"Hobbs, Lawrence" <lhobbs@[redacted]>

From:	"Hobbs, Lawrence" <lhobbs[redacted]>
Sent:	Tue Jul 10 2018 14:37:57 GMT-0600 (MDT)
To:	"Holzel, Fred" <fholzel[redacted]>
Subject:	Re: Updated Proposed Mineral Withdrawal RFDS

thank you fred

Larry Hobbs
Assistant District Manager - Minerals
Geologist/Mining Engineer
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On Mon, Jul 9, 2018 at 3:51 PM, Holzel, Fred <fholzel[redacted]> wrote:

Larry

Good afternoon. Attached is an updated track changes version of the proposed RFDS with draft figures, and removed reference to Emigrant and Crevice. I also provided my suggestions on the table of content for the RFDS.

Let me know your thoughts.

Thank you

Fred

Fred Holzel

Geologist

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Conversation Contents

Updated Proposed Mineral Withdrawal RFDS

Attachments:

/2. Updated Proposed Mineral Withdrawal RFDS/1.1 SNF_Draft_Mineral RFDS_July 2018V1.10 FRH.docx

"Holzel, Fred" <fholzel@[redacted]>

From:	"Holzel, Fred" <[redacted]>
Sent:	Mon Jul 09 2018 14:51:15 GMT-0600 (MDT)
To:	Lawrence Hobbs <[redacted]>
Subject:	Updated Proposed Mineral Withdrawal RFDS
Attachments:	SNF_Draft_Mineral RFDS_July 2018V1.10 FRH.docx

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USDOI Bureau of Land Management

Superior National Forest Proposed Mineral Withdrawal: Reasonably Foreseeable Development Scenario

July 2018

Prepared by Bureau of Land Management – Eastern States Northeastern States District

Deleted: Prepared by Bureau of Land Management – Eastern States Northeastern States District

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1 Executive Summary

2 Introduction

The Superior National Forest (SNF) is proposing a mineral withdrawal to withdraw approximately 234,328 acres of "Public Domain" and "Acquired" surface lands and the underlying mineral estate located in the Rainy River Watershed, Minnesota, from further disposition under the applicable United States mineral and geothermal leasing laws. More specifically, to withdraw the right to lease certain non-energy solid leasable minerals (hard rock minerals) and geothermal fluid minerals, for a twenty year term, subject to valid existing rights (VER).

Commented [HFR1]: Rainy River Basin? Withdrawal appears to extend into the adjacent Vermilion River Watershed.

Commented [GE2]: Need clarification on "soft rock"

Although it may not be immediately intuitive, the surface and its attendant rights (associated rights) of a particular tract of land can be owned or managed separately from the 'mineral assemblages' comprising the soils, rocks and mineral fluids underneath the surface. The surface estate in the context of the proposed action is the ownership interest in the topographical expression or exposure of the land surface along with all inorganic materials and waters appurtenant to it. The surface estate of the SNF is under the administration of the United States Department of Agriculture (USDA), Forest Service (FS), comprising over 3,900,000 acres (6,100 mi^2 or 16,000 km^2) of woods and waters. The underlying mineral estate is comprised of all inorganic materials at or below the surface expression of the land and is principally administered by the Department of the Interior (DOI), Bureau of Land Management (BLM).

The majority of the SNF is multiple-use, including both logging and recreational activities such as camping, boating, and fishing. Slightly over a quarter of the forest is set aside as a wilderness reserve known as the Boundary Waters Canoe Area (BWCA), where canoers can travel along interconnected fresh waters near land as well as over historic portages once used by Native American tribes and First Nations people, but later by European explorers and traders. The forest is located in Cook, Lake, and Saint Louis counties in northeastern Minnesota. Forest headquarters are located in Duluth, Minnesota, outside the boundaries of the forest. There are local ranger district offices in Aurora, Cook, Ely, Grand Marais, and Tofte. (WIKI CITATION)

The presence and abundance of metal mineralization in northeastern Minnesota, primarily iron ores, has been known and mined for well over 120 years and has played a vital role in the development of local communities in the region. Historically significant mineral exploration activity on the SNF has allowed prospecting, exploration and development for precious and base metals, building stone, sand and gravel and peat along with other minor minerals. The geologic domain hosting these mineralization, the Duluth Complex, hosts some of the world's largest deposits of iron, copper, nickel and cobalt along with lesser occurrences of cobalt, chromium, iron, titanium, platinum, palladium, silver, gold and other associated metallic, and non-metallic minerals.

The Duluth Complex is a mid-continental rift system developed in response to crustal-scale tectonic extension approximately 1.1 billion years ago. The western arm of the rift extends southwestward from Lake Superior - where rift-fill rocks are moderately well exposed - to the subsurface of the Twin Cities metropolitan area, and from there to the subsurface of northeastern Kansas. The fill associated with the active stages of rift development consists mainly of basalt that was erupted under subaerial conditions, together with related sills, dikes, and large layered intrusions that cooled beneath or within the volcanic area. In the waning stages of rifting, the principal rock types deposited in the rift shifted gradually from magmatic to sedimentary; among the sedimentary sequences are those for which alluvial-fan, fluvial braid-plain, aeolian, and lacustrine depositional environments.

The Duluth Complex hosts four distinct types of magmatic mineral deposits. The deposit types include (1) large, low-grade, disseminated Nickel and Copper (Ni-Cu) concentrations, some of which contain local zones enriched in platinum-group elements (PGEs); (2) localized high-grade zones of massive Ni-Cu

sulfides, some of which are moderately enriched in PGEs; (3) stratabound PGE-enriched "reefs" associated with specific types of phase-layer transitions; and (4) oxide-rich ultramafic plugs that in some instances are potential sources of Titanium and Vanadium (Ti & V).]

Commented [HLH3]: (https://www.mngs.umn.edu/mnpot/dcmplx.html)

The purpose of this Reasonably Foreseeable Development Scenario (RFDS) Report is to provide supplemental information regarding potential mineral development within the proposed withdrawal's analysis area in support of an Environmental Analysis (EA) Report being prepared as required under the National Environmental Policy Act (NEPA). This is a compliance and public disclosure requirement performed in support of agency decision making in regards to the FS proposed mineral withdrawal. This report predicts the amount and type of potential future mineral exploration and development activity that could reasonably occur within the boundaries of the proposed withdrawal area overt the projected life of the withdrawal.

2.1 Proposed Action

The FS submitted an application on January 5, 2017 to the Secretary of the Interior proposing to withdraw the identified lands from disposition under United States (US) mineral and geothermal mining and leasing laws (subject to valid existing rights) for a period of 20 years. The FS proposal also includes an amendment to the Superior National Forest Land and Resource Management Plan (LRMP) to reflect this withdrawal request.

A withdrawal is a public land order, issued by the Secretary of Interior and published in the Federal Register, which creates a title encumbrance on the land restricting an agency's ability to manage its lands for the specified activities. If approved by the Secretary of Interior, the Bureau of Land Management would not be allowed to approve any applicable (to certain "Hard Rock" minerals) solid non-energy mineral prospecting permit(s), exploration license(s) or issue any new mineral lease(s) under Federal regulations found at; 43 CFR Part 3500; *LEASING OF SOLID MINERALS OTHER THAN COAL AND OIL SHALE*. This would apply to any wholly owned Federal mineral estate(s) within the proposal area (see vicinity map). This effectively means that no new mineral exploration or development would be allowed to occur on these lands and those lands subsequently acquired within and adjacent to the identified lands for a 20 year period from the date of the public land order.

The FS application subjects the applicable Federal lands ("Public Domain" and "Acquired") to temporary segregation for up to 2 years from entry under the United States mineral and geothermal leasing laws while the potential effects of a withdrawal are analyzed. The lands were previously and shall remain open under the proposed withdrawal to other forms of mineral use and disposition allowed under other mineral laws currently applicable to National Forest System (NFS) lands including the disposition of mineral materials. The segregation or withdrawal of these lands will be subject to valid existing rights and is therefore inapplicable to private lands owned in fee, private mineral estates, and private fractional minerals interests which may be intermingled within the applicable identified lands within the proposal boundary. (FS FR Notice citation check language)

2.2 Purpose

The Forest Service stated its purpose in the Federal Register (DATE) for the withdrawal request was *"..for protection of the natural resources and waters located on NFS lands from the potential adverse environmental impacts arising from exploration and development of fully Federally-owned minerals conducted pursuant to the mineral leasing laws within the Rainy River Watershed that flow into the Boundary Waters Canoe Area Wilderness (BWCAW) and the Boundary Waters Canoe Area Wilderness Mining Protection Area (MPA) in northeastern Minnesota."* (FR citation) DOUBLE CHECK EXACT WORDING

This Reasonably Foreseeable Development Scenario Report (RFDS) was prepared to satisfy, in part, the withdrawal regulation requirements outlined at 43 CFR 2310.3-2, that requires *"[an] environmental assessment, an environmental impact statement or any other documents as are needed to meet the*

requirements of the National Environmental Policy Act of 1969, 42 U.S.C. 4332(2)(C)), and the regulations applicable thereto."

The RFDS has been prepared consistent with BLM Handbook 1624-1 and BLM Instructional Memorandum (IM) 2004-89. IM 2004-89 requires that the RFDS project a baseline scenario of activity assuming that all potentially productive areas are open to allowable mineral entry, including leasing under standard terms and conditions with the exception of those areas closed to leasing by existing law or regulation.

Commented [HLH4]: (NEED TO FIND Handbook & IM and verify consistency)

Publication of the Federal Register notice initiated a two-year segregation of the subject lands from location and entry under the applicable mining laws, subject to valid existing rights. The segregation period is intended to allow for the agencies to undertake an environmental analysis of the withdrawal application in support of decision making by the Secretary of the Interior in accordance with the Federal Land Policy and Management Act (FLPMA) Section 204.

In support of the broader and more comprehensive environmental analysis, the specific purpose of this RFDS report is to provide supplemental information regarding potential mineral development within the proposed withdrawal's analysis area. This report predicts the amount and type of potential future applicable mineral exploration and development that could occur within the boundaries of the proposed withdrawal area. For comparison purposes, predictions are made for both the No Action and Proposed Action alternatives over the proposed 20-year withdrawal period. The predictions address the potential for allowable mineral entry activities, will be used to analyze possible impacts to other resources, and will serve as a basis for complimentary NEPA analysis, including a cumulative impacts analysis. This will, in turn, help determine the potential effects of withdrawing or not withdrawing the proposed area from allowable mineral entry.

The RFDS is, by its nature, speculative in attempting to predict future types and levels of mineral prospecting, exploration and development activity. The important feature of the RFDS is not its numeric and/or predictive accuracy when it comes to specific features, but rather that it uses reasonable assumptions to portray the relative levels of reasonably foreseeable future actions across the range of alternatives. While it attempts to predict future mining activity, the RFDS is intended only to help the agency analyze and disclose the reasonably foreseen effects of the Proposed Action compared to the No Action Alternative, and cannot be used to assert or refute the validity of any existing mineral or for any other unintended purpose.

2.3 Scope

The scope of this RFD analysis incorporates only locatable minerals; salable and leasable mineral resources are not considered as they are not subject to the proposed withdrawal as written. The mineral commodities within this proposed area that could be the focus of future exploration, development or mining activity are gold, silver, copper, and molybdenum with minor activity regarding lead, zinc, and tungsten (reference #MPR). The lands discussed in the RFD primarily include National Forest System (NFS) lands with federal Public Domain minerals that are managed by the BLM. However, activities on non-federal lands as well as private mineral estates within the proposed withdrawal boundary are also discussed where applicable to support the cumulative effects analysis, and because the proposed withdrawal applies to any lands or interest in lands that could be acquired by the U.S. in the future as long as the withdrawal were to remain in effect at that time. Specifically, this includes approximately 1,668 acres of non-federal lands and/or split estate lands with non-federal mineral rights within the proposed withdrawal boundary (reference #lands report).

The prediction of future exploration and mining development scenario is initially limited in scope to the proposed area and is provided for the No Action Alternative analysis (i.e., what is reasonably expected to occur in the absence of the withdrawal). Then, the methods and results of that analysis were adjusted based on the constraints of the Proposed Action. The prediction of future mining is based on a number of assumptions (Section 3.3.3) and is provided solely to establish a maximum level of expected mineral activity to be analyzed as part of the impact assessment of each alternative in the NEPA analysis. These

mining activity assumptions, in conjunction with existing conditions, serve as the basis for the evaluation and disclosure of the environmental consequences associated with the two alternatives.

An RFD is a prediction based on the known or inferred locatable mineral resource potential of the lands in the proposed withdrawal area using a set of assumed future economic, regulatory, and legal conditions. While historic mine development can give some idea of future development, there are other factors that affect the pace of future development. As such, this prediction is subject to deviations as additional geologic and mineral resource data become available, technology improves, market prices fluctuate, and/or the economic, regulatory, and/or legal circumstances change (Section 3.2 and 3.3). These factors and others could contribute to a different assumed future development pattern than was experienced in the past.

2.4 Federal Land

Throughout America's history, federal land laws have reflected two visions: keeping some lands in federal ownership while disposing of others. From the earliest days, there has been conflict between these two visions. During the 19th century, many laws encouraged settlement of the West through federal land disposal. Mostly in the 20th century, emphasis shifted to retention of federal lands. Congress has provided varying land acquisition and disposal authorities to the agencies, ranging from restricted to broad dependent on various agency missions.

The federal government owns roughly 640 million acres, about 28% of the 2.27 billion acres of land in the United States. Four major federal land management agencies administer 610.1 million acres of this land (as of September 30, 2015). They are the Bureau of Land Management (BLM), Fish and Wildlife Service (FWS), and National Park Service (NPS) in the Department of the Interior (DOI) and the Forest Service (FS) in the Department of Agriculture.

In addition, the Department of Defense (excluding the U.S. Army Corps of Engineers) administers 11.4 million acres in the United States (as of September 30, 2014), consisting of military bases, training ranges, and more. Numerous other agencies administer the remaining federal acreage. The lands administered by the four major agencies are managed for many purposes, primarily related to preservation, recreation, and development of natural resources. Yet the agencies have distinct responsibilities.

The BLM manages 248.3 million acres of public land and administers about 700 million acres of federal subsurface mineral estate throughout the nation. The BLM has a multiple-use, sustained-yield mandate that supports a variety of activities and programs, as does the FS, which currently manages 192.9 million acres most of which are designated national forests. The FWS manages 89.1 million acres of the U.S. total, primarily to conserve and protect animals and plants. In 2015, the NPS managed 79.8 million acres to conserve lands and resources and make them available for public use. Activities that harvest or remove mineral resources from NPS lands generally are prohibited.

The amount and percentage of federally owned land in each state varies widely, ranging from 0.3% of land (in Connecticut and Iowa) to 79.6% of land (in Nevada). However, federal land ownership generally is concentrated in the west and by contrast, the federal government owns 4.2% of lands in the other non-western states. (GAO citation)

Commented [HLH5]: GAO citation

All of the land east of the Mississippi River was granted to the United States at the end of the American Revolution in 1783. This included much of what would become modern day Minnesota, including the northeast, north-central and east-central portions. The western portion of the state initially part of Spanish Louisiana, was purchased in 1803 from France as part of the Louisiana Purchase. The exact definition of the boundary between Minnesota and British North America established acceptance as the current U.S.-Canada border at the 49th parallel in 1842.

Throughout the first half of the 19th century, the northeastern portion of the state was a part of the Northwest Territory, then the Illinois Territory, then the Michigan Territory, and finally the Wisconsin Territory. The western and southern areas of the state, although theoretically part of the Wisconsin Territory from its

creation in 1836, were not formally organized until 1838, when they became part of the Iowa Territory. Minnesota gained legal existence as the Minnesota Territory in 1849, and became the 32nd U.S. state on May 11, 1858. Early industry came from iron ore, discovered in the north, mined relatively easily from open pits, and shipped to Great Lakes steel mills from the ports of Duluth and Two Harbors. Economic development and social changes led to an expanded role for state government and a population shift from rural areas to cities. The Great Depression brought layoffs in mining and tension in labor relations but New Deal programs led to increased Federal land holdings and helped the state expand economically.

Commented [HLH6]: https://en.wikipedia.org/wiki/History_of_Minnesota

According to the Congressional Research Service, Minnesota spans 51.2 million acres. Of that total, 6.78 percent, or 3.469 million acres, belonged to the Federal government as of 2015. As distinguished from early major land acquisitions, the Louisiana Purchase along with the Oregon Compromise and lands acquired in the Mexican War, later gave rise to a distinction in the laws between Public Domain lands, which essentially are those ceded by the original states or obtained from a foreign sovereign (via purchase, treaty, or other means), and acquired lands, which are those obtained from a state or individual by exchange, purchase, or gift. About 90% of all federal lands are Public Domain lands, while the other 10% are acquired lands. Many laws were enacted that related only to Public Domain lands. Even though the distinction has lost most of its underlying significance today, different laws, especially the general mineral mining and mineral leasing laws, may still apply depending on the original nature of the lands involved.

Commented [HLH7]: https://ballotpedia.org/Federal_land_policy_in_Minnesota&GAO

The creation of national parks and forest reserves laid the foundation for the current federal agencies whose primary purposes are managing natural resources on federal lands, in this case of this proposed action, the BLM and FS. The BLM origins date back to the General Land Office (GLO), which had been created in 1812 to oversee disposal of the federal lands. In 1891, Congress authorized the President to establish forest reserves from the Public Domain lands administered by the Department of the Interior. The BLM in its current configuration was formed in 1946 by merging the GLO with the DOI Grazing Division, established in 1934 to administer grazing on public rangelands. The Forest Service was created in 1905, when responsibility for managing the forest reserves (renamed national forests in 1907) was joined with forestry research and assistance in a new agency within the Department of Agriculture. (GAO citation)

2.5 Study Area Surface Lands and Estate

The Forest Service has requested the withdrawal of all lands [described in] Appendix XX that include fully federally owned minerals that are situated within the exterior boundaries of the area depicted in Figure XX. The Forest Service also requests that the withdrawal be made applicable to all fee title lands subsequently acquired by the Federal Government that are situated within the exterior boundaries of the area depicted in Table XX and vicinity map (Figure XX).

Commented [HLH8]: confirm

Early non-native American settlement of the Superior National Forest area mostly occurred by homesteading between 1869 and 1900. The building of railroads, mineral exploration (especially discovery of iron ore) and lumbering attracted people to the area. While there was a rush of immigrants settling lands, many of the claims were fraudulently claimed to acquire timbered lands for the big lumber companies or were soon abandoned by legitimate settlers due to poor farming conditions in northeastern Minnesota. Those who stayed were mostly miners or loggers and their families. By the 1870s, mineral exploration parties were on the Vermilion Range. In 1882, Charlemagne Tower and Samuel Munson incorporated the Minnesota Iron Company. The town of Tower became the first mining town on the range and a rail line was built to Two Harbors in 1884, formally connecting the iron range to Lake Superior's North Shore. By 1888, mining had expanded to Ely, MN.

On February 13, 1909, Theodore Roosevelt signed a Presidential Proclamation officially creating the Superior National Forest. Thus began an era of early forest administration of the area inclusive of additional land acquisition authority granted by the passage of the 1911 Weeks Act, by which the FS gained the authority to purchase additional private lands, enabling the agency to acquire new lands to

expand the SNF to its current configuration. Additionally, a campaign from within the FS since at least 1921, successfully lead to establishment of the Boundary Waters Canoe Area Wilderness (BWCAW). Originally designated a Roadless Area in 1926, nearly 40 years later it was designated a wilderness area in the Wilderness Act of 1964 and later amended in 1978.

Since any land acquired within a national forest boundary is given Weeks Act status, the actual acreage attributed to the Weeks Act authority varies depending on how one counts acquisitions. For example some land acquisitions under New Deal conservation programs were incorporated into national forests and given Weeks Act status along with other individual land transactions. While the Forest Service continues to buy land under the Weeks Act authority, the major purchase programs were largely over by 1976.

All fee title Public Domain and Acquired lands within the following legal descriptions (see Table 1) are included the proposed action. The vicinity map (XX) also includes an application boundary, which identifies non-Federal lands which, if they should be returned to or acquired pass into Federal ownership, would become subject to the withdrawal. For a comprehensive description of proposed withdrawn lands (herein called "Application Lands"), see Appendix XX, Application for Withdrawal.

2.6 S????

3 Authorities

The Forest Service Organic Administration Act of 1897 provided the main statutory basis for the management of forest reserves in the United States, hence the commonly used term "Organic Act". The legislation's formal title is the *Sundry Civil Appropriations Act of 1897*, which was signed into law on June 4, 1897, by President William McKinley. This law was the first step toward legislation concerning the management, protection and care of the nation's forest reserves. Its features included

- *It specified the purpose for establishing reserves as well as the administration and protection.*
- *It granted the Secretary of the United States Department of the Interior the authority in rule-making and regulations of reserves.*
- *It allowed the General Land Office (GLO) to hire employees for the necessary administrative tasks and opened the reserves for public use.*
- *It specifically stated the criteria for new forest reserve designations, which were timber production, watershed protection and forest protection.*
- *It gave the United States Geological Survey (USGS) the responsibility for mapping the reserves.*

This last item gave two separate branches of the Department of Interior responsibility, the GLO for the sale, claims and administration of the reserves and the USGS for the drawing of boundaries and land maps.

According to the Organic Act, the intention of the forest reservations was *"to improve and protect the forest within the reservation.... securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States."*

After Congress authorized the establishment of forest reserves in 1891, the administrative machinery for such reserves created by the Organic Act, specified that all Public Domain national forests continued to be open to entry under the Mining Law for prospecting for and location and development of their mineral resources, subject to the rules and regulations governing such national forests. Millions of acres of national forests were created pursuant to this congressional authorization at the beginning of the 20th century, marking the first major closure of the Public Domain lands to non-mineral (but not mineral) private entry and settlement.

Commented [HLH9]: https://www.fs.usda.gov/detail/superior/learning/history-culture/?cid=fsm91_049843

Commented [HLH10]: https://foresthistory.org/research-explore/us-forest-service-history/places/superior-national-forest/

Commented [HLH11]: https://foresthistory.org/wp-content/uploads/2016/12/2011_Lawyers_Perspective_implementing-weeks-act.pdf

Commented [HLH12]: Are there any public domain land?s

Commented [HLH13]: https://en.wikipedia.org/wiki/Organic_Act_of_1897

3.1 Historical Context of the Study Area Mineral Estate

Predating the Organic Act, acquisition of mining claims on Federal land is a right granted by the Mineral Location Law of 1872, also known as the "1872 Mining Law" and the "Hard Rock Mining Law" (17 Stat. 91). This law continued a policy of opening mineral lands to exploration, and the acquisition of mining rights on federally owned land is, and for the most part, still governed by this law in the Federal Domain lands of the western US. The principal exceptions are a series of leasing acts that have made coal and certain nonmetalliferous minerals, metalliferous or "hard rock" minerals in the eastern states appurtenant to Federal "acquired" lands and all land on the Outer Continental Shelf exclusively leasable and not open to acquisition by claim staking.

The mineral leasing laws meeting the principle exceptions are the Mineral Leasing Act of 1920 (XX Stat. XX), The Mineral Leasing Act for Acquired Lands of 1947 (XX Stat. XXX) and Reorganization Plan No. 3 of 1946 as well as the Materials Disposal Act of 1947 (61 Star. 681) as amended by the Surface Resources Act of 1955 (69 Stat. 367), which defined and withdrew a group of salable minerals, or "common varieties," from mineral entry. There are, of course, numerous additional Federal statutes relating to mining on Federal lands, and state laws are permitted to elaborate on some aspects of mining law where the federal laws are silent. Of specific applicable interest is the Weeks Act of 1911 and 16 U.S. Code § 508b - National forests in Minnesota; authority to prospect, develop, mine, remove, and utilize mineral resources.

Commented [HLH14]: https://link.springer.com/chapter/10.1007/978-1-4684-4376-9_13

In the 19th century, settlement of the vast Federal Public Domain was encouraged by enactment of laws providing for free or almost-free disposal of Public Domain land. One of these laws was the Mining Law of 1872, which originally governed the disposal of all minerals other than coal, and still authorizes the disposal of Public Domain land containing a valuable deposit of almost any nonfuel mineral.

Early in the 20th century, the fossil fuel and fertilizer minerals and lands containing them were reserved from disposal under the Mining Law and were made subject to leasing at the discretion of the Secretary of the Interior under the Mineral Leasing Act of 1920 and related statutes. As the concern over conservation and proper management of mineral and non-mineral resources on Federal land grew, special laws were passed reserving more minerals and lands from disposal under the Mining Law, and making the minerals subject to disposition by lease or sale.

In 1913, Congress amended the law by allowing Weeks Act land acquisitions to be subject to rights-of-way, easements, and reservations of water, timber, and mineral rights, so long as the exercise of such rights would not interfere with the purposes for which the land was acquired. The Secretary of Agriculture issued regulations prescribing how these rights could be exercised, and these regulations were actually appended to and made a part of any deed which reserved rights in timber, minerals, rights-of-way, and other issues.

Commented [HLH15]: https://foresthistory.org/wp-content/uploads/2016/12/2011_Lawyers_Perspective_implementing-weeks-act.pdf

When the Weeks Act was written, the purchase of surface rights only, with the mineral estate remaining in private ownership, was an issue that needed to be addressed. The majority of Weeks Act lands were acquired in fee, with the mineral estate acquired by the federal government. In 1916 Congress authorized the secretary of Agriculture to permit the prospecting, development, and utilization of those acquired mineral resources.

Many of the lands in the East were either known to have oil, gas, coal, and stone or had high potential for mineral development. Parcels were sold to the Forest Service under different arrangements. The seller (the fee owner) might convey both the land and the minerals beneath ("surface and mineral estate") to the Federal Government, or might have conveyed only the surface, having reserved the subsurface rights to himself or having sold them to a third party ("reserved mineral rights"). Section 9 of the Weeks Act specifically allowed "reservation" of the mineral estate and mandated that any rules regarding the removal of those minerals be expressed in the deed. However, in some cases, the surface was sold with no contractual relationship between a third-party mineral estate owner and the new surface owner ("outstanding mineral rights").

Commented [HLH16]: https://foresthistory.org/wp-content/uploads/2016/12/2011_Mineral_Rights.pdf

Further complicating management of the Weeks Act in national forests is the sharing of authority with the Department of the Interior. In the 19th century, settlement of the vast Federal Public Domain was encouraged by enactment of laws providing for free or almost-free disposal of Public Domain land. One of these laws was the Mining Law of 1872, which originally governed the disposal of all minerals other than coal, and still authorizes the disposal of Public Domain land containing a valuable deposit of almost any nonfuel mineral. Early in the 20th century, the fossil fuel and fertilizer minerals and lands containing them were reserved from disposal under the Mining Law and were made subject to leasing at the discretion of the Secretary of the Interior under the Mineral Leasing Act of 1920 and related statutes.

The authority to allow the development of federal oil and gas, coal, oil shale, and other resources was further modified in 1947 by the Mineral Leasing Act for Acquired Lands, which gave the Secretary of the Interior the responsibility to develop regulations to lease minerals acquired pursuant to the Weeks Act. Today there are 2,517 leases on 1.6 million acres of Weeks Act acquired minerals on eastern national forests. Authority to lease hardrock minerals (gold, copper, nickel, lead) was transferred from the Secretary of Agriculture to the Secretary of the Interior in 1946.

Forestland mineral ownership in the SNF can be divided among several parties. Any entity, be it a person, partnership, corporation or governmental entity might own the tract's surface, while the mineral and timber rights may belong to other parties or vice versa. Private mineral rights remain regulated and governed, as they have since the Weeks Act was passed, by state law. A land parcel might also be subject to easements for roads and utilities, or some other form of interest held by third parties.

On 744,500 acres where the SNF manages the land surface and the subsurface mineral rights are privately owned (as "split estate"), the Forest cooperatively negotiates with the mineral owner/proponent in reviewing and concurring with their mineral exploration proposal and are specifically exempted from the withdrawal subject to a determination of VER.

Commented [HLH17]: https://www.princeton.edu/~ota/disk3/1979/7909/790906.PDF

Commented [HLH18]: https://foresthistory.org/wp-content/uploads/2016/12/2011_Mineral_Rights.pdf

Commented [HLH19]: What other VER exist in the withdrawal area ie VER which already precludes no mineral activity by prior vested rights (number of and acres affected)?

Commented [HLH20]: https://www.fs.usda.gov/detail/superior/landmanagement/resourcemanagement/?cid=fsepr d493605

3.2 Federal Laws

3.2.1 Mineral Leasing National Forests in Minnesota

The Department of the Interior, through the BLM, administers leasing of certain hard rock minerals appurtenant to certain Public Domain lands within the exterior boundaries of National Forests located in the State of Minnesota under regulations adopted pursuant to 16 U.S. Code § 508b and Section 402 of Reorganization Plan No. 3 of 1946 by means of a the leasing system governed under 43 CFR 3500 as cited in 43 CFR 3051.1(b)(1)& (3).

16 U.S. Code § 508b - National forests in Minnesota; authority to prospect, develop, mine, remove, and utilize mineral resources;

> *Where, through withdrawal or reservation or by statutory limitation or otherwise, all or any part of the mineral resources in public-domain lands or lands received in exchange for public-domain lands or for timber on such lands situated within the exterior boundaries of the national forests in Minnesota, are not subject to development or utilization under the mining laws of the United States or the mineral leasing laws, and for the development and utilization of which no other statutory authority exists, the Secretary of the Interior is authorized, under general regulations to be prescribed by him and upon such terms and for specified periods or otherwise as he may deem to be for the best interests of the United States, to permit the pros-pecting for and the development and utilization of such mineral resources: Provided, That the development and utilization of such mineral deposits shall not be permitted by the Secretary of the Interior except with the consent of the Secretary of Agriculture. All receipts derived from permits or leases issued under the authority of this section for prospecting for and the development and utilization of such mineral resources*

shall be paid into the same funds or accounts in the Treasury and shall be distributed in the same manner as prescribed for national forest revenue by sections 499 to 501 of this title.

3.2.2 Mineral Leasing on Acquired Land
3.2.3

The principle mineral laws of the United States, the Mining Law of 1872 and the Mineral Leasing Act of 1920, discussed below apply only to the Federal Public Domain. As stated previously, lands in the Federal Public Domain are lands that have been retained in Federal ownership since its original acquisition by treaty, cession, or purchase as part of the general territory of the United States, including such land that has temporarily passed out of but subsequently reverted to Federal ownership through operation of the public land laws, or any land obtained in exchange for such land or for timber on such land.

The two laws above do not apply to so-called "acquired land," which is land obtained from a State or a private owner through purchase, gift, or condemnation for particular Federal purposes rather than as part of the general territory of the United States. Early lands were "acquired" for Federal offices and similar purposes from the beginning of the Republic, particularly in the States carved from the 13 original colonies in which the Federal Government never had any territorial property.

The first acquisition of major land areas, however, was undertaken under the Weeks (Appalachian Forest) Act of 1911, which authorized the purchase of forested, cutover, or denuded land within the watershed of navigable streams to be placed in national forests. Subsequent acts provided more general land acquisition authority for the National Forest System and for other Federal land systems. In 1917, the Secretary of Agriculture was authorized to permit mineral exploration, development, and production on lands acquired under the Weeks Act. Similar authority was granted under certain other national forest and national grassland acquisition statutes. This authority extended to all minerals, and it was exercised through a permit and leasing system, since ownership of the land was to be retained by the Federal Government. These "acquired" lands are applicable to the majority of lands within the SNF, The Mineral Leasing Act for Acquired Lands of 1947 and Reorganization Plan No. 3 of 1946 are the principle congressional actions under which the mineral estate of the SNF is administered.

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In 1947, Congress passed the Mineral Leasing Act for Acquired Lands. *3 In substance, the Act made the fossil fuel, fertilizer, and chemical minerals on all acquired land (including acquired land in the National Forest System) subject to permit and lease by the Secretary of the Interior under the provisions of the Mineral Leasing Act of 1920, which was already applicable to such minerals on the Public Domain. However, permits and leases on acquired land can be issued only with the consent of the surface management agency and subject to such conditions as it may prescribe to ensure the adequate utilization of the land for the primary purposes for which it was acquired or is being administered. Similar consent requirements have recently been legislated for coal and geothermal steam on the Public Domain. Sulfur can be leased on acquired land in any State, but on the Public Domain in Louisiana and New Mexico only. Native asphalt, solid and semisolid bitumen, and bituminous rock, which were 92 . Management of Fuel and Nonfuel Minerals in Federal Land added in 1960 to the list of leasable minerals on the Public Domain under the 1920 Mineral Leasing Act, were not at the same time made leasable on acquired land. A year prior to enactment of the Mineral Leasing Act for Acquired Lands, the mineral leasing authority of the Secretary of Agriculture for acquired national forest land and grassland was transferred to the Secretary of the Interior by Reorganization Plan No. 3 of 1946. " Mineral development on such lands, however, could be authorized only upon the Secretary of Agriculture's certification that it would not interfere with the primary purposes for which the land was acquired, and only in accordance with conditions specified by the Secretary of Agriculture to protect such purposes. This transfer of authority was superseded in 1947 for the fossil fuel, fertilizer, and chemical minerals (other than native asphalt, solid and semisolid bitumen, and bituminous rock) by the Mineral Leasing Act for Acquired Lands; but it continues to be the basis for the Secretary of the Interior's authority to lease all other minerals (that is, the minerals disposed of under the Mining Law on the Public Domain) on much of the acquired national forest land. The Secretary of the

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Interior has made the leasing of these minerals subject to the regulations that govern the leasing of the fossil fuel, fertilizer, and chemical minerals on acquired land.

As has been mentioned earlier, the Mining Law does not apply to the Public Domain in certain States. In 1950, Congress authorized the Secretary of the Interior to lease mineral resources in Public Domain national forest in one of those States, Minnesota, subject to the consent of the Secretary of Agriculture. Although the National Commission on Materials Policy stated in its 1973 report that hardrock minerals are leased on Public Domain land in Kansas, Missouri, Minnesota, Nebraska, and Wisconsin, there is apparently no other statute authorizing such leasing.

3.2.4 1872 Mining Law

The General Mining Law of 1872, as amended, gives a U.S. citizen, or a corporation organized under state law, a statutory right to go onto Public Domain federal lands open to mineral entry to stake or "locate" a mining claim for the purpose of mineral prospecting, exploration, development, and extraction of locatable minerals. Locatable minerals include metallic minerals (gold, silver, lead, zinc, etc.), nonmetallic minerals (fluorspar, asbestos, mica, gemstones, etc.), and certain "uncommon variety" minerals having a unique or special quality giving it a higher value.

The Mining Law consists of five basic elements including discovery of a valuable mineral deposit, location, recordation, maintenance of mining claims, and patenting[1]. For more information on these five elements, see https://www.blm.gov/sites/blm.gov/files/MiningClaims.pdf. Under the Mining Law, citizens have the right to locate the following types of mining claims and sites as defined by the BLM (43 CFR 3832; FSM 2811.3):

1. *Lode Claim* = in-place, hard rock deposit consisting of a zone of veins, veinlets, or disseminations of a valuable mineral; claims may not exceed 1500 ft. by 600 ft. in size.
2. *Placer Claim* = non-lode deposits, typically unconsolidated material containing concentrations of valuable minerals (i.e., placer gold) or nonmetallic bedded deposits (i.e., gypsum); claims may not exceed 20 acres for an individual claimant or 160 acres for an association of eight locators.
3. *Mill Site* = located on non-mineralized land as either a (1) dependent mill site whereby mill feed is sourced from associated lode or placer mining claims, or (2) independent mill site whereby the mill is essentially a custom mill taking feed from area mines and not associated with any particular lode or placer claims; mill site may not exceed five acres.
4. *Tunnel Site* = subsurface right-of-way used for tunnel exploration of potential lode deposits up to a distance of 3,000 ft.; once a mineral discovery is made, locator must file a lode claim.

Commented [HFR21]: e.g. ?

All NFS lands classified as Public Domain lands that have not been appropriated, withdrawn, or segregated from location and entry, are open to prospecting for locatable minerals (16 U.S.C. 482). If NFS lands are withdrawn or segregated (as is the case with the subject lands), no new mining claims may be located under the 1872 Mining Law. However a segregation or withdrawal is made "subject to valid existing rights"; therefore, an existing mining claimant may continue to hold and develop "valid" mining claims that predate the segregation or withdrawal, subject to all applicable statutes and regulations (Section 3.1.3 for valid existing rights).

3.2.5 1892 Organic Administration Act

The Organic Administration Act, as amended, provides the main statutory basis for management of the NFS lands with goals to improve and protect the resources. This Act authorized the FS to regulate surface use and occupancy, such as mineral operations, on NFS lands and to develop mineral regulations. The FS's

[1] In October 1994, Congress passed a moratorium on the expenditure of funds to process patent applications; therefore, no new mining claims can file for patent with the BLM. The moratorium has been renewed annually through the various Interior Appropriations Acts, and the duration of this moratorium is unknown.

locatable mineral regulations were later promulgated in 1974 and can be found in the Code of Federal Regulation (CFR), Chapter 36, Part 228, Subpart A (Section 2.2.1).

3.2.6 1955 Surface Use Act

The Surface Use Act amended the General Mining Act of 1872, including the following: (1) removed from mineral entry the common varieties of minerals such as sand, gravel, stone, pumice, pumicite, and cinders and classified these materials as salable minerals requiring either a sales contract or a free-use permit from the appropriate federal land management agency; (2) gave authority to the federal land management agencies to manage surface resources, including surface vegetative material; and (3) placed limitations on claimants' surface rights stating that mining claimants shall not use claims for any purposes other than mining related activities, including prospecting, mining, processing operations, and/or uses reasonably incident thereto.

However, this Act provided claimants an opportunity to file with the BLM to retain surface rights on claims located prior to the Act that had a valid discovery. Upon a timely filing of a claimant's statement to retain surface rights, a government geologist/mining engineer/mineral examiner had to make the determination whether or not a claim had a valid discovery, therefore allowing for retention of surface rights. Surface rights included the possession and removal of timber as reasonably necessary in conducting mining operations. There are three existing lode claims within the proposed withdrawal area that filed for and obtained surface rights (Section 4.2).

3.2.7 1

Mineral Conservation and Multimineral Development:

The Geothermal Steam Act of 1970

The Geothermal Steam Act of 1970

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' provides for the leasing of geothermal steam

and associated resources in public domain and acquired land administered by the Secretary

of the Interior or the Forest Service and in areas where such resources have

been reserved by the United States. The provisions of the Act are similar to those for

oil and gas under the Mineral Leasing Act of 1920, but include more detailed provisions

relating to required and allowed multimineral development, prevention of waste,

and protection of surface resources. Leases can be issued for land withdrawn or acquired

in aid of the functions of the Department of Agriculture, or subject to powersite

applications before the Federal Power Commission, only with the consent of the head

of the respective department or agency, and subject to such conditions as he or she

may prescribe to ensure adequate utilization

3.2.8 1955 Mining Claims Rights Restoration Act

The purpose of the Mining Claims Rights Restoration Act of 1955 (PL 359) was to reopen to mineral entry and claim location lands that had been withdrawn or reserved for power development and other purposes. However, there are a couple exceptions for lands that were under license, permit or preliminary permit under the Federal Power Act or other Act of Congress. There are two power site withdrawals within the proposed withdrawal area that are subject to this Act.

3.2.9 1970 Mining and Mineral Policy Act

The Mining and Mineral Policy Act 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 economic development of domestic mineral resources. This Act must be considered when making federal decisions regarding mineral and mining actions, such is the situation with this proposed action.

3.2.10 1976 Federal Land Policy and Management Act (FLPMA)

Similar to the establishment of Organic Act for the FS, the FLPMA established and governs the way in which the BLM manages public land for multiple-use to serve present and future generations. Section 204 of FLPMA gives the Secretary of Interior general authority to make, modify, extend, or revoke most mineral withdrawals. Furthermore, this Act affects the recordation and maintenance of mining claims. The FS must apply to the Secretary of Interior for mineral withdrawal actions on NFS lands in accordance with 43 CFR 2310.1-2 (Section 2.2.2).

3.3 Federal Regulations

The FS and the BLM have promulgated management regulations governing locatable mining operations conducted under the Mining Law. Operators on NFS lands must comply with the regulations at 36 CFR 228 Subpart A, while operators on BLM lands must comply with the regulations at 43 CFR 3809, as well as the use and occupancy regulations at 43 CFR 3715. The federal lands in this proposed withdrawal are all managed by the FS and therefore subject to 36 CFR 228 Subpart A; however, BLM's regulation 43 CFR 2310 would still be applicable, as described below. In addition, operators must comply with all other federal, state, and local laws and regulations.

3.3.1 36 CFR 228 Subpart A

These regulations apply to locatable mineral operations conducted under the US mining laws as they affect surface resources on NFS lands under the jurisdiction of the Secretary of Agriculture. It is the purpose of these regulations to set forth rules and procedures through which surface use of NFS lands in connection with operations authorized by the US mining laws (30 U.S.C. 21–54) shall be conducted so as to minimize adverse environmental impacts on NFS surface resources. Mining operations are defined as all functions, work, and activities in conjunction with prospecting, exploring, developing, mining, or processing of mineral resources, and all uses reasonably incident thereto, including roads and other means of access on lands subject to the regulation in this part, regardless of whether said operations take place on or off mining claims.

The 36 CFR 228 Subpart A regulations outline the process and requirements for FS notification and processing of proposed mining operations. It describes the two levels of mining activity (Notice of Intent (NOI) and Plan of Operations (Plan)) and outlines what is required for notification, including a detailed description of the operations, a reclamation plan, and bond requirements. For additional information on the mine Plan permitting process, see Section 3.1.2.

3.3.2 43 CFR 2310

Although the proposed withdrawal is on NFS lands, the administration of the US mining laws is primarily the responsibility of the Department of the Interior through the BLM. The Secretary of Interior ultimately decides whether or not to make, modify, or revoke a withdrawal.

For a withdrawal of more than 5,000 acres from mineral entry, as has been proposed for this project, a mineral resource assessment must also be completed to identify mineral resources within the proposed area of withdrawal (43 CFR 2310.3-2). The analysis must provide information on the general geology, known mineral deposits, past, and present mineral production, mining claims, mineral leases, evaluation of mineral potential, and review of mineral economics. Therefore, as part of this proposed withdrawal process, the FS