

## EXECUTIVE SUMMARY

### ES.1 BACKGROUND TO THE PEIS

In September 2008, pursuant to Section 369 of the Energy Policy Act of 2005, the Federal Land Management Policy Act of 1976 (FLPMA), and the National Environmental Policy Act of 1969 (NEPA), the U.S. Department of the Interior (DOI), Bureau of Land Management (BLM), issued a Proposed Plan Amendments/Final Oil Shale and Tar Sands (OSTS) Programmatic Environmental Impact Statement (PEIS) analyzing the environmental and socioeconomic impacts of amending 12 land use plans in Colorado, Utah, and Wyoming to designate public lands administered by the BLM as available for commercial leasing for oil shale or tar sands development (BLM 2008a).<sup>1</sup> The November 17, 2008, ROD that followed this PEIS adopted the proposed land use amendments reflecting the allocation decisions analyzed in the 2008 OSTS PEIS (BLM 2008b). These land allocation decisions, which are currently in effect, were challenged in a lawsuit brought by a coalition of environmental organizations in January 2009. As part of a settlement agreement entered into by the United States to resolve the lawsuit and in light of new information that has emerged since the 2008 OSTS PEIS was prepared, the BLM decided to take a fresh look at the land allocations analyzed in the 2008 OSTS PEIS, now covered under 10 land use plans after some consolidation, and to consider excluding certain lands from future leasing of oil shale and tar sands resources. Specifically, the BLM, through its planning process, has taken a hard look at whether it is appropriate for approximately 2,000,000 acres to remain available for potential development of oil shale and approximately 431,000 acres of public land to remain available for potential development of tar sands.

In February 2012, the BLM issued a Draft PEIS (BLM 2012) in which the agency proposed to amend 10 land use plans in Colorado, Utah, and Wyoming to describe those areas that will be open and those that will be closed to application for commercial leasing, exploration, and development of oil shale and tar sands resources. The analyses in the Draft PEIS were developed to evaluate the effects of this proposed action and its alternatives. This Proposed Plan Amendments/Final PEIS analyzes alternatives revised on the basis of public and internal comments received on the Draft PEIS. The proposed Plan Amendments herein would revise the current land use plans in the study area, which describe land allocations analyzed in the 2008 OSTS PEIS and approved in the subsequent ROD (BLM 2008a,b).

As noted above, the BLM decided to reconsider the 2008 allocations. The purpose and need for this proposed planning action is to reassess the appropriate mix of allowable uses with respect to oil shale and tar sands leasing and potential development in light of Congress's policy emphasis on these resources. Specifically, the BLM will consider amending the applicable Resource Management Plans (RMPs) to specify whether any areas in Colorado, Utah, and Wyoming currently open for application for future leasing and development of oil shale or tar

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<sup>1</sup> While the 2008 Record of Decision (ROD) amended 12 land use plans, some of these plans were subsequently incorporated into revised plans. Therefore, the study area is now covered by 10 land use plans that are being considered for amendment in this planning process.

sands should not be available for such application for leasing and development. The BLM's focus in this planning initiative is on potential development of oil shale and tar sands as sources of energy consistent with congressional policy as expressed in the Energy Policy Act of 2005 that a commercial leasing program be established for these resources. Tar sands also have a commercial use as paving material. The phrase "available for application for leasing" is used throughout the PEIS, rather than simply "available for leasing," to highlight that, unlike the BLM's practice with respect to oil and gas leasing, additional analysis, including but not limited to NEPA, the National Historic Preservation Act of 1966 (NHPA), and the Endangered Species Act of 1973 (ESA), would be required prior to the issuance of any lease of oil shale or tar sands.

This Final PEIS and Proposed Plan Amendments contain analyses of the direct, indirect, and cumulative environmental, cultural, and socioeconomic impacts of the proposed action and alternatives. Preparation of this PEIS complies with the requirements of FLPMA, NEPA, the President's Council on Environmental Quality's (CEQ's) NEPA implementing regulations, the BLM's land use planning regulations contained in Part 1600 of Title 43 of the *Code of Federal Regulations* (43 CFR Part 1600), the BLM's *Land Use Planning Handbook* (H-1601-1) (BLM 2005), and the BLM's *NEPA Handbook* (H-1790-1) (BLM 2008c).

## **ES.2 DESCRIPTION OF THE PLANNING AREA**

The study area for the oil shale resources includes the most geologically prospective area of the Green River Formation located in the Piceance, Uinta, Green River, and Washakie Basins. The BLM identified the most geologically prospective areas for oil shale development on the basis of the grade and thickness of the deposits within the Green River Formation. There are approximately 2.3 million acres of BLM-managed lands within this area that are the subject of this PEIS. For the tar sands resources, the study area, which coincides with the area considered to be the most geologically prospective for tar sands development, includes those locations in Utah previously designated as Special Tar Sand Areas (STSAs) in the geologic reports (minutes) prepared by the U.S. Geological Survey in 1980 (USGS 1980a-k) and formalized by Congress in the Combined Hydrocarbon Leasing Act of 1981 (Public Law 97-78). The STSAs contain approximately 654,000 acres of BLM-managed lands. The PEIS study areas for both oil shale and tar sands include public lands administered by the BLM where the federal government owns both the surface estate and subsurface mineral rights and where the federal government owns the subsurface mineral rights but the surface estate is owned by tribes, states, or private parties (i.e., split estate lands).

## **ES.3 PUBLIC INVOLVEMENT**

A Notice of Intent (NOI) to prepare a PEIS and possible land use plan amendments for allocation of oil shale and tar sands resources on lands administered by the BLM in Colorado, Utah, and Wyoming was published in the *Federal Register* on April 14, 2011 (BLM 2011). The NOI articulated a preliminary purpose and need for the proposed action of amending land use plans, identified planning criteria, initiated the public scoping process, and invited interested

members of the public to provide comments on the scope and objectives of the PEIS, including identification of issues and alternatives that should be considered in the PEIS analyses.

During the scoping period, the BLM conducted public meetings in April and May of 2011, in Salt Lake City, Vernal, and Price, Utah; Rock Springs and Cheyenne, Wyoming; and Rifle and Denver, Colorado. Approximately 28,800 people participated in the scoping process by attending public meetings and/or submitting comments. The BLM published a scoping report in October 2011 summarizing and categorizing issues, concerns, and comments, and considered them in developing the alternatives in this 2012 PEIS. A summary of scoping comments is provided in Section J.3 of Appendix J of this document.

The BLM published a Notice of Availability (NOA) for the 2012 Draft PEIS on February 3, 2012, and announced a 90-day public comment period that closed on May 4, 2012. Open house meetings were held during March 2012 to provide additional information on the Draft PEIS. Approximately 160,000 comment letters were received, about 600 of them contained substantive comments and roughly 160,000 appeared to be similar or identical to one another (i.e., form letters). Comments on the Draft PEIS received from the public and cooperating agencies were considered and incorporated, as appropriate, into the proposed plan amendments. Issues identified in the comments include air quality, climate change, water quality and quantity, socioeconomic concerns, wildlife concerns, and cultural resources concerns, as well as concerns related to the agency's compliance with FLPMA, NEPA, and the Energy Policy Act of 2005. These issues are summarized and the resolution of them described in the Comment Response Document in Volume 5 of this document (the Comment Response Document is on a CD at the back of Volume 5).

Comments on the Draft RMP Amendments/Draft PEIS received from the public, cooperating agencies, other federal agencies, as well as internal BLM review were considered and information incorporated, as appropriate, into this Proposed RMP Amendments/Final PEIS. As a result of public comments and upon further review, corrections/revisions were made to the alternatives, and changes were made from what was presented as the Preferred Alternative in the Draft PEIS. These changes have resulted in a Proposed Plan Amendment that references new acreage figures.

#### **ES.4 COOPERATING AGENCIES**

The scope of the *Proposed Land Use Plan Amendments for Allocation of Oil Shale and Tar Sands Resources on Lands Administered by the Bureau of Land Management in Colorado, Utah, and Wyoming and Final Programmatic Environmental Impact Statement* is of interest to numerous federal, tribal, state, and local governments. The BLM invited 55 agencies to participate in the preparation of the PEIS as cooperating agencies. Fourteen agencies expressed an interest in participating as cooperating agencies, and Memoranda of Understanding between these agencies and the BLM were established. The following agencies are participating as cooperating agencies in the preparation of this PEIS:

- National Park Service (NPS);

- U.S. Fish and Wildlife Service (USFWS);
- State of Colorado Department of Natural Resources (Colorado DNR) and Department of Public Health and the Environment (CDPHE);
- State of Utah;
- State of Wyoming;
- Garfield County, Colorado;
- City of Rifle, Colorado;
- Carbon County, Utah;
- Duchesne County, Utah;
- Grand County, Utah;
- Uintah County, Utah;
- Lincoln County, Wyoming;
- Sweetwater County, Wyoming; and
- Coalition of Local Governments.

The roles and responsibilities of these cooperating agencies, and the extent of interactions between them and the BLM, are discussed in Chapter 7.

## **ES.5 BLM'S OIL SHALE AND TAR SANDS LEASING PROGRAM**

Under all programmatic oil shale and tar sands alternatives analyzed in this PEIS, land use plans would continue to (under the No Action Alternative) or be amended to (1) identify the most geologically prospective oil shale or tar sands resources within each planning unit, (2) designate lands within the most geologically prospective areas as available or not available for leasing, and (3) identify any technology restrictions. In addition, the following decisions from the 2008 ROD will be carried forward through this planning process: the requirement for future consultation activities, as well as compliance with all pertinent laws, regulations, and policies, including NEPA, NHPA, and ESA analyses; and the specific decision that the BLM will consider and give priority to the use of land exchanges to facilitate commercial oil shale development pursuant to Section 369(n) of the Energy Policy Act of 2005.

In summary, the PEIS is analyzing an allocation decision, the amendment of 10 existing land use plans to designate certain public lands as open, and certain other lands as closed for application for future oil shale and tar sands leasing.

The BLM anticipates that oil shale development would proceed in a three-step decisionmaking process similar to that used for federal onshore oil and gas: (1) land use planning (i.e., amending RMPs), (2) leasing, and (3) project development. In the present experimental stage of the oil shale and tar sands industries, however, the BLM believes that the stages of NEPA compliance will be different from those used in oil and gas.

If and when applications to lease are received and accepted, the BLM will conduct additional required analyses, including consideration of direct, indirect, and cumulative effects, reasonable alternatives, and possible mitigation measures, as well as assessment of the level of development that may be anticipated. On the basis of that analysis of future lease application(s), the BLM will establish general lease stipulations and best management practices (BMPs) and amend those plans, if necessary. After a lease is authorized, actual development will require additional analysis to address the site-specific conditions of the proposed development and to develop mitigating measures.

## **ES.6 ALTERNATIVES**

### **ES.6.1 Alternative 1, No Action Alternative, No Change to 2008 Decision, Oil Shale**

Under Alternative 1, the No Action Alternative, no existing land use plans would be amended. In 2008, the BLM designated a total of 2,017,714 acres<sup>2</sup> as available for application for commercial oil shale leasing and 430,686 acres available for commercial tar sands leasing (see Figures 2.3.2-1, 2.3.2-2, and 2.3.2-3 for Colorado, Utah, and Wyoming, respectively, in Chapter 2 of this document). The lands available for lease under the 2008 land use plan amendment decisions would remain available for future leasing consideration under the No Action Alternative. These public lands comprise the most geologically prospective oil shale and tar sands areas administered by the BLM, including split estate lands where the federal government owns the mineral rights, but excluding lands that are exempted by statute, regulation, or Executive Order.

### **ES.6.2 Alternative 1, No Action Alternative, No Change to 2008 Decision, Tar Sands**

Under this alternative, no existing land use plans would be amended. In 2008, the BLM designated a total of 430,686 acres as available for applications for commercial tar sands leasing. The lands available for lease under the 2008 land use plan amendment decisions would remain available for future leasing consideration under Alternative 1, no action.

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<sup>2</sup> This amount includes the total potential research, development, and demonstration (RD&D) lease acreage of 30,720 acres.

**ES.6.3 Alternative 2, Oil Shale Conservation Focus Alternative (2a), and with RD&D First Requirement (2b), Oil Shale**

Under this alternative, eight land use plans in Colorado, Utah, and Wyoming would be amended to designate 676,967 acres as available for future commercial oil shale leasing. This alternative would exclude from commercial oil shale leasing the following categories or groups of categories of public lands and/or their resource values that may warrant protection from potential oil shale leasing and development:

1. All areas that the BLM has identified or may identify as a result of inventories conducted during this planning process, as lands having wilderness characteristics (LWC);
2. The whole of the Adobe Town “Very Rare or Uncommon” area, as designated by the Wyoming Environment Quality Council on April 10, 2008 (180,910 acres total; 167,517 acres of public land, of which 10,920 acres are already a BLM Wilderness Study Area [WSA]);
3. Core or priority sage-grouse habitat, as defined by such guidance as the BLM or the DOI may issue (except in Wyoming, where such habitat protections will be consistent with Wyoming’s Greater Sage-Grouse Core Area Protection Strategy);
4. All Areas of Critical Environmental Concern (ACECs) located within the areas analyzed in the 2008 OSTS PEIS (76,666 acres in existing ACECs in the 2008 OSTS PEIS plus additional ACEC acreages as a result of Utah and Wyoming planning efforts recently completed);<sup>3,4</sup> and
5. All areas identified as excluded from commercial oil shale and tar sands leasing in Alternative C of the September 2008 OSTS PEIS (Alternative C made 830,296 acres available for potential commercial oil shale leasing and 229,038 acres available for potential commercial tar sands leasing).

*RD&D First Requirement (2b)*. Under this alternative, the lands open for future leasing consideration would be the same as those in Alternative 2(a), but only for RD&D leases. The BLM would issue a commercial lease only when a lessee satisfies the conditions of its RD&D lease and the regulations at 43 CFR Subpart 3926 for conversion to a commercial lease. The preference right acreage, if any, which would be included in the converted lease, would be specified in the RD&D lease.

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<sup>3</sup> This would only include those ACECs that were formally designated in those plans. ACECs that were proposed, but not formally designated in the applicable plans undergoing revision/amendment at that time, would not be considered for closure.

<sup>4</sup> With respect to any new potential ACECs, the Rock Springs Field Office has not yet completed its ACEC report. Any decisions regarding designation and management of ACECs will be made by the Rock Springs Field Office through its land use planning process.

The environmental impacts of Alternative 2(b) would be analytically indistinguishable from those of Alternative 2(a). Only the method of obtaining a lease would be different. Accordingly, the analysis in this PEIS of Alternative 2 applies fully and equally to both alternatives. To the extent there may be differences in environmental consequences between Alternative 2(a) and 2(b), these would be related to the timing of the commencement of impacts, as well as, possibly, length of disturbance. However, these issues are best addressed in the lease and/or project-specific analysis.

#### **ES.6.4 Alternative 2, Conservation Focus Alternative, Tar Sands**

Under this alternative, four land use plans in Utah would be amended to designate 129,567 acres as available for future commercial tar sands leasing. This alternative would exclude from commercial tar sands leasing the same categories or groups of categories of public lands and/or their resource values as listed above under Alternative 2, Oil Shale, as apply in the tar sands areas in Utah.

#### **ES.6.5 Alternative 3, Oil Shale Research Lands Focus (RD&D with PRLA only), Oil Shale**

Under Alternative 3, eight land use plans would be amended such that public lands for commercial leasing would be available only where there were existing RD&D leases at the time the ROD for the 2012 Final OSTs PEIS is signed. The six current RD&D leases contain terms and conditions that could allow commercial development of the original leases and the associated preference right lease area (PRLA) totaling 32,968 acres. A second round of solicitations of interest in RD&D leases was issued by the BLM on November 3, 2009 (74 FR 56867). Three nomination packages were submitted and selected for further consideration. The projects that were selected include two projects in the Piceance Basin, Colorado (one from Exxon-Mobil Exploration Company and one from Natural Soda Holdings, Inc.) and one project in the Uintah Basin, Utah, submitted by Aurasource. Aurasource, the company in Utah, has not indicated a willingness to move forward in the lease approval process. **While the two Colorado leases have not yet been approved or issued, they are presented in this Final PEIS as approved, which shows what the allocation would look like, should these RD&D leases be issued.** Maximum acreage of these three leases, if approved, would be 1,920 acres, bringing the total acreage to 34,888 acres as available for potential oil shale leasing under this alternative.

#### **ES.6.6 Alternative 3, Pending Commercial Lease, Tar Sands**

Because there is no specific "RD&D" program for tar sands, this alternative would also analyze foregoing the leasing of tar sands for the commercial development of fluid mineral resources, entirely, except for one tar sands lease currently under consideration. The Asphalt Ridge tar sands lease application is located approximately 11 mi south of Vernal, Utah, and the expression of commercial leasing interest that forms its basis was submitted on November 16, 2009. This prospective lease is for a commercial tar sands project and covers approximately 2,100 acres.

#### **ES.6.7 Alternative 4, 2008 Moderate Development Alternative (4a), and with RD&D First Requirement (4b), Oil Shale**

Under Alternative 4, the BLM would amend eight land use plans in Colorado, Utah, and Wyoming to designate between 1,384,237 and 1,968,079 acres as available for future

consideration for leasing for commercial oil shale leasing.<sup>5</sup> This alternative would exclude from commercial oil shale or tar sands leasing:

1. The whole of the Adobe Town “Very Rare or Uncommon” area, as designated by the Wyoming Environment Quality Council on April 10, 2008 (180,910 acres total; 167,517 acres of public land, of which 10,920 acres are already a BLM WSA).
2. All ACECs located within the areas analyzed in the 2008 OSTS PEIS (76,666 acres in existing ACECs in 2008 OSTS PEIS plus additional ACEC acreages as a result of Colorado, Utah, and Wyoming planning efforts recently completed).<sup>6</sup>

*RD&D First Requirement (4b)*. Under this alternative, the lands open for future leasing consideration would be the same as those in Alternative 4(a) but only for RD&D leases. The BLM would issue a commercial lease only when a lessee satisfies the conditions of its RD&D lease and the regulations at 43 CFR Subpart 3926 for conversion to a commercial lease. The preference right acreage, if any, which would be included in the converted lease, would be specified in the RD&D lease.

The environmental impacts of Alternative 4(b) would be analytically indistinguishable from those of Alternative 4(a). Only the method of obtaining a lease would be different. Accordingly, the analysis in this PEIS of Alternative 4 applies fully and equally to both alternatives. To the extent there may be differences in environmental consequences between Alternative 4(a) and 4(b), these would be related to the timing of commencement of impacts, as well as, possibly, length of disturbance. However, these issues are best addressed in the lease and/or project-specific analysis.

### **ES.6.8 Alternative 4, Tar Sands Moderate Development Alternative, Tar Sands**

Under Alternative 4, the BLM would amend four land use plans in Utah to designate between 283,331 and 435,369 acres as available for application for commercial tar sands leasing.<sup>5</sup> This alternative would exclude from commercial oil shale or tar sands leasing the same two categories of lands listed above for oil shale Alternative 4. However, no prospective tar sands areas fall with the excluded Adobe Town “Very Rare or Uncommon” area in Wyoming.

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<sup>5</sup> This alternative satisfies the settlement agreement to exclude some, but not all, lands from the application of oil shale and tar sands leasing, in comparison to Alternative 2. The acreage range shown corresponds to protection of up to 75% of core and priority sage-grouse habitat and identified LWC.

<sup>6</sup> This would only include those ACECs that were formally designated in those plans. ACECs that were proposed but not formally designated in the applicable plans undergoing revision/amendment at that time would not be considered for closure.

## ES.7 PROPOSED PLAN

The 2012 Proposed RMP Amendments/Final PEIS presents four alternatives for allocation of oil shale (two of these include sub-alternatives) and four analogous alternatives for allocation of tar sands. Under Alternative 2(b), identified as the Preferred Alternative in the Draft RMP Amendments/Draft PEIS and carried forward as the Proposed Plan here, the lands open for future consideration for oil shale leasing would be the same as those in Alternative 2(a), but only for RD&D leases. Alternative 2(a), revised as described below, analyzes removing from possible oil shale and tar sands leasing the following lands:

1. All areas that the BLM has identified or may identify as a result of inventories conducted during this planning process, as containing wilderness characteristics (acreage figures for LWC have been corrected from the erroneous figures included in the Draft RMP Amendments/Draft PEIS; no supplementation is required, as these lands were analyzed as open under Alternative 1);
2. The whole of the Adobe Town “Very Rare or Uncommon” area, as designated by the Wyoming Environment Quality Council on April 10, 2008;
3. Core or priority sage-grouse habitat, as defined by such guidance as the BLM or the DOI may issue. Under BLM’s Preferred Alternative in the Draft RMP Amendments/Draft PEIS, oil shale leasing and development would be excluded from greater sage-grouse core and priority habitat. On the basis of comments received on the Draft RMP Amendments/Draft PEIS, the BLM has concluded that such exclusion is not consistent with Wyoming’s Greater Sage-Grouse Core Area Protection Strategy under Wyoming’s Executive Order 2011-5, as has been recognized by the USFWS as an adequate regulatory mechanism for the conservation of greater sage-grouse, and has been adopted by the BLM Wyoming State Office. Thus, for the Proposed Plan, the BLM has modified the Alternative 2(b) approach to the greater sage-grouse core and priority habitat to be coordinated with the policy direction adopted by the BLM Wyoming State Office in BLM Instruction Memorandum WY-2012-019, *Greater Sage-Grouse Habitat Management Policy on Wyoming Bureau of Land Management Administered Lands Including the Federal Mineral Estate*, signed and dated February 10, 2012, which reflects coordination between the BLM and the State of Wyoming. Such modification would not require a supplement to the Draft PEIS, as these areas were analyzed as open for oil shale leasing and development under Alternative 1, the No Action alternative. While the lands would be open for leasing, that future leasing and development would be subject to applicable BLM land use plan decisions and guidance regarding management of sage-grouse habitat;
4. All ACECs located within the areas analyzed in the September 2008 OSTs PEIS; and

5. All areas identified as excluded from commercial oil shale and tar sands leasing in Alternative C of the September 2008 OSTs PEIS (the text has been clarified from that in the Draft RMP Amendments/Draft PEIS to reflect that the 2008 Alternative C only contemplated excluding then-existing ACECs from oil shale/tar sands development).

In addition, the decisionmaking regarding the pending Asphalt Ridge tar sands leasing application has not yet been completed. In order to avoid pre-determining the outcome of that decisionmaking process, the lands encompassed by the pending lease application are included in the Proposed Plan Amendments as open and have been added to the acreage analyzed as open in Alternative 2. These lands were analyzed as open for leasing and development in Alternative 3 of the Draft PEIS.

Further, the split estate lands (federal minerals, tribal surface) within the Hill Creek Extension of the Uintah and Ouray Reservation will remain open for potential oil shale and tar sands leasing and development. The ROD for the 2008 OSTs PEIS opened these lands for potential oil shale and tar sands leasing and development in accordance with the expressed desire of the Ute Indian Tribe. These lands were identified as closed under Alternative 2(b) in the Draft RMP Amendments/Draft PEIS. Closing these lands to potential leasing and development would be very different from how these lands have been managed, and the BLM does not have any indication from the Tribe that they would like to see this changed.

Under the Proposed Plan Amendments, about 677,000 acres would be open for application for commercial oil shale leasing: about 26,000 acres in Colorado, 357,000 acres in Utah, and 293,000 acres in Wyoming. About 130,000 acres would be open for commercial tar sands leasing in Utah.

## **ES.8 ANALYSIS OF THE IMPACTS OF THE PROPOSED PLAN AMENDMENT FOR OIL SHALE AND TAR SANDS**

As was the case with the 2008 OSTs PEIS, the scope of the decisionmaking to be supported by the development of this PEIS is limited to an allocation decision. The analysis of potential impacts associated with oil shale and tar sands development in Chapters 4, 5, and 6 is programmatic in character and designed to disclose the potential impacts from future leasing and development, in order to provide the decision maker the available, essential information for making the allocation decision.

**ES.9 REFERENCES**

*Note to Reader:* This list of references identifies Web pages and associated URLs where reference data were obtained. It is likely that at the time of publication of this PEIS, some of these Web pages may no longer be available or their URL addresses may have changed.

BLM (Bureau of Land Management), 2005, *Land Use Planning Handbook*, BLM Handbook H-1601-1, Washington, D.C., March.

BLM, 2008a, *Proposed Oil Shale and Tar Sands Resource Management Plan Amendments to Address Land Use Allocation in Colorado, Utah, and Wyoming and Final Programmatic Environmental Impact Statement*, FES 08-32, Sept.

BLM, 2008b, *Approved Resource Management Plan Amendments/Record of Decision (ROD) for Oil Shale and Tar Sands Resources To Address Land Use Allocations in Colorado, Utah, and Wyoming and Final Programmatic Environmental Impact Statement*, Nov., 17.

BLM, 2008c, *National Environmental Policy Act Handbook*, BLM Handbook H-1790-1, Washington, D.C., Jan.

BLM, 2011, "Notice of Intent To Prepare a Programmatic Environmental Impact Statement (EIS) and Possible Land Use Plan Amendments for Allocation of Oil Shale and Tar Sands Resources on Lands Administered by the Bureau of Land Management in Colorado, Utah, and Wyoming," *Federal Register* 76:21003–21005.

BLM 2012, *Draft Programmatic Environmental Impact Statement and Possible Land Use Plan Amendments for Allocation of Oil Shale and Tar Sands Resources on Lands Administered by the Bureau of Land Management in Colorado, Utah, and Wyoming*, Vols. 1–4, DES 12-01, Jan.

USGS (U.S. Geological Survey), 1980a, *Argyle Canyon–Willow Creek, Utah Tar Sand Leasing Minutes No. 9*, Minutes of the Mineral Land Evaluation Committee, Nov. 10.

USGS, 1980b, *Asphalt Ridge–Whiterocks and Vicinity, Utah Tar Sand Leasing Minutes No. 3*, Minutes of the Mineral Land Evaluation Committee, Sept. 23.

USGS, 1980c, *Circle Cliffs East and West Flanks, Utah Tar Sand Leasing Minutes No. 5*, Minutes of the Mineral Land Evaluation Committee, Sept. 23.

USGS, 1980d, *Hill Creek, Utah Tar Sand Leasing Minutes No. 6*, Minutes of the Mineral Land Evaluation Committee, Nov. 10.

USGS, 1980e, *Pariette, Utah Tar Sand Leasing Minutes*, Minutes of the Mineral Land Evaluation Committee, Nov. 10.

USGS, 1980f, *P.R. Spring, Utah Tar Sand Leasing Minutes*, Minutes of the Mineral Land Evaluation Committee, Sept. 23.

USGS, 1980g, *Raven Ridge–Rim Rock and Vicinity, Utah Tar Sand Leasing Minutes No. 8*, Minutes of the Mineral Land Evaluation Committee, Nov. 10

USGS, 1980h, *San Rafael Swell, Utah Tar Sand Leasing Minutes No. 7*, Minutes of the Mineral Land Evaluation Committee, Nov. 10.

USGS, 1980i, *Sunnyside and Vicinity, Utah Tar Sand Leasing Minutes No. 4*, Minutes of the Mineral Land Evaluation Committee, Sept. 23.

USGS, 1980j, *Tar Sand Triangle, Utah Tar Sand Leasing Minutes No. 2*, Minutes of the Mineral Land Evaluation Committee, Sept. 23.

USGS, 1980k, *White Canyon, Utah Tar Sand Leasing Minutes No. 11*, Minutes of the Mineral Land Evaluation Committee, Nov. 10.