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Sent to: Comments-pacificnorthwest-rogueriver-siskiyou@fs.fed.us

Re: Comments on the Environmental Assessment (EA) for the Southwest Oregon Mineral Withdrawal: Docket No. 2015-15954

These comments are submitted on behalf of Earthworks, Klamath Siskiyou Wildlands Center (KS Wild), the Western Environmental Law Center (WELC), Soda Mountain Wilderness Council, Kalmiopsis Audubon, American Whitewater and the Smith River Alliance.

Earthworks is a national non-profit organization dedicated to protecting communities and the environment against the adverse impacts of hardrock mining. KS Wild is an advocate for the forest, wildlife and waters of the Klamath and Rogue River Basin of southwest Oregon and northwest California. WELC uses the power of the law to safeguard the wildlife, wildlands, and communities of the American West. The Smith River Alliance is a non-profit organization dedicated to protecting the Smith River watershed. Kalmiopsis Audubon is the primary local conservation advocacy organization in Curry County, with over 250 members. American Whitewater is a national non-profit organization with a mission to conserve and restore America's whitewater resources. The members of our organizations enjoy hiking, fishing, floating, wildflower viewing and other activities in the region.

We commend the agencies for initiating this process, and we express our strong support for a 20-year mineral withdrawal for 95,806 acres of National Forest System lands on the Rogue River-Siskiyou National Forest and 5,216 acres of Bureau of Land Management lands on the Medford District and Coos Bay Districts.

A mineral withdrawal is needed to protect the extremely high conservation values offered by the public lands in this region, including wild rivers, world-class salmon runs, globally significant botanical diversity, and tremendous recreational opportunities.

The EA adequately justifies the proposed mineral withdrawal, and the Forest Service and BLM should promptly reach its finding of no significant impact.

Our more detailed comments are outlined below.

Sincerely,

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1. The EA uses H.R. 1937 to inappropriately define what constitutes “strategic and critical minerals.”

The EA uses H.R. 1937 to define what constitutes a “strategic and critical mineral.” (EA P. 14) It further determines, based on the definition in the draft legislation, that “Nickel remains a critical mineral for end-uses discussed, and, therefore, remains a strategic mineral.”

The definition for critical and strategic minerals used in this section is inappropriately excerpted from draft legislation, rather than using a definition from existing statutory language. The conclusions are therefore unsupported. H.R. 1937 has merely been introduced, not enacted, and therefore has no statutory authority. That language, and the associated definition of a strategic and critical mineral, should not be included in the EA.

In contrast, the Strategic and Critical Materials Stock Piling Act (50 U.S.C. § 98 et seq.) does have statutory authority. Section 12 (1) of the Stock Piling Act defines strategic and critical materials as materials that (A) would be needed to supply the military, industrial, and essential civilian needs of the United States *during a national emergency* and (B) are not found or produced in the United States in sufficient quantities to meet such need. This Act provides for the acquisition and retention of stocks of strategic and critical materials and encourages the conservation and development of sources of such materials within the United States. It specifically tasks the Department of Defense with issuing a report every other year that identifies and makes recommendations concerning these minerals.

According to the 2015 Strategic and Critical Minerals Report, the National Defense Strategy Program implemented a method for identifying strategic and critical materials. It identified net shortfalls for 21 materials (aluminum oxide, (fused crude), antimony, beryllium metal, carbon fiber (two types) chlorosulfonated polyethylene, europium, germanium, lanthanum, magnesium, manganese metal, (electrolytic) and silicon carbide fiber (multifilament). (p. 2-3, DOD)¹ Nickel is not amongst the list of 21 materials.

2. Mineral withdrawals under FLPMA are “outside the authority of National Forest Planning” and therefore need not conform to existing forest plans.

It should be noted that the segregation and withdrawal do not have to be consistent with the BLM RMP or Forest Service Forest Plan. Under FLPMA and the NFMA, RMPs and Forest Plans cannot by law open or close lands to mineral entry. FLPMA mandates that “public lands shall be removed from or restored to the operation of the Mining Law of 1872 ... *only* by withdrawal action pursuant to [43 U.S.C.] section 1714.” 43 U.S.C. § 1712(e)(3) (emphasis added). Decisions to close public lands to mineral entry can be made only by act of Congress or by express authority delegated by Congress, such as FLPMA’s withdrawal authority or the Antiquities Act (which permits the President to withdraw lands for national monuments). 54 U.S.C. § 320301.

¹ U.S. Department of Defense, Strategic and Critical Materials 2015 Report on Stockpile Requirements: Under Secretary of Defense Acquisition, Technology and Logistics, January 2015. Available at: <https://www.hSDL.org/?view&did=764766>

Thus, though the Forest Service *regulates* mining operations under the NFMA (and the BLM regulates mining under FLPMA), the Forest Service and BLM cannot open or close lands to mining through land use planning processes (such as Forest Plans and RMPs). Instead, a Forest Plan/RMP can only reflect the fact that some lands are open and others closed to mineral entry. A FLPMA withdrawal thus by its very nature cannot conflict with a Forest Plan/RMP.

This was the express holding in the recent case rejecting multiple challenges to the Interior Secretary's withdrawal of BLM and USFS lands around Grand Canyon National Park, where the federal court rejected the plaintiffs' arguments that FLPMA withdrawals must be consistent with the RMP and Forest Plan.

These statutes [FLPMA and NFMA] and regulations make clear that the Secretary of Agriculture and the forest plans created within his agency do not have authority to open or close lands to mining. That power has been delegated by the FLPMA to the Secretary of the Interior. **The ROD therefore correctly concluded that Forest Service management plans do not apply to mining-related withdrawals.** Such plans may provide some regulation of mining on Forest Service lands when mining is otherwise permitted, as it will be for existing valid claims in the withdrawal area, but they do not have the legal effect of opening or closing those lands to mining. Given this fact, the Withdrawal was not an amendment of any mining right granted by a Forest Service plan.

Yount v. Salazar, 2014 WL 4904423 *24 (D.AZ. 2014) (emphasis added).

Although the industry groups have appealed that decision, the brief in support of that decision filed by the Interior, Agriculture, and Justice Departments correctly stated, after discussing how USFS and BLM land use planning processes and documents do not apply to FLPMA withdrawals, that:

Accordingly, the withdrawal decision correctly stated that withdrawals of lands from the mining laws are “outside the authority of National Forest Planning” and therefore need not conform to existing forest plans.

Answering Brief filed by Federal Defendants /Appellees in *National Mining Association v. Jewell*, at 110 (Case Nos. 14-17350, 14-17351, 14-17352, 14-17374, 9th Cir. Aug. 19, 2015) (attached).

3. The proposed mineral withdrawal is essential to protecting the high conservation values of the area because the 1872 Mining Law and associated case law prioritizes mining over all other land uses.

The General Mining Law of 1872, more commonly known as the 1872 Mining Law, is the fundamental statute governing hardrock mineral development on federal public lands.² Its central

² Act of May 10, 1872, 17 Stat. 91 (codified as amended at 30 U.S.C. §§ 22-47 (1994)). The Law, although originally covering most minerals, is now limited to what are commonly known as “locatable” minerals. The most important of these types of minerals are “hardrock” minerals such as gold, silver, copper, molybdenum, and uranium, among others. Non-uranium “fuel” minerals such as oil and gas and coal, were removed from operation of

tenet, unchanged in 143 years, is that: “all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase . . .”

Under The General Mining Law of 1872 and related case law, the United States Forest Service and Bureau of Land Management prioritize mining over all other land uses. The agencies assert that they have no authority to prohibit an otherwise reasonable plan of operations for such mining (i.e., one that can be characterized as the logical next step in the orderly development of a mine).

It is the position of the Forest Service that absent a mineral withdrawal the agency has no authority to prevent mining from occurring even to protect exceptional conservation values. This position is described in a preliminary decision memo regarding the proposal to conduct exploratory drilling at Red Flat (RFG38), Gold Beach Ranger Tina Lanier stated: “Under this law and related case law the United States Department of Agriculture (USDA) Forest Service has no authority to prohibit an otherwise reasonable plan of operations for such mining.”³

As a result, a mineral withdrawal is necessary to protect high conservation values and maintain the current environmental baseline, relative to mining, mineral exploration and development and geothermal energy development, while Congress considers legislation enacting a permanent withdrawal from mineral entry for the federal lands depicted on the map.

4. The EA appropriately identifies important conservation values within the mineral withdrawal, including unique botanical ecosystems, threatened and endangered species, and wild and scenic rivers, etc.

While the EA clearly identifies the wide-scale presence of serpentine soils within the withdrawal area, and the unique ecosystems they support (EA, p. 19), we’d like to provide additional supporting information about the conservation value of this resource. The Oregon Department of Fish and Wildlife’s Conservation Strategy 2006, describes the high conservation value of the region: (ODFW, 2006)

Partly because of its unique geology, the Klamath Mountains ecoregion boasts a high rate of species diversity, including many species found only locally. In fact, the Klamath Siskiyou region was included in the World Wildlife Fund’s assessment of the 200 locations most important for species diversity worldwide. The region is particularly rich in plant species, including many pockets of endemic communities and some of the most diverse plant communities in the world. For example, there are more kinds of cone-bearing trees found in the Klamath Mountains ecoregion than anywhere else in North America. In all, there are about 4000 native plants in Oregon, and about half of these are found in the

the Mining Law by the Mineral Leasing Act of 1920, 30 U.S.C. §§ 201-210 (1994) and are regulated under entirely separate statutory and regulatory regimes. In addition, the Surface Resources Act of 1947, as amended in 1955, removed “common varieties” of sand, stone, gravel, and clay from operation of the 1872 Law. See 30 U.S.C. §§ 601-615 (1994).

³ Preliminary Decision Memo, RFG38, Test Drilling for Red Flat Nickel Corporation, Nov. 6, 2013.

Klamath Mountains ecoregion. The ecoregion is noted as an Area of Global Botanical Significance (one of only seven in North America) and world “Center of Plant Diversity” by the World Conservation Union. The ecoregion boasts many unique invertebrates, although many of these are not as well studied as their plant counterparts.

The U.S. Fish and Wildlife Service in its comment letter on the mineral withdrawal also highlights the tremendous conservation value of the region, stating that:

The K-S bioregion is well-known for its vast array of unusual and endemic flowering plants. This is exemplified by BLM and USFS having established thousands of acres of Areas of Critical Environmental Concern and designated botanical areas, particularly in Rough and Ready Creek, due to rare and endemic plants. Several of the rare plant species include ESA protected Gentner's fritillary and Cook's desert parsley, which occur in the proposed withdrawal area.

Protection of the withdrawal area will further conservation of the listed plants by providing broad distribution and sources of connectivity for these small and isolated plant populations. (USFWS, 2015)

The area's value for biological diversity is reiterated by the Forest Service, “The Klamath Siskiyou Mountains are considered a center of diversity and endemism. Species of special assemblages occur in this geographic area and nowhere else in the world. Much of the area's diversity is attributed to the extensiveness of serpentine landscapes and the endemic species they support.” (USDA website)

5. Hardrock mineral exploration and development are incompatible with the protection of the high conservation values contained in the proposed mineral withdrawal area.

SOILS: The EA makes clear that mineral exploration has already heavily effected soils. (EA, p. 22) We would also like to provide additional information on the effects of exploration activities, road construction, mineral development on serpentine soils, and the vegetation it supports. The only nickel laterite mine in the U.S. operated at Riddle Oregon. Regardless of the type of deposit or the type of processing that was used, the mine illustrates the extensive surface disturbance that occurs at surface mines, and clearly highlights the difficulties in re-establishing vegetation. The 2012 google map image (below) of the Riddle Mine, which mined nickel laterite deposits into the 1990s and has been closed for nearly twenty years, illustrates the issue well.



A 2012 google map image of the Riddle Mine, which mined nickel laterite deposits into the 1990s, but has been closed since then.

The scientific literature identifies serpentine soils as highly erosive and documents the adverse effects of mining and construction activities on these soil systems and the significant uncertainties associated with reclamation. According to O'Dell and Claasen (2006), maintaining vegetative cover is important for serpentine substrates because they are highly erosive and contain high concentrations of toxic heavy metals and asbestos. Odell and Claasen (2009) states:

Mining and construction activities typically remove serpentine topsoil down to bedrock. Removal of the topsoil results in loss of the biologically important biological features associated with it that support vegetation including water-holding capacity, CEC, organic matter, plant essential nutrients, plant seed, mycorrhizal propagules, and associated microbial communities, resulting in drastically disturbed, barren landscapes, which are erosive and fail to naturally revegetate, even after a prolonged period of time. The barren landscapes result in elevated sediment and heavy metal transport to watersheds and are a source of wind-borne heavy metal and asbestos pollution, all of which have negative impacts on ecosystems and human health. Revegetation of drastically disturbed landscapes can reduce adverse environmental and human health impacts from mine lands; however, revegetation is not accomplished without great difficulty, particularly for serpentine.

AQUATICS: The EA identifies a number of adverse effects of mining activity on aquatic habitat and water quality (EA, Table 6, p. 37&38). It further identifies likely adverse effects to aquatic threatened and endangered species and critical habitat (Table 7, p. 39). We would like to

provide additional supporting materials on the adverse effects of mineral exploration and development on aquatic life and water quality.

The U.S. Fish and Wildlife Service describes the K-S bioregion as an expression of its biological diversity and unique evolutionary history. It says that because of these unique factors, it hosts some of the most productive salmon and steelhead fisheries outside of Alaska. The agency further states that “Salmonid strongholds, including ESA listed Coho salmon and nationally significant Wild and Scenic Rivers, occur throughout the proposed withdrawal area. Pacific lamprey, a Service Species of Concern, also occurs throughout the proposed withdrawal area. Withdrawing this area from mining will provide needed long-term habitat conservation benefits to lamprey and native freshwater resident fishes while simultaneously benefiting anadromous salmonid species.” (USFWS, 2015)

It further states the incompatibility of protecting these resources from mining. “Straddling the Oregon-California border, the K-S bioregion contains some of the largest concentration of intact watersheds on the west coast and world renowned biodiversity. These exceptionally high resource values, including several federal candidate and listed species, makes mining incompatible with the resource values and conservation investments in the bioregion. For these reasons, I urge the land management agencies to follow through on the proposed mineral withdrawal of the approximately 100,000 acres of federal lands in the K-S bioregion.” (USFWS, 2015)

The Oregon Department of Fish and Wildlife also agree that the withdrawal is necessary, stating that: “The extraction of minerals associated with metal mining generates large amounts of waste, which creates the potential for significant releases of sediment or contaminants into adjacent waterways. The Klamath geologic province, which encompasses all of the area in southwest Oregon included in the proposed mineral withdrawal, is very erosive and prone to landslides. Siting a large-scale metal mining operation in this area would pose great risk to the fishery resources in southwest Oregon.” (ODFW, 2015)

The scientific literature contains extensive documentation of adverse effects on fish and aquatic life from mining activities. The perception that the existing regulatory structure can effectively prevent water quality impacts has been effectively challenged by a 2006 comprehensive study of modern U.S. mines. (Kuipers & Maest, 2006) Despite predicted compliance of permit conditions, many operating metal mines have violated water quality criteria. The study compared predicted water quality impacts to observed impacts found at a sample of 25 U.S. mines. In summary it found that:

- 100% of mines predicted compliance with water quality standards prior to operations (assuming pre-operations water quality was in compliance).
- 76% of mines exceeded water quality criteria as a result of mining.
- 64% of mines employed mitigation measures that failed to prevent water quality contamination.

Similarly, extensive case studies outlined by fisheries biologists in the scientific journal *Fisheries* describe the impacts to aquatic life from modern hardrock mines regulated under the 1872 Mining Law, and identify the inadequacies of the existing regulatory structure. (Woody et al. 2012)

The effects of roads for mineral exploration and development are well documented for their adverse effects. Trombulak & Frissell (2000) conducted a review of the scientific literature on the ecological effects of roads on aquatic life and found support for the general conclusion that they are associated with negative effects on biotic integrity in both terrestrial and aquatic ecosystems, including modification of animal behavior, alteration of the physical environment, alteration of the chemical environment, spread of exotics and increased use of areas by humans. Overall, the presence of roads is highly correlated with changes in species composition, population sizes and hydrologic and geomorphic processes that shape aquatic and riparian systems.

It is also useful to review the Environmental Impact Statement for the Gasquet Mountain Mining Project in the Six Rivers National Forest to understand the potential impacts of nickel laterite mining. Although the project was never developed, the EIS identified a number of potential impacts from surface mining, roads and pipelines. The project area was on an 8,000 acre claim block south of the 2015 SW Oregon Mineral Withdrawal.

According to the Draft Environmental Impact Statement (USDA, 1983) Cal-Nickel's proposed project would present moderate risks of reactivating landslides, and triggering large progressive slope failures. Landslides could have moderately to highly adverse impacts on streams and fish habitat. Ground disturbance would create a moderate potential for localized deposition of sediment in streams. There would also be a high risk of significantly reduced groundwater and surface-water quality resulting from tailings leachate. Overall, the adverse effects on fish habitat would be considered moderate, with the highest potential in Hardscrabble Creek during low-flow periods. The potential for long-term revegetation would be low. There would be an associated high risk that much of the altered wildlife habitat in the mined area would remain in a degraded condition for a considerable time. The mining and processing activities would result in moderate loss of unique bog habitat, potential localized air emissions damage to vegetation, and the direct loss of significant percentages of the known populations of six Sensitive Plants.

BOTANY: The EA identifies potential impacts to threatened and endangered plants, stating that, "Within the existing claim areas *Streptanthus howellii* has the highest potential to be impacted by current and future PoO's because the heart of the species range falls directly within this proposed withdrawal area." It further states that without mitigation through a NEPA process, there would be high potential for individuals or clumps of plants to be impacted by existing and future mining plans within existing claims.

We agree with the EA's statement that "Withdrawing these lands for the next five years while Congress considers legislation to permanently withdraw them may result in the protection of yet to be found populations of McDonald's rockcress, Cook's lomatium, and other sensitive plant species because, except for VER, mining and new claims will be precluded." (EA, P. 50). We agree that there would be high potential for individuals or clumps of plants to be impacted by

existing and future mining plans within existing claims, particularly for laterite mining which requires the removal of top soil. This could certainly result in the local loss of individual plants or clumps of plants. The scientific literature provides examples of the impacts on local vegetation as a result of the strip mining required to develop laterite deposits. (Develsam, 2015)

The impacts of nickel mining to serpentine soils and the rare plants they support has also been acknowledged by the federal and state agencies involved in The Interagency Serpentine Fen Conservation Agreement, which states: “large scale mining of serpentine associated minerals (nickel, chromium, copper and gold) would clearly pose a threat to these taxa if undertaken in areas where they occur.” (USFWS, 2006) The agencies also point to past mining operations as the likely cause for the local extinction of serpentine Darlingtonia plant communities: “The mining at Nickel Mountain was likely responsible for loss of the Douglas County population of rare plants.”

In its “Conservation Assessment for the Gasquet Manzanita,” the Forest Service also identifies nickel mining as a conservation threat to Gasquet Manzanita, another high value conservation species: “Based on the renewed interest in nickel mining in the Siskiyou Mountains this activity must be considered a conservation threat to this species because of its affinity to occur within the ultramafic serpentine soils which are the same areas where nickel can be found.” (USDA, 2010).

WILDLIFE: According to the EA, current claims, if they were ever to be developed, have the potential to impact habitats associated with the listed species, northern spotted owl and marbled murrelet (680 acres of NRF and 1560 acres of dispersal) as well as several other species associated with late seral, early seral and non-forest habitats. (EA Wildlife Report, p. 25) The EA states that Endangered Species Act consultation would occur prior to authorization of any proposed activity, and subsequent minimization measures would be imposed to reduce impacts.

We agree that further development in the current claims would have the potential to impact habitats associated with these listed species. While the Endangered Species Act, and associated mitigation measures associated with an ESA consultation can reduce impacts, it is hypothetical to assume that they will.

ASBESTOS: According to the EA, the majority of existing claims within the mineral withdrawal areas are within areas where soil and/or underlying geology have the potential to contain naturally occurring asbestos. We appreciate that the EA highlights the widespread presence of asbestos within the region, and we'd like to add the following for consideration.

Asbestos has been classified as a carcinogen by state and federal agencies. Asbestos is released from ultramafic and serpentine rock when it is broken or crushed. This can happen when cars drive over unpaved roads or driveways, which are surfaced with these rocks, when land is graded for building purposes, or at quarrying operations. It is also released naturally through weathering and erosion.

Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time. Soil disturbances that destroy soil aggregates and liberate individual particles or expose the parent rock to the atmosphere may increase the risk of exposure to asbestos particles.

(University of California, 2009) It can present a public health hazard if released into the air as a result of mining operations, land clearing, road building, mine traffic, storm-water runoff, etc. Any exposure to asbestos fibers involves some risk of disease. (California EPA) The ATSDR also makes clear that if naturally occurring asbestos is not disturbed and fibers are not released into the air, then it is not a health risk.

6. The 20-year alternative should be recommended by the agencies and selected by the Interior Secretary.

The 20-year withdrawal in aid of legislation is authorized under the Federal Land Policy and Management Act (FLPMA) (see attached Western Mining Action Project memo dated March 13, 2015), and is necessary to ensure that the proposed withdrawal area is protected while Congress has time to consider lasting protection.

Senators Wyden and Merkley and Representatives Defazio and Huffman have introduced legislation, the Southwestern Oregon Watershed and Salmon Protection Act, to provide permanent protection for the proposed withdrawal area. These congressional members are actively advancing this legislation, yet it's important to recognize that public lands bill can take extensive time to move through Congress. Thus, these Congressional members have asked the Interior Department for a 20-year withdrawal to provide them the necessary time to enact legislation. There is broad public support for the 20-year alternative, as demonstrated by the thousands of public comments submitted to the agencies in response to the notice in the Federal Register.

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