Minerals, Energy, and Geological Resources in Revision

The Federal Government's policy for minerals resource management is expressed in the Mining and Minerals Policy Act of 1970:

> *"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."*

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.

Mineral and energy resources are classified into three disposal categories in accordance with Forest Service regulations at 36 CFR 228:

- Leasable: Coal, oil and gas, geothermal, non-coal solid
- Locatable: Metallic materials, non-metallic industrial materials
- Saleable: Common variety mineral materials

What are private mineral reservations and outstanding mineral rights?

Within the Lolo National Forest there are acquired lands where the United States does not hold title to the subsurface, also known as the mineral estate. Some of the mineral estates underlying National Forest lands are owned by a non-federal entity such as a private individual, corporation, or state agency. A privately held mineral estate or mineral interests is generally documented in the deed language as a mineral reservation or an outstanding mineral right.

- Mineral reservations are mineral rights retained by a grantor in a deed conveying land to the United States.
- Outstanding mineral rights are rights owned by a party other than the surface owner at the time the surface was conveyed to the United States. There is usually no contractual or other legal relationship between the United States and the owner of outstanding mineral rights.

There are other types of outstanding rights beyond minerals that may exist on National Forest lands.

How does the Forest Service manage areas with mineral reservations and outstanding mineral rights interest?

The Forest Service recognizes that there are mineral reservations and outstanding mineral rights, and that the mineral owner may decide to exercise their mineral right. Generally, the Forest Service has limited discretion and authority over surface use for developmental activities associated with outstanding mineral rights. However, the exercise of all mineral reservations and outstanding mineral rights would be subject to applicable federal and state laws and regulations pertaining to mining, real property, and environmental protection. Environmental analysis may be necessary to ensure development of access on National Forest System lands to exercise such rights is implemented in accordance with applicable state or federal policy and regulations.

There are often specific terms in the deed language by which the surface and subsurface owners acquired their interests and these help to provide the basis for the Forest Service authority to administer outstanding mineral rights.

Due to specific terms and conditions associated with the deed language and the outstanding

minerals, the Forest Service must address these on a case-by-case basis. There is also information a mineral owner must submit which is outline in Forest Service Manual 2830. If a proposal is received to pursue access on National Forest system lands to exercise such rights, additional information would be needed to evaluate the request. It is the proponent's responsibility to supply necessary information to validate their existing rights and provide details of their desired activities to allow Forest Service to understand their proposal.

How does land management consider mineral estates and outstanding interest?

Understanding the extent of mineral estates and outstanding interests, as well as the potential of exercising these rights, helps inform the plan revision process. Plan revision efforts do not have an effect on any valid, existing rights. This includes subsurface locatable mineral rights, leasable oil and gas rights, deeded right-of-ways easements, or ditch easements. If a valid, existing right exists, the Forest Service is obligated to provide reasonable access regardless of management direction in the Forest Plan or any National designations.

Geologic Resources

Geologic resources include any geologic feature or area that has important scientific value or that is significant to natural resource management or human health and safety concerns. Geologic resources include landforms, bedrock exposures, aquifers, recharge areas, groundwater dependent ecosystems, caves, cave resources and associated cave ecosystems, karst features, paleontology, geologic and paleontological special interest areas, interpretive sites, and recreational collecting sites for fossils, rocks, and minerals.

Geologic hazards are geologic conditions or processes that risk potential damage to life, property, livelihoods and services, social and economic well-being, and natural resources. These hazards include slope failure and mass wasting (landslides, mudflows, debris flows, rock falls), flooding, earthquakes, and naturally occurring hazardous particulate minerals (asbestos, erionite, silica dust).

How does land management planning address geological resources and hazards?

Unique or important geological resources are identified during plan revision. The 2012 Planning Rule requires that these features be considered in the planning process and during the Scenery Management System Inventory. As part of the record of decision, the Forest Supervisor may administratively designate an area as appropriate for their authority or recommend an area to Congress or Secretary of the Interior for national designation using processes outlined in Forest Service Manual 2370. Geological resources and hazards should remain intact and influenced by natural processes.

The assessment contains information identifying geologic hazards such as landslides, flooding, or snow avalanche areas that may be a risk to the public or resources of the plan area. In the revised plan, desired conditions can describe such areas to be avoided or mitigated. There may be objectives to modify infrastructure or manage certain lands to reduce risks associated with these areas. Suitability, standards, or guidelines may prescribe certain restrictions on uses, projects, or activities in or near these geologically hazardous areas.

Figure 1. As Lake Missoula released catastrophic floods and refilled over the course of about 1000 years, it created layers of sediment, or varves, which allow geologists to study the flood history and how this glacial lake influenced geology and soils in this area. (Photo from Ice Age Floods Institute, iafi.org)