

Chapter 1: Purpose and Need

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1.1 Introduction

In many parts of the United States, National Forest System (NFS) lands overlie geological formations that may contain oil and/or natural gas. The U.S. Forest Service's (USFS's) national policy on minerals states (USFS 2007):

Exploration, development, and production of mineral and energy resources and reclamation of activities are part of the Forest Service ecosystem management responsibility. The Forest Service will administer its minerals program to provide commodities for current and future generations commensurate with the need to sustain the long-term health and biological diversity of ecosystems.

The Federal Government's policy for minerals resource management is expressed in the Mining and Minerals Policy Act of 1970: "[to] foster and encourage private enterprise in the development of economically sound and stable industries, and in the orderly and economic development of domestic resources to help assure satisfaction of industrial, security, and environmental needs." Within this context, the National Forests and Grasslands have an essential role in contributing to an adequate and stable supply of mineral and energy resources while continuing to sustain the land's productivity for other uses and its capability to support biodiversity goals. In accordance with this role, the USFS offers leases for many of the NFS lands for the purpose of drilling exploratory wells and extracting oil and/or gas (USFS 2007).

The USFS is conducting an environmental analysis of Uinta National Forest (UNF) lands with the intent of identifying NFS lands with Federal mineral rights that could be made available for oil and gas leasing within UNF boundaries, in accordance with the Mineral Leasing Acts. Under the National Environmental Policy Act (NEPA) of 1969, the USFS, along with its cooperating agencies, is responsible for identifying and assessing potentially significant environmental impacts and addressing issues associated with oil and gas leasing.

This Environmental Impact Statement (EIS) identifies UNF lands that could be made available for oil/gas leasing, describes and explains various leasing alternatives, describes the existing affected environment, and discusses the possible impacts of each alternative on the human environment. Environmental issues and concerns expressed by the public and various government agencies during public scoping have been incorporated into the analysis.

This EIS is not a decision document. It is a document disclosing the environmental consequences of implementing various oil/gas leasing alternatives on lands that could be offered for lease in the future. The decision will be documented in a Record of Decision (ROD) signed by the responsible official. Although issuing a lease also grants rights that could result in surface-disturbing activities, the ROD associated with this EIS will not offer or approve any leases, or authorize any surface-disturbing activities. The ROD will only make a decision about which lands could be available for leasing and what conditions and stipulations would apply to any oil and gas leases offered in the future. Further project-specific analysis is required prior to final approval of surface-disturbing activities per 36 CFR (Code of Federal Regulations) 228.107. In addition, existing oil and gas leases will not be affected. They will still be governed by the agreement under which the lease was granted.

1.2 Purpose and Need for Action

The USFS has determined that it is necessary to complete a forest-wide leasing analysis, to facilitate a decision as to which lands could be available for leasing and what conditions (stipulations) would be applied if these lands were offered for lease.

The analysis is needed to be responsive to requests for oil and gas leasing on the Forest. In 1997, an oil and gas leasing analysis was conducted for those portions of the UNF that lie within Western Uintah Basin and is called the Western Uintah Oil and Gas Leasing Final Environmental Impact Statement (WUB FEIS). The ROD for the WUB FEIS identified approximately 197,000 acres of land in the UNF that would be available for oil and gas leasing. Since the 1997 WUB FEIS, there has been interest in other areas of the Forest and a number of parties have submitted requests to the Bureau of Land Management (BLM) for oil and gas leasing in the UNF.

Currently only a portion of the UNF, lands originally identified in the WUB FEIS, is available for leasing, and the majority of that area (approximately 193,000 acres) has already been leased or has pending leases (see Figure 1.1). In addition, the analysis is needed in order to comply with the Federal Onshore Oil and Gas Reform Act of 1987 which requires the USFS to analyze lands under its jurisdiction that are legally available for leasing in accordance with NEPA. This EIS covers all NFS lands, and existing leases will continue to be managed according to the WUB stipulations under which they were leased. Once those leases expire, terminate, or are suspended, the areas would be up for lease again but under this new decision.

1.3 Lands Involved

1.3.1 Analysis Area

According to the 2003 LRMP FEIS (USFS 2003) for the UNF, lands within the forest boundary encompass approximately 983,670 acres of land. However, the LRMP FEIS also indicates that only approximately 897,400 of these acres are NFS lands (see Figure 1.2). The EIS analysis area includes all NFS Lands within the UNF with a Federally-owned, leasable mineral estate. This excludes the following acreages within UNF boundaries:

- designated wilderness areas (approximately 58,400 acres);
- Strawberry Project lands (approximately 60,700 acres); and
- other lands where the subsurface oil and gas mineral estate is not under Forest Service jurisdiction (approximately 38,800 acres).

The total leasable acreage under analysis is approximately 739,500 acres. Lands not available for leasing are described in detail below.

1.3.2 Lands Not Available for Leasing

This section describes USFS System lands that are unavailable for leasing and will not be analyzed in this EIS. The lands described below are not available for leasing under any alternative.

Designated Wilderness Areas

Wilderness is defined by Congress as “an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain”. In general, wilderness areas are Federally owned, undeveloped lands that retain their primeval character and influence, without permanent improvements of human habitation. Further, wilderness areas have been unaffected by man’s imprint, have outstanding opportunities for solitude or primitive and unconfined recreation, and are at least five thousand acres or of a sufficient size as to make practicable preservation and use in an unimpaired condition. Finally, wilderness areas may contain ecological, geological, or other features of scientific, educational, scenic, or historical value (Wilderness.net 2006).

The National Wilderness System was created by the Wilderness Act of 1964, which sought to provide the American people with the benefits of wilderness resources by establishing a national preservation system composed of Federally owned lands designated by Congress as “wilderness areas.” These areas are managed by the Federal Agency having jurisdiction over the land prior to its establishment as wilderness. Wilderness areas are administered for the use and enjoyment of the American public while leaving the wilderness unimpaired for future use, preserving the wilderness character, and for gathering and dissemination of information regarding their enjoyment and use (Wilderness.net 2006).

The UNF manages three wilderness areas: Mount Timpanogos, Mount Nebo, and Lone Peak Wilderness, the last of which is jointly managed with the Wasatch-Cache National Forest. The

total wilderness acreage in the UNF is 58,357 acres. Table 1.1 summarizes total acreage by wilderness area in the UNF.

Table 1.1. Summary of wilderness acreage by wilderness area in the UNF.

Wilderness Area	Year Established	Acres
Lone Peak	1978	*20,829
Mount Nebo	1984	27,010
Mount Timpanogos	1984	10,518
Total		58,357

Source: Uinta Forest Plan FEIS.

* Lone Peak total acreage equals 31,165 of which 20,829 are in UNF and 10,336 are in Wasatch-Cache National Forest.

The Endangered American Wilderness Act of 1978 (PL 95-237) designated 17 wilderness areas including Lone Peak Wilderness area. The Utah Wilderness Act of 1984 (PL 98-428) designated Mount Timpanogos and Mount Nebo Wilderness areas (Wilderness.net 2006).

Subject to valid existing rights, minerals in lands within wilderness are withdrawn from appropriations under mining laws and disposition of mineral leasing laws. Validated mining claims and mineral leases predating January 1, 1984 may be accessed and operated provided there will be no unnecessary or undue degradation of wilderness. Vegetation management activities such as timber harvest and treatments are prohibited in wilderness areas.

Since these lands are withdrawn from mineral leasing by law, they will not be analyzed in this EIS.

Strawberry Project Lands

Background Information

Strawberry Project Lands are 56,775 acres of land located in the Strawberry Reservoir Management Area (MA). A small discrepancy exists between this acreage figure and the acreage figure generated in the GIS data (60,700). Because of this known discrepancy, the larger of the acreage figures is included in the lands not available for leasing. Title of the surface and subsurface of the Strawberry Project Land is vested to the US Department of Interior, Bureau of Reclamation (BOR) (for the Strawberry Valley Project, a water development project). The Strawberry Valley Project was authorized by the Secretary of the Interior on December 15, 1905, under the provisions of the Reclamation Act of 1902. BOR began construction of the project in 1906 and completed the project in 1922. Project features include Strawberry Dam and Reservoir, Indian Creek Dike, Strawberry Tunnel, two diversion dams, three power plants, a main canal system, and a portion of the lateral canal system. The remainder of the distribution system was privately constructed. Two of the power plants were constructed by the Strawberry Water Users Association (SWUA) (US Reclamation 2006, PL 100-563).

Currently, operation, maintenance, and control of project facilities reside with the SWUA (US Reclamation 2006). Up until October 1988, SWUA controlled and managed the surface use of Strawberry Project Lands. Concerns over negative impacts to watershed resources from overgrazing and recreational use led to the decision to transfer management authority of surface use over to the USFS. Jurisdiction over the surface of Strawberry Project Lands was transferred

by Public Law 100-563, dated October 31, 1988, to the USFS for inclusion in the boundaries of the UNF (USFS 1997a, PL 100-563).

While the USFS has jurisdiction over the administration of surface uses of Strawberry Project Lands, SWUA retains its contractual rights to issue oil, gas, coal, and mineral leases for the subsurface estate (PL 100-563). Authority to execute and administer mineral leasing proposals has been delegated to the Regional Director of the BOR’s Upper Colorado Regional Office by the Secretary of the Interior (Gold 2005).

As outlined above, by law the UNF does not have the authority to issue oil and gas leases on Strawberry Project Lands and cannot make a decision about their leasing availability. For this reason, these lands have been excluded from analysis in this EIS. However, the UNF would be responsible for issuing any surface use authorizations for exploration, development, and production of minerals on Strawberry Project Lands, subject to compliance with Reclamation leasing decisions, related NEPA documentation, and other applicable laws.

Split Estate Lands

Split estates refer to situations where the surface rights and the subsurface rights for a piece of land are owned by different parties. In these situations, mineral rights are considered to be the dominant estate and take precedence over other rights, including those associated with owning the surface. However, the mineral owner must show due regard for the interests of the surface estate owner and occupy only as much of the surface as is reasonably necessary (BLM 2007).

There are approximately 45,800 acres of split estate lands in the UNF. Table 1.2 is a summary of split estate acres in the UNF.

Table 1.2. Summary of ownership of split estate lands in the UNF.

Surface Ownership/ Subsurface Mineral Estate	Mineral Rights with Oil and/or Gas (acres)	Other Mineral Rights, excluding Oil and/or Gas (acres)	Total Split Estates* (acres)
Federal Ownership/Other Minerals, which includes Private, Tribal, and State	38,800	1,200	40,000
Private/Federal	5,800	0	5,800
Total*	44,600	1,200	45,800

**Numbers may not add up due to rounding.*

It is important to note that lands with private or non-Federal subsurface oil and gas mineral estates are not part of the oil and gas leasable lands base for the UNF. Public Land Survey System sections (a section is approximately 640 acres) with split estates are highlighted in Figure 1.3. Please note that this is only an indication of their approximate location; the entire section may or may not have a split estate, and for many sections only a small area within that section may have a split estate. These lands are randomly located throughout the UNF and vary in size from less than one acre to over 640 acres. None of them are mapped in existing GIS data, and as a result (although excluded from availability for leasing), they will remain part of the analyzed acreages in Chapter 4 (see Section 1.4.1: Land and Resource Management Plan Context, and Section 1.8: Reasonably Foreseeable Development Scenario).

The Federal government does not have the authority to issue oil and gas leases on split estate lands where the subsurface oil and gas mineral estate is not under Federal jurisdiction (approximately 38,800 acres), and cannot make a decision about their leasing availability. However, the USFS can issue an authorization for use of the surface.

1.4 Decisions to be Made

The UNF Forest Supervisor, as the responsible official, will decide which lands with Federal mineral ownership are administratively available for oil and gas leasing, and will determine what conditions (stipulations) would be applied to future oil leases on the UNF. This decision will not result in ground-disturbing activities within NFS lands administered by the UNF, such as exploration, drilling, and/or field development. Any ground disturbing activity that may be proposed subsequent to leasing would require further review and environmental analysis prior to approval, as outlined in current Federal regulations (36 CFR 228.102).

1.4.1 Land and Resource Management Plan Context

Management of each administrative unit of the NFS (one or more National Forest(s) or National Grassland(s)) is governed by a Land and Resource Management Plan (LRMP). The current LRMP was implemented in 2003. Throughout the remainder of this document the 2003 LRMP will simply be referred to as the LRMP.

The LRMP includes decisions, as part of Management Prescriptions (MPs), to provide for oil and gas leasing on 197,000 acres of UNF lands. Oil and gas leasing on these 197,000 acres of land was analyzed through the NEPA process for the WUB FEIS. The ROD for the WUB FEIS was issued in 1997. Lease stipulations outlined in the LRMP were determined using that analysis and will be used as a basis for the alternatives being analyzed in this EIS. Decisions the Forest Supervisor will make, including availability, may result in an amendment to the LRMP (refer to USFS Manuals and Handbooks for Plan Amendment Process).

Management Area (MA): An area with similar management objectives based on similar characteristics within the area which help define management direction.

Management Prescription (MP): direction applied to a geographical area that identifies a resource emphasis and associated limits on use and development. MPs have been adapted from regional prescriptions to fit specific conditions on the UNF.

In the LRMP, MPs have been applied to different MAs (see inset). These MAs will be the unit for analysis in this EIS. Please see Chapter 5 of the LRMP for a full description of the MAs in the UNF.

To facilitate analysis, MAs have also been grouped according to geologic and geographic characteristics. These analysis groups are identified as Reasonable Foreseeable Oil and Gas Development Groups (RFOGDs). RFOGDs are described in greater detail under Section 1.8: Reasonably Foreseeable Development Scenario.

1.5 Cooperating Agencies

According to Council on Environmental Quality (CEQ) regulations (1508.5), a cooperating agency is any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. A State or local agency of similar qualifications may, by agreement with the lead agency, become a cooperating agency (CEQ 1508.5). For this EIS the following agencies are cooperating agencies:

- Bureau of Land Management (BLM), Salt Lake Field Office
- State of Utah, Governor's Office of Public Land Policy
- Bureau of Reclamation (BOR), Upper Colorado Region, Provo Area Office
- Wasatch County, Utah

1.6 Oil and Gas Leasing General Background

The leasing of public domain minerals, including oil and gas, is a complex process often involving multiple agencies and governed by numerous laws and regulations. The following sections summarize the relevant legislation and policy and the Federal leasing process.

1.6.1 Relevant Laws, Regulations, and Documents

The Mineral Leasing Act of 1920, as amended (MLA) grants all public lands open to oil and gas leasing, unless a specific land order has been issued to close or withdraw an area. Leasable public domain minerals (those which have never passed out of Federal ownership) are leased under authority of the MLA. The BLM was made responsible for leasing under this Act.

The Mineral Leasing Act for Acquired Lands of 1947 states that all deposits of coal, phosphate, oil, oil shale, gas, sodium, potassium, and sulfur that are owned or may be acquired by the U.S. and that are within lands acquired by the U.S. may be leased by the Secretary of the Interior under the same conditions as contained in the leasing provisions of the mineral leasing laws. No mineral deposits shall be leased without the consent of the head of the executive department having jurisdiction over the lands containing the deposit and subject to such conditions as that official may prescribe.

The Mining and Minerals Policy Act of 1970 states that the continuing policy of the Federal government is to foster and encourage private enterprise in the development of economically sound and stable domestic mining and minerals industries and the orderly and economic development of domestic mineral resources.

The Energy Security Act of 1980 directs the Secretary of Agriculture to process applications for leases and permits to explore, drill, and develop resources on NFS lands, notwithstanding the current status of any management plan being prepared.

The Federal Onshore Oil and Gas Leasing Reform Act of 1987 (FOGLRA) (amendment to MLA of 1920) expands the authority of the Secretary of Agriculture in the management of oil and gas resources on NFS lands. Without the approval of the USFS, the BLM cannot issue leases for oil and gas on NFS lands, and the USFS must approve all surface-disturbing activities on NFS lands before operations commence.

FOGLRA changed the analysis process from “responsive”, reacting to an application, to “proactive”, analyzing lands for leasing and then offering them for lease through BLM auction if determined to be suitable. Subsequently, the USFS developed new regulations in March of 1990 (36 CFR Parts 228 and 261) to implement FOGLRA, and to provide guidance for oil and gas leasing and surface use management on NFS lands. FOGLRA also established a statutory requirement for processing the Surface Use Plan of Operation (SUPO) prior to ground-disturbing activities.

The Energy Policy Act of 2005 directs the Secretaries of the Interior and Agriculture to improve administration of Federal oil and gas leasing programs including the improvement of inspection and enforcement of oil and gas activities. It also requires the development and implementation of best management practices. In addition, it requires the Secretaries of the Interior and Agriculture

to enter into a Memorandum of Understanding (MOU) to improve coordination and consultation on oil and gas leasing activities.

The Secretaries of Interior and Agriculture entered into a MOU in April 2006. The purpose of the MOU was to satisfy requirements of the Energy Policy Act of 2005 and to establish joint BLM and USFS policies and procedures for managing oil and gas leasing and subsequent actions.

36 Code of Federal Regulations, Part 228, Subpart E contains a complete description of the USFS's rules and procedures to carry out its statutory responsibilities in the issuance of Federal oil and gas leases and management of subsequent oil and gas operations on NFS lands.

1.6.2 Federal Leasing Process

The BLM acts as the onshore leasing agent for the Federal government. FOGLRA states that the BLM cannot lease National Forest System lands over the objection of the USFS, and authorizes the USFS to regulate all surface-disturbing activities conducted pursuant to a lease. Therefore, the USFS has established an incremental decisionmaking framework for the consideration of oil and gas leasing activities on NFS lands. In general the various steps that are undertaken are as follows:

1. USFS leasing analysis
2. USFS notification to BLM of lands administratively available for leasing
3. USFS review and verification of BLM leasing proposals
4. BLM assessment of USFS conditions of surface occupancy
5. BLM offers lease
6. BLM issues lease
7. USFS review and approval of lessee's SUPO
8. BLM reviews and approves lessee's Application for Permit to Drill (APD)
9. Final reclamation

Based on the USFS leasing analysis (step 1 from above), USFS decides whether or not lands will be available for leasing, and under what conditions (stipulations) the leases will be issued. This EIS will fulfill step 1.

1.6.3 Relationship between NEPA and Oil and Gas Leasing

Subsequent NEPA actions in the leasing process include site-specific analysis at the SUPO and APD steps (Steps 7 and 8 above). Site-specific analysis includes an on-site resources review. The on-site resources review is used to determine the level of NEPA analysis required before an APD can be approved. The public is notified, in accordance with NEPA policies, of any site-specific activities. If appropriate, the public is given an opportunity to provide comments about the proposed site-specific activities.

If applicable, the action could be a Categorical Exclusion. A proposed action may be categorically excluded from further analysis and documentation in an EIS or environmental assessment (EA) only if there are no extraordinary circumstances related to the proposed action and if (FSH 1909.15.30):

- a. The proposed action is within one of the categories in the Department of Agriculture (USDA) NEPA policies and procedures in Title 7, Code of Federal Regulations, part 1b (7 CFR part 1b), or
- b. The proposed action is within a category listed in the most current Forest Service Handbook.

Additional categorical exclusions that apply to oil and gas activities on NFS lands were developed in accordance with the Energy Policy Act of 2005, sec.390.

If the on-site review reveals extraordinary circumstances and/or significant impacts, as per Forest Service Handbook, a more detailed level of NEPA analysis would be required. An example of an extraordinary circumstance is the potential for a wetland, floodplain, or municipal watershed to be impacted by the action. However, the categorical exclusions developed in accordance to the Energy Policy Act of 2005 are not subject to review for extraordinary circumstances.

Regardless of the level of NEPA analysis, the on-site review would be used to determine site-specific best management practices (BMPs), mitigation measures, and any additional leasing stipulations that may be necessary to protect resources of concern. This EIS takes into account mitigation measures or BMPs that would be required at the APD and SUPO stage. BLM/USFS’s *Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development* (commonly referred to as the “Gold Book”, [BLM/USFS 2006]), was used as guide for the type of mitigation measures or BMPs that would be required for exploratory drilling.

1.6.4 Standard Lease Terms and Stipulations

The Standard Lease Terms (SLT), contained on BLM Form 3100-11 (July 2006): Offer to Lease and Lease for Oil and Gas (see Appendix A), provide the lessee the right to use the leased land as needed to explore for, drill for, extract, remove and dispose of oil and gas deposits, including tar sands, located under the leased lands. The lessee must conduct operations in a manner that minimizes adverse impacts to the land, air, water, cultural, biological, visual, and other resources, as well as other land uses or users. Federal environmental protection laws such as the Clean Water Act, Safe Drinking Water Act, Endangered Species Act (ESA), and Historic Preservation Act, will be applied to all lands and are included in the SLT. The SLTs require that if threatened or endangered species; objects of historic, cultural, or scientific value; or substantial unanticipated environmental effects are encountered during operations, all work affecting the resource will stop and the land management agency will be contacted. Operations which would destroy or harm these species or objects are prohibited.

SLTs provide for reasonable measures to minimize adverse impacts to surface resources. SLTs include, but are not limited to, modifications

Stipulation abbreviations:	
CSU	Controlled Surface Use
LN	Lease Notice
NA	Not available for lease
NL	No Lease
NSO	No Surface Occupancy
TL	Timing Limitation
SLT	Standard Lease Terms

to the siting or design of facilities, timing of operations, and specifications of interim and final reclamation measures. Well sites may be moved up to 200 meters and operations delayed for up to 60 days without interfering with the lease rights (43 CFR 3101.1-2). These allowances cannot be used to increase existing stipulated restrictions attached to a lease.

A lease does not convey an unlimited right to explore, or an unlimited right to develop, any oil or gas resources found under the land. Leases are subject to terms and conditions. These restrictive terms and conditions, derived from legal statutes and measures to minimize adverse impacts to other resources, are defined in a lease as stipulations. Stipulations modify the rights the government grants to a lessee. The stipulations are known by potential lessees prior to any lease sale. SLT can be modified by special or supplemental stipulations, which are attached to the lease. Special stipulations are designed to address specific resource concerns or potential impacts, and allow the government to retain sufficient authority to require protection or mitigation beyond that provided by SLT. These stipulations include No Surface Occupancy, Timing Limitation, and Controlled Surface Use.

The Rocky Mountain Regional Coordinating Committee published “Uniform Format for Oil and Gas Stipulations” in March 1989. A uniform format for stipulations was developed for No Surface Occupancy, Timing (or seasonal) Limitations, and Controlled Surface Use. This guidance also includes the use of Lease Notices. There is provision for special administration or unique stipulations, such as those required by prior agreements between agencies or other instances when standardized forms are not appropriate. These formats have been adopted for nationwide use (RMRCC 1989).

No Surface Occupancy: The No Surface Occupancy (NSO) stipulation is intended for use only when other stipulations are determined insufficient to adequately protect the public interest. NSO means that no well sites, central tank batteries, or similar facilities could be constructed on the lands covered by the stipulation. The construction of a road, pipeline, or similar linear facility that typically extends beyond the boundaries of the lease would be evaluated using Forest Plan standards and guidelines, the same as roads related to other resource uses would be.

Timing Limitation: The Timing Limitation (TL) stipulation prohibits oil and gas mineral exploration and development activities for time periods longer than 60 days but less than one year long. This stipulation does not apply to the operation and maintenance of production facilities unless the analysis findings demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

For example, a TL might be used to protect an elk calving area during the elk calving period, or to prevent excessive soil erosion and stream sedimentation resulting from construction activities during periods when soils are saturated. The TL would not allow surface use during a prescribed period of time on all or a portion of the lease. The TL may also specify that the restrictions apply when certain surface conditions exist, such as water-saturated soils or during spring thaws when road beds are too soft to allow traffic without unacceptable damage to the road.

Controlled Surface Use: The Controlled Surface Use (CSU) stipulation is intended for use when oil and gas development is generally allowed on all, or portions, of the lease area year-round; but because of special values or resource concerns, lease activities must be strictly controlled. The CSU stipulation is used to identify constraints on surface use or operations which

may otherwise exceed the mitigation provided by Section 6 of the SLT (see BLM Form 3100-11 in Appendix A), existing regulations, and Onshore Oil and Gas Orders.

The use of CSU stipulations should be limited to areas where restrictions and controls are necessary for specific types of activities within the specific affected environments, rather than all activity on the lease. The stipulation should clearly describe the activity to be controlled or what operational constraints are required, and must identify the applicable area and the reason for the requirement. For example, a CSU stipulation might be used to protect the Visual Quality Objective (VQO) of an area. To do so, the CSU stipulation would require that operations be located and designed to meet the specific VQO, normally within a specified time period (i.e., within one year). If at the APD stage the analysis indicates that the VQO would not be met, the proposal would have to be modified to do so, or it would not be approved.

Lease Notice: An LN is attached to leases to transmit information at the time of lease issuance to assist the lessee in submitting acceptable plans of operation, or to assist in administration of leases. LNs do not involve new restrictions or requirements; they identify specific concern(s) that may impact lease operations on a given lease. Any requirements contained in an LN must be fully supported in a law, regulation, SLT, or Onshore Oil and Gas Orders.

Bonding

Before any surface-disturbing activities related to drilling can begin, the lessee or his/her operator must furnish a bond in the amount of at least \$10,000 to ensure compliance with all the lease terms, including protection of the environment. With the consent of the surety and principal, the operator may use the bond of another party such as the lessee. Each time there is a new operator, that operator must notify the BLM that he/she is the responsible operator, giving the particulars of the bond under which he/she will operate (BLM 2007a).

Lease Terms and Conditions

The lease grants the lessee the right to explore and drill for, extract, remove, and dispose of oil and gas deposits, except helium, that may be found in the leased lands (BLM 2007a).

Subject to special stipulations as noted above, the leases are granted on the condition that the lessee will have to obtain BLM and Forest Service approval before conducting any surface-disturbing activities. The oil and gas lease conveys the right to develop those resources on the leased land. The lessee or his/her operator cannot build a house on the land, cultivate the land, or remove any minerals other than oil and gas from the leased land (BLM 2007a).

Rentals and Royalties

Annual rental rates for both competitive and noncompetitive leases are \$1.50 per acre (or fraction thereof) in the first 5 years and \$2.00 per acre each year thereafter. After the lease is issued, rentals must be received at the Department of the Interior’s Minerals Management Service (MMS) on or before the lease anniversary date to prevent statutorily required automatic termination of the lease. This requires mailing of the annual rental at least 7 to 10 days in advance of the lease anniversary date to ensure timely receipt by the MMS (BLM 2007a).

Royalty on production is 12.5 percent for both competitive and noncompetitive leases (BLM 2007a).

How a Lease Expires or Terminates

Oil and gas leases expire at the end of their primary term—the 10th year—unless diligent drilling operations are in progress on or for the benefit of the lease, the lease contains a well capable of producing oil or gas in paying quantities, or the lease is receiving or is entitled to receive an allocation of production under the terms of an approved communitization agreement or unit agreement (BLM 2007a).

Leases without a producible well automatically terminate if the lessee fails to make full and timely payment of the annual rental. The rental must be received by the proper Federal office on or before the anniversary date of the lease. The automatic termination is specifically prescribed by law, is not the result of BLM action, and cannot be waived (BLM 2007a).

The owner of a lease also may surrender the lease in whole or in part by filing a written relinquishment with the proper BLM State Office. A relinquishment takes effect on the date it is filed. However, the lessee must plug any abandoned well, perform other work as may be required by the BLM or Forest Service to place the leasehold in proper condition for abandonment, and bring his/her account into good standing. If the lessee fails to perform the necessary work, the lessee's bond will be used to do so, and the lessee will be prohibited from leasing any additional Federal lands (BLM 2007a).

A nonproducing lease may be canceled for failure to comply with lease terms (BLM 2007a).

Lease Stipulation Modifications, Waivers, and Exceptions

According to 36 CFR Sec. 228.104, a lease stipulation may be modified (permanently changed), waived (permanently removed) or granted an exception (case-by-case exemption). It is the burden of the lessee to provide enough information for the authorized Forest Service officer to make a decision about requests to modify, waive, or grant exceptions to lease stipulations. The following is an excerpt from 36 CFR Sec.228.104 and describes how modifications, waivers, or exceptions will be reviewed by the USFS.

General. An operator submitting a surface use plan of operations may request the authorized Forest officer to authorize the Bureau of Land Management to modify (permanently change), waive (permanently remove), or grant an exception (case-by-case exemption) to a stipulation included in a lease at the direction of the Forest Service. The person making the request is encouraged to submit any information which might assist the authorized Forest officer in making a decision.

Review. The authorized Forest officer shall review any information submitted in support of the request and any other pertinent information.

- (1) As part of the review, consistent with 30 U.S.C. 226 (f)-(g), the authorized Forest officer shall ensure compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4331 et seq.) and any other applicable laws, and shall ensure preparation of any appropriate environmental documents.
- (2) The authorized Forest officer may authorize the Bureau of Land Management to modify, waive, or grant an exception to a stipulation if:
 - (i) The action would be consistent with applicable Federal laws;
 - (ii) The action would be consistent with the current forest land and resource management plan;
 - (iii) The management objectives which led the Forest Service to require the inclusion of the stipulation in the lease can be met without restricting operations in the manner provided for by the stipulation given the change in the present condition of the surface resources involved, or given the nature, location, timing, or design of the proposed operations; and
 - (iv) The action is acceptable to the authorized Forest officer based upon a review of the environmental consequences.

Other agency stipulations. If a stipulation was included in a lease by the Forest Service at the request of another agency, the authorized Forest officer shall consult with that agency prior to authorizing modification, waiver, or exception.

Notice of decision.

- (1) When the review of a stipulation modification, waiver, or exception request has been completed and the authorized Forest officer has reached a decision, the authorized Forest officer shall promptly notify the operator and the appropriate Bureau of Land Management office, in writing, of the decision to grant, or grant with additional conditions, or deny the request.
- (2) Any decision to modify, waive, or grant an exception to a lease stipulation shall be subject to administrative appeal only in conjunction with an appeal of a decision on a surface use plan of operation or supplemental surface use plan of operation.

1.7 Public Involvement and Key Issues Identified

1.7.1 Scoping

A public scoping process consistent with NEPA and USFS policies was initiated February 2, 2006 with the publication of the Notice of Intent (NOI) in the Federal Register. The formal scoping period was initially scheduled to end March 20, 2006, but was extended until April 3, 2006. During the scoping period the UNF employed several methods to notify the public about opportunities to become involved and provide comments. In compliance with NEPA, a legal notice informing the public about the NOI was published in the Provo Daily Herald on February 1, 2006. In addition, the UNF sent two mailings, held two open houses, provided briefing packets to elected officials, and posted information on the UNF website. A press release was also sent to local media outlets concerning the open houses. Open houses were held on March 3 and March 16, 2006 in Provo, Utah. During the scoping period 51 individuals commented on the proposed project.

Additional details concerning public involvement and scoping results can be found in the Scoping Report, which is contained in the project record.

1.7.2 Key Issues

Fifteen key issues were first developed by the UNF Interdisciplinary (ID) Team at the onset of the project. These issues were reviewed and refined prior to scoping by the UNF ID Team. In response to comments received during scoping, and during further discussion and review by the ID team, the 15 resource issues have been compiled and consolidated into 13 issues for analysis under all the alternatives.

No issues that were presented during scoping have been eliminated from analysis. However, in some cases two or more issues have been compiled into one, or rolled into another resource analysis as a measurement indicator.

Key issues are not ranked by order of importance; rather, they are listed to reduce redundancy and to facilitate cross referencing in Chapters 3 and 4. The existing conditions of the resource issues listed below are described in Chapter 3. Measurement indicators used to evaluate the impacts of oil and gas leasing on these issues are listed in Chapter 4 under each resource. The 13 key issues and the rationale for their inclusion as a key issue are as follows:

1. Socioeconomic Resources
2. Soils and Geologic Hazards
3. Transportation
4. Inventoried Roadless Areas (IRAs)
5. Watershed Resources, Including Wetlands, Floodplains, and Riparian Areas
6. Water Resources, Including Culinary and Municipal Water Systems, Surface Water, and Groundwater

7. Vegetative Resources, Including Upland Vegetation, Noxious Weeds, and Invasive Species
8. Terrestrial and Aquatic Flora and Fauna, Including Threatened and Endangered Species, Sensitive Species, and Management Indicator Species
9. Air Resources
10. Visual Resources
11. Cultural and Traditional Heritage Resources
12. Developed and Dispersed Recreation
13. Other Mineral Resource Extraction Activities

Issue #1: Socioeconomic Resources

Due to the current energy issues and policies within the nation, there is a need to review the impacts that oil and gas exploration and development would have on local, State, and national economies. Other economic concerns include potential tax revenues, employment opportunities, income generated through oil and gas exploration and development, and displacement or reduction of other existing revenue sources on the UNF. Oil and gas leasing may affect other forest visitors in their use and enjoyment of the forest. Effects on other existing uses may impact the income and jobs generated by those activities.

Leasing stipulations could potentially limit oil and gas exploration and development activities by placing restrictions on the location and timing of these activities. Stipulations developed as a result of the EIS or other lease-related activities could result in restrictive Federal regulation or decisions, adversely affecting the potential for existing or future oil and gas development. Leasing stipulations could affect the number of bids received on lands made available for leasing.

Issue #2: Soils and Geologic Hazards

Oil and gas exploration and development could destabilize areas on the UNF leading to mass movement events. These activities could also result in soil compaction, puddling, and/or accelerated erosion, and could adversely impact long-term soil productivity.

Issue #3: Transportation

Oil and gas exploration and development could impact the existing transportation system in terms of expanding the road system, increasing maintenance costs, impacting public access, and creating safety concerns.

Issue #4: Inventoried Roadless Areas

The UNF contains about 554,850 acres of IRAs. The LRMP FEIS contains maps and descriptions of these areas. In addition, environmental groups have identified another 42,540 acres of the UNF they consider unroaded or “roadless”. Oil and gas activities could impact the character of IRAs and unroaded areas.

Issue #5: Watershed Resources, Including Wetlands, Floodplains, and Riparian Areas

Effects to wetlands, floodplains, and riparian areas could result from direct impacts of surface-disturbing activities in these areas and indirect impacts from increased sediment loads from new roads and well pad construction. Other impacts may include changes in timing and amount of surface runoff and stream flow. Oil and gas operations, including necessary road access, could adversely impact the function and values of riparian areas including Riparian Habitat Conservation Areas (RHCA), particularly in narrow canyons or V-shaped valley bottoms where activities may be confined by these physiographic features.

Issue #6: Water Resources, Including Culinary and Municipal Water Systems, Surface Water, and Groundwater

Oil and gas exploration and development activities could directly, indirectly, or cumulatively impact surface water and groundwater resources, including impaired waterbodies (i.e., 303(d) listed) and culinary water sources.

Potential impacts on water quality could occur from accidental contaminant releases associated with machinery fuels, lubricants and drilling fluids, drill cuttings, the storage and transport of produced petroleum fluids, and produced water of inferior quality. Introduction of sediment, fuels, lubricants, drilling fluids, or produced waste water to surface and/or groundwater could alter water quality and subsequently impact aquatic life and habitat in any affected perennial streams and other downstream surface water or down-hole groundwater locations.

Impacts to surface water quantity may also occur as a result of increased surface runoff from disturbed areas. Oil and gas activities could impact in-stream sedimentation and stream bank stability due to channeling surface water and head cutting on areas with surface disturbance.

Issue #7: Vegetative Resources, Including Upland Vegetation, Noxious Weeds, and Invasive Species

Oil and gas exploration and development activities that require surface disturbance could result in removal and disturbance of upland vegetation. Activities will need to be in keeping with timber management and vegetation management guidelines outlined in the LRMP.

The UNF contains populations of several noxious weeds and other undesirable plants. Soil disturbance and vehicular traffic as a consequence of oil and gas development could result in the spread and establishment of noxious weeds and other undesirable plant species from other places on the UNF or from off-UNF locations.

Issue #8: Terrestrial and Aquatic Flora and Fauna, Including Threatened and Endangered Species, Sensitive Species, and Management Indicator Species

Oil and gas exploration and development could potentially impact plant, wildlife and/or fish populations and habitat. The current Federally listed threatened and endangered species that could potentially be impacted by oil and gas activities include: Clay phacelia (*Phacelia argillacea*), Deseret Milkvetch (*Astragalus desereticus*), Ute Ladies'-tresses (*Sprianthes diluvialis*), Utah valvata snail (*Valvata utahensis*), June sucker (*Chasmistes liorus*), Bonytail (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), Humpback chub (*Gila cypha*), Razorback chub (*Xyrauchen texanus*), Bald eagle (*Haliaeetus leucocephalus*), Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), slender moonwort (*Botrychium lineare*) and Canada lynx (*Lynx Canadensis*).

Other species of concern include Forest Service sensitive species, migratory birds, American beaver, raptors, State of Utah listed sensitive species, and big game.

Issue #9: Air Resources

The primary impacts to air resources would include short-term effects of construction of roads and well pads, road maintenance, traffic from motorized vehicles for maintenance of wells, and emissions from vehicles and facilities related to oil and gas exploration and development.

Issue #10: Visual Resources

The primary issue associated with visual resources is the degree of visible change that may occur in characteristic landscapes, viewsheds, and areas with high scenic value. Oil and gas operations could adversely impact the landforms, colors and textures in the environment, and thereby impact visual quality. Adopted VQOs were established through the Forest Plan and consistency with these could be impacted.

Issue #11: Cultural and Traditional Heritage Resources

Oil and gas leasing and subsequent activities could produce adverse effects on heritage resources through road and pad construction. Surface-disturbing activities can directly or indirectly displace or destroy cultural and traditional resources. Activities associated with oil and gas exploration could also result in changes in plants available for traditional uses in localized areas.

Issue #12: Developed and Dispersed Recreation

The primary issue with recreation is the potential for altering existing recreational opportunities. Impacts include displacement or exclusion from recreational areas and uses due to conflicts with other activities, and changes to visual quality, noise, cultural resources, vegetative communities, and wildlife.

Other impacts include direct and indirect impacts to recreation infrastructure, summer and winter recreational opportunities and users, campground water sources, and access roads and trails. Recreation Opportunity Spectrum allocations were established in the LRMP and consistency with these could be impacted.

Issue #13: Other Mineral Resource Extraction Activities

Oil and gas development could potentially restrict exploration and development of other mineral resources.

1.7.3 Consultation with Federal and State Agencies and Tribes

Endangered Species Act Section 7 Consultation

Consultation with the United States Fish and Wildlife Service (USFWS) is required under section 7 of the ESA. Section 7 of the ESA directs all Federal agencies to use their existing authorities to conserve threatened and endangered species and, in consultation with the USFWS, to ensure that their actions do not jeopardize listed species or destroy or adversely modify critical habitat. Section 7 applies to management of Federal lands as well as other Federal actions that may affect listed species, such as Federal approval of private activities through the issuance of Federal permits, licenses, or other actions. Consultation with the USFS will take place after the Agency chooses an alternative.

National Historic Preservation Act Section 106 Consultation

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties. Historic properties are properties that are included in the National Register of Historic Places or that meet the criteria for the National Register. If an agency has determined that its undertakings may affect historic properties, it must identify the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer (SHPO/THPO) to consult with during the process.

If the Agency determines that it has no undertaking, or that its undertaking is a type of activity that has no potential to affect historic properties, the agency has no further Section 106 obligations.

Tribal Consultation

Tribal consultation is required by Executive Order (EO) 13175, which states that “Each agency shall have an accountable process to ensure meaningful and timely input by Tribal officials in the development of regulatory policies that have Tribal implications”.

Tribes were contacted during the scoping period that occurred prior to the initiation of the preparation of the Draft EIS (DEIS). The Confederated Tribes of the Goshute Reservation responded that they have no comments regarding this project.

The Ute Indian Tribe also responded with comments during scoping. They expressed concerns about adequate access, coordination of road planning, cultural resources, and timing of future environmental analysis. They requested the UNF to keep them informed throughout the leasing process (see Section 1.6.2: Federal Leasing Process). The Ute Tribe was sent a formal letter on August 9, 2007 inviting them the Tribe to meet or enter into formal consultation. An informal meeting was held on Sep 18, 2007 with representatives of the Tribe and UNF personnel. Discussion items included a briefing document of the forthcoming DEIS, maps, and general discussion of Tribal lands within the NF. The Ute Tribe has not provided a formal request for consultation at this point.

The Bureau of Indian Affairs also responded with comments during the scoping period and asked to be included in any future outreach efforts concerning this EIS.

Other Tribes contacted during scoping include the Skull Valley Band of Goshute Indians and the Northwestern Band of Shoshoni Tribe. Neither of these two Tribes responded with comments.

1.8 Reasonably Foreseeable Development Scenario

In order to analyze the environmental effects that could occur as a result of a leasing decision, a projection of the kind and amount of activity that could be reasonably anticipated was made. This projection is called the Reasonably Foreseeable Development Scenario (RFDS). The RFDS for this analysis was developed using current and historical oil and gas development and exploration information, geologic interpretation, and projected market trends. The RFDS looks ahead a period of 10 to 15 years. The rapid changes in the understanding of the petroleum geology of the region along with the new exploration occurring in the Central Utah Overthrust Belt to the south of the UNF make it likely that advances in geologic understanding will render these RFDSs obsolete within that 10 to 15-year period.

For the purpose of evaluating the potential for oil or gas exploration on the UNF through 2017, the UNF was divided into nine analysis groups based upon surface geology, past exploration activities, and geography. These analysis groups are called Reasonably Foreseeable Oil and Gas Development Groups (RFOGDs), and have been named American Fork, Currant Creek, Deer Creek, Diamond Fork, Payson, Spanish Fork Canyon, Strawberry, Upper Provo, and Vernon. Table 1.3 lists each RFOGD and its associated MAs (JBR 2006).

Table 1.3. **MAs in each RFOGD.**

RFOGD	MAs
American Fork	American Fork
Currant Creek	West Fork Duchesne, Currant Creek
Deer Creek	Deer Creek Reservoir, Lower Provo, Hobble Creek
Diamond Fork	Diamond Fork
Payson	Thistle, Payson, Mona, Nephi
Spanish Fork Canyon	Upper Spanish Fork Canyon
Strawberry	Strawberry Reservoir, Willow Creek, White River
Upper Provo	Upper Provo
Vernon	Vernon, West Sheeprock

The RFDS in its entirety is included as Appendix B. The RFDS has a full description of geology, analysis methodology, and factors used to determine potential oil and gas resources in the UNF.

1.8.1 Conclusions

In 1997 the WUB FEIS projected a maximum of one well to be drilled on the Uinta Basin portion of the UNF in the succeeding 15 years. No wells have been drilled on the UNF since 1997 and a single unapproved APD currently on file for the Strawberry Group is the only APD on file for the entire UNF. Neither the current status of permitting activity nor the lack of the limited drilling estimated by the WUB FEIS can be considered indicators of the likelihood of exploration drilling for the entire 10 to 15-year evaluation period.

The potential for exploration for oil and gas resources on Federal oil and gas leases within the UNF is dependent upon economics, applied science, and the existence of favorable subsurface geology. Economic incentives drive risk-taking through “wildcat” exploration (an exploration

well that is drilled outside of a known oil or gas field or reservoir in an area from which no oil or gas has been produced); however, success is dependent upon technology, good science, and, most importantly, whether or not commercial oil and gas reservoirs are present. The present number of acres under lease in and of itself is not a gauge of the potential for new discoveries, since most of the current leases are probably being held speculatively.

The lack of past oil and gas production, the limited available subsurface data and the uncertainties regarding the surficial geologic evidence for thrust faulting create a great deal of uncertainty regarding the assessment of future oil and gas development on the UNF. Nevertheless, nearly all of the UNF is considered to be prospective for oil and gas exploration with both the potential for occurrence and certainty of occurrence for all areas recognized as prospective. Therefore, while under the RFDS analysis, exploration drilling was not anticipated in three of the nine management groups (American Fork, Upper Provo, and Vernon) during the 10 to 15-year analysis period, this EIS contemplates the possibility that prospective exploration activity could occur in any or all of the RFOGD groups.

Future exploration is likely to begin with seismic surveys since past exploration, apparently based in large part on observed surface-exposed geologic structures, failed to result in a discovery. If seismic results or geologic evaluations are favorable, then drilling of exploration wells could be anticipated. Assuming favorable seismic survey results or other successful target development, it is possible to forecast up to 12 exploration wells across the forest. Of course, a single discovery well, a change in crude oil or gas demand or market access, restrictions imposed on oil and gas exploration by future statutory or regulatory actions, or perhaps other factors that cannot be anticipated at this time could easily result in a greater or lesser number of new wells on the UNF. Directional drilling capabilities allow multiple wells to be drilled from a single location.

A discovery may or may not lead to construction of additional well pads as an immediate result. For example, the Covenant Field has production from multiple wells at a single well location. Given current and foreseeable economic demand for oil and gas nationally, interest by the oil and gas industry in acquiring additional Federal leases on the UNF is likely to be high through 2017. Whether or not exploration for oil and gas will occur on these leases during this time period is uncertain and dependent upon the assessment of the potential for discovery of new oil and gas fields as perceived by the oil and gas exploration industries. Even more uncertain is the potential for future oil and gas production on the UNF. It must be recognized that future exploration and development may not occur as predicted in the RFDS as presented, and only provides a reasonable basis for analyzing potential subsequent activities and their effects (see RFDS).

The projected level of oil and gas activity in the UNF over the next 10-15-year period is summarized in Table 1.4.

Table 1.4. Projected number of exploration wells in the UNF in the next 10-years.

RFOGD	Projected # of Wells	Rationale
American Fork	1	RFDS predicts no potential for oil and gas activity; however, prospective exploration still considered possible.
Currant Creek	2	multiple play potential;
Deer Creek	1	geology similar to Payson Group, where current exploration is active
Diamond Fork	1	multiple play potential, but extensive past exploration
Payson	1	active exploration in vicinity
Spanish Fork Canyon	1	multiple play potential
Strawberry	3	One existing APD; multiple play potential
Upper Provo	1	RFDS predicts no potential for oil and gas activity; however, prospective exploration still considered possible.
Vernon	1	RFDS predicts no potential for oil and gas activity; however, prospective exploration still considered possible.

Source: JBR 2006.

1.8.2 Relationship of the RFDS to the Impacts Analysis of this EIS

The authorization of a lease also grants rights to explore for and develop oil and gas within the terms and stipulations of the lease. The regulations, 36 CFR 228.102 (c)(4), direct the USFS to consider the subsequent actions that would be authorized by a lease, as connected actions. Specifically:

- (c) *Leasing analyses.* The leasing analysis shall be conducted by the authorized Forest officer in accordance with the requirements of 36 CFR part 219 (Forest land and resource management planning) and/or, as appropriate, through preparation of NEPA documents. As part of the analysis, the authorized Forest officer shall: (4) Analyze the reasonable foreseeable impacts of post-leasing activity projected under paragraph (c)(3) of this section.

Connected actions are defined by CEQ (40 CFR 1508.25) as actions that are closely related and should be discussed in the same impact statement if they:

- i. Automatically trigger other actions which may require environmental impact statements.
- ii. Cannot or will not proceed unless other actions are taken previously or simultaneously.
- iii. Are interdependent parts of a larger action and depend on the larger action for their justification.

The RFDS identifies the range of connected actions that could occur from oil and gas leasing (i.e., projected number of wells) over the next 10-15 years. Projections from the RFDS were used as a framework to determine the magnitude and duration of environmental consequences that could occur from an oil and gas leasing program. For more detailed description of impacts analysis and connected actions, see Chapter 4: Introduction.

Decisions on the lands that will be administratively available, and the subsequent decision authorizing leases, are based upon analysis of the *likely* environmental effects of the connected actions. This EIS, in accordance with CEQ guidelines, analyzes connected actions as they were identified in the RFDS. In the context of this EIS, connected actions that are considered include:

- exploratory drilling
- abandonment activities
- development associated with exploratory drilling such as the building or upgrading of roads

The RFDS forecasts the potential for a single well moving on to full-field development or production. The precise location and nature of this potential field are not known. However, if a commercial discovery were made, additional NEPA analysis would occur before production or full-field development could take place.

Figure 1.2. UNF base map.

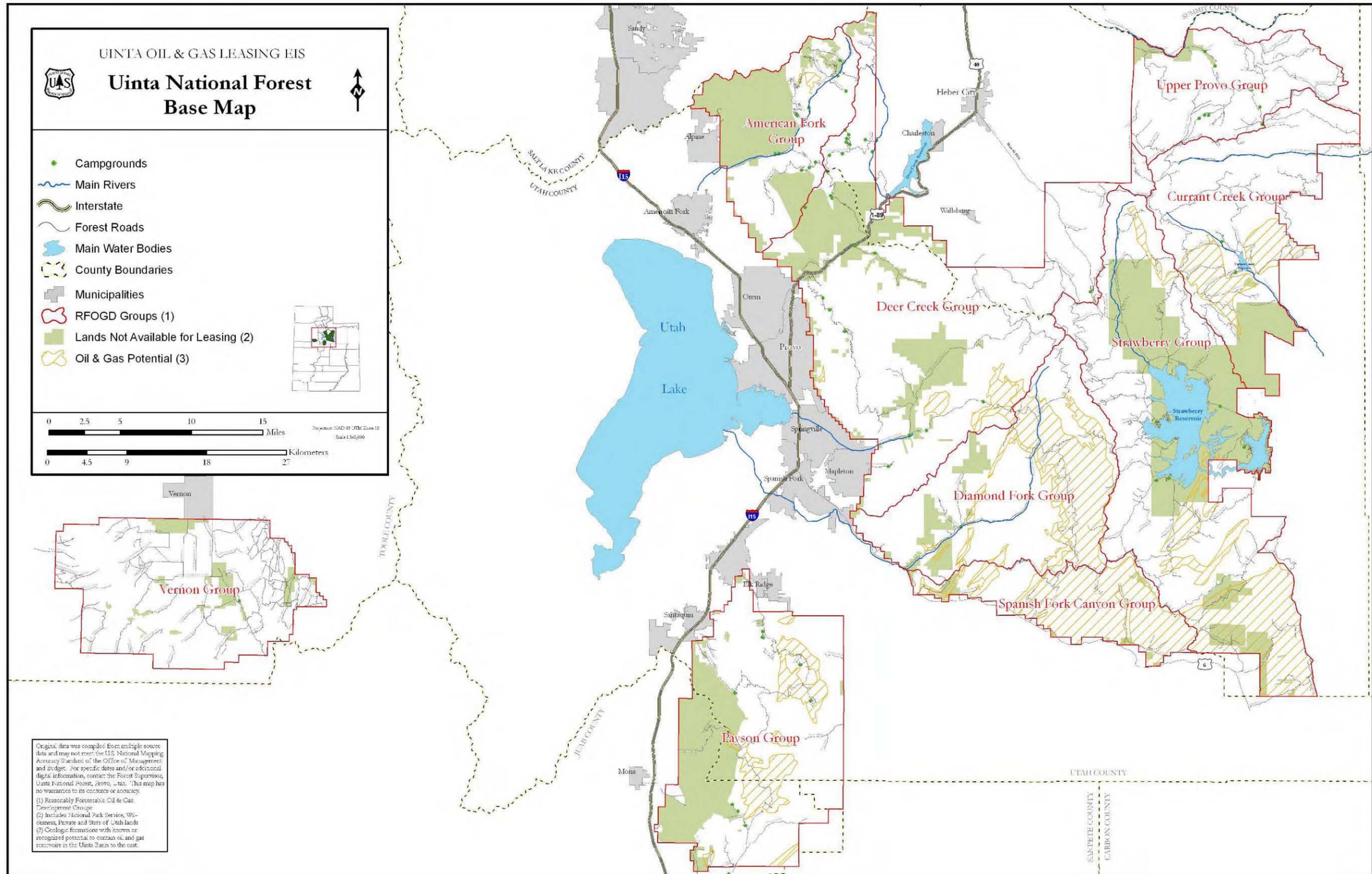


Figure 1.3. General location of non-forest service sub-surface mineral estates.

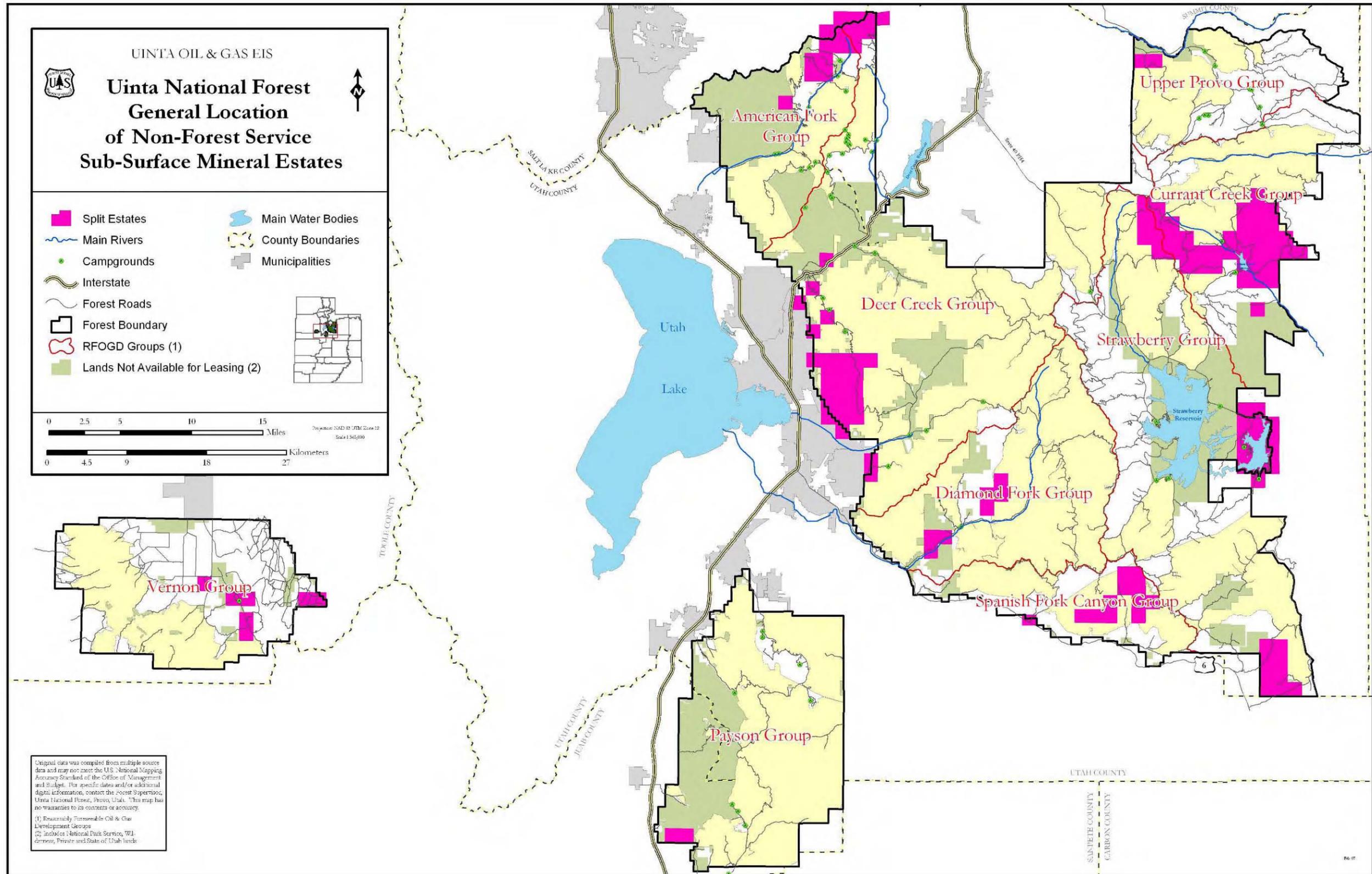


Figure 1.4. MAs and reasonably foreseeable oil and gas development.

