263	-6%	$0	$0	(D)	$1,243	$2,564	106%
Accommodation and food services	(D)	(D)	(D)	$4,991	$9,365	88%	$126	(D)	(D)	$3,038	$4,893	61%
Other services (except public administration)	(D)	$352	61%	$5,749	$8,173	42%	(D)	(D)	(D)	(D)	$1,378	(D)
Government and government enterprises	$3,682	$5,927	95%	$59,993	$74,094	24%	$5,666	$6,159	9%	$18,714	$23,013	23%
Federal, civilian	$1,023	$1,992	113%	$10,356	$9,876	-5%	$2,403	$2,393	0%	$8,610	$11,110	29%
Military	$52	$111	47%	$1,124	$2,517	124%	$51	$95	86%	$220	$446	103%
State and local	$2,607	$3,824	(D)	$48,513	$61,701	27%	$3,212	$3,671	14%	$9,884	$11,457	16%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-14. Labor Income by Sector in the SFA Counties in the Idaho Socioeconomic Study Area (Thousands of Dollars)

Total Compensation of Employees	Elmore County			Fremont County			Gooding County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Compensation of employees	$404,711	$585,601	45%	$91,590	$139,212	52%	$158,225	$275,930	74%
Average compensation per job (dollars)	$35,327	$56,173	59%	$30,338	$42,808	41%	$27,513	$43,168	57%
Farm compensation	$29,324	$28,898	-1%	$8,485	$17,495	106%	$39,832	$80,238	101%
Forestry, fishing, and related activities	(D)	$4,172	(D)	(D)	(D)	(D)	$5,598	$15,389	175%
Mining, quarrying, and oil and gas extraction	(D)	$0	(D)	(D)	(D)	(D)	$0	$165	(D)
Utilities	$374	$4,949	1223%	(D)	(D)	(D)	$1,790	$3,418	91%
Construction	$10,435	$7,653	-27%	$4,272	$13,318	212%	$6,279	$6,903	10%
Manufacturing	$8,526	$20,561	141%	$1,680	$1,090	-35%	$21,457	$46,006	114%
Wholesale trade	$2,849	$3,917	37%	(D)	(D)	(D)	$5,374	$13,257	147%
Retail trade	$22,672	$25,899	14%	$5,637	$7,813	39%	$7,332	$10,638	45%
Transportation and warehousing	$4,531	$10,287	21%	$2,981	$5,503	85%	$9,953	$8,365	-16%
Information	$3,119	$3,786	40%	(D)	$582	(D)	(D)	(D)	(D)
Finance and insurance	$5,922	$8,265	210%	$1,254	$1,826	46%	$2,165	$2,988	38%
Real estate and rental and leasing	$570	$1,767	(D)	$491	$978	99%	(D)	(D)	(D)
Professional, scientific, and technical services	(D)	$5,458	(D)	$5,137	$1,612	-69%	$3,921	$7,083	81%
Management of companies and enterprises	(D)	$0	194%	$0	$0	(D)	(D)	(D)	(D)
Administrative and support and waste management and remediation services	$3,848	$11,331	84%	$910	$2,394	163%	(D)	(D)	(D)
Educational services	$2,261	$4,151	533%	$0	$0	(D)	(D)	(D)	(D)
Health care and social assistance	$5,900	$37,370	265%	$3,756	$4,808	28%	(D)	(D)	(D)
Arts, entertainment, and recreation	$80	$292	57%	$240	$462	93%	(D)	$1,768	(D)
Accommodation and food services	$7,353	$11,568	47%	$3,742	$5,417	45%	$2,698	$3,259	21%
Other services (except public administration)	$6,513	$9,559	35%	(D)	$4,830	(D)	$5,770	$12,476	116%
Government and government enterprises	$284,665	$385,718	36%	$39,788	$54,209	36%	$35,229	$51,201	45%
Federal, civilian	$40,165	$54,584	41%	$5,738	$5,713	0%	$3,315	$4,651	40%
Military	$200,921	$283,071	10%	$613	$1,343	119%	$743	$1,623	118%
State and local	$43,579	$48,063	(D)	$33,437	$47,153	41%	$31,171	$44,927	44%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-15. Labor Income by Sector in the SFA Counties in the Idaho Socioeconomic Study Area (Thousands of Dollars)

Total Compensation of Employees	Jefferson County			Lemhi County			Lincoln County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Compensation of employees	$132,411	$250,473	89%	$73,748	$103,633	41%	$40,737	$74,321	82%
Average compensation per job (dollars)	$25,226	$38,393	52%	$26,837	$41,075	53%	$28,851	$42,348	47%
Farm compensation	$11,187	$20,783	86%	$2,406	$3,932	63%	$5,443	$15,592	186%
Forestry, fishing, and related activities	(D)	$19,214	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	$0	$0	(D)	(D)	(D)	(D)	$0	$0	(D)
Utilities	$1,720	$2,966	72%	$214	(D)	(D)	(D)	(D)	(D)
Construction	$12,645	$22,487	78%	$3,018	$8,954	197%	(D)	(D)	(D)
Manufacturing	$19,414	$45,493	134%	$4,606	$3,187	-31%	(D)	(D)	(D)
Wholesale trade	$6,849	$14,298	109%	$955	(D)	(D)	$1,693	(D)	(D)
Retail trade	$10,665	$17,714	66%	$7,539	$9,878	31%	$548	$2,144	291%
Transportation and warehousing	$3,130	$13,431	(D)	$822	$1,461	78%	(D)	$862	(D)
Information	(D)	$365	165%	$811	$744	-8%	$0	(D)	(D)
Finance and insurance	$2,411	$6,383	180%	$1,561	$1,481	-5%	$203	(D)	(D)
Real estate and rental and leasing	$299	$836	12%	$337	$386	15%	(D)	(D)	(D)
Professional, scientific, and technical services	$2,699	$3,026	(D)	$861	(D)	(D)	(D)	$868	(D)
Management of companies and enterprises	(D)	$3,735	(D)	(D)	(D)	(D)	$0	$0	(D)
Administrative and support and waste management and remediation services	(D)	$2,444	(D)	(D)	(D)	(D)	(D)	$3,907	(D)
Educational services	(D)	(D)	(D)	$207	(D)	(D)	$0	$0	(D)
Health care and social assistance	(D)	(D)	78%	$3,285	(D)	(D)	$3,728	$4,939	32%
Arts, entertainment, and recreation	$1,121	$1,997	142%	$1,144	$1,805	58%	$217	(D)	(D)
Accommodation and food services	$1,348	$3,257	92%	$2,942	$3,605	23%	$642	(D)	(D)
Other services (except public administration)	$3,752	$7,220	37%	$2,819	$4,566	62%	(D)	$1,376	(D)
Government and government enterprises	$39,827	$54,679	43%	$36,560	$47,265	29%	$18,791	$23,682	26%
Federal, civilian	$2,152	$3,074	186%	$15,289	$16,511	8%	$6,046	$6,305	4%
Military	$1,017	$2,911	33%	$400	$826	107%	$219	$570	160%
State and local	$36,658	$48,694	(D)	$20,871	$29,928	43%	$12,526	$16,807	34%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-16. Labor Income by Sector in the SFA Counties in the Idaho Socioeconomic Study Area (Thousands of Dollars)

Total Compensation of Employees	Minidoka County			Owyhee County			Twin Falls County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Compensation of employees	$239,188	$336,533	41%	$68,514	$121,364	77%	$916,110	$1,524,062	66%
Average compensation per job (dollars)	$29,869	$45,968	54%	$25,815	$41,806	62%	$28,808	$40,420	40%
Farm compensation	$22,505	$51,994	131%	$12,567	$33,334	165%	$37,766	$68,412	81%
Forestry, fishing, and related activities	$7,979	$12,004	50%	(D)	$4,298	(D)	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	$0	$0	(D)	(D)	$4,904	(D)	(D)	(D)	(D)
Utilities	$3,133	$5,118	63%	(D)	(D)	(D)	$5,800	$19,899	243%
Construction	$7,090	$15,667	121%	$5,246	$3,374	-36%	$46,745	$46,704	0%
Manufacturing	$76,511	$70,346	-8%	$5,062	$8,400	66%	$119,732	$215,958	80%
Wholesale trade	$22,525	$40,656	80%	$1,939	$8,414	334%	$51,415	$72,774	42%
Retail trade	$10,829	$15,337	42%	$3,484	$5,674	63%	$104,499	$151,479	45%
Transportation and warehousing	$11,773	$14,435	70%	(D)	(D)	(D)	$35,299	$63,502	80%
Information	$4,429	$7,521	99%	$922	$1,071	16%	$14,066	$24,799	76%
Finance and insurance	$2,177	$4,337	340%	(D)	(D)	(D)	$38,220	$55,919	46%
Real estate and rental and leasing	$400	$1,761	39%	(D)	(D)	(D)	$10,169	$9,980	-2%
Professional, scientific, and technical services	$2,883	$4,001	(D)	(D)	(D)	(D)	$38,195	$75,842	99%
Management of companies and enterprises	(D)	(D)	(D)	(D)	(D)	(D)	$16,614	$11,295	-32%
Administrative and support and waste management and remediation services	(D)	(D)	(D)	$2,064	$4,179	102%	$22,556	$89,156	295%
Educational services	(D)	$938	(D)	(D)	(D)	(D)	$4,583	$5,161	13%
Health care and social assistance	(D)	$8,920	94%	(D)	(D)	(D)	$85,921	$254,207	196%
Arts, entertainment, and recreation	$281	$544	3%	(D)	$166	(D)	$3,286	$5,196	58%
Accommodation and food services	$5,717	$5,888	85%	(D)	$2,049	(D)	$30,762	$55,794	81%
Other services (except public administration)	$4,491	$8,330	36%	$1,317	$2,290	74%	$28,014	$45,985	64%
Government and government enterprises	$48,691	$66,429	82%	$21,537	$29,063	35%	$209,285	$232,080	11%
Federal, civilian	$3,885	$7,088	113%	$1,622	$3,144	94%	$23,243	$30,650	32%
Military	$1,029	$2,192	31%	$570	$1,211	112%	$3,365	$8,741	160%
State and local	$43,777	$57,149	(D)	$19,345	$24,708	28%	$182,677	$192,689	5%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-17. Labor Income by Sector in the Trade Counties in the Idaho Socioeconomic Study Area (Thousands of Dollars)

Total Compensation of Employees	Franklin County			Jerome County			Oneida County			Payette County			Washington County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Compensation of employees	$74,022	$132,680	79%	$207,102	$400,599	48%	$24,429	$43,092	76%	$177,515	$289,975	63%	$80,515	$117,165	46%
Average compensation per job (dollars)	$26,202	$36,421	39%	$28,589	$44,645	36%	$23,535	$34,808	48%	$28,794	$43,215	50%	$25,504	$38,977	53%
Farm compensation	$6,895	$13,546	96%	$33,606	$57,284	41%	$1,279	$2,943	130%	$9,590	$20,127	110%	$4,070	$6,969	71%
Forestry, fishing, and related activities	(D)	(D)	(D)	$3,307	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	$5,223	$6,909	32%
Mining, quarrying, and oil and gas extraction	(D)	(D)	(D)	$0	$0	0%	(D)	(D)	(D)	(D)	(D)	(D)	$0	$0	(D)
Utilities	(D)	$5,756	(D)	(D)	(D)	(D)	(D)	$0	(D)	$624	$11,715	1777%	(D)	(D)	(D)
Construction	$3,206	$9,835	207%	$9,868	$12,921	24%	$354	(D)	(D)	$4,500	$9,214	105%	$3,424	$2,697	-21%
Manufacturing	$9,206	$10,286	12%	$31,587	$81,290	61%	(D)	$866	(D)	$47,509	$52,509	11%	$14,207	$20,898	47%
Wholesale trade	$4,784	$11,268	136%	(D)	(D)	(D)	(D)	$1,166	(D)	$7,632	$9,296	22%	$3,731	$6,427	72%
Retail trade	$7,312	$13,436	84%	$23,647	$26,637	11%	$1,779	(D)	(D)	$13,648	$13,201	-3%	$5,745	$8,212	43%
Transportation and warehousing	(D)	$3,124	20%	$23,504	$49,265	52%	$984	$2,795	184%	$10,221	$9,771	-4%	(D)	(D)	(D)
Information	$1,722	$2,058	59%	$1,492	$4,092	64%	(D)	$304	(D)	$2,256	(D)	(D)	$3,348	$6,520	95%
Finance and insurance	$1,928	$3,057	44%	$2,840	$5,244	46%	(D)	$3,167	(D)	$3,783	$14,043	271%	$1,594	$2,274	43%
Real estate and rental and leasing	$113	$163	(D)	$546	$1,178	54%	(D)	$143	(D)	$1,297	$1,641	27%	$234	$358	53%
Professional, scientific, and technical services	$804	(D)	(D)	$5,373	$6,245	14%	(D)	$912	(D)	(D)	(D)	(D)	$1,509	$1,726	14%
Management of companies and enterprises	$0	(D)	(D)	$753	$967	22%	$0	$0	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Administrative and support and waste management and remediation services	$331	(D)	(D)	$1,420	$10,056	86%	(D)	$131	(D)	$6,105	$8,897	46%	(D)	(D)	(D)
Educational services	$0	(D)	(D)	$879	$2,006	56%	$0	$0	(D)	$644	(D)	(D)	$0	(D)	(D)
Health care and social assistance	$2,219	(D)	14%	$9,188	$23,083	60%	$1,090	$1,479	36%	$9,603	(D)	(D)	(D)	(D)	(D)
Arts, entertainment, and recreation	$348	$396	68%	$1,479	$2,464	40%	(D)	(D)	(D)	(D)	$592	(D)	$734	$495	-33%
Accommodation and food services	$1,761	$2,959	11%	$3,200	$5,756	44%	(D)	(D)	(D)	(D)	$2,831	(D)	$1,659	$1,984	20%
Other services (except public administration)	$3,312	$3,680	63%	$5,087	$13,631	63%	(D)	$926	(D)	$6,789	(D)	(D)	$1,861	$3,040	63%
Government and government enterprises	$24,884	$40,600	43%	$32,002	$49,350	35%	$12,097	$16,648	38%	$37,101	$50,075	35%	$24,457	$35,713	46%
Federal, civilian	$1,439	$2,055	132%	$2,430	$3,126	22%	$1,352	$1,359	1%	$2,387	$2,047	-14%	$2,958	$3,593	21%
Military	$601	$1,397	63%	$978	$2,456	60%	$219	$449	105%	$1,094	$2,461	125%	$518	$1,071	107%
State and local	$22,844	$37,148	(D)	$28,594	$43,768	35%	$10,526	$14,840	41%	$33,620	$45,567	36%	$20,981	$31,049	48%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-18. Gross Economic Output and Value Added for SFA Counties in the Montana Socioeconomic Study Area (2013)

Description	Fergus County		Petroleum County		Phillips County		Valley County	
	Output	Value Added	Output	Value Added	Output	Value Added	Output	Value Added
Total	$967,530,524	$427,193,347	$64,356,319	$25,216,972	$374,979,367	$166,383,978	$704,993,254	$319,818,556
Agriculture, forestry, fish, & hunting	$159,572,851	$50,129,176	$36,961,461	$13,378,365	$127,574,198	$38,072,558	$179,628,597	$34,070,247
Extraction of natural gas and crude petroleum	$9,140,665	$4,338,927	$4,280,063	$2,304,115	$4,185,680	$2,247,098	$6,209,767	$3,046,376
Sand and gravel mining	$1,296,848	$805,264	$0	$0	$0	$0	$0	$0
Drilling oil and gas wells	$933,132	$459,073	$725,826	$531,189	$708,024	$517,756	$627,437	$319,332
Support activities for oil and gas operations	$493,996	$323,432	$54,790	$40,341	$832,819	$579,428	$5,635,674	$4,185,506
Metal mining services	$73,290	$50,512	$73,688	$42,702	$0	$0	$0	$0
Utilities	$49,880,239	$9,685,079	$0	$0	$18,297,686	$4,007,799	$32,905,611	$6,336,131
Manufacturing	$137,239,523	$23,231,259	$40,121	$13,370	$10,611,937	$921,865	$10,630,565	$2,126,289
Wholesale trade	$47,319,794	$27,201,245	$0	$0	$9,919,821	$5,825,183	$41,090,816	$24,066,327
Retail trade	$46,937,251	$25,668,707	$1,682,911	$574,790	$15,904,470	$7,738,550	$27,049,037	$14,421,310
Transportation & warehousing	$26,003,477	$10,500,714	$3,168,547	$1,344,988	$33,192,774	$19,154,168	$98,056,246	$57,251,867
Information	$17,315,183	$5,797,357	$717,005	$272,281	$4,105,302	$1,337,296	$19,007,128	$7,211,538
Finance & insurance	$40,139,731	$18,244,395	$82,509	$22,745	$19,935,524	$7,239,752	$22,947,091	$11,272,550
Real estate & rental	$88,954,576	$63,055,131	$5,049,555	$1,764,943	$31,331,785	$22,392,866	$47,750,886	$34,901,514
Professional, scientific, & tech services	$20,672,170	$11,115,523	$216,537	$60,062	$5,905,344	$2,855,204	$16,713,266	$7,520,760
Management of companies	$1,029,255	$262,738	$0	$0	$0	$0	$1,198,593	$438,978
Administrative & waste services	$4,834,953	$2,445,814	$1,708,391	$508,921	$338,574	$214,093	$10,766,629	$5,094,324
Educational services	$1,533,036	$486,319	$0	$0	$838,920	$80,089	$844,959	$115,437
Health & social services	$73,737,849	$42,055,502	$1,079,744	$518,719	$17,927,026	$9,716,475	$55,781,534	$31,099,589
Arts, entertainment, & recreation	$9,737,704	$4,218,363	$767,443	$96,393	$2,149,490	$908,586	$6,107,158	$3,021,069
Accommodation & food services	$29,651,044	$13,507,862	$521,038	$212,348	$9,150,844	$3,775,937	$17,205,560	$8,435,769
Other services	$25,520,692	$12,017,056	$875,799	$253,069	$14,408,687	$8,808,277	$15,067,045	$6,489,495
Government & non-NAICs	$60,054,913	$58,973,831	$2,819,650	$2,750,096	$26,088,636	$23,883,289	$49,104,442	$46,164,306

Source: Minnesota IMPLAN Group, Inc. 2013.

Table C-19. Change in Employment by Industry in the SFA Counties in the Montana Socioeconomic Study Area, 2001 and 2014

Industry	Fergus County			Petroleum County			Phillips County			Valley County		
	2001	2014	Change	2001	2014	Change	2001	2014	Change	2001	2014	Change
Total employment	7,189	7,378	189	323	568	245	2,662	2,657	-5	4,533	5,087	554
Farm employment	975	858	-117	113	134	21	612	551	-61	853	672	-181
Forestry, fishing, and related activities	(D)	(D)		(D)	(D)		(D)	(D)		(D)	(D)	
Mining	(D)	51		(D)	(D)		(D)	(D)		33	138	105
Utilities	(D)	(D)		(L)	(L)		20	19	-1	33	34	1
Construction	540	725	185	(L)	(D)		99	129	30	215	296	81
Manufacturing	423	350	-73	(L)	0		53	46	-7	82	72	-10
Wholesale trade	232	264	32	0	0		91	41	-50	118	209	91
Retail trade	789	734	-55	(D)	(D)		271	270	-1	513	455	-58
Transportation and warehousing	(D)	(D)		(D)	(D)		89	94	5	157	418	261
Information	84	89	5	(D)	(D)		33	(D)		41	87	46
Finance and insurance	222	297	75	0	0		76	95	19	171	(D)	
Real estate and rental and leasing	243	228	-15	15	73	58	58	89	31	71	(D)	
Professional, scientific, and technical services	210	216	6	(L)	16		60	67	7	138	149	11
Management of companies and enterprises	(D)	(D)		0	0		0	(D)		0	(D)	
Administrative and waste management services	(D)	(D)		(L)	(D)		41	(D)		106	(D)	
Educational services	19	(D)		(L)	(L)		(D)	(D)		(D)	(D)	
Health care and social assistance	(D)	(D)		(D)	(D)		(D)	(D)		(D)	(D)	
Arts, entertainment, and recreation	142	115	-27	(D)	(D)		(D)	35		28	48	20
Accommodation and food services	533	575	42	(D)	(D)		(D)	170		340	352	12
Other services, except public administration	381	374	-7	(D)	(D)		151	163	12	229	191	-38
Government and government enterprises	1,118	1,074	-44	62	56	-6	459	400	-59	740	811	71

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-20. Change in Employment by Industry by Trade County in the Montana Socioeconomic Study Area, 2001 and 2014

Description	Judith Basin County			State of Montana		
	2001	2014	Change	2001	2014	Change
Total employment	1,046	1,357	311	558,884	643,412	84,528
Farm employment	405	384	-21	32,384	29,695	-2,949
Forestry, fishing, and related activities	(D)	(D)		6,995	7,925	930
Mining, quarrying, and oil and gas extraction	(D)	(D)		6,964	14,985	7,931
Utilities	(D)	(D)		3,240	3,291	51
Construction	(D)	(D)		38,429	43,373	4,944
Manufacturing	(D)	(D)		24,450	23,429	-1,021
Wholesale trade	15	36	21	17,229	18,994	1,765
Retail trade	51	48	-3	69,231	73,463	4,232
Transportation and warehousing	(D)	(D)		17,418	20,019	2,601
Information	(D)	(L)		9,457	8,275	-1,182
Finance and insurance	(D)	120		20,272	25,075	4,803
Real estate and rental and leasing	(D)	151		18,430	28,242	9,812
Professional, scientific, and technical services	25	(D)		28,426	35,536	7,110
Management of companies and enterprises	0	0		1,407	2,272	865
Administrative and support and waste management and remediation services	(L)	(D)		21,457	25,362	3,905
Educational services	(L)	(D)		5,705	8,891	3,186
Health care and social assistance	20	(D)		55,897	71,982	16,085
Arts, entertainment, and recreation	(D)	(D)		14,094	19,750	5,656
Accommodation and food services	(D)	(D)		46,190	53,873	7,683
Other services (except public administration)	(D)	(D)		31,060	33,097	2,847
Government and government enterprises	235	181	-54	90,149	95,163	5,014

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-21. Labor Income by Sector in SFA Counties in the Montana Socioeconomic Study Area (Thousands of Dollars)

Total Compensation of Employees	Fergus County			Petroleum County			Phillips County			Valley County		
	2001	2014	% Change	2001	2014	% Change	2001	2014	% Change	2001	2014	% Change
Total compensation of employees	$123,276	$201,547	63%	$2,683	$5,966	122%	$38,746	$59,632	54%	$84,638	$169,046	100%
Average compensation per job (dollars)	$26,899	$42,646	59%	$21,992	$34,091	55%	$24,111	$39,941	66%	$28,897	$47,471	64%
Farm compensation	$3,443	$7,604	121%	$667	$1,787	168%	$2,666	$5,299	99%	$2,611	$4,969	90%
Forestry, fishing, and related activities	(D)	(D)		(D)	(D)		(D)	(D)		(D)	(D)	
Mining, quarrying, and oil and gas extraction	(D)	$153		(D)	(D)		(D)	(D)		$1,127	$2,212	96%
Construction	$12,037	$24,417	103%	$0	(D)		$864	$1,802	109%	$2,853	$7,090	149%
Manufacturing	$11,016	$14,021	27%	$0	$0		$809	$989	22%	$1,945	$1,592	-18%
Utilities	(D)	(D)		$0	$0		$1,079	$1,574	46%	$1,675	$2,673	60%
Wholesale trade	$6,113	$11,566	89%	$0	$0		$2,692	$1,876	-30%	$2,857	$11,477	302%
Retail trade	$11,253	$17,132	52%	(D)	(D)		$3,204	$4,896	53%	$8,092	$10,838	34%
Transportation and warehousing	(D)	(D)		(D)	(D)		$2,533	$3,433	36%	$10,113	$26,037	157%
Information	$1,303	$2,694	107%	(D)	(D)		$378	(D)		$660	$4,054	514%
Finance and insurance	$4,169	$9,045	117%	$0	$0		$2,003	$2,958	48%	$4,463	(D)	
Real estate and rental and leasing	$503	$1,356	170%	$0	$0		$60	$99	65%	$403	(D)	
Professional, scientific, and technical services	$1,918	$2,668	39%	$0	$0		$547	$1,114	104%	$2,175	$4,767	119%
Management of companies and enterprises	(D)	(D)		$0	$0		$0	(D)		$0	(D)	
Administrative and support and waste management and remediation services	(D)	(D)		$0	(D)		$114	(D)		$488	(D)	
Educational services	$0	(D)		$0	$0		(D)	(D)		(D)	(D)	
Health care and social assistance	(D)	(D)		(D)	(D)		(D)	(D)		(D)	(D)	
Arts, entertainment, and recreation	$897	$897	0%	(D)	(D)		(D)	$234		$152	$616	305%
Accommodation and food services	$5,327	$7,936		(D)	(D)		(D)	$2,227		$3,220	$5,720	78%
Other services (except public administration)	$3,352	$4,960	48%	(D)	(D)		$1,152	$1,955	70%	$2,063	$2,461	19%
Government and government enterprises	$37,185	$51,150	38%	$1,518	$2,039	34%	$13,494	$19,756	46%	$25,711	$42,829	67%
Federal, civilian	$8,776	$11,334	29%	$126	$231	83%	$3,094	$6,847	121%	$7,933	$15,194	92%
State government	$9,708	$13,342	37%	(D)	(D)		$1,010	$666	-34%	$3,485	$5,142	48%
Local government	$17,912	$24,882	39%	(D)	(D)		$9,078	$11,653	28%	$13,770	$21,401	55%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-22. Labor Income by Sector in the Trade Counties of the Montana Socioeconomic Study Area (2014 Dollars in Thousands)

Total Compensation of Employees	Judith Basin County			State of Montana		
	2001	2014	% Change	2001	2014	% Change
Total compensation of employees	$13,055	$23,935	83%	$12,921,933	$23,055,640	78%
Average compensation per job (dollars)	$24,131	$42,894	78%	$31,212	$48,989	57%
Farm compensation	$2,516	$5,588	122%	$157,974	$310,677	97%
Forestry, fishing, and related activities	(D)	(D)		$74,375	$147,482	98%
Mining, quarrying, and oil and gas extraction	(D)	(D)		$330,916	$882,468	167%
Construction	(D)	(D)		$817,977	$1,452,113	78%
Manufacturing	(D)	(D)		$885,339	$1,138,349	29%
Utilities	(D)	(D)		$226,567	$349,698	54%
Wholesale trade	$238	$1,255	427%	$589,187	$1,074,217	82%
Retail trade	$234	$833	256%	$1,190,752	$1,873,728	57%
Transportation and warehousing	(D)	(D)		$567,161	$967,855	71%
Information	(D)	$0		$299,610	$381,136	27%
Finance and insurance	(D)	$1,723		$609,124	$1,111,697	83%
Real estate and rental and leasing	(D)	$171		$111,557	$209,817	88%
Professional, scientific, and technical services	$90	(D)		$640,423	$1,383,382	116%
Management of companies and enterprises	$0	$0		$59,285	$170,009	187%
Administrative, support and waste management and remediation services	$0	(D)		$305,634	$631,987	107%
Educational services	$0	(D)		$75,614	$176,492	133%
Health care and social assistance	$67	(D)	21%	$1,501,948	$3,287,230	119%
Arts, entertainment, and recreation	(D)	(D)		$144,937	$311,995	115%
Accommodation and food services	(D)	(D)		$563,810	$1,059,627	88%
Other services (except public administration)	(D)	(D)		$408,717	$671,508	64%
Government and government enterprises	$6,412	$7,363	15%	$3,361,026	$5,464,173	63%
Federal, civilian	$1,819	$1,843	1%	$767,293	$1,181,524	54%
State government	$457	(D)		$881,057	$1,512,674	72%
Local government	$3,978	(D)		$1,479,903	$2,355,867	59%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-23. Gross Economic Output and Value Added for SFA Counties in the Nevada Socioeconomic Study Area (2013)

Description	Elko County		Humboldt County		Washoe County	
	Output	Value Added	Output	Value Added	Output	Value Added
Total	$4,673,023,968	$2,948,976,733	$2,964,029,750	$1,912,777,234	$1,041,050,802	$464,277,541
Agriculture, forestry, fish, & hunting	$112,132,991	$51,169,047	$124,492,722	$63,910,393	$3,821,591	$2,441,706
Extraction of natural gas and crude petroleum	$12,426,854	-$3,288,792	$9,850,223	$1,840,778	$918,451	$242,928
Extraction of natural gas liquids	$164,673	$69,262	$45,206	$19,370	$0	$0
Gold ore mining	$1,146,993,408	$769,053,706	$1,483,098,267	$996,797,295	$6,864,651	$5,061,655
Copper ore mining	$6,940,555	$5,488,301	$0	$0	$0	$0
Uranium-radium-vanadium ore mining	$0	$0	$536,766	$376,166	$0	$0
Other metal ore mining	$36,857,746	$29,231,350	$3,383,790	$2,691,901	$0	$0
Stone mining and quarrying	$21,413,458	$18,122,071	$3,868,350	$3,244,462	$1,455,066	$1,231,368
Sand and gravel mining	$6,025,977	$4,667,859	$0	$0	$1,158,352	$909,845
Other chemical and fertilizer mineral mining	$126,728,249	$98,559,175	$0	$0	$0	$0
Other nonmetallic minerals	$0	$0	$0	$0	$5,327,308	$4,158,806
Drilling oil and gas wells	$2,387,083	$884,855	$2,349,597	$1,432,981	$105,794	$39,698
Support activities for oil and gas operations	$12,639,926	$8,657,413	$16,350,883	$11,377,779	$139,408	$116,414
Other nonmetallic minerals services	$458,849	$337,637	$590,725	$439,866	$0	$0
Utilities	$149,811,987	$42,120,701	$200,418,705	$132,623,121	$108,453,611	$79,304,544
Construction	$380,069,645	$182,131,082	$167,176,278	$83,492,970	$36,309,619	$14,067,239
Manufacturing	$109,296,014	$22,488,292	$120,651,591	$29,942,413	$420,578,458	$100,099,233
Wholesale trade	$247,510,880	$161,637,077	$40,839,542	$25,205,246	$19,729,124	$12,074,463
Retail trade	$218,932,366	$141,579,596	$98,746,632	$64,159,117	$6,626,544	$4,145,358
Transportation & warehousing	$137,710,212	$82,361,354	$79,374,086	$46,113,409	$294,679,006	$157,090,219
Information	$56,243,162	$23,156,785	$17,733,842	$7,400,909	$5,671,892	$2,079,339
Finance & insurance	$111,759,992	$62,431,537	$30,201,348	$18,353,275	$12,021,967	$2,931,243
Real estate & rental	$325,073,831	$234,009,294	$107,692,739	$74,787,358	$24,681,741	$16,494,122
Professional, scientific, & tech services	$89,987,707	$47,836,115	$25,612,899	$12,755,561	$14,771,243	$6,422,569
Management of companies	$107,346,046	$71,419,089	$2,087,300	$717,198	$3,221,070	$1,354,225
Administrative & waste services	$42,860,419	$29,171,833	$46,019,597	$29,860,659	$14,912,750	$9,523,893
Educational services	$5,621,576	$2,162,894	$452,662	$161,349	$744,521	$328,839
Health & social services	$146,733,368	$89,371,495	$34,093,538	$21,441,118	$3,984,963	$2,833,731
Arts, entertainment, & recreation	$137,806,934	$82,575,603	$27,515,675	$16,644,972	$8,673,170	$4,224,800
Accommodation & food services	$357,376,758	$221,103,584	$121,721,593	$94,975,398	$14,306,387	$10,112,555
Other services	$102,147,578	$67,284,880	$41,567,044	$27,710,690	$9,434,110	$6,622,797
Government & non-NAICs	$289,808,384	$278,294,517	$112,337,602	$111,799,927	$22,460,005	$20,365,951

Source: Minnesota IMPLAN Group, Inc. 2013.

Table C-24. Change in Employment by Industry for Nevada and the SFA Counties in the Nevada Socioeconomic Study Area, 2001 and 2014

Industry	Nevada State Total			Elko County			Humboldt County			Washoe County		
	2001	2014	Change (2001 - 2014)	2001	2014	Change (2001 - 2014)	2001	2014	Change (2001 - 2014)	2001	2014	Change (2001 - 2014)
Total employment (number of jobs)	1,285,122	1,614,814	329,692	22,752	26,820	4,068	8,424	10,650	2,226	239,103	259,833	20,730
Farm employment	5,303	5,759	456	698	682	-16	503	583	80	539	561	22
Forestry, fishing, and related activities	1,398	1,696	298	97	(D)		(D)	(D)		321	223	-98
Mining	11,972	20,924	8,952	1,283	2,254	971	951	2,118	1,167	1,016	2,007	991
Utilities	4,598	4,108	-490	120	100	-20	(D)	143		958	456	-502
Construction	107,003	79,815	-27,188	1,233	2,293	1,060	412	552	140	18,858	14,273	-4,585
Manufacturing	46,307	47,057	750	217	302	85	331	309	-22	14,446	13,227	-1,219
Wholesale trade	38,185	39,006	821	648	1,188	540	(D)	200		11,967	9,903	-2,064
Retail trade	135,919	168,282	32,363	2,523	2,844	321	1,147	1,268	121	25,219	26,440	1,221
Transportation and warehousing	42,433	62,696	20,263	588	753	165	357	380	23	10,296	12,510	2,214
Information	22,074	19,387	-2,687	221	215	-6	111	82	-29	4,205	2,819	-1,386
Finance and insurance	63,697	87,375	23,678	531	483	-48	138	141	3	11,337	14,835	3,498
Real estate and rental and leasing	61,248	101,906	40,658	478	725	247	185	256	71	10,940	15,130	4,190
Professional, scientific, and technical services	63,029	86,901	23,872	530	666	136	(D)	(D)		13,991	17,137	3,146
Administrative and waste management services	81,439	111,203	29,764	797	688	-109	269	432	163	13,528	18,551	5,023
Educational services	6,029	15,371	9,342	76	(D)		(D)	(D)		1,607	3,143	1,536
Health care and social assistance	75,215	122,764	47,549	1,243	1,590	347	(D)	(D)		18,552	24,207	5,655
Arts, entertainment, and recreation	41,160	51,636	10,476	537	570	33	155	179	24	8,558	8,149	-409
Accommodation and food services	283,052	316,355	33,303	6,164	5,617	-547	1,167	1,151	-16	36,851	31,159	-5,692
Other services, except public administration	50,326	79,819	29,493	955	1,353	398	358	518	160	9,464	13,433	3,969
Government and government enterprises	135,522	168,180	32,658	3,747	3,802	55	1,376	1,566	190	24,281	28,582	4,301

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-25. Change in Employment by Industry in Trade Counties of the Nevada Socioeconomic Study Area, 2001 and 2014

Description	Lander County			Lyon County			Pershing County			Storey County		
	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)
Total employment (number of jobs)	3,013	4,298	1,285	14,091	17,172	3,081	2,397	2,667	270	1,608	5,616	4,008
Farm employment	174	185	11	678	818	140	220	235	15	0	0	0
Forestry, fishing, and related activities	(D)	(D)		101	185	84	(D)	(D)		(L)	(D)	
Mining, quarrying, and oil and gas extraction	1,124	2,088	964	166	473	307	589	674	85	(D)	(D)	
Utilities	(D)	(D)		77	63	-14	(D)	0		(D)	(D)	
Construction	(D)	(D)		1,351	882	-469	(D)	(D)		(D)	259	
Manufacturing	(D)	(D)		2,123	2,251	128	(D)	(D)		166	746	580
Wholesale trade	(D)	(D)		705	292	-413	(D)	30		(D)	(D)	
Retail trade	332	335	3	2,182	2,859	677	234	210	-24	127	(D)	
Transportation and warehousing	91	169	78	342	845	503	50	36	-14	(D)	2,847	
Information	(D)	(D)		55	68	13	12	(D)		14	(D)	
Finance and insurance	46	(D)		237	521	284	19	(D)		(D)	67	
Real estate and rental and leasing	18	(D)		573	862	289	48	(D)		61	(D)	
Professional, scientific, and technical services	(D)	28		(D)	682		35	(D)		65	125	60
Management of companies and enterprises	0	0	0	(D)	43		0	0	0	0	(D)	
Educational services	(L)	29		(D)	(D)		0	(D)		(D)	(D)	
Health care and social assistance	54	44		(D)	(D)		47	(D)		(D)	(D)	
Arts, entertainment, and recreation	17	(D)		643	912	269	(D)	(D)		74	93	19
Accommodation and food services	175	(D)		458	842	384	(D)	(D)		143	169	26
Other services (except public administration)	81	(D)		913	949	36	78	83	5	83	120	37
Government and government enterprises	599	579	-20	1,759	2,219	460	725	736	11	187	242	55

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-26. Labor Income by Sector in Nevada and the SFA Counties in the Nevada Socioeconomic Study Area

Industry/Earnings Category	Nevada State Total			Elko County			Humboldt County			Washoe County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Total compensation of employees	$45,164,688	$71,927,764	59%	$742,476	$1,399,407	88%	$257,128	$559,003	117%	$8,679,077	$11,564,131	33%
Average compensation per job	$41,763	$57,412	37%	$37,352	$59,945	60%	$38,383	$66,532	73%	$43,286	$57,197	32%
Farm compensation	$59,266	$104,457	76%	$6,300	$10,614	68%	$7,960	$14,859	87%	$5,110	$4,780	-6%
Forestry, fishing, and related activities	$11,895	$32,169	170%	$1,137	(D)		(D)	(D)		$5,303	$2,180	-59%
Mining, quarrying, and oil and gas extraction	$695,152	$1,522,798	119%	$89,362	$225,266	152%	$56,222	$224,441	299%	$38,954	$17,067	-56%
Construction	$4,522,009	$4,169,875	-8%	$49,991	$174,485	249%	$10,612	$25,082	136%	$754,699	$702,662	-7%
Manufacturing	$2,192,793	$2,939,886	34%	$5,722	$15,597	173%	$13,682	$15,733	15%	$794,452	$844,858	6%
Utilities	$422,204	$548,134	30%	$8,534	$11,941	40%	(D)	$19,604		$89,540	$58,516	-35%
Wholesale trade	$1,915,454	$2,726,233	42%	$34,516	$101,461	194%	(D)	$12,608		$605,262	$660,667	9%
Retail trade	$3,450,713	$5,012,561	45%	$53,975	$84,096	56%	$21,005	$30,990	48%	$663,250	$788,980	19%
Transportation and warehousing	$1,548,354	$3,264,958	111%	$27,924	$50,882	82%	$12,207	$18,080	48%	$399,788	$619,453	55%
Information	$1,027,947	$1,047,439	2%	$7,850	$10,075	28%	$3,314	$3,013	-9%	$208,138	$156,505	-25%
Finance and insurance	$2,005,717	$2,719,951	36%	$19,952	$16,426	-18%	$3,037	$3,494	15%	$432,700	$575,834	33%
Real estate and rental and leasing	$758,001	$1,251,085	65%	$4,151	$10,010	141%	$1,194	$1,104	-8%	$143,926	$165,620	15%
Professional, scientific, and technical services	$2,439,226	$4,274,463	75%	$13,447	$26,823	99%	(D)	(D)		$507,047	$857,032	69%
Management of companies and enterprises	$931,416	$2,944,624	216%	$1,921	$70,501	3570%	(D)	(D)		$225,960	$480,430	113%
Administrative and support and waste management and remediation services	$1,915,775	$3,175,088	66%	$16,591	$18,556	12%	$4,155	$17,823	329%	$278,308	$510,954	84%
Health care and social assistance	$3,012,168	$6,525,292	117%	$39,253	$80,508	105%	(D)	(D)		$797,113	$1,351,626	70%
Arts, entertainment, and recreation	$815,739	$1,209,630	48%	$13,809	$14,316	4%	$2,076	$2,774	34%	$160,928	$166,116	3%
Accommodation and food services	$8,976,996	$12,784,033	42%	$152,040	$174,177	15%	$17,734	$24,937	41%	$953,038	$910,090	-5%
Other services (except public administration)	$970,662	$1,747,929	80%	$17,174	$40,781	137%	$4,234	$13,172	211%	$184,200	$321,859	75%
Government and government enterprises	$7,365,917	$13,437,118	82%	$177,865	$257,065	45%	$67,429	$109,866	63%	$1,394,741	$2,276,935	63%
Federal, civilian	$960,253	$1,729,322	80%	$24,257	$32,169	33%	$9,896	$12,258	24%	$216,504	$350,986	62%
State government	$1,542,206	$2,671,966	73%	$45,700	$58,903	29%	$11,480	$15,482	35%	$430,613	$711,760	65%
Local government	$4,407,410	$7,780,392	77%	$106,749	$161,618	51%	$45,667	$80,687	77%	$737,041	$1,171,690	59%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-27. Labor Income by Sector in the Trade Counties of the Nevada Socioeconomic Study Area

Description	Lander County			Lyon County			Pershing County			Storey County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Total compensation of employees	$136,364	$307,465	125%	$376,184	$631,366	68%	$82,482	$132,936	61%	$50,161	$252,709	404%
Average compensation per job (dollars)	$55,795	$85,454	53%	$35,167	$50,029	42%	$41,365	$68,137	65%	$42,259	$51,955	23%
Non services related							$3,405	$8,375	146%	$0	$0	
Farm compensation	$1,880	$3,056	63%	$8,985	$20,670	130%	$3,405	$8,375	146%	$0	$0	
Forestry, fishing, and related activities	(D)	(D)		$885	$3,995	351%	(D)	(D)		$0	(D)	
Mining, quarrying, and oil and gas extraction	$86,890	$218,980	152%	$6,561	$38,018	479%	$32,726	$58,914	80%	(D)	(D)	
Construction	(D)	(D)		$36,106	$28,821	-20%	(D)	$0		(D)	(D)	
Manufacturing	(D)	(D)		$89,032	$126,464	42%	(D)	(D)		(D)	$15,609	
Services related							(D)	(D)		$9,043	$48,352	435%
Utilities	$0	(D)		$6,251	$7,058	13%	(D)	$1,050		(D)	$22,671	
Wholesale trade	(D)	(D)		$24,669	$14,075	-43%	(D)	$262		(D)	(D)	
Retail trade	$4,363	$6,751	55%	$48,334	$95,480	98%	$3,879	$4,490	16%	$1,384	(D)	
Transportation and warehousing	$2,054	$11,157	443%	$6,937	$31,363	352%	$1,709	$2,096	23%	(D)	$120,844	
Information	(D)	(D)		$1,127	$1,152	2%	$361	(D)		$0	(D)	
Finance and insurance	$441	(D)		$3,635	$11,305	211%	$463	(D)		(D)	$0	
Real estate and rental and leasing	(L)	(D)		$2,974	$5,071	71%	$126	(D)		$0	(D)	
Professional, scientific, and technical services	(D)	$369		(D)	$20,227		$301	(D)		$208	$2,298	1005%
Management of companies and enterprises	$0	$0		(D)	$3,520		$0	$0		$0	(D)	
Administrative and support and waste management and remediation services	(D)	$951		$7,021	$14,016	100%	$0	(D)		$4,085	(D)	
Health care and social assistance	$444	$538	21%	(D)	(D)		$582	(D)		(D)	(D)	
Arts, entertainment, and recreation	$83	(D)		$11,179	$22,238	99%	(D)	(D)		$522	$1,052	102%
Accommodation and food services	$1,948	(D)		$4,617	$13,487	192%	(D)	(D)		$2,336	$3,667	57%
Other services (except public administration)	$1,310	(D)		$14,831	$17,228	16%	$917	$1,985	116%	$1,888	$3,544	88%
Government and government enterprises	$27,448	$41,769	52%	$74,184	$136,439	84%	$32,687	$49,077	50%	$8,223	$17,627	114%
Federal, civilian	$5,425	$6,058	12%	$3,222	$5,050	57%	$554	$1,066	92%	$134	$236	76%
State government	$2,233	$2,307	3%	(D)	$6,681		$132	$426	223%	$86	$329	283%
Local government	$19,652	$32,899	67%	(D)	$120,378		$32,001	$47,585	49%	$8,003	$17,062	113%

Source: U.S Bureau of Economic Analysis Economic Accounts.

Table C-28. Gross Economic Output and Value Added for SFA Counties in the Oregon Socioeconomic Study Area (2013)

Description	Harney County		Lake County		Malheur County	
	Output	Value Added	Output	Value Added	Output	Value Added
Total	$469,983,294	$251,201,968	$498,039,295	$279,831,573	$2,229,042,350	$1,068,342,038
Agriculture, forestry, fish, & hunting	$142,522,300	$68,883,124	$122,901,784	$63,930,773	$350,270,805	$175,019,173
Extraction of natural gas and crude petroleum	$3,638,134	$13,584	$0	$0	$0	$0
Gold ore mining	$0	$0	$0	$0	$139,833	$105,005
Sand and gravel mining	$0	$0	$103,241	$59,036	$0	$0
Other clay, ceramic, refractory minerals mining	$0	$0	$0	$0	$4,887,152	$2,035,947
Other nonmetallic minerals	$0	$0	$7,399,438	$4,013,897	$12,042,983	$6,318,920
Utilities	$18,178,383	$3,598,484	$6,617,064	$1,870,164	$29,387,049	$19,579,216
Construction	$23,748,772	$6,301,505	$27,507,226	$7,879,118	$62,949,505	$18,653,349
Manufacturing	$4,414,985	$1,329,121	$55,895,656	$14,769,380	$467,760,486	$59,090,813
Wholesale trade	$9,177,356	$3,607,128	$11,775,802	$6,284,320	$125,481,285	$70,434,483
Retail trade	$25,659,247	$12,919,734	$21,239,212	$11,450,108	$130,526,190	$73,873,287
Transportation & warehousing	$2,307,125	$1,250,605	$12,688,193	$7,579,656	$69,021,616	$29,166,095
Information	$8,899,805	$3,047,070	$8,223,182	$3,506,091	$58,324,191	$23,265,503
Finance & insurance	$16,907,747	$5,086,443	$8,811,943	$3,161,319	$59,500,316	$21,964,317
Real estate & rental	$55,556,365	$33,537,159	$66,497,430	$46,638,963	$160,905,244	$117,501,972
Professional, scientific, & tech services	$12,230,469	$5,987,797	$14,788,834	$7,299,517	$61,784,886	$28,133,261
Management of companies	$1,052,041	$593,219	$1,880,281	$591,958	$41,822,151	$20,453,963
Administrative & waste services	$4,145,194	$1,687,223	$1,369,798	$798,569	$17,178,473	$8,126,672
Educational services	$956,843	$469,819	$1,789,939	$184,971	$2,438,901	$1,374,195
Health & social services	$17,927,047	$10,390,937	$15,002,850	$9,339,044	$173,242,494	$93,194,369
Arts, entertainment, & recreation	$7,408,513	$1,368,927	$4,778,194	$352,412	$7,580,608	$2,577,564
Accommodation & food services	$15,141,405	$7,975,012	$10,791,028	$5,578,428	$61,959,889	$31,238,147
Other services	$16,578,898	$7,416,683	$15,125,457	$6,939,822	$68,299,208	$32,649,910
Government & non-NAICs	$83,532,667	$75,738,395	$82,852,741	$77,604,024	$263,539,086	$233,585,880

Source: Minnesota IMPLAN Group, Inc. 2013.

Table C-29. Change in Employment by Industry for Oregon and SFA Counties in the Oregon Socioeconomic Study Area, 2001 and 2014

Industry	Oregon State Total			Harney County			Lake County			Malheur County		
	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)	2001	2014	Change (2001 to 2014)
Total employment (number of jobs)	2,077,075	2,310,320	233,245	4,089	4,341	252	4,377	4,150	-227	17,732	16,623	-1,109
Proprietors employment	404,250	509,297	105,047	1,320	1,790	470	1,520	1,575	55	3,580	3,527	-53
Farm employment	67,687	61,967	-5,720	735	772	37	860	561	-299	2,431	2,010	-421
Forestry, fishing, and related activities	28,369	32,921	4,552	137	189	52	189	(D)	(D)	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	3,489	6,236	2,747	0	24	24	52	(D)	(D)	(D)	(D)	(D)
Utilities	5,539	4,814	-725	(D)	(D)	(D)	16	(D)	(D)	48	43	-5
Construction	118,344	114,184	-4,160	179	(D)	(D)	187	180	-7	557	384	-173
Manufacturing	226,519	197,303	-29,216	265	(D)	(D)	313	278	-35	1,451	900	-551
Wholesale trade	81,385	80,327	-1,058	(D)	61	(D)	67	(D)	(D)	715	746	31
Retail trade	234,059	242,136	8,077	470	432	-38	389	336	-53	2,377	2,182	-195
Transportation and warehousing	63,111	67,916	4,805	87	(D)	(D)	111	174	63	527	564	37
Information	45,519	40,328	-5,191	38	52	14	63	34	-29	160	210	50
Finance and insurance	80,487	93,813	13,326	58	234	176	105	79	-26	374	357	-17
Real estate and rental and leasing	77,186	98,945	21,759	97	141	44	115	205	90	353	421	68
Professional, scientific, and technical services	113,158	147,616	34,458	(D)	128	(D)	103	112	9	(D)	(D)	(D)
Administrative and support and waste management and remediation services	107,899	124,990	17,091	(D)	(D)	(D)	(D)	(D)	(D)	384	356	-28
Educational services	34,574	58,111	23,537	(D)	35	(D)	(D)	(D)	(D)	(D)	80	(D)
Health care and social assistance	192,672	268,103	75,431	(D)	300	(D)	(D)	(D)	(D)	(D)	1,945	(D)
Arts, entertainment, and recreation	41,462	56,454	14,992	39	(D)	(D)	(D)	(D)	(D)	133	119	-14
Accommodation and food services	140,232	172,960	32,728	248	(D)	(D)	(D)	(D)	(D)	1,014	1,096	82
Other services (except public administration)	109,684	122,343	12,659	167	199	32	202	199	-3	868	814	-54
Government and government enterprises	278,103	277,599	-504	1,102	985	-117	961	1,023	62	3,440	3,186	-254
Federal, civilian	29,106	27,503	-1,603	258	241	-17	302	249	-53	236	227	-9
Military	12,681	11,927	-754	24	19	-5	24	20	-4	93	73	-20
State and local	236,316	238,169	1,853	820	725	-95	635	754	119	3,111	2,886	-225
State government	60,815	61,798	983	103	95	-8	73	161	88	1,167	1,135	-32
Local government	175,501	176,371	870	717	630	-87	562	593	31	1,944	1,751	-193

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-30. Labor Income by Sector in Oregon and the SFA Counties in the Oregon Socioeconomic Study Area (Thousands of 2014 Dollars)

Industry/Earnings Category	Oregon State Total			Harney County			Lake County			Malheur County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Compensation of employees	$69,628,007	$104,854,394	51%	$87,140	$116,223	33%	$91,102	$128,525	41%	$437,402	$577,227	32%
Average compensation per job (dollars)	$41,623	$58,219	40%	$31,470	$45,560	45%	$31,887	$49,913	57%	$30,907	$44,077	43%
Farm compensation	$740,161	$1,109,671	50%	$4,798	$10,852	126%	$7,765	$11,223	45%	$29,277	$35,554	21%
Forestry, fishing, and related activities	$647,970	$1,029,918	59%	$2,082	$2,746	32%	$2,830	(D)	(D)	(D)	(D)	(D)
Forestry and logging	$361,705	$444,704	23%	(D)	$223	(D)	(D)	$937	(D)	(D)	$0	(D)
Fishing, hunting and trapping	$28,740	$42,673	48%	$0	$0	(D)	$0	$0	$0	$0	$0	$0
Mining, quarrying, and oil and gas extraction	$85,620	$98,320	15%	$0	$0	(D)	$1,173	(D)	(D)	(D)	(D)	(D)
Utilities	$450,763	$564,339	25%	(D)	(D)	(D)	$832	(D)	(D)	$3,111	$3,380	9%
Construction	$4,003,402	$5,315,819	33%	$2,664	(D)	(D)	$1,374	$2,754	100%	$9,333	$8,372	-10%
Manufacturing	$11,889,236	$14,236,229	20%	$7,411	(D)	(D)	$9,569	$10,691	12%	$42,712	$33,102	-22%
Wholesale trade	$4,210,258	$5,505,800	31%	(D)	$1,764	(D)	$1,425	(D)	(D)	$21,508	$32,224	50%
Retail trade	$5,237,017	$6,851,324	31%	$7,918	$8,774	11%	$5,473	$6,680	22%	$44,585	$60,184	35%
Transportation and warehousing	$2,291,954	$3,035,084	32%	$987	(D)	(D)	$926	$2,954	219%	$12,998	$18,789	45%
Information	$2,294,626	$2,839,449	24%	$585	$682	17%	$3,105	$1,370	-56%	$4,902	$8,674	77%
Finance and insurance	$3,397,752	$5,010,766	47%	$1,371	$1,859	36%	$1,881	$1,647	-12%	$9,519	$12,196	28%
Real estate and rental and leasing	$908,511	$1,121,352	23%	$250	$305	22%	$218	$274	26%	$2,705	$2,085	-23%
Professional, scientific, and technical services	$3,771,792	$6,965,627	85%	(D)	$2,123	(D)	$1,397	$1,873	34%	(D)	(D)	(D)
Management of companies and enterprises	$2,114,494	$5,199,560	146%	$0	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Educational services	$651,911	$1,502,931	131%	(D)	$532	(D)	(D)	(D)	(D)	(D)	$1,437	(D)
Health care and social assistance	$6,144,230	$12,965,486	111%	(D)	$6,809	(D)	(D)	(D)	(D)	(D)	$75,438	(D)
Arts, entertainment, and recreation	$535,774	$774,394	45%	$184	(D)	(D)	(D)	(D)	(D)	$1,026	$1,152	12%
Accommodation and food services	$2,180,501	$3,787,270	74%	$2,755	(D)	(D)	(D)	(D)	(D)	$13,078	$20,178	54%
Other services (except public administration)	$1,998,608	$3,067,463	53%	$1,769	$2,582	46%	$1,683	$2,594	54%	$12,186	$14,945	23%
Government and government enterprises	$13,787,013	$20,075,192	46%	$46,647	$64,347	38%	$42,234	$68,063	61%	$153,016	$208,928	37%
Federal, civilian	$1,891,118	$2,761,011	46%	$15,052	$21,031	40%	$17,311	$21,347	23%	$13,304	$19,393	46%
Military	$220,664	$434,238	97%	$311	$562	81%	$315	$593	88%	$1,261	$2,178	73%
State and local	$11,675,231	$16,879,943	45%	$31,284	$42,754	37%	$24,608	$46,123	87%	$138,451	$187,357	35%
State government	$3,044,589	$4,648,017	53%	$5,103	$6,935	36%	$3,658	$12,678	247%	$66,457	$97,183	46%
Local government	$8,630,642	$12,231,926	42%	$26,181	$35,819	37%	$20,950	$33,445	60%	$71,994	$90,174	25%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-31. Gross Economic Output and Value Added for SFA Counties in the Utah Socioeconomic Study Area, 2013

Description	Box Elder County		Cache County		Rich County	
	Output	Value Added	Output	Value Added	Output	Value Added
Total	$4,909,891,192	$2,162,721,124	$10,654,111,732	$4,393,417,452	$163,664,411	$86,766,490
Manufacturing	$2,703,006,860	$953,187,507	$4,686,611,358	$934,265,784	$46,501,993	$22,891,160
Real estate & rental	$308,556,798	$218,835,900	$764,594,933	$546,125,513	$1,523,945	$1,087,880
Construction	$247,615,053	$85,998,311	$742,943,822	$708,641,207	$0	$0
Agriculture, forestry, fish, & hunting	$200,945,344	$90,577,378	$678,456,047	$342,591,844	$0	$0
Government & non-NAICs	$197,539,319	$177,312,931	$649,898,201	$311,306,362	$0	$0
Transportation & warehousing	$186,056,464	$87,739,359	$518,302,960	$291,281,544	$0	$0
Finance & insurance	$175,435,256	$104,898,663	$504,666,870	$174,114,605	$0	$0
Retail trade	$167,284,652	$97,455,244	$476,463,706	$269,001,281	$0	$0
Professional, scientific, & tech services	$136,405,890	$40,460,200	$299,133,306	$133,774,013	$0	$0
Health & social services	$127,210,668	$67,794,937	$220,352,936	$122,536,607	$0	$0
Wholesale trade	$122,394,073	$71,070,210	$213,439,418	$136,701,760	$0	$0
Accommodation & food services	$69,014,701	$34,331,617	$202,097,478	$96,951,483	$0	$0
Other services	$67,444,132	$41,485,320	$183,399,881	$84,169,988	$285,451	$162,257
Information	$44,704,293	$17,756,195	$170,345,136	$70,707,365	$0	$0
Administrative & waste services	$38,920,068	$26,575,244	$122,009,349	$76,131,060	$0	$0
Management of companies	$27,427,992	$3,926,662	$60,337,991	$24,607,471	$0	$0
Extraction of natural gas and crude petroleum	$24,981,571	$18,254,408	$50,716,015	$25,526,355	$0	$0
Utilities	$22,792,939	$4,859,104	$50,430,743	$11,617,321	$0	$0
Arts, entertainment, & recreation	$14,934,760	$6,287,871	$31,607,031	$13,401,696	$64,878	$22,500
Drilling oil and gas wells	$8,777,711	$6,357,485	$4,524,736	$2,662,706	$0	$0
Sand and gravel mining	$4,365,622	$2,294,947	$2,848,474	$1,896,085	$0	$0
Support activities for oil and gas operations	$101,788	$53,261	$754,432	$584,301	$15,158,367	$5,699,911
Coal mining	$0	$0	$0	$0	$3,326,994	$1,499,939
Iron ore mining	$0	$0	$0	$0	$5,336,656	$2,955,188
Gold ore mining	$0	$0	$0	$0	$2,551,607	$908,713
Silver ore mining	$0	$0	$0	$0	$717,197	$110,511
Lead and zinc ore mining	$0	$0	$0	$0	$10,023,510	$3,830,784
Copper ore mining	$0	$0	$0	$0	$22,834,521	$16,812,957
Uranium-radium-vanadium ore mining	$0	$0	$0	$0	$10,910,923	$2,040,133
Other metal ore mining	$0	$0	$0	$0	$968,314	$388,802
Other clay, ceramic, refractory minerals mining	$0	$0	$0	$0	$1,151,625	$682,189
Potash, soda, and borate mineral mining	$0	$0	$0	$0	$589,395	$109,549
Phosphate rock mining	$0	$0	$0	$0	$11,663,355	$5,369,623
Other chemical and fertilizer mineral mining	$0	$0	$0	$0	$1,040,782	$361,412
Other nonmetallic minerals	$0	$0	$0	$0	$8,152,092	$4,364,527
Metal mining services	$0	$0	$0	$0	$3,723,461	$2,751,644
Other nonmetallic minerals services	$0	$0	$0	$0	$15,073,937	$13,944,992

Source: Minnesota IMPLAN Group, Inc. 2013.

Table C-32. Change in Employment by Industry, Utah and the SFA Counties in the Utah Socioeconomic Study Area, 2001 and 2014

Industry	Utah State Total			Box Elder County			Cache County			Rich County		
	2001	2014	Change (2001 - 2014)	2001	2014	Change (2001 - 2014)	2001	2014	Change (2001 - 2014)	2001	2014	Change (2001 - 2014)
Total employment (number of jobs)	1,385,001	1,785,244	400,243	23,805	25,205	1,400	53,885	70,173	16,288	1,077	1,673	596
Farm employment	20,539	20,520	-19	1,510	1,429	-81	1,901	1,486	-415	216	188	-28
Forestry, fishing, and related activities	2,551	3,686	1,135	(D)	153	(D)	(D)	247	(D)	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	8,922	18,506	9,584	(D)	114	(D)	(D)	(D)	(D)	0	(D)	(D)
Utilities	4,348	4,130	-218	42	42	0	59	63	4	(L)	(D)	(D)
Construction	94,992	104,910	9,918	1,336	1,620	284	3,056	3,210	154	86	93	7
Manufacturing	126,985	130,106	3,121	7,352	5,204	-2,148	8,636	11,506	2,870	(D)	(D)	(D)
Wholesale trade	45,931	54,847	8,916	459	649	190	800	1,167	367	(D)	25	(D)
Retail trade	159,485	189,294	29,809	2,413	2,466	53	5,926	7,497	1,571	96	85	-11
Transportation and warehousing	48,148	57,695	9,547	1,043	1,502	459	1,191	1,471	280	(D)	(D)	(D)
Information	36,940	39,058	2,118	194	157	-37	760	(D)	(D)	0	0	0
Finance and insurance	79,017	117,849	38,832	797	804	7	1,591	3,351	1,760	(D)	(D)	(D)
Real estate and rental and leasing	51,945	90,617	38,672	524	923	399	1,386	2,877	1,491	(D)	(D)	(D)
Professional, scientific, and technical services	79,314	128,098	48,784	(D)	(D)	(D)	2,795	5,008	2,213	19	(D)	(D)
Management of companies and enterprises	21,996	24,288	2,292	(D)	(D)	(D)	2,348	383	-1,965	0	(D)	(D)
Administrative and support and waste management and remediation services	78,438	103,183	24,745	464	957	493	2,891	2,769	-122	(D)	49	(D)
Educational services	31,021	55,418	24,397	99	336	237	506	1,173	667	(D)	(D)	(D)
Health care and social assistance	100,153	151,000	50,847	1,405	1,907	502	3,674	6,618	2,944	(D)	(D)	(D)
Arts, entertainment, and recreation	27,643	38,760	11,117	252	383	131	898	1,568	670	(D)	(D)	(D)
Accommodation and food services	87,236	114,946	27,710	1,242	1,357	115	2,772	3,895	1,123	(D)	(D)	(D)
Other services (except public admin)	72,334	93,508	21,174	1,134	1,373	239	2,929	3,539	610	92	115	23
Government and gov. enterprises	207,063	244,825	37,762	2,573	2,942	369	9,504	11,205	1,701	194	212	18

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-33. Labor Income by Sector in Utah and the SFA Counties in the Utah Socioeconomic Study Area (Thousands of 2014 Dollars)

Industry / Earnings Category	Utah State Total			Box Elder County			Cache County			Rich County		
	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014	2001	2014	% Change 2001 - 2014
Compensation of employees	$42,098,649	$75,416,061	44%	$764,666	$931,027	18%	$1,306,842	$2,380,531	45%	$15,540	$29,463	47%
Average compensation per job (dollars)	$37,231	$54,553	32%	$41,151	$49,726	17%	$29,910	$44,028	32%	$23,581	$37,628	37%
Farm compensation	$125,507	$230,463	46%	$9,623	$17,864	46%	$11,046	$16,160	32%	$1,775	$3,565	50%
Forestry, fishing, and related activities	$28,506	$61,791	54%	(D)	$2,822	(D)	(D)	$3,288	(D)	(D)	(D)	(D)
Mining, quarrying, and oil and gas extraction	$439,161	$1,133,505	61%	(D)	$1,352	(D)	(D)	(D)	(D)	$0	(D)	(D)
Utilities	$407,591	$479,525	15%	$1,732	$2,754	37%	$3,527	$6,236	43%	$263	(D)	(D)
Construction	$2,715,626	$4,474,971	39%	$32,052	$62,009	48%	$58,818	$91,209	36%	$1,308	$1,699	23%
Manufacturing	$5,500,726	$8,274,334	34%	$438,483	$382,521	-15%	$296,717	$619,458	52%	(D)	(D)	(D)
Nondurable goods manufacturing	$1,493,733	$2,557,955	42%	$6,060	$79,195	92%	$183,619	$338,866	46%	(D)	$0	(D)
Wholesale trade	$2,024,803	$3,593,092	44%	$15,505	$30,759	50%	$19,384	$44,677	57%	(D)	$0	(D)
Retail trade	$3,170,222	$5,395,787	41%	$33,507	$48,314	31%	$89,768	$155,563	42%	$958	$1,306	27%
Transportation and warehousing	$1,892,710	$2,818,974	33%	$26,861	$63,389	58%	$32,652	$53,237	39%	(D)	(D)	(D)
Information	$1,585,112	$2,594,951	39%	$3,447	$3,112	-11%	$22,356	(D)	(D)	$0	$0	(D)
Finance and insurance	$2,477,663	$4,714,865	47%	$11,589	$14,241	19%	$25,912	$68,513	62%	(D)	(D)	(D)
Real estate and rental and leasing	$434,844	$931,785	53%	$1,485	$2,384	38%	$4,900	$14,712	67%	(D)	(D)	(D)
Professional, scientific, and technical services	$2,772,075	$6,515,027	57%	(D)	(D)	(D)	$52,480	$162,072	68%	$0	(D)	(D)
Management of companies and enterprises	$1,295,013	$1,837,594	30%	(D)	(D)	(D)	$93,064	$25,509	-265%	$0	(D)	(D)
Administrative and support and waste management and remediation services	$1,531,635	$3,163,407	52%	$4,057	$18,285	78%	$39,929	$62,859	36%	(D)	$563	(D)
Educational services	$643,111	$1,691,639	62%	$277	$3,198	91%	$2,198	$16,167	86%	(D)	(D)	(D)
Health care and social assistance	$2,903,332	$6,704,381	57%	$25,290	$60,147	58%	$79,086	$247,237	68%	(D)	(D)	(D)
Arts, entertainment, and recreation	$382,022	$652,244	41%	$858	$2,800	69%	$6,836	$14,834	54%	(D)	(D)	(D)
Accommodation and food services	$1,208,620	$2,295,174	47%	$13,188	$20,917	37%	$27,644	$60,878	55%	(D)	(D)	(D)
Other services (except public administration)	$1,752,660	$3,177,067	45%	$23,571	$42,848	45%	$61,090	$100,299	39%	$1,480	$2,671	45%
Government and government enterprises	$8,807,710	$14,675,485	40%	$95,295	$136,643	30%	$376,007	$579,989	35%	$6,589	$10,745	39%
Federal, civilian	$1,976,260	$3,232,485	39%	$12,102	$17,501	31%	$19,057	$28,496	33%	$535	$612	13%
Military	$409,041	$732,974	44%	$3,064	$6,878	55%	$7,075	$15,637	55%	$129	$296	56%
State government	$2,738,541	$4,764,548	43%	$9,531	$12,987	27%	$216,973	$316,695	31%	$1,580	$2,336	32%
Local government	$3,683,868	$5,945,478	38%	$70,598	$99,277	29%	$132,902	$219,161	39%	$4,345	$7,501	42%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

Table C-34. Gross Economic Output and Value Added for SFA Counties in the Wyoming Socioeconomic Study Area (2013)

Description	Fremont County		Lincoln County		Sublette County		Sweetwater County	
	Output	Value Added	Output	Value Added	Output	Value Added	Output	Value Added
Total	$3,139,248,655	$1,952,055,987	$1,590,431,099	$931,752,254	$1,654,803,170	$1,148,378,123	$7,736,970,798	$5,087,551,465
Agriculture, forestry, fish, & hunting	$174,287,593	$90,790,087	$71,091,033	$38,109,015	$87,320,991	$43,663,188	$33,555,536	$17,294,407
Extraction of natural gas and crude petroleum	$383,803,802	$322,486,163	$50,144,600	$42,576,960	$511,681,396	$435,694,942	$769,901,123	$696,334,480
Extraction of natural gas liquids	$320,560	$285,790	$126,761,772	$112,534,578	$2,788,409	$2,477,108	$206,914,032	$187,582,552
Coal mining	$37,165,672	$30,438,761	$187,037,384	$134,987,396	$0	$0	$864,822,632	$660,637,039
Stone mining and quarrying	$0	$0	$1,284,845	$834,789	$0	$0	$0	$0
Sand and gravel mining	$7,400,288	$5,889,767	$5,082,354	$3,862,236	$9,574,443	$7,977,461	$0	$0
Potash, soda, and borate mineral mining	$0	$0	$0	$0	$0	$0	$862,393,860	$669,033,116
Drilling oil and gas wells	$99,314,056	$77,677,364	$67,444,542	$52,190,461	$109,935,707	$87,594,297	$85,094,170	$75,725,682
Support activities for oil and gas operations	$108,691,483	$79,343,001	$8,766,268	$6,358,301	$142,908,035	$107,040,612	$587,114,502	$445,183,577
Metal mining services	$1,490,875	$1,211,642	$0	$0	$60,191	$48,381	$9,632,271	$7,898,021
Other nonmetallic minerals services	$418,489	$285,961	$17,202	$12,234	$86,951	$70,482	$11,466,946	$7,869,181
Utilities	$47,112,012	$8,273,281	$152,275,171	$35,346,401	$13,228,594	$3,762,326	$488,057,172	$178,697,268
Manufacturing	$120,967,398	$17,302,241	$59,862,111	$9,591,237	$14,128,265	$3,411,209	$975,650,531	$318,406,442
Wholesale trade	$84,661,324	$52,732,378	$19,844,650	$11,706,353	$11,025,033	$7,030,494	$267,474,915	$163,768,720
Retail trade	$185,536,783	$119,549,275	$66,865,941	$41,832,461	$45,381,398	$30,002,806	$225,643,512	$144,919,740
Transportation & warehousing	$105,826,805	$56,469,641	$52,772,680	$27,101,525	$71,490,231	$39,740,063	$410,758,727	$259,820,281
Information	$61,672,752	$25,811,585	$43,498,855	$18,398,208	$11,897,755	$5,158,141	$46,866,911	$18,978,511
Finance & insurance	$101,115,818	$32,211,318	$40,066,692	$11,794,299	$28,080,726	$8,591,292	$93,397,818	$35,796,154
Real estate & rental	$349,303,985	$258,466,791	$167,095,916	$123,206,022	$172,027,400	$123,423,225	$481,525,756	$362,460,677
Professional, scientific, & tech services	$110,202,190	$54,026,405	$52,667,866	$19,945,712	$38,698,366	$18,235,807	$121,141,638	$69,153,031
Management of companies	$13,978,993	$6,348,643	$10,400,541	$4,431,054	$1,421,651	$397,994	$27,033,852	$15,949,764
Administrative & waste services	$36,744,798	$17,352,423	$20,821,294	$12,006,238	$34,575,125	$17,430,294	$44,913,628	$29,769,259
Educational services	$29,845,927	$18,279,306	$1,342,037	$335,458	$2,267,875	$786,979	$3,869,907	$1,990,844
Health & social services	$178,836,129	$105,622,301	$31,098,694	$16,327,282	$15,753,963	$9,604,725	$102,735,049	$63,272,604
Arts, entertainment, & recreation	$28,232,742	$11,943,185	$9,228,591	$3,866,768	$9,838,795	$4,411,358	$22,309,982	$9,135,246
Accommodation & food services	$100,173,222	$51,849,964	$31,510,571	$15,666,011	$27,902,241	$15,327,424	$142,914,765	$74,811,632
Other services	$87,954,869	$54,359,884	$29,083,686	$17,578,646	$23,586,777	$16,305,455	$92,511,910	$63,131,329
Government & non-NAICs	$445,998,996	$370,224,895	$120,174,688	$114,969,714	$77,735,447	$76,213,616	$321,297,846	$307,452,210

Source: Minnesota IMPLAN Group, Inc. 2013.

Table C-35. Change in Employment by Industry in Wyoming and the SFA Counties in the Wyoming Socioeconomic Study Area, 2001 and 2014

Industry	Wyoming State Total			Fremont County			Lincoln County			Sublette County			Sweetwater County		
	2001	2014	Change	2001	2014	Change	2001	2014	Change	2001	2014	Change	2001	2014	Change
Total employment	328,624	402,763	74,139	21,243	24,693	3,450	8,250	9,823	1,573	4,219	7,475	3,256	24,216	30,127	5,911
Farm employment	12,447	13,928	1,481	1,228	1,493	265	593	667	74	409	461	52	201	274	73
Forestry, fishing, and related activities	2,583	2,980	397	183	251	68	102	100	-2	80	127	47	(D)	(D)	
Mining	20,647	35,157	14,510	482	1,428	946	430	779	349	434	1,554	1,120	(D)	6,165	
Utilities	(D)	2,590	(D)	(D)	73		(D)	245		(D)	27		(D)	(D)	
Construction	27,148	31,853	4,705	1,947	1,481	-466	1,223	1,117	-106	472	944	472	1,806	2,123	317
Manufacturing	11,419	12,008	589	611	451	-160	402	227	-175	(D)	56		1,426	1,497	71
Wholesale trade	7,717	10,518	2,801	(D)	466		(D)	103		(D)	23		(D)	(D)	
Retail trade	38,834	38,526	-308	2,603	2,414	-189	988	970	-18	433	521	88	2,866	2,842	-24
Transportation and warehousing	(D)	15,727	(D)	593	633	40	220	278	58	83	333	250	1,115	1,742	627
Information	(D)	4,721	(D)	324	235	-89	124	126	2	50	37	-13	254	208	-46
Finance and insurance	10,208	16,174	5,966	480	705	225	223	293	70	81	172	91	542	793	251
Real estate and rental and leasing	10,933	17,836	6,903	632	1,059	427	297	499	202	162	431	269	641	1,203	562
Professional, scientific, and technical services	13,731	17,342	3,611	757	918	161	224	406	182	231	293	62	592	851	259
Management of companies and enterprises	941	1,383	442	(D)	84		(D)	(D)		(D)	(D)		91	135	44
Administrative and waste management services	11,461	12,971	1,510	(D)	574		(D)	(D)		(D)	(D)		805	721	-84
Educational services	2,371	3,734	1,363	(D)	(D)		21	59	38	(D)	(D)		91	135	44
Health care and social assistance	22,842	29,363	6,521	(D)	(D)		(D)	520		(D)	(D)		1,117	1,479	362
Arts, entertainment, and recreation	6,320	7,252	932	341	454	113	112	155	43	85	146	61	258	216	-42
Accommodation and food services	28,458	34,745	6,287	1,633	1,654	21	580	532	-48	383	426	43	2,093	2,420	327
Other services, except public administration	(D)	18,468	(D)	1,123	1,328	205	370	527	157	205	285	80	1,045	1,158	113
Government and government enterprises	65,270	75,487	10,217	4,866	6,021	1,155	1,557	1,874	317	702	1,122	420	4,213	4,769	556

Source: U.S Bureau of Economic Analysis 2001a, 2014c.

Table C-36. Labor Income by Sector in Wyoming and the SFA Counties in the Wyoming Socioeconomic Study Area (Dollars in Thousands)

Description	State of Wyoming			Fremont County			Lincoln County			Sublette County			Sweetwater County		
	2001	2014	% Change	2001	2014	% Change	2001	2014	% Change	2001	2014	% Change	2001	2014	% Change
Total compensation of employees	$9,006,140	$18,222,304	102%	$466,115	$952,749	104%	$192,099	$353,196	84%	$87,568	$395,001	351%	$918,184	$1,875,466	104%
Average compensation per job (dollars)	$35,005	$59,878	71%	$29,433	$53,313	81%	$33,345	$56,930	71%	$32,053	$75,124	134%	$44,182	$73,007	65%
Farm compensation	$87,580	$169,994	94%	$5,749	$12,268	113%	$2,381	$4,240	78%	$4,078	$6,965	71%	$677	$2,088	208%
Forestry, fishing, and related activities	$8,918,560	$18,052,310	102%	$950	$3,777	298%	$809	$629	-22%	$430	$1,802	319%	(D)	(D)	
Mining, quarrying, and oil and gas extraction	$27,876	$39,381	41%	$19,102	$103,681	443%	$27,359	$72,666	166%	$20,088	$157,918	686%	(D)	$662,243	
Construction	$772,684	$1,550,319	101%	$52,389	$48,547	-7%	$33,540	$34,683	3%	$9,030	$53,497	492%	$62,598	$124,937	100%
Manufacturing	$486,532	$803,564	65%	$15,486	$12,267	-21%	$13,552	$6,556	-52%	(D)	$1,820		$113,555	$161,014	42%
Utilities	(D)	$298,679	(D)	(D)	$7,491		(D)	$22,363		(D)	$3,344		(D)	(D)	
Wholesale trade	$486,532	$803,564	65%	(D)	$2,017		(D)	$3,746		(D)	$644		(D)	(D)	
Retail trade	$683,271	$1,028,565	51%	$46,634	$63,566	36%	$12,338	$20,050	63%	$6,054	$11,883	96%	$52,946	$82,470	56%
Transportation and warehousing	(D)	$940,265	(D)	$16,592	$29,036	75%	$5,858	$11,743	100%	$1,492	$21,312	1,328%	$51,092	$121,039	137%
Information	(D)	$224,812	(D)	$7,856	$10,292	31%	$3,482	$8,256	137%	$1,135	$1,607	42%	$6,229	$7,784	25%
Finance and insurance	$294,244	$498,743	69%	$11,367	$20,773	83%	$3,370	$7,728	129%	$1,836	$4,222	130%	$14,216	$22,394	58%
Real estate and rental and leasing	$88,923	$256,348	188%	$5,400	$28,205	422%	$322	$366	14%	$894	$7,336	721%	$8,856	$47,472	436%
Professional, scientific, and technical services	$313,437	$703,648	124%	$11,596	$34,724	199%	$2,883	$9,463	228%	$3,978	$10,817	172%	$15,703	$43,649	178%
Management of companies and enterprises	$43,735	$119,118	172%	(D)	$7,828		(D)	(D)		(D)	(D)		$5,058	$13,922	175%
Administrative and support and waste management and remediation services	$185,664	$312,385	68%	(D)	$11,105		(D)	(D)		(D)	(D)		$13,918	$19,789	42%
Educational services	$32,363	$79,448	145%	(D)	(D)		$0	$148		(D)	(D)		$751	$1,962	161%
Health care and social assistance	$583,506	$1,257,089	115%	(D)	(D)		(D)	$10,223		(D)	(D)		$24,425	$53,044	117%
Arts, entertainment, and recreation	$63,476	$88,022	39%	$1,274	$2,544	100%	$477	$1,003	110%	$600	$856	43%	$1,693	$1,504	-11%
Accommodation and food services	$384,137	$813,152	112%	$18,602	$32,157	73%	$4,769	$7,582	59%	$5,036	$11,797	134%	$28,165	$50,150	78%
Government and government enterprises	$2,465,408	$5,069,823	106%	$164,616	$366,931	123%	$51,808	$118,086	128%	$24,929	$78,924	217%	$153,456	$313,296	104%
Federal, civilian	$414,099	$636,280	54%	$25,537	$42,842	68%	$5,757	$8,486	47%	$5,866	$10,231	74%	$14,930	$19,215	29%
State government	$558,142	$1,089,956	95%	$34,137	$57,322	68%	$5,150	$9,308	81%	(D)	$7,161		$11,229	$19,696	75%
Local government	$1,294,717	$2,991,340	131%	$102,304	$260,341	154%	$39,795	$97,306	145%	(D)	$59,998		$124,533	$267,237	115%

Source: U.S Bureau of Economic Analysis 2001b, 2014b.

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Appendix D

BLM and Forest Service Sensitive Plant and Animal Species and Forest Service Management Indicator or Focal Species within the SFAs

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Appendix D

BLM and Forest Service Sensitive Plant and Animal Species and Forest Service Management Indicator or Focal Species within the SFAs

This appendix provides additional data tables referenced in Sections 3.6 and 3.7 of the main volume of the environmental impact statement (EIS). Due to the length of the tables contained herein, they are presented in this appendix to improve the readability of Chapter 3 of the EIS.

Tables D-1 through D-3 include information for the vegetation and wildlife resources analysis for all of the alternatives analyzed, as follows:

- Table D-1 presents BLM and Forest Service sensitive plant species within the SFAs.
- Table D-2 presents BLM and Forest Service sensitive animal species within the SFAs.
- Table D-3 presents Forest Service management indicator or focal species.

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Table D-1. BLM and Forest Service Sensitive Plant Species within the SFAs

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
California maiden-hair	*Adiantum jordanii*		X					X		
Cusick's horse-mint	*Agastache cusickii*		X					X		
Western boneset	*Agertina occidentalis = Eupatorium occidentale*		X							
Pink agoseris, Mill Creek agoseris	*Agoseris lackschewitzii*		X	X	X					
Aase's onion	*Allium aaseae*		X							
Tapertip onion	*Allium acuminatum*		X							
Two-headed onion	*Allium anceps*		X		X					
Sweet-flowered rock jasmine	*Androsace chamaejasme ssp. carinata*			X						
King's angelica, Great Basin angelica	*Angelica kingie*		X							
Wheeler's angelica	*Angelica wheeleri*			X					X	
Meadow pussytoes	*Antennaria arcuate*		X	X			X			X
Sitka columbine	*Aquilegia formosa*		X							
Macdonald's rock-cress	*Arabis macdonaldiana*		X					X		
Ophir rockcress	*Arabis ophira*		X				X			
Hairy manzanita	*Arctostaphylos hispidula*		X					X		
Shasta arnica	*Arnica viscosa*		X					X		
Eastwood milkweed	*Asclepias eastwoodiana*		X	X			X			
Coral lichen	*Aspicilia rogerii*		X		X					
Grass-fern	*Asplenium septentrionale*		X					X		
Challis milkvetch	*Astragalus amblytropis*		X		X					
Lost River milkvetch	*Astragalus amnis-amissi*		X	X	X					
Goose Creek milkvetch	*Astragalus anserinus*		X	X	X		X			
Lemhi milkvetch	*Astragalus aquilonius*		X	X	X					
Sweetwater milkvetch	*Astragalus aretiodes = Orophaca aretioides*		X		X					
Mourning milkvetch	*Astragalus astratus var. inseptus*		X		X					
Two-grooved milkvetch	*Astragalus bisulcatus var. bisulcatus*		X		X					
California milk-vetch	*Astragalus californicus*		X					X		

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Stiff milkvetch, Idaho milkvetch	*Astragalus conjunctus*		X		X					
Barren milkvetch	*Astragalus cusickii var. sterilis*		X		X					
Meadow milkvetch	*Astragalus diversifolius*			X	X					X
Geyer's milkvetch	*Astragalus geyeri*		X					X		
Tufted milkvetch, Plains milkvetch	*Astragalus gilviflorus*		X		X					
Broad-pod freckled milkvetch	*Astragalus lentiginosus var. latus*		X	X			X			
Park milkvetch	*Astragalus leptaleus*		X		X					
Mulford's milkvetch	*Astragalus mulfordiae*		X		X					
Newberry's milkvetch	*Astragalus newberry var. castoreus*		X		X					
Picabo milkvetch	*Astragalus oniciformis*		X		X					
Payson's milkvetch	*Astragalus paysonii*		X	X	X					
Snake River milkvetch	*Astragalus purshii var. ophiogenes*		X		X					
Trelease 's milkvetch	*Astragalus racemosus var. treleasei*		X							X
Lamoille Canyon milkvetch	*Astragalus robbinsii var. occidentalis*		X	X			X			
Bastard kentrophyta	*Astragalus tegetarioides*		X					X		
Railhead milkvetch	*Astragalus terminalis*		X		X					
Toquima milkvetch	*Astragalus toquimanus*		X				X			
Currant milkvetch	*Astragalus uncialis*		X	X			X			
White Cloud milkvetch	*Astragalus vexilliflexus var. nubilus*			X	X					
Mudflat milkvetch	*Astragalus yoder-williamsii*		X		X					
Bensonia	*Bensoniella oregana*		X					X		
King's desert grass	*Blepharidachne kingii*		X		X					
Grouse Creek rockcress	*Boechera (Arabis) falcatoria*			X			X			
Small rock cress or Fremont County rockcress	*Boechera (Arabis) pusilla*	C	X							X
Upswept moonwort	*Botrychium ascendens*		X				X			
Dainty moonwort	*Botrychium crenulatum*		X	X	X		X	X		
Slender moonwort	*Botrychium lineare*		X	X	X		X			
Pumice grape-fern	*Botrychium pumicola*		X					X		

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Little grape fern	*Botrychium simplex*			X	X					
Moosewort	*Botrychium tunux*		X				X			
Blue gramma	*Bouteloua gracilis*		X		X					
Beautiful bryum	*Bryum calobryoides*			X	X					
Fringed redmaids	*Calandrinia ciliate*		X		X					
Crinite mariposa-lily	*Calochortus coxii*		X					X		
Greene's mariposa-lily	*Calochortus greenei*		X					X		
Howell's mariposa-lily	*Calochortus howellii*		X					X		
Sexton Mt. mariposa-lily	*Calochortus indecorus*		X					X		
One-leaved mariposa-lily	*Calochortus monophyllus*		X					X		
Broad-fruit mariposa-lily	*Calochortus nitidus*		X					X		
Siskiyou mariposa-lily	*Calochortus persistens*		X					X		
Umpqua mariposa-lily	*Calochortus umpquaensis*		X					X		
Howell's camas	*Camassia howellii*		X					X		
Slender-flowered evening-primrose	*Camissonia graciliflora*		X					X		
Abrupt-beaked sedge	*Carex abrupta*		X					X		
Capitate sedge	*Carex capitata*		X					X		
Bristly sedge	*Carex comosa*		X					X		
Lesser panicled sedge	*Carex diandra*		X					X		
Hairy sedge	*Carex gynodynama*		X					X		
Idaho sedge	*Carex idahoa = C. parryana ssp. idahoa*		X		X					
Seaside sedge	*Carex incurviformis*			X	X					
Slender sedge	*Carex lasiocarpa var. americana*		X					X		
Livid sedge	*Carex livida*		X		X					
Western sedge	*Carex occidentalis*		X		X					
Siskiyou sedge	*Carex scabriuscula*		X					X		
Saw-tooth sedge	*Carex serratodens*		X					X		
Dark alpine sedge	*Carex subnigricans*		X					X		

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Foothill or splitawn sedge	*Carex tumulicola*		X		X					
Native sedge	*Carex vernacula*		X					X		
Green-tinged paintbrush	*Castilleja chlorotica*		X					X		
Christ's indian paintbrush	*Castilleja christii*			X	X					
Earth lichen	*Catapyrenium congestum= Heteroplacidium congestum*		X		X					
Cusick's false yarrow	*Chaenactis cusickii*		X		X					
Desert pincushion	*Chaenactis stevioides*		X		X					
Desert chaenactis	*Chaenactis xantiana*		X					X		
Coville's lip-fern	*Cheilanthes covillei*		X					X		
Fee's lip-fern	*Cheilanthes feei*		X					X		
Coastal lipfern	*Cheilanthes intertexta*		X					X		
Narrow-leaved amole	*Chlorogalum angustifolium*		X					X		
Centennial rabbitbrush	*Chrysothamnus parryi ssp. montanus*			X	X					
Tall bugbane	*Cimicifuga elata var. elata*		X					X		
Cedar rim thistle	*Cirsium aridum*		X							X
Lancefeaf springbeauty	*Claytonia multiscapa var. flava =C. Lanceolata var. multiscapa*		X		X					
Twisted/Alkali cleomella	*Cleomella plocasperma*		X		X					
Flexible alpine collomia	*Collomia debilis var. camporum*			X	X					
Wasatch fitweed	*Corydalis caseana spp. brachycarpa*			X					X	
Milo baker's cryptantha	*Cryptantha milo-bakeri*		X					X		
Malheur cryptantha	*Cryptantha propria = Oreocarya propria*		X		X					
Baker's cypress	*Cupressus bakeri*		X					X		
Sepal-tooth dodder	*Cuscuta denticulata*		X		X					
Greeley's wavewing	*Cymopterus acaulis, var. greeleyorum*		X		X					
Davis' wavewing	*Cymopterus davisii*			X	X					
Douglas' biscuitroot	*Cymopterus douglasii*			X	X					
Goodrich biscuitroot	*Cymopterus goodrichii*		X				X			

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Ibapah springparsley	*Cymopterus ibapensis =Epallageiton ibapensis*		X		X					
Snowline spring-parsley	*Cymopterus nivalis*		X					X		
Brownie ladyslipper	*Cypripedium fasciculatum*		X	X				X	X	
Lesser yellow lady's slipper	*Cypripedium parviflorum =Cypripedium calceolus var. parviflorum*			X					X	
California damasonium	*Damasonium californicum= Machaerocarpus californicus*		X		X					
Red larkspur	*Delphinium nudicaule*		X					X		
Few-flowered bleedingheart	*Dicentra pauciflora*		X					X		
Doublet	*Dimeresia howellii*		X		X					
Wasatch shooting star	*Dodecatheon utahense*			X					X	
Bacigalupi's downingia	*Downingia bacigalupii*		X		X					
Harlequin calicoflower, Parti-color dowingia	*Downingia insignis*		X		X					
Arid draba	*Draba arida*		X				X			
Wasatch draba	*Draba brachystylis*			X					X	
Pointed draba, Beavertip draba, Rockcress draba	*Draba globosa = D. apiculata*		X	X	X					
Howell's whitlow-grass	*Draba howellii*		X					X		
Serpentine draba	*Draba oreibata var. serpentine*			X			X			
Pennell draba	*Draba pennellii*			X			X			
Stanley's whitlow-grass	*Draba trichocarpa*			X	X					
White false tickhead	*Eatonella nivea*		X		X					
Short seeded waterwort	*Elatine brachysperma*		X					X		
Dune wildrye	*Elymus simplex var. luxurians*									X
Nevada willowherb	*Epilobium nevadense*		X				X			
Oregon willow-herb	*Epilobium oreganum*		X					X		
Swamp willow-herb	*Epilobium palustre*		X		X					
Chatterbox orchid	*Epipactis gigantea*		X		X					
Golden fleece	*Ericameria arborescens*		X					X		

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Snake Mountain erigeron	*Erigeron cavernensis*		X	X			X			
Siskiyou daisy	*Erigeron cervinus*		X					X		
Cronquist daisy	*Erigeron cronquistii*			X					X	
Welsh's buckwheat	*Eriogonum capistratum var. welshii*		X	X	X					
Crosby's buckwheat	*Eriogonum crosbyae*		X		X			X		
Cusick's buckwheat	*Eriogonum cusickii*		X					X		
Great Basin desert buckwheat	*Eriogonum desertorum*		X	X	X					
Sunflower Flat buckwheat	*Eriogonum douglasii var. elkoense*		X				X			
Toiyabe buckwheat	*Eriogonumesmeraldense var. toiyabense*		X				X			
Hooker's buckwheat	*Eriogonum hookeri*		X		X					
Lewis's buckwheat	*Eriogonum lewisii*		X	X			X			
Lobb's buckwheat	*Eriogonum lobbii*		X					X		
Logan buckwheat	*Eriogonum loganum*			X					X	
Guardian buckwheat	*Eriogonum meledonum*			X	X					
False naked buckwheat	*Eriogonum novonudum*		X		X					
Prostrate buckwheat	*Eriogonum prociduum*		X					X		
Packard's buckwheat	*Eriogonum shockleyi var. packardiae*		X		X					
Shockley's matted buckwheat	*Eriogonum shockleyi var. shockleyi*		X		X					
Railroad Canyon wild buckwheat	*Eriogonum soliceps*		X		X					
Green buckwheat	*Eriogonum umbellatum var. glaberrimum*		X					X		
Howell's adder's-tongue	*Erythronium howellii*		X					X		
Gold poppy	*Eschscholzia caespitosa*		X					X		
Wayside aster	*Eucephalus vialis*		X					X		
Gentner's fritillary	*Fritillaria gentneri*		X				X	X		
Warner Mt. bedstraw	*Galium serpenticum ssp. warnerense*		X					X		
Elegant gentian	*Gentiana plurisetosa*		X					X		
Waldo gentian	*Gentiana setigera*		X					X		
White-margined wax plant	*Glyptopleura marginata*		X		X					

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Boggs lake hedge-hyssop	*Gratiola heterosepala*		X					X		
Beautiful stickseed	*Hackelia bella*		X					X		
Owyhee forget-me-not or stickseed	*Hackelia ophiobia*		X		X					
Purple-flowered rush-lily	*Hastingsia bracteosa var. atropurpurea*		X					X		
Large-flowered rush-lily	*Hastingsia bracteosa var. bracteosa*		X					X		
Salt heliotrope	*Heliotropium curassavicum*		X					X		
Three-toothed horkelia	*Horkelia tridentata ssp. tridentata*		X					X		
Cooper's goldflower	*Hymenoxys lemmonii*		X					X		
California globe-mallow	*Iliamna latibracteata*		X					X		
Spreading gilia	*Ipomopsis polycladon= Gilia polycladon*		X		X					
Grimy ivesia	*Ivesia rhypara var. rhypara*		X					X		
Shelly's ivesia	*Ivesia rhypara var. shellyi*		X					X		
Shockley's ivesia	*Ivesia shockleyi*		X					X		
Utah ivesia	*Ivesia utahensis*			X					X	
Webber ivesia	*Ivesia webberi*	T	X				X			
Wasatch jamesia	*Jamesia americana var. macrocalyx*			X					X	
Basin jamesia	*Jamesia tetrapetala*		X	X			X			
Tweedy's rush	*Juncus tweedyi*		X		X					
Bush beardtongue	*Keckiella lemmonii*		X					X		
Grimes lathyrus	*Lathyrus grimesii*		X	X			X			
Davis' peppergrass	*Lepidium davisii= L. montanum*		X		X					
Entire-leaved peppergrass	*Lepidium integrifolium var. integrifolium*									X
Wasatch pepperwort	*Lepidium montanum var. alpinum*			X					X	
Slickspot peppergrass	*Lepidium papilliferum*	P	X		X					
Bruneau River prickly phlox	*Leptodactylon glabrum*		X		X					
Garrett bladderpod	*Lesquerella garrettii*			X					X	
Large-fruited bladderpod	*Lesquerella macrocarpa*		X							X
Payson bladderpod	*Lesquerella paysonii*			X	X					

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Prostrate bladderpod	*Lesquerella prostrata*		X							X
Maguire lewisia	*Lewisia maguirei*		X	X			X			
Sacajawea's bitterroot	*Lewisia sacajaweana*		X	X	X					
Bellinger's meadow-foam	*Limnanthes floccosa ssp. bellingeriana*		X					X		
Large-flowered wooly meadowfoam	*Limnanthes floccosa ssp. grandiflora*		X					X		
Dwarf meadow-foam	*Limnanthes floccosa ssp. pumila*		X					X		
Slender meadow-foam	*Limnanthes gracilis ssp. gracilis*		X					X		
Aristulate lipocarpha	*Lipocarpha aristulata*		X					X		
Cook's lomatium	*Lomatium cookii*		X					X		
Englemann's desert-parsley	*Lomatium engelmannii*		X					X		
Packard's desert parsley	*Lomatium packardiae*		X		X					
marsh felwort	*Lomatogonium rotatum*		X		X					
Stipuled trefoil	*Lotus stipularis*		X					X		
Nevada lupine	*Lupinus nevadensis*		X					X		
Tracy's lupine	*Lupinus tracyi*		X					X		
Inch-high lupine	*Lupinus uncialis*		X		X					
Lyrate malacothrix	*Malacothrix sonchoides*		X					X		
White fairypoppy	*Meconella oregana*		X					X		
United blazingstar	*Mentzelia congesta*		X		X					
Smooth stickleaf	*Mentzelia mollis*		X		X					
Howell's microseris	*Microseris howellii*		X					X		
Bolander's monkeyflower	*Mimulus bolanderi*		X					X		
Congdon's monkeyflower	*Mimulus congdonii*		X					X		
Disappearing monkeyflower	*Mimulus evanescens*		X		X			X		
Broad-toothed monkeyflower	*Mimulus latidens*		X					X		
Three-colored monkey-flower	*Mimulus tricolor*		X					X		
to be determined	*Monardella angustifolia*		X		X					
green muhly, marsh muhly	*Muhlenbergia racemosa*		X		X					

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Green needlegrass	*Nassella viridula =Stipa viridula*		X		X					
White-flowered navarretia	*Navarretia leucocephala ssp. leucocephala*		X					X		
Slender nemacladus	*Nemacladus capillaris*		X					X		
Rigid threadbush	*Nemacladus rigidus*		X		X					
Idaho pennycress, Stanley thlaspi	*Noccaea idahoensis var. aileeniae*			X	X					
Saint Anthony evening-primrose	*Oenothera psammophila*		X		X					
Challis crazyweed	*Oxytropis besseyi var. salmonensis =O. nana var. salmonensis*		X	X	X					
Arctic poppy	*Papaver radicatum var. pygmaeum*			X					X	
Creeping nailwort	*Paronychia sessiliflora*		X		X					
Simpson’s hedgehog cactus	*Pediocactus simpsonii*		X		X					
Coffee fern	*Pellaea andromedifolia*		X					X		
Bird's-foot fern	*Pellaea mucronata ssp. mucronata*		X					X		
Cache beardtongue	*Penstemon compactus*			X	X					
Elegant penstemon	*Penstemon concinnus*		X				X			
Blue-leaved penstemon	*Penstemon glaucinus*		X					X		
Idaho penstemon	*Penstemon idahoensis*			X	X					
Janish’s penstemon	*Penstemon janishiae*		X		X					
Lemhi penstemon	*Penstemon lemhiensis*		X	X	X					
Small-flower phacelia	*Penstemon minutissima*		X				X			
Mt. Moriah penstemon	*Penstemon moriahensis*		X	X			X			
Bashful penstemon	*Penstemon pudicus*		X	X			X			
Rhizome beardtongue	*Penstemon rhizomatosus*		X	X			X			
Short-lobed penstemon	*Penstemon seorsus*		X		X					
Indian apple, Wild crab apple	*Peraphyllum ramosissimum*		X		X					
Red-rooted yampah	*Perideridia erythrorhiza*		X					X		
Spine-noded milkvetch	*Peteria thompsoniae= P. nevadensis*		X		X					
Obscure phacelia	*Phacelia inconspicua*		X	X	X		X			
Playa phacelia	*Phacelia inundata*		X					X		

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Siskiyou phacelia	*Phacelia leonis*		X					X		
Malheur yellow phacelia	*Phacelia lutea var. calva*		X		X					
Least phacelia, Small-flower phacelia	*Phacelia minutissama*		X	X	X					
Beaver rim phlox	*Phlox pungens*									X
Tufted twinpod	*Physaria condensata*		X							X
Idaho twinpod, Salmon twin bladderpod	*Physaria didymocarpa var. lyrata*		X	X	X					
Dorn's twinpod	*Physaria dornii*		X							X
Rocky Mountain twinpod	*Physaria saximontana var. saximontana*		X							X
American pillwort	*Pilularia americana*		X					X		
Whitebark pine	*Pinus albicaulis*	C	X	X	X		X			X
Limber pine	*Pinus flexilis*		X							X
Small-flowered ricegrass	*Piptatherum micranthum =Oryzopsis micrantha*		X		X					
Austin's plagiobothrys	*Plagiobothrys austiniae*		X					X		
Coral seeded allocarya	*Plagiobothrys figuratus ssp. corallicarpus*		X					X		
Greene's popcorn flower	*Plagiobothrys greenei*		X					X		
Shiny-fruited popcorn flower	*Plagiobothrys lamprocarpus*		X					X		
Desert allocarya	*Plagiobothrys salsus*		X					X		
Western prairie fringed orchid	*Platanthera praeclars*	T	X							X
Oregon semaphoregrass	*Pleuropogon oregonus*		X					X		
Marsh's bluegrass	*Poa abbreviata ssp. marshii*		X	X	X		X			
Timber bluegrass	*Poa rhizomata*		X					X		
Profuse-flowereed mesa mint	*Pogogyne floribunda*		X					X		
Williams combleaf	*Polyctenium williamsii*		X	X			X			
Cottam cinquefoil	*Potentilla cottamii*			X	X				X	
Sagebrush cinquefoil	*Potentilla johnstonii*		X	X			X			
Alkali primrose	*Primula alcalina*		X	X	X					
Ruby Mountain primrose	*Primula capillaris*			X			X			
Nevada primrose	*Primula nevadensis*		X	X			X			

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Turtleback, annual brittlebrush	*Psathyrotes annua = Bulbostylis annua*		X		X					
Bugleg goldenweed	*Pyrrocoma (=Haplopappus) insecticruris*			X	X					
Beartooth large-flowered goldenweed	*Pyrrocoma carthamoides var. subsquarrosa = haplopappus carthamoides var. subsquarrosus*		X		X					
Thinleaf goldenhead	*Pyrrocoma linearis =Haplopappus uniflorus var. howellii*		X		X					
California chicory	*Rafinesquia californica*		X					X		
Southern Oregon buttercup	*Ranunculus austrooreganus*		X					X		
Redberry	*Rhamnus ilicifolia*		X					X		
White grouse pellet lichen	*Rhizoplaca idahoensis*		X		X					
Thompson's mistmaiden	*Romanzoffia thompsonii*		X					X		
Columbia cress	*Rorippa columbiae*		X					X		
Tahoe yellowcress	*Rorippa subumbellata*		X				X			
Lowland toothcup	*Rotala ramosior*		X					X		
Least snapdragon	*Sairocarpus kingii*		X		X					
Hoary willow	*Salix candida*		X		X					
Wolf's willow	*Salix wolfii*		X					X		
Tobias’ saxifrage	*Saxifraga bryophora var. tobiasiae*			X	X					
Tolmie’s saxifrage	*Saxifraga tomiei var. ledifolia*			X	X					
Joint-leaved saxifrage	*Saxifragopsis fragarioides*		X					X		
Water clubrush	*Schoenoplectus subterminalis*		X					X		
Drooping bulrush	*Scirpus pendulus*		X					X		
Rogue river stonecrop	*Sedum moranii*		X					X		
Verrucose sea-purslane	*Sesuvium verrucosum*		X					X		
Hickman's checkerbloom	*Sidalcea hickmanii ssp. nov.*		X					X		
Bolander's catchfly	*Silene hookeri ssp. bolanderi*		X					X		
Nachlinger silene	*Silene nachlingerae*		X	X			X			
Lost River silene	*Silene scaposa var. lobata*		X		X					
Parish's horse-nettle	*Solanum parishii*		X					X		

Table D-1. (continued)

Common Name	Scientific Name	Status			State					
		ESA	BLM	USFS	Idaho	Montana	Nevada	Oregon	Utah	Wyoming
Western sophora	*Sophora leachiana*		X					X		
Railroad Valley globemallow	*Sphaeralcea caespitosa var. williamsiae*		X	X			X			
Ute ladies'-tresses	*Spiranthes diluvialis*	T	X	X	X				X	X
Tall dropseed	*Sporobolus compositus var. compositus = Sporobolus asper*		X		X					
Malheur princesplume	*Stanleya confertiflora=S. annua, S. rara, S. viridiflora*		X		X					
Common jewel flower	*Streptanthus glandulosus*		X					X		
Howell's streptanthus	*Streptanthus howellii*		X					X		
Long-flowered snowberry	*Symphoricarpos longiflorus*		X					X		
Rush aster	*Symphyotrichum boreale = Aster junciformis*		X		X					
American wood sage	*Teucrium canadense var. occidentale*		X		X					
Uinta greenthread	*Thelesperma pubescens*		X	X						X
Short-podded thelypody	*Thelypodium brachycarpum*		X					X		
Wavy-leaf thelypody	*Thelypodium repandum*		X	X	X					
Alpine goldenweed	*Tonestas lyalli*		X				X			
Charleston ground daisy	*Townsendia jonesii var. tumulosa*		X				X			
Scapose townsendia	*Townsendia scapigera*		X		X					
Currant Summit clover	*Trifolium andinum var. podocephalum*		X				X			
Owyhee clover	*Trifolium owyheense*		X		X					
Leiberg's clover	*Trifoolium leibergii*		X	X			X			
Rollins clover	*Trifoolium macilentum var. rollinsii*		X				X			
Lesser bladderwort	*Utricularia minor*		X					X		
Lithion violet	*Viola lithion*			X			X			
Western bog violet	*Viola primulifolia ssp. occidentalis*		X					X		
Columbia water-meal	*Wolffia columbiana*		X					X		
Idaho range lichen	*Xanthoparmelia idahoensis*		X	X	X					
Small-flowered death camas	*Zigadenus fontanus*		X					X		

Note: ESA listed species are E (Endangered), T (Threatened), C (Candidate), or P (Proposed)

Table D-2. BLM and Forest Service Sensitive Animal Species

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
MAMMALS											
Big brown bat *Eptesicus fuscus*		X		Various wooded and semi-open habitats, including cities. Much more abundant in regions dominated by deciduous forest than in coniferous forest areas. Summer roosts generally are in buildings; also hollow trees, rock crevices, tunnels, and cliff swallow nests; prefers sites that do not get hot.			X				NL
Big free-tailed bat *Nyctinomops macrotis*		X		They are found only as far north as southern Utah during the spring and summer, and have been captured in a variety of habitats including ponderosa pine, Douglas-fir, and Sonoran desert scrub.						X	NL
Black-footed ferret *Mustela nigripes*	E, EXP	X	X	Prairie dog colonies in grasslands and shrub communities.	X				X	X	NL
Brazilian free-tailed bat *Tadarida brasiliensis*		X		Roosts primarily in caves in the southwestern U.S. May use rock crevice, bridge, sign, or cliff swallow nest as roost during migration. Generally roosts high (at least 10 feet) above ground to allow free fall required to attain flight. Large maternity colonies inhabit buildings and caves; also uses culverts and bridges.			X				NL
California bighorn sheep *Ovis canadensis californiana*		X		Steep rocky open terrain and canyons.				X			NL
California myotis *Myotis californicus*		X		Western lowlands; sea coast to desert, oak-juniper, canyons, riparian woodlands, desert scrub, and grasslands. Often uses man-made structures for night roosts. Uses crevices of various kinds, including those in buildings, for summer day roosts. May roost on small desert shrubs or on the ground. Hibernates in caves, mines, tunnels, or buildings. May form small maternity colonies in rock crevices, under bark, or under eaves of buildings.			X				P
Canada lynx *Lynx canadensis*	T	X	X	Found in montane coniferous forests, where it feeds mainly on snowshoe hare. Lynx sightings are rare in all six states associated with the analysis area. Though its range overlaps greater sage-grouse population areas, this species is not likely to be found in greater sage-grouse habitat.	X	X		X	X	X	NL

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Cliff chipmunk *Tamias dorsalis*		X		The cliff chipmunk typically resides at elevations from 4,900 to 12.000 feet. They occur in a variety of plant communities and associations including sagebrush, big tooth maple, four-winged saltbrush, snakeweed, and cheatgrass				X			P
Dark kangaroo mouse *Microdipodops megacephalus*		X		Found in shadscale scrub, sagebrush scrub, and alkali sink plant communities in loose sands and gravel. May occur in sand dunes near margins of range.	X		X	X	X		P
Fish Spring pocket gopher *Thomomys sp.*		X		May be found in a variety of habitat and soil types. Habitat types include cropland, desert, grassland, savanna, chaparral, and woodland.			X				P
Fisher *Martes pennanti*			X	Coniferous forests.		X		X		X	NL
Fringed myotis *Myotis thysanodes*		X		Primarily at middle elevations of 3,900-7,050 feet in desert grassland, and woodland habitats. Roosts in caves, mines, rock crevices, buildings, and other protected sites. Nursery colonies occur in caves, mines, and sometimes buildings.		X	X			X	P
Gray wolf *Canis lupus*	EXP	X	X	Habitat generalists— prairie, forest, and shrublands.		X	X			X	P
Great Basin pocket mouse *Perognathus parvus*				Prefer sandy habitats in arid to semi-arid regions.				X			P
Grizzly bear *Ursus arctos*	E	X	X	Primarily use meadows, seeps, riparian zones, mixed shrub fields, closed timber, open timber, sidehill parks, snow chutes, and alpine slabrock habitats. Habitat use is highly variable between areas, seasons, local populations, and individuals.				X		X	NL
Hoary bat *Lasiurus cinereus*		X		Prefers deciduous and coniferous forests and woodlands. Roosts usually in tree foliage 10-15 feet above ground, with dense foliage above and open flying room below, often at the edge of a clearing and commonly in hedgerow trees. Sometimes roosts in rock crevices, rarely uses caves in most of range. Hibernating individuals have been found on tree trunks, in a tree cavity, in a squirrel's nest, and in a clump of Spanish-moss. Solitary females with young roost among tree foliage.			X				NL

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Idaho pocket gopher *Thomomys idahoensis*		X		Dry ridgetops; gravelly, loose soil; greasewood.						X	NL
Kit fox *Vulpes macrotis*		X		Favor arid climates, such as desert scrub, chaparral, and grasslands. Common habitats include sagebrush and saltbrush.	X	X		X			P
Little brown myotis *Myotis lucifugus*		X		Adapted to using human-made structures for resting and maternity sites; also uses caves and hollow trees. Foraging habitat requirements are generalized; usually forages in woodlands near water. In winter, uses caves, tunnels, abandoned mines, and similar sites. Maternity colonies commonly are in warm sites in buildings and other structures; also infrequently in hollow trees.			X				NL
Little pocket mouse *Perognathus longimembris*		X		Found in sagebrush, creosote bush, and cactus communities. On slopes with widely spaced shrubs, found in firm, sandy soil overlain with pebbles.				X			P
Long-eared myotis *Myotis evotis*		X		Mostly forested areas, especially those with broken rock outcrops; also shrubland, meadows near tall timber, along wooded streams, and reservoirs. Often roosts in buildings, also in hollow trees, mines, caves, fissures, etc.			X			X	NL
Long-legged myotis *Myotis volans*		X		Primarily in montane coniferous forests, in the south most often at 6,500-9,800 feet; also riparian and desert habitats. May change habitats seasonally. Uses caves and mines as hibernacula, but winter habits are poorly known. Roosts in abandoned buildings, rock crevices, under bark, etc. In summer, apparently does not use caves as daytime roost site. In some areas hollow trees are the most common nursery sites, but buildings and rock crevices are also used.			X				NL
Merriam's ground squirrel *Spermophilus canus vigilis*		X		Arid chaparral environments dominated by sagebrush, and, to a lesser extent, by greasewood and shadscale. It is sometimes found in marginal juniper woodland and can be common in man-made pasture and fields.	X			X			P
Pale kangaroo mouse *Microdipodops pallidus*				Habitat is nearly restricted to fine sands in alkali sink and desert scrub dominated by shadscale or big sagebrush. This mouse often burrows in areas of soft, windblown sand piled at the bases of shrubs.			X				P

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Pallid bat *Antrozous pallidus*		X		Arid deserts and grasslands, often near rocky outcrops and water. Less abundant in evergreen and mixed conifer woodlands. Usually roosts in rock crevice or building, less often in cave, tree hollow, mine, etc. Prefers narrow crevices in caves as hibernation sites.		X	X				P
Piute ground squirrel *Spermophilus mollis artemisae*		X		Found mainly in high desert (sagebrush, shadscale, greasewood). In SW Idaho, highest densities are in winterfat-Sandberg's bluegrass communities, with intermediate densities in big sagebrush-dominated communities and lowest densities in shadscale communities; scarce in communities dominated by exotic annuals. Generally occurs in well-drained soils, especially embankments, often around desert springs and irrigated fields.				X			P
Preble's shrew *Sorex preblei*		X		Recorded habitats include arid and semiarid shrub-grass associations, openings in montane coniferous forests dominated by sagebrush, willow-fringed creeks, marshes, bunchgrass associations, sagebrush-aspen associations, sagebrush-grass associations, and alkaline shrubland.	X		X				P
Pygmy rabbit *Brachylagus idahoensis*		X	X	Generally use burrows found in taller and denser big sagebrush in an area. May be found in broad valley floors, drainage bottoms, alluvial fans, and other areas with friable soils. May also occur in areas of large dense rabbitbrush and greasewood. Understory can vary from none to dense grasses and forbs.		X	X			X	P
Rocky Mountain bighorn sheep *Ovis Canadensis*		X		Occur in mesic to xeric, alpine to desert grasslands or shrub-steppe in mountains, foothills, or river canyons. Many of these grasslands are fire-maintained. Suitable escape terrain (cliffs, talus slopes, etc.) is an important feature of the habitat.			X	X			NL
Silver-haired bat *Lasionycteris noctivagans*		X		Prefers forested (frequently coniferous) areas adjacent to lakes, ponds, and streams. During migration, sometimes occurs in xeric areas. Summer roosts and nursery sites in tree foliage, cavities, under loose bark, and in buildings.			X				NL

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Southern Idaho ground squirrel *Spermophilus brunneus endemicus*		X		Northern populations are associated with shallow rocky soils in xeric meadows surrounded by ponderosa pine and Douglas-fir forests; southern populations inhabit low rolling hills and valleys now dominated by annual grassland with relict big sagebrush and bunch grasses.				X			P
Spotted bat *Euderma maculatum*		X	X	Found in various habitats from desert to montane coniferous stands, including open ponderosa pine, pinyon-juniper woodland, canyon bottoms, open pasture, and hayfields. Roosts in caves and in cracks and crevices in cliffs and canyons. Winter habit is poorly known.	X	X	X			X	P
Townsend's big-eared bat *Corynorhinus townsendii*		X	X	Maternity and hibernation colonies typically are in caves and mine tunnels. Prefers relatively cold places for hibernation, often near entrances and in well ventilated areas. Uses caves, buildings, and tree cavities for night roosts. Commonly occurs in mesic habitats characterized by coniferous and deciduous forests, but occupies a broad range of habitats.	X	X	X	X	X	X	P
Uinta chipmunk *Tamias umbrinus*		X		In coniferous forests, often near logs and brush in open areas, and at edge of forests.	X			X			NL
Western pipistrelle *Pipistrellus Hesperus*		X		Deserts and lowlands, desert mountain ranges, desert scrub flats, and rocky canyons. Day and night roosts include rock crevices, under rocks, burrows, and sometimes buildings or mines. May hibernate in cave, mine, or rock crevice. Typically visits water and drinks immediately after emergence each evening. Young are born in rock crevices or in buildings.			X				P
Western red bat *Lasiurus blossevillii*		X		Appear to prefer riparian and forested areas where they roost in tree foliage.	X						NL
Western small-footed myotis *Myotis ciliolabrum*		X		Various wooded and semi-open habitats, including cities. Much more abundant in regions dominated by deciduous forest than in coniferous forest areas. Summer roosts generally are in buildings; also hollow trees, rock crevices, tunnels, and cliff swallow nests.			X				NL
White-tailed prairie dog *Cynomys leucurus*		X		Shrub-steppe and saltbush communities.	X					X	P

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Wolverine *Gulo gulo luscus*	P	X	X	Found only in high alpine coniferous forests. Historically, wolverines were found in the Uinta Mountains and still may inhabit high mountainous areas of the state. There is mapped habitat in population areas, but no known sightings of wolverines in greater sage-grouse population areas. Therefore unlikely to occur within any population area.	X						NL
Yuma myotis *Myotis yumanensis*		X		More closely associated with water than most other North American bats. Found in a wide variety of upland and lowland habitats, including riparian, desert scrub, moist woodlands and forests, but usually found near open water. Nursery colonies usually in buildings, caves and mines, and under bridges.			X				NL
BIRDS											
American bitten *Bolaurus lentiginosus*		X		Marshes, wet meadows.					X		NL
Bald eagle *Haliaeetus leucocephalus*		X	X	Usually nests in forests or tall trees near large water bodies.	X	X	X	X	X	X	NL
Bank swallow *Riparia riparia*		X		Generally found near larger bodies of water, such as rivers, lakes or even the ocean, throughout the year.			X				NL
Black-backed woodpecker *Picoides arcticus*		X		Coniferous forests.					X		P
Black tern *Chilodonias niger*		X		Marshes, wet meadows.					X		NL
Black swift *Cypseloides niger*		X		Coastlines, rocky ledges, and rocky crevices.	X						NL
Black-throated sparrow *Amphispiza bilineata*		X		Arid desert hillsides and scrub.				X			P
Bobolink *Dolichonyx oryzivorus*		X		Open grasslands with a moderate litter layer and standing residual vegetation, including hay fields, pastures, old fields, mesic prairies, and sedge meadows.	X	X		X	X		NL

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Baird's sparrow *Ammodramus bairdii*		X		Grasslands, weedy fields.					X	X	NL
Boreal owl *Aegolius funereus*			X	Coniferous forests.	X			X			NL
Brewer's sparrow *Spizella breweri*		X		Strongly associated with sagebrush scrub, sagebrush steppe, and salt desert scrub. May occur in most habitat types in Nevada.		X	X	X	X	X	P
Bufflehead *Bucephala albeola*		X		Lakes, ponds, and marshes.	X						NL
Burrowing owl *Athene cunicularia*		X		Grasslands, basin-prairie shrub, often with prairie dogs.	X		X	X	X	X	P
Calliope hummingbird *Stellula calliope*		X		Forest glades, canyons, usually in mountains.				X			NL
Caspian tern *Hydroprogne caspia*		X		Marshes, wet meadows.					X		NL
Chestnut-collared longspur *Calcarius ornatus*		X		Dry grasslands and deserts					X	X	P
Columbian sharp-tailed grouse *Tympanuchus phasianellus columbianus*		X	X	Grasslands and shrublands.	X	X		X		X	P
Common loon *Gavia immer*			X	Open water.				X			NL
Common tern *Sterna hirundo*		X		Marshes, wet meadows.					X		NL
Ferruginous hawk *Buteo regalis*		X		Basin-prairie shrub, grassland, rock outcrops.	X		X	X	X	X	P
Flammulated owl *Otus flammeolus*		X	X	Mountain, pine forests.			X		X		NL
Forster's tern *Sterna forsteri*		X		Marshes, wet meadows.					X		NL

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Franklin's gull *Leucophocus pipixcam*		X		Marshes, wet meadows.					X		NL
Golden eagle *Aquila chrysaetos*		X		A variety of habitats ranging from arctic to desert, including tundra, shrublands, grasslands, coniferous forests, farmland, and areas along rivers and streams.	X	X	X	X	X	X	P
Grasshopper sparrow *Ammodramus savannarum*		X		Grasslands and shrublands.	X	X					P
Greater sage-grouse *Centrocercus urophasianus*		X	X	Grasslands and shrublands.	X	X	X	X	X	X	Known
Green-tailed towhee *Pipilo chlorurus*		X		Brushy mountain slopes, low chaparral, open pines, sagebrush steppe.				X			P
Harlequin duck *Histrionicus histrionicus*		X	X	Mountain streams.				X			NL
Lewis' woodpecker *Melanerpes lewis*		X		Nests in open forest and woodland, often logged or burned, including oak, coniferous forest, riparian woodland, orchards, and pinyon-juniper. Primary habitat consists of burned coniferous woodlands and open riparian woodlands with a relatively intact grass or shrub understory.	X	X	X				NL
Loggerhead shrike *Lanius ludovicianus*		X		Nests in arid, open country with just a few perches or lookouts. Has a lower probability of occurrence in forests, higher mountains, barren zones, and urban areas.			X	X	X	X	P
Long-billed curlew *Numenius americanus*		X		Grasslands, plains, foothills, wet meadows.	X			X	X	X	P
Mountain plover *Charadrius montanus*		X		Areas of low vegetation, short-grass and mixed- grass prairie, openings in shrub ecosystems, prairie dog towns.					X	X	P
Mountain quail *Oreortyx pictus*		X	X	Mountainous chaparral.			X	X			P
Northern goshawk *Accipiter gentilis*		X	X	Old-growth timber and cottonwood stands during migration.	X		X			X	NL

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Olive-sided flycatcher *Contopus cooperi*		X		Sagebrush shrub, mountain-foothill shrub.				X			P
Peregrine falcon *Falco peregrinus*		X	X	May be found in a variety of habitat types. Known nest sites occur on cliff ledges or high buildings.		X	X	X	X	X	P
Pinyon jay *Gymnorhinus cyanocephalus*		X		Nests and forages in pinyon-juniper woodland and may forage in other habitats such as sagebrush shrublands. Strongly associated with occurrence of pinyon pine.			X				P
Red-headed woodpecker *Melanerpes erythrocephalus*		X		Coniferous forests.					X		NL
Red knot *Calidris cantus*	T	X		Shoreline of marshes, streams, lakes, rivers.					X		NL
Sagebrush sparrow *Amphispiza belli*		X		Sagebrush shrub, mountain-foothill shrub.				X		X	P
Sage thrasher *Oreoscoptes montanus*		X		Associated with intact, dense stands of sagebrush. Primarily uses sagebrush scrub and sagebrush steppe habitat, but also other Great Basin shrublands.			X	X	X	X	P
Short-eared owl *Asio flammeus*		X		Grasslands and shrublands.	X			X			P
Sprague's pipit *Anthus spragueii*		X		Shoreline of marshes, streams, lakes, rivers.					X		NL
Swainson’s hawk *B. swainsoni*		X		Open pine/oak woodlands, and in cultivated land with scattered trees.			X	X	X		P
Three-toed woodpecker *Picoides tridactylus*		X	X	Coniferous forests.	X						NL
Tricolored blackbird Agelaius tricolor		X		Cattail or tule marshes; forages in fields, farms.		X					NL
Trumpeter swan *Cygnus buccinator*		X	X	Lakes, ponds, and marshes.		X				X	NL
Veery *Catharus fuscescens*		X		Mature deciduous woods, sometimes mixed or coniferous woods, or open country on northern Great Plains, concentrating along streams or other openings.					X		NL

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Virginia's warbler *Vermivora virginiae*		X		Oak canyons, brushy slopes, pinyons.				X			P
White-faced Ibis *Plegadis chihi*		X		Marshes, wet meadows.					X	X	NL
Willow flycatcher *Empidonax traillii*		X		Riparian areas dominated by willow habitats.				X			NL
Yellow-billed cuckoo *Coccyzus americanus*	C	X		Dense cottonwood-willow habitats along streams and river corridors.	X		X	X		X	NL
Yellow rail *Coturnicops noveboracensis*		X		Marshes, wet meadow.		X					NL
AMPHIBIANS AND REPTILES											
Arizona toad *Bufo microscaphus*		X		Shallow, flowing, permanent water over sandy or rocky substrates, typically in river canyons or foothill streams.	X						NL
Columbia spotted frog *Rana luteiventris*		X	X	Variety of vegetation communities, including subalpine forest grasslands and sagebrush habitats. Requires both aquatic and terrestrial habitats.		X	X	X		X	P
Common garter snake *Thamnophis sirtalis*		X		Usually found in habitats associated with water, such as streams, rivers, lakes, ponds and marshes. Also found in open meadows and coniferous forests.				X	X		NL
Great basin spadefoot *Spea intermontana*		X		Springs; seeps; permanent and, temporary waters during the breeding season and loose sandy soils in arid habitats the rest of the year.						X	P
Great plains toad *Bufo cognatus*		X		Sagebrush-grassland, rainwater pools in road ruts, in stream valleys, at small reservoirs and stock ponds.	X				X		P
Inland tailed frog *Ascaphus montanus*		X		Marshes, wet meadows, ponds.		X					NL
Longnose snake *Rhinocheilus lecontei*		X		Dry, often rocky, grassland areas.				X			P
Midget faded rattlesnake *Crotalus viridis concolor*		X		Mountain foothills shrub, rock outcrop.						X	P
Mojave black-collared lizard *Crotaphytus bicinctores*		X		Arid habitats, and a critical component of the habitat appears to be the presence of rocks and boulders.				X			P

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Northern leopard frog *Rana pipiens*		X		Small fishless ponds for reproduction and upland habitats for summertime foraging.					X	X	NL
Northern sagebrush lizard *Sceloporus graciosus*		X		Predominately found in sagebrush cover, but also found in greasewood and other desert shrubs and sometimes on small rocky outcrops.			X				P
Oregon spotted frog *Rana pretiosa*		X		Highly aquatic, and rarely found far from permanent quiet water; usually occurs at the grassy margins of streams, lakes, ponds, springs, and marshes.		X	X				NL
Plains spadefoot *Spea bombifrons*		X		Small fishless ponds for reproduction and upland habitats for summertime foraging.				X	X		NL
Western (boreal) toad *Bufo boreas*		X	X	Found in a variety of habitats, including wetlands, springs, slow-moving streams, ponds, meadows, and woodlands.	X			X		X	NL
Western ground snake *Sonora semiannulata*		X		Arid habitats usually having loose or sandy soil, ranging from rocky areas (talus slopes, canyon rims and outcroppings) to low desert shrub areas.				X			P
Woodhouse's toad *Anaxyrus woodhousii woodhousii*		X		Grasslands, shrub steppe, woods, river valleys, floodplains, and agricultural lands, usually in areas with deep, friable soils.		X		X			P
INVERTEBRATES											
Owyhee Hot Spring snail *Pyrgulopsis owyheensis*		X		Entirely aquatic life cycle requiring clean, moderately swift, well-oxygenated waters. Disjunctly distributed among five small groups of springs in southeastern Oregon (Owyhee River near Three Forks, Rattlesnake Creek drainage, Owyhee Spring area, lower Owyhee River, Malheur River drainage)		X					NL
Bruneau Dunes tiger beetle *Cicindela waynei waynei*		X		Occurs within the Bruneau sand dunes in Idaho and breeds primarily in saddles between dunes where there is sparse vegetation.				X			NL
Deschutes Sideband *Monadenia fidelis ssp. nov. (Deschutes)*		X		Rare Oregon endemic terrestrial snail. They have been documented along the Deschutes River in Wasco and Sherman Counties, Oregon		X					NL
Hells Canyon Land Snail *Cryptomastix populi*		X		Found mostly in moderately xeric, rather open and dry, large-scale basalt taluses. Endemic to the Hells Canyon area.		X					NL

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Idaho point-headed grasshopper *Acrolophitus pulchellus*		X		Rare Idaho endemic known to occur in xeric shrublands of Idaho's Birch Creek and Big Lost River drainages.				X			P
Modoc Rim sideband *Monadenia fidelis ssp. nov. (Modoc Rim)*		X		Rare Oregon endemic terrestrial snail known from a small area on the southeast and west of Upper Klamath Lake, Klamath County, Oregon.		X					NL
Owyhee Hot Spring snail *Pyrgulopsis fresti*		X		Have an entirely aquatic life cycle and require clean, moderately swift, well-oxygenated waters, typically with gravel-boulder substrates. Known only from a short reach of the middle Owyhee River, at the mouth of Warm Springs Canyon above the town of Three Forks, in Malheur County, Oregon.		X					NL
Silver-bordered fritillary *Boloria selene*		X		Wet meadows, willow bogs, open grassy marshes, moist aspen groves, wet to mesic tallgrass prairie.		X					NL
FISH											
Alvord chub *Gila alvordensis*		X		Endemic to the Alvord Basin, an endorheic basin located in southeastern Oregon and northwestern Nevada.		X					NL
Bluehead sucker *Catostomus discobolus*		X		Colorado River drainage; large rivers, streams, and lakes.						X	NL
Bonneville cutthroat trout *Oncorhynchus clarkii utah*		X	X	Bear River drainage, clear mountain streams.						X	P
Borax Lake chub *Gila boraxobius*	T	X		Endemic to Borax Lake in the Alvord Basin located in southeastern Oregon and northwestern Nevada.		X					NL
Bull trout *Salvelinus confluentus*	T	X	X	Cold fresh water habitats with scattered populations remaining in portions of Oregon, Washington, Nevada, Idaho, and Montana. Occurs within or downstream of habitats in the North Central Idaho and Southern Idaho / Northern Nevada SFAs in the analysis area.			X	X			P
Chinook salmon *Oncorhynchus tshawytscha*	T	X	X	Occur within the Columbia River, Salmon River, and portions of the Snake River watersheds and their associated tributaries which are used for spawning habitats. Occurs in close proximity to the North-Central Idaho SFA within the Salmon River and Lemhi River watersheds.				X			NL

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Clover Valley speckled dace *Rhinichthys osculus oligoporus*		X		Confined to three springs and outflows in the Clover Valley in Elko County, Nevada.			X				N
Colorado River cutthroat trout *Oncorhynchus clarkii pleuriticus*			X	Green River, Black's Fork and Little Snake River enclaves. Cool, clear water and well-vegetated stream banks for cover and bank stability						X	NL
Desert dace *Eremichthys acros*		X		Inhabits warm springs and their outflow creeks, in areas with temperatures of 64-104 F. Occupied habitat includes spring pools up to 45 feet in diameter and 12 feet deep; outflow streams typically less than 1 foot deep; alkali marsh areas with overland flow among cattails, hardstem bulrush, and other herbaceous plants; artificial impoundments; and earthen irrigation ditches. Endemic to eight spring systems in the Soldier Meadow area.			X				NL
Desert sucker *Catostomus clarkii*		X		Common in some of the large, turbid rivers of the southwest - chiefly the Virgin, White, Colorado, Gila, and Bill Williams rivers. Not known to occur within any of the SFAs associated with the analysis area.	X						N
Fine-spotted Snake River cutthroat trout *Oncorhynchus clarkii spp.*		X		Snake River drainage, clear, fast water.						X	NL
Flannelmouth sucker *Catostomus latipinnis*		X		Colorado River drainage, large rivers, streams and lakes.						X	NL
Foskett speckled dace *Rhinichthys osculus*		X		Currently only one known population, which is found in Foskett Spring in the Coleman subbasin.		X					N
Hornyhead chub *Nocomis biguttatus*		X		Lower Laramie and North Laramie River watersheds in small to medium sized, moderate to low gradient, clear gravelly streams, preferring pools and slow to moderate runs and is often associated with aquatic plants.						X	N
Hutton tui chub *Gila bicolor ssp.*		X		Distribution includes only two springs in the Alkali Subbasin, Hutton Spring and an unnamed spring, in Oregon.		X					N

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Independence Valley speckled dace *Rhinichthys osculus lethoporus*		X		Confined to a series of springs and associated deep pools and shallow marshlands in the Independence Valley in Elko County.			X				N
Inland Columbia Basin redband trout *Oncorhyncus mykiss gairdneri*		X		Winter habitat includes deep pools with extensive amounts of cover in third-order mountain streams. Summer surveys indicated that low-gradient, medium elevation reaches with an abundance of complex pools are critical areas for production.			X				N
Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*	T	X		Lakes and streams; requires cool, well-oxygenated water. Adapted to highly mineralized waters. In streams, uses rocky areas, riffles, deep pools, and areas under logs and overhanging banks; optimally, cover should be available in at least 25% of the stream area.	X	X	X				N
Lahontan redside shiner *Richardsonius egregius*		X		Occurs in Summit Lake in Humboldt County Nevada.		X					N
Long River sucker *Deltistes luxatus*		X		Restricted to a few areas in the Upper Klamath Basin, such as the drainages of Upper Klamath Lake, Tule Lake, and Clear Lake.		X					N
Modoc sucker *Catostomus microps*		X		Found in the Thomas Creek drainage, in the Goose Lake sub-basin, in Oregon		X					N
Northern leatherside chub *Lepidomeda copei*		X	X	Bear, Snake and Green River drainages, clear, cool streams and pools.						X	N
Northern redbelly X finescale dace *Chrosomus eos x chrosomus neogaeus*		X		Prefers quiet waters from beaver ponds, bogs, and clear streams.					X		N
Pacific lamprey *Lampetra tridentata*		X		In Idaho it is restricted to the Clearwater and Salmon river drainages and tributaries to the Snake River below Hells Canyon Dam.				X			N
Pallid Sturgeon *Scaphirhynchus albus*	E	X	X	In Montana it occurs within the Missouri River.					X		N
Paddle fish *Polyodon spathula*		X		In Montana it occurs within the Missouri River and its tributaries.					X		P

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Oregon lakes tui chub *Gila bicolor oregonensis*		X	X	Endemic to the Abert Lake Basin of south-central Oregon		X					NL
Redband trout *Oncorhynchus mykiss gibbsi*		X		Streams, rivers, and lakes throughout eastern and southern Oregon and western Idaho.		X					P
Roundtail chub *Gila robusta*		X		Colorado River drainage, mostly large rivers, also streams and lakes.						X	N
Sauger *Sander canadensis*		X		Inhabits the larger turbid rivers and the muddy shallows of lakes and reservoirs.					X		N
Sheldon tui chub *Gila bicolor eurysoma*		X		Isolated waters of the Guano Basin of southeastern Oregon and northwestern Nevada. Within Guano Basin, the subspecies has been reported from Fish Creek on the Sheldon National Wildlife Refuge, Washoe County in Nevada, and Piute and Guano creeks, Lake County in Oregon. No populations were identified within the portions of the SFA occurring in Nevada.		X					NL
Shortnose sucker *Chasmistes brevirostris*		X		Occupies only a fraction of its former range and is restricted to a few areas in the Upper Klamath Basin, such as the Upper Klamath Lake, Tule Lake, and Clear Lake drainages.		X					N
Sockeye salmon *Oncorhynchus nerka*	E	X	X	Occur within the Columbia River, Salmon River, and portions of the Snake River watersheds and their associated tributaries which are used for spawning habitats. Occurs in close proximity to the North-Central Idaho SFA within the Salmon River and Lemhi River watersheds.				X			N
Sturgeon chub Macrhybopsis gelida		X		Found in the eastern Montana prairie river drainages (i.e., Missouri, Lower Yellowstone, and Powder Rivers).					X		N
Summer Basin tui chub *Gila bicolor ssp.*		X		Endemic to springs and outflows in the Summer Basin of southcentral Oregon.		X					NL
Tahoe sucker *Catostomus tahoensis*		X		Lahontan Basin in southeastern Oregon, Nevada, and northeastern California.		X					NL
Warner sucker *Catostomus Warnerensis*		X		The Warner sucker is endemic to the streams and lakes of the Warner Basin in south-central Oregon. The species is presently known to occur in portions of Crump and Hart Lakes, the spillway canal north of Hart Lake, and portions of Snyder, Honey, Twenty mile, and Twelve Mile Creeks.		X	X				NL

Table D-2. (continued)

Common Name	Status			Brief Habitat Description	Utah	Oregon	Nevada	Idaho	Montana	Wyoming	Occurrence in Project Area
	ESA	BLM	USFS								
Westslope cutthroat trout *Oncorhynchus charki lewisi*		X	X	Occurs along both sides of the Continental Divide from Yellowstone National Park into British Columbia and Alberta, additionally there are several disjunct populations in Oregon, Washington, and British Columbia.				X			P
Yellowstone cutthroat trout *Oncorhynchus clarkii bouvieri*		X	X	Yellowstone drainage, small mountain streams, and large rivers.						X	P
MOLLUSKS											
Dixie Valley pyrg *Pyrgulopsis dixensis*		X		Endemic to springs near Hot Springs, Dixie Valley, Pershing County, Nevada.			X				N
Elongate Mud Meadows pyrg *Pyrgulopsis notidicola*		X		Endemic to four spring systems near Mud Meadow, Solider Meadow area, Humboldt County, Nevada. Occupies two basic habitat types; near the source of springs with temperatures greater than 113 degrees F in the splash zone on rocks and riparian grasses only in wetted areas, and downstream from spring sources submerged in gravel substrate.			X				P
Northern Soldier Meadow pyrg *Pyrgulopsis militaris*		X		Endemic to springs in the Soldier Meadow area, Humboldt County, Nevada.			X				P
Northern steptoe pyrg *Pyrgulopsis serrate*		X		Endemic to spring near Warm Springs Canyon in Soldier Meadow area, Humboldt County, Nevada.			X				P
Southern Soldier Meadow pyrg *Pyrgulopsis umbilicata*		X		Endemic to spring near Warm Springs Canyon in Soldier Meadow, Humboldt County, Nevada.			X				P
Squat Mud Meadows pyrg *Pyrgulopsis limaria*		X		Endemic to spring brook in Mud Meadow drainage, Humboldt County, Nevada.			X				P
Wongs pyrg *Pyrgulopsis wongi*		X		Found in springs in Douglas, Esmeralda, and Mineral County in Nevada.			X				NL

P= Potential occurrence within the habitat types associated with the proposed withdrawal area.
NL= Not Likely to occur within the habitat types associate with the proposed withdrawal area.
N= No habitat present for these individuals within the proposed withdrawal area. Many of these species are endemic or isolated to a specific region or habitat type.

Table D-3. Forest Service Management Indicator Species or Focal Species

Forest	Focal Species	Management Indicator Species
Idaho		
Caribou	Not identified	Columbian sharp-tailed grouse Northern goshawk Greater sage-grouse
Targhee	Not identified	Bald eagle Peregrine falcon Grizzly bear Gray wolf Lewis woodpecker Red-naped sapsucker Williamson's sapsucker Downy woodpecker Hairy woodpecker Three-toed woodpecker Black-backed woodpecker Standing dead tree habitat Northern flicker Wolverine Fisher American Marten Lynx Northern goshawk Flammulated owl Boreal owl Great gray owl Trumpeter swan Spotted frog Common loon Harlequin duck Elk vulnerability and elk habitat effectiveness Red squirrel Cutthroat trout
Sawtooth	Northern goshawk Greater sage-grouse pileated woodpecker Yellowstone cutthroat trout Bull trout	Not identified
Salmon	Not identified	Pileated woodpecker Greater sage-grouse Columbia spotted frog Bull trout
Challis	Not identified	Pileated woodpecker Greater sage-grouse Spotted frog Bull trout

Table D-3. (continued)

Forest	Focal Species	Management Indicator Species
Nevada		
Humboldt-Toiyabe	Quaking aspen Aquatic macroinvertebrates Invasive annual grasses (e.g., cheatgrass)	Not identified
Oregon		
Fremont-Winema	Not identified	Goshawk Mule deer Pileated woodpecker American martin Red-naped sapsucker Black-backed woodpecker
Utah		
Uinta	Northern goshawk Bonneville cutthroat trout Colorado River cutthroat trout	Not identified
Wasatch-Cache	Northern goshawk Bonneville cutthroat trout Colorado River cutthroat trout.	Not identified

GLOSSARY

Affected environment. The existing biological, physical, social, and economic conditions of an area that are subject to change, both directly and indirectly, as a result of a proposed human action.

Area of Critical Environmental Concern. A Bureau of Land Management designation for an area within public lands in which special management is required in order to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life from natural hazards.

Assessment (environmental). An evaluation of existing resources and potential impacts to those resources from a proposed act or change to the environment.

Baseline. The environmental conditions that form the basis against which the environmental consequences of a proposed action are evaluated.

Best management practices. Structural and operational measures undertaken to reduce erosion and sedimentation before beginning and continuing during ground-disturbing activities. Best management practices are measures that are demonstrated to be the best available for the site for controlling soil loss and protecting water quality, given the site-specific social, economic, and technical constraints.

Candidate species. Species for which the U.S. Fish and Wildlife Service has sufficient information on file regarding biological vulnerability and threat(s) to support the issuance of a proposed rule to list the species as threatened or endangered but for which issuance of the proposed rule is precluded.

Code of Federal Regulations. The compilation of federal regulations adopted by federal agencies through a rule-making process.

Cooperating Agency. A federal, state, or local government entity or Tribe that provides input for and review of the compliance process required by the National Environmental Policy Act of 1969 but that is not responsible for management of that process.

Core area. A component of natural habitat composed of "contiguous blocks of uniform habitat types away from natural breaks or habitat edges,"[2] which is most commonly utilized or frequented and is used to describe the inner part of the effect zone.

Council on Environmental Quality. An advisory council to the President of the United States established by the National Environmental Policy Act of 1969. It reviews federal programs for their effect on the environment, conducts environmental studies, and advises the President on environmental matters.

Cultural resources. Areas, properties, or sites of importance to cultural groups. In addition to areas of importance for traditional uses or products, these include the remains of human activity, occupation, or endeavor, as reflected in districts, sites, buildings, objects, artifacts, ruins, works of art, architecture, and natural features important in human events.

[2] Weller, C., J, Thomson, P. Morton, and G. Aplet, 2002. *Fragmenting Our Lands: The Ecological Footprint from Oil and Gas Development—a Spatial Analysis of a Wyoming Gas Field.* Seattle, Washington, and Denver, Colorado: The Wilderness Society. Available at: <http://wilderness.org/files/fragmenting-our-lands.pdf>.

Cumulative effects. The impact on the environment that results from the incremental effect of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of who undertakes such actions. Cumulative effects can result from individually minor but collectively significant actions that take place over a period of time.

Direct effect. See *Direct impact.*

Direct impact. Beneficial or adverse effect that is caused by an action and occurs at the same time and place.

Economic output. Generally, the gross value of annual sales for an operation, industry or geographic area. Retail output is an exception, where output is generally reported based on total sales net of the wholesale cost of materials sold.

Ecotone. The transition zone between two major ecological communities in which one does not merge gradually into the other, for example, that between grassland and woodland.

Edge area. The portion of wildlife habitat that forms the borders with nearby non-habitat area and typically provides less value to wildlife.

Effect. See *Impact.*

Employee compensation. Annual wages, salaries, and benefits paid to employees.

Endangered species. A plant or animal species that is threatened with extinction or serious depletion in its range and is formally listed as such by the U.S. Fish and Wildlife Service.

Environmental Impact Statement. A document prepared to analyze the impacts on the environment of a Proposed Action and released to the public for review and comment. An Environmental Impact Statement must meet the requirements of the National Environmental Policy Act and the Council on Environmental Quality Regulations and the directives of the lead federal agency responsible for the Proposed Action.

Environmental Justice. Defined as the fair treatment and meaningful involvement of all people—regardless of race, ethnicity, or income level—in environmental decision-making. Consideration of environmental justice issues is mandated by EO 12898, which was published on February 11, 1994.

Endemic environment. Plants or animals that are native to a particular region; the surrounding conditions, influences, or forces that affect or modify an organism or an ecological community and ultimately determine its form and survival.

Exploration. Under BLM regulations at 43 CFR 3809.5, creating surface disturbance greater than casual use that includes sampling, drilling, or developing surface or underground workings to evaluate the type, extent, quantity, or quality of mineral values present. Exploration does not include activities where material is extracted for commercial use or sale.

Federally listed threatened and endangered species. Species afforded protection under the Endangered Species Act. An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future.

Fragmentation. See *Habitat fragmentation*.

Gross regional product. Measure of the total economic *value-added* across all sectors in an economic region such as a county, state, or nation.

Habitat. The region in which a plant or animal naturally grows or lives. A specific set of physical conditions that surround a single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

Habitat fragmentation. The disruption (by division) of habitat into smaller habitat patches. The effects of habitat fragmentation include loss of habitat area, increased edge area, and the creation of smaller, more isolated patches of remaining habitat.

Habitat type. A habitat type is the basis of a forest ecosystem classification system. It is an aggregation of all land areas potentially capable of producing similar plant communities at climax. Habitat types are usually named for the most shade-tolerant tree species that will grow on the site and an understory plant that is represented with a high degree of constancy.

Human environment. The natural and physical environment and the relationship between people and the environment.

Impact. The terms "impacts" and "effects" are synonymous as used in National Environmental Policy Act analyses. Impacts may be beneficial or adverse and may apply to the natural, aesthetic, historic, cultural, and socioeconomic resources of the installation and the surrounding communities. Where applicable, impacts may be classified as direct or indirect.

IMPLAN. A regional economic input-output modeling system originally developed by the Forest Service which is now owned and operated by a private company. Widely used for economic impact analysis in both the public and private sectors.

Indicator species. A wildlife species whose presence in a certain location or situation at a given population level indicates a particular environmental condition. Population changes are believed to indicate effects of management activities on a number of other wildlife species.

Indirect effect. See *Indirect impact.*

Indirect impact. An indirect impact is caused by a proposed activity but is later in time or farther removed in distance while still being reasonably foreseeable. Indirect impacts may include land use changes or population density changes and the related effects these changes will have on air, water, and other natural or social systems.

Labor force. The population of working-age residents that are currently employed or are unemployed but actively seeking work.

Labor income. An economic metric which includes *Employee compensation* and *Proprietor income.*

Leasable mineral. Minerals that may be acquired under the Mineral Leasing Act of 1920, as amended, including coal, oil shale, oil and gas, phosphate, potash, sodium, and geothermal resources.

Lek. An assembly area used by sage-grouse for communal courtship displays.

Listed species. Any species that occurs on a threatened or endangered species list at the state or federal level.

Lithic. Pertaining to stone or a stone tool (e.g., lithic artifact).

Locatable materials. Locatable minerals are minerals that may be "located" with a mining claim under the General Mining Law of 1872, (Act of May 10, 1872 (17. Stat. 92; 30 U.S.C. 28)), as amended. Locatable minerals include, but are not limited to, gold, silver, platinum, precious gems, uranium, bentonite, chemical grade limestone, chemical grade silica sand and gypsum. Uncommon varieties of mineral materials such as pumice, rock and cinders are also regulated as locatable minerals.

Long-term impacts. Long-term impacts are those that could last greater than 10 to 20 years.

LR2000. The Bureau of Land Management's Legacy Rehost System called LR2000 provides reports on BLM land and mineral use authorizations for oil, gas, and geothermal leasing, rights-of-ways, coal and other mineral development, land and mineral title, mining claims, withdrawals, classifications, and more on federal lands or on federal mineral estate.

Mine footprint. The land area within which all surface mining activities are conducted, including head structures for underground mines, stockpiles of waste rock or ore, and stormwater or process water basins.

Mine plan of operations. A description of proposed mineral exploration or mining, including the name and address of the operator, location of the operation, access to the operation, period in which the operation would take place, and other information, as required by the Bureau of Land Management in accordance with 43 CFR Part 3809 and by the U.S. Forest Service in accordance with 36 CFR Part 228.4.

Mineral deposit. A mineral concentration of sufficient size and quality that it might, under the most favorable of circumstances, be considered to have potential for economic development.

Mineral development. Used to include all surface ground disturbing activities including but not limited to prospecting, exploration, operations, and reclamation.

Mineral entry. Authority to enter public lands for the purpose of developing minerals in an orderly, organized manner.

Mineral potential. A prediction of the likelihood of the occurrence of mineral resources.

Mineral rights. An ownership interest in minerals that may or may not be owned by the person or party having title to the surface estate.

Mining claim. A mining claim is a parcel of land for which the claimant has asserted a right of possession and the right to develop and extract a discovered, valuable, mineral deposit. This right does not include exclusive surface rights (see Public Law 84-167).

Mining Law. The General Mining Law of 1872, as amended (30 U.S.C. §§ 22-54 and §§ 611-615) is the major Federal law governing locatable minerals. This law allows citizens of the United States the opportunity to explore for, discover, and purchase certain valuable mineral deposits on those federal lands that are open for mining claim location and patent (open to mineral entry). These mineral deposits include most metallic mineral deposits and certain nonmetallic and industrial minerals. The law sets general standards and guidelines for claiming the possessory right to a valuable mineral deposit discovered during exploration.

Mitigation. Actions intended to render an action less severe or harmful to environmental resources. Mitigation generally includes the following: avoiding the impact altogether by stopping or modifying the Proposed Action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by conducting preservation and maintenance operations during the life of the action; compensating for the impact by replacing or providing substitute resources or environments.

No Action Alternative. The most likely condition expected to exist in the future if current management direction were to continue unchanged.

No effect. See *No impact.*

No impact. "No impact" implies that a particular activity creates neither a direct nor indirect impact, does not have long- or short-term implications, and is neither beneficial nor negative.

Non-market value. Economic values received by the public from environmental and resource conditions that are not reflected in market activity or metrics. Common types of non-market values include use values such as the benefits received by recreational users and non-use values such as the value that people place on the continued existence of endangered species or undeveloped landscapes.

Noxious weed. An undesirable weed species that typically moves into disturbed areas, grows aggressively, and outcompetes desirable or native species for resources.

Off-highway vehicle. Any motorized vehicle designated for cross-country travel over any type of natural terrain.

Ore. Naturally occurring material from which a valuable mineral or minerals can be economically extracted.

Overburden. Rock and soil cleared away prior to mining.

Patent. A document by which the United States conveys, to those entitled thereto, legal title to some portion of the public lands (Glossaries of Bureau of Land Management Surveying and Mapping Terms).

Patented claims. Private land that has been secured from the U.S. government by compliance with laws relating to such lands.

Payments in-lieu of taxes (PILT). Payments made by the federal government to states or local governments for federal lands within their jurisdictions. These payments are "in-lieu" of property tax revenues that could be produced by those lands if they were in private ownership.

Percent grade. The total amount of processed mineral that can be extracted from a given amount of ore.

Personal income. Annual income received by individuals or households from all sources, including labor earnings from work, and non-labor income sources such as dividends, interest earnings, rental income, and transfer payments from government sources.

Physiographic. Describing the shape and features of the land's surface.

Physiographic province. An area characterized by distinctive topography, geological structure, climate, drainage patterns, and other features and phenomena of nature.

Plan of operations. See *Mine plan of operations.*

Preferred Alternative. The alternative recommended for implementation by the project proponent based on the evaluation completed in the NEPA process.

Principle of self-initiation under the Mining Law. The mining claimant, rather than BLM or the Forest Service chooses whether and when to develop the mineral deposit in the mining claims.

Proprietor income. Annual income received by business owners, including self-employed individuals.

Project alternatives. Alternatives to the proposed project developed through the National Environmental Policy Act process.

Quaternary. The geological period following the Tertiary in the Cenozoic Era, beginning about 1.8 million years ago, composed of the Pleistocene and Holocene epochs, characterized by the evolution of hominids into modern humans.

Reasonably foreseeable development. Estimates the level and type of reasonably foreseeable future locatable mineral development that could occur in the proposed withdrawal area and surrounding lands.

Reclamation. The process of contouring, stabilizing, and/or vegetating to convert disturbed land to its former use or other productive uses.

Record of Decision. A public document that explains which alternative will be selected for the area of concern. In addition to the decision, the Record of Decision states the alternatives considered, environmentally preferable alternative or alternatives, factors considered in the agency's decision, and mitigation measures that will be implemented and identifies any applicable enforcement and monitoring programs.

Salable minerals. Common-variety mineral materials, such as sand, gravel, cinders, and building stone, that are sold on a permit basis. Also referred to as mineral materials.

SaMiRA. See *USGS Mineral Potential Report.*

Scope. The range of actions, alternatives, and impacts to be considered in an Environmental Impact Statement.

Scoping. A term used to identify the process for determining the range of issues related to a Proposed Action and for identifying significant issues to be addressed in an Environmental Impact Statement. Scoping may involve public meetings, field interviews with representatives of agencies and interest groups, discussions with resource specialists and managers, and comments received by the lead federal agency in response to news releases, direct mailings, articles, and Internet postings about the Proposed Action.

Sedimentary rock. Rock formed from consolidation of loose sediment that has accumulated in layers and become cemented.

Segregation. Within 30 days of receipt of an application for withdrawal, and whenever she proposes a withdrawal on her own motion, the Secretary shall publish a notice in the Federal Register stating that the application has been submitted for filing or the proposal has been made and the extent to which the land is to be segregated while the application is being considered by the Secretary. Upon publication of such notice the land shall be segregated from the operation of the public land laws to the extent specified in the notice. The segregative effect of the application shall terminate upon (a) rejection of the application by the Secretary, (b) withdrawal of lands by the Secretary, or (c) the expiration of two years from the date of the notice.

Sensitive species. Species whose populations are small and widely dispersed or restricted to a few localities; species that are listed or candidates for listing by the state or federal government.

SFA counties. As used in this EIS, SFA counties refers to counties containing sagebrush focal areas proposed to be withdrawn from the Mining Law.

Short-term impacts. Short-term impacts are temporary and either direct or indirect. Short-term impacts are those that last four to 10 years.

Significance. Significance requires consideration of the context and intensity of the impact under consideration. Significance can vary in relation to the context of the Proposed Action. Both short- and long-term impacts may be relevant. Impacts may also be evaluated in terms of their intensity or severity.

Social effects. The consequences of any public or private actions that alter the way communities and the people who live in them interact with the environment, ensure their livelihoods, relate to one another, organize to meet their needs, and function as members of society. Social impacts also include cultural impacts, which describe the values and beliefs that influence how people perceive themselves, society at large, and their environment.

Special Status Species. Species which have been given a specialized designation under the Federal Endangered Species Act of 1973, as amended, as Endangered, Threatened, Candidate, Proposed, or by the BLM or Forest Service as sensitive.

Species. A group of individuals of common ancestry that closely resemble each other structurally and physiologically and in nature interbreed, producing fertile offspring.

Stratigraphy. The arrangement of rock strata, especially as relates to geographic position and chronological order of sequence.

Subsurface. A zone below the surface of the earth whose geological features are principally layers of rock that have been tilted or faulted and are interpreted on the basis of drill hole records and geophysical (seismic or rock vibration) evidence. Generally, it is all rock and solid materials lying beneath the earth's surface.

Tertiary. The older of the two geological periods, from 62 million to 2 million years ago, that form the Cenozoic Era; also, the system of rock strata deposited during that period.

Threatened and endangered species. Animal or plant species that are listed under the Federal Endangered Species Act of 1973, as amended.

Trade counties. As used in this document, trade counties refers to counties that do not include areas proposed to be withdrawn from the Mining Law but which are strongly linked by commuting and economic ties to *SFA counties*.

Unemployment rate. The number of unemployed persons as a percent of the total labor force. It is important to note that "unemployed" is specifically defined as individuals without jobs who are actively seeking work and does not include the entire non-working population.

Unnecessary or undue degradation. Under BLM regulations at 43 CFR 3809.5, anyone intending to develop mineral resources on the public lands must prevent unnecessary or undue degradation of the land and reclaim disturbed areas. Unnecessary or undue degradation is defined as conditions, activities, or practices that:

> (1) Fail to comply with one or more of the following: the performance standards in 43CFR 3809.420, the terms and conditions of an approved plan of operations, operations described in a complete notice, and other Federal and state laws related to environmental protection and protection of cultural resources;

(2) Are not ‘‘reasonably incident’’ to prospecting, mining, or processing operations as defined in 43 CFR 3715. 0–5; or

(3) Fail to attain a stated level of protection or reclamation required by specific laws in areas such as the California Desert Conservation Area, Wild and Scenic Rivers, BLM-administered portions of the National Wilderness System, and BLM-administered National Monuments and National Conservation Areas.

USGS Mineral Potential Report. Report **p**repared by the US Geological Survey at the request of the BLM with the primary focus of providing qualitative mineral resource assessments for the significant locatable mineral commodities within the withdrawal area. The report also informs the Reasonably Foreseeable Development.

USMIN. GIS layers prepared by US Geological Survey that represent locations of mineral occurrences, mines, mining and mineral districts, and sites of active mineral exploration within or near the proposed withdrawal. These data informed the Reasonably Foreseeable Development.

Valid existing right. Holders of mining claims and sites located within lands later withdrawn from mineral entry must prove their right to continue to occupy and use the land for mining purposes. The owner must demonstrate they contain a discovery of a valuable mineral deposit and/or are used and occupied properly under the Mining Law, as of the date of withdrawal and as of the date of the mineral examination.

Value-added. Economic measure of the total annual value of sales net of the cost of inputs. The sum of value-added across all economic sectors in a region is also referred to as gross regional product or gross national product.

Waste rock. Non-ore rock that is extracted to gain access to ore. It contains no ore metals or contains ore metals at levels that are below the economic cutoff value and that must be removed to recover the ore.

Wilderness. Federal wildlands that have been permanently protected as Wilderness under the Wilderness Act of 1964. The Wilderness Act defines wilderness as "an area of undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions....". Official wilderness has the highest form of protection of any federal wildland.

Withdrawal. As defined in FLPMA, the term “withdrawal” means withholding an area of federal land from settlement, sale, location, or entry, under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area of reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of federal land, other than 'property' governed by the Federal Property and Administrative Services Act, as amended (40 U.S.C. 472) from one department, bureau or agency to another department, bureau, or agency.