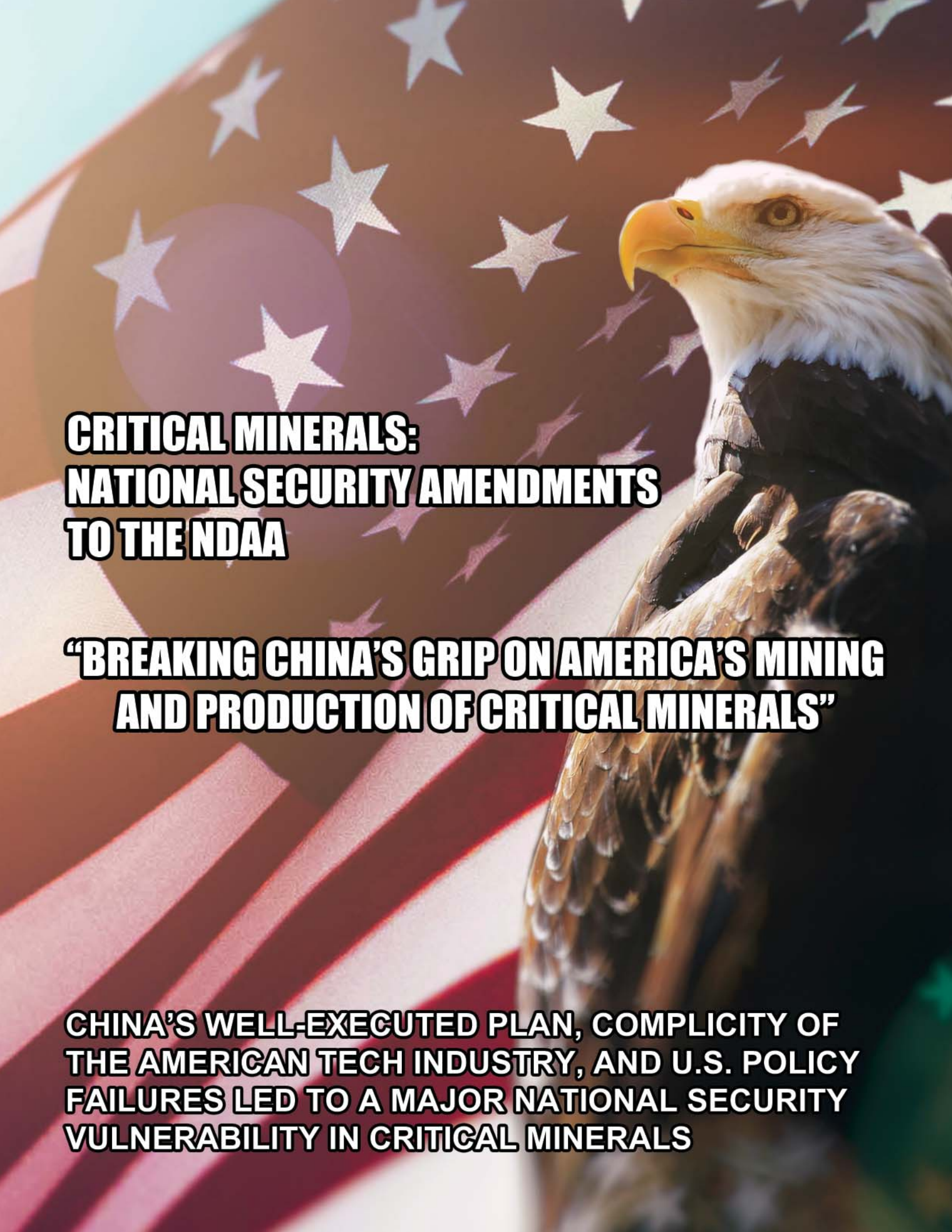


CRITICAL MINERALS: NATIONAL SECURITY AMENDMENTS TO THE NDAA

"BREAKING CHINA'S GRIP ON AMERICA'S MINING AND PRODUCTION OF CRITICAL MINERALS"

CHINA'S WELL-EXECUTED PLAN, COMPLICITY OF THE AMERICAN TECH INDUSTRY, AND U.S. POLICY FAILURES LED TO A MAJOR NATIONAL SECURITY VULNERABILITY IN CRITICAL MINERALS

2017 U.S. NET IMPORT RELIANCE[1]

Commodity	Percent	Major import sources (2013–16)[2]
ARSENIC (trioxide)	100	Morocco, China, Belgium
ASBESTOS	100	Brazil, Russia
CESIUM	100	Canada
FLUORSPAR	100	Mexico, China, South Africa, Vietnam
GALLIUM	100	China, Germany, United Kingdom, Ukraine
GRAPHITE (natural)	100	China, Mexico, Canada, Brazil
INDIUM	100	Canada, China, France, Republic of Korea
MANGANESE	100	South Africa, Gabon, Australia, Georgia
MICA, sheet (natural)	100	China, Brazil, Belgium, Austria
NEPHELINE SYENITE	100	Canada
NIOBIUM (columbium)	100	Brazil, Canada, Russia
QUARTZ CRYSTAL (industrial)	100	China, Japan, Romania, United Kingdom
RARE EARTHS	100	China, Estonia, France, Japan
RUBIDIUM	100	Canada
SCANDIUM	100	China
STRONTIUM	100	Mexico, Germany, China
TANTALUM	100	Brazil, Rwanda, Australia, Canada
THALLIUM	100	Russia, Germany
THORIUM	100	India, United Kingdom
VANADIUM	100	Czechia, Austria, Canada, Republic of Korea
YTTRIUM	100	China, Estonia, Japan, Germany
GEMSTONES	99	Israel, India, Belgium, South Africa
BISMUTH	96	China, Belgium, Peru
POTASH	92	Canada, Russia, Israel, Chile
TITANIUM MINERAL CONCENTRATES	91	South Africa, Australia, Canada, Mozambique
ANTIMONY (oxide)	85	China, Belgium, Bolivia
ZINC	85	Canada, Mexico, Peru, Australia
STONE, dimension	83	China, Brazil, Italy, Turkey
RHENIUM	80	Chile, Belgium, Germany, Poland
ABRASIVES, fused aluminum oxide (crude)	>75	China, Canada, France
ABRASIVES, silicon carbide (crude)	>75	China, Netherlands, South Africa, Romania
BARITE	>75	China, India, Mexico, Morocco
BAUXITE	>75	Jamaica, Brazil, Guinea, Guyana
TELLURIUM	>75	Canada, China, Belgium, Philippines
TIN	75	Peru, Indonesia, Malaysia, Bolivia
COBALT	72	Norway, China, Japan, Finland
PEAT	71	Canada
DIAMOND (dust, grit, and powder)	70	China, Ireland, Russia, Romania
CHROMIUM	69	South Africa, Kazakhstan, Russia
PLATINUM	68	South Africa, Germany, United Kingdom, Russia
SILVER	62	Mexico, Canada, Peru, Poland
ALUMINUM	61	Canada, Russia, United Arab Emirates, China
NICKEL	59	Canada, Norway, Australia, Russia
TITANIUM (sponge)	53	Japan, China, Kazakhstan, Ukraine
GERMANIUM	>50	China, Belgium, Russia, Germany
IODINE	>50	Chile, Japan
IRON OXIDE PIGMENTS (natural)	>50	Cyprus, Spain, France, Austria
IRON OXIDE PIGMENTS (synthetic)	>50	China, Germany, Canada, Brazil
LITHIUM	>50	Chile, Argentina, China
TUNGSTEN	>50	China, Canada, Bolivia, Germany
BROMINE	<50	Israel, China, Jordan
ZIRCONIUM MINERAL CONCENTRATES	<50	South Africa, Australia, Senegal
ZIRCONIUM	<50	China, Germany, Japan
MAGNESIUM COMPOUNDS	47	China, Canada, Australia, Brazil
GARNET (industrial)	46	Australia, India, South Africa, China
PALLADIUM	45	South Africa, Russia, Italy, United Kingdom
MICA, scrap and flake (natural)	42	Canada, China, India, Finland
LEAD	40	Canada, Republic of Korea, Mexico, India
ALUMINA	37	Australia, Suriname, Brazil, Jamaica
SILICON	35	Russia, Brazil, Canada, China
COPPER	33	Chile, Canada, Mexico
VERMICULITE	30	Brazil, South Africa, China, Zimbabwe
PUMICE	27	Greece, Iceland, Mexico
FELDSPAR	26	Turkey, Mexico, Spain

[1]Not all mineral commodities covered in this publication are listed here. Those not shown include mineral commodities for which the United States is a net exporter (abrasives, metallic; boron; clays; diatomite; gold; helium; iron and steel scrap; iron ore; kyanite; molybdenum; sand and gravel, industrial; selenium; soda ash; titanium dioxide pigment; wollastonite; and zeolites) or less than 25% import reliant (beryllium; cadmium; cement; diamond, industrial stones; gypsum; iron and steel; iron and steel slag; lime; magnesium metal; nitrogen (fixed)—ammonia; perlite; phosphate rock; sand and gravel, construction; salt; stone, crushed; sulfur; and talc). For some mineral commodities (hafnium and mercury), not enough information is available to calculate the exact percentage of import reliance.

[2]In descending order of import share.

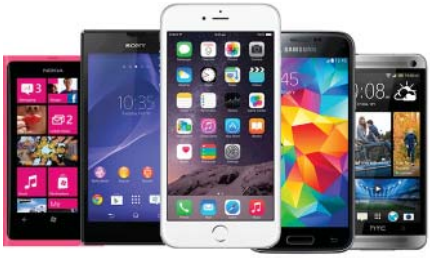
America Needs Critical Minerals for Technology and National Defense

Here's A Few Alarming Facts Every American Should Know

Critical minerals are a necessary component for everyday items from cellphones, flat-screen televisions, electric motors, solar panels, wind turbines, lithium-ion batteries and television screens, to aircraft components, radar arrays, and missile guidance systems.

Tantalum is a required component for tablets, smartphones, and many electronic components in domestic and military applications. It is also used in metal alloys for jet-engine components, nuclear reactors and missiles.

Cobalt is a required alloy for aircraft engines, electronic devices, lithium-ion batteries and related technologies. It's a required component for electric vehicles.



Smartphones require copper, silver, gold, palladium, platinum, tantalum, neodymium, indium and yttrium.

Gallium is needed for cellphones and radar systems. Niobium, maganese, titanium, tungsten, vanadium, strontium, chromium, zirconium and hafnium are just some of the critical minerals needed by our defense and aerospace industries to create lightweight and heat-resistant components.

April 2017: American warships fire Tomahawk missiles on a Syrian airbase in retaliation for chemical attacks on their own people.

We could go on, but you get the picture. Without critical minerals, the items we use in our everyday lives would go away. And without critical minerals, our national defense is in severe jeopardy.

Rare earths are the "beans and bullets for our soldiers on the battlefield," says Dr. Ned Mamula, who spent decades working for the US Geological Survey, the Department of Energy and the intelligence community.

Most Americans cannot name a single rare earth mineral, but our technology and defense industries cannot create products America wants and needs without them. Rare earths include scandium, yttrium, lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium.

> ***For advanced weapon systems and technology products, substitution is not an option. If you want to cook up a batch of Tomahawk cruise missiles, you need lots of neodymium, dysprosium and terbium. Lasers require yttrium and a rail gun needs copious quantities of holmium.***
>
> ***—Dr. Ned Mamula, author of "Groundbreaking! America's New Quest for Mineral Independence"***

In many instances, only a small amount of rare earths are needed to change the properties and bestow valuable characteristics to the end product. But there is no substitute for these items. ***Our nation cannot defend itself without them***.

China Has A Stranglehold On Critical Minerals

China Purposely Put America In A Difficult Position, And We Allowed It To Happen

China put in place an organized, well-thought-out plan to seize control of critical minerals, and then carried out that plan with precision.

China recognized the strategic and critical need for rare earth minerals decades ago.

While America was busy placing more lands off-limits through the use of mineral withdrawals and presidential proclamations, China was implementing their plan to take control of critical minerals mining and production.

1980: China opened its first National Laboratory for Rare Earths.

1991: China opened its second National Laboratory for Rare Earths.

1992: "The Middle East has the oil and China has rare earth minerals." —Chinese leader Deng Xiaoping.

1995: China sets up the National Non-Ferrous Import Corporation to acquire outside critical mineral sources.

1995: China buys US-based Magnequench in Indiana, the only American company producing high-strength rare earth magnets for defense applications.

1998: China closes Magnequench.

1999: China opens their third National Laboratory for Rare Earths in Mongolia.

"The Middle East has the oil and China has rare earth minerals."
—Chinese leader Deng Xiaoping, 1992.

2002: China opens their fourth National Laboratory of Engineering Research Center for Rare Earths.

2003: Last remaining equipment at Magnequench is moved to China and the company is renamed as Neo/Magnequench.

In 1995, China's National Non-Ferrous Import Corporation was allowed to purchase Magnequench, a high-tech magnet manufacturer in Indiana. Three years later, the facility closed its doors. By 2003, the company was renamed and all equipment had been moved to facilities in Tianjin, China.

Excavators dig rare earths at Jiangxi Copper Corp's Sichuan branch in Chengdu, Sichuan Province of China. (ChinaFotoPress)

2005: China attempts to acquire Molycorp, the only US producer of rare earths, but the deal is stopped by US regulators.

2007: China cuts off rare earth supplies to Maryland-based WR Grace and begins restricting supplies to other technology companies. WR Grace was forced to move part of their operations to China in order to access supplies.

2008: China begins acquiring interests in foreign rare earth mines and undeveloped properties.

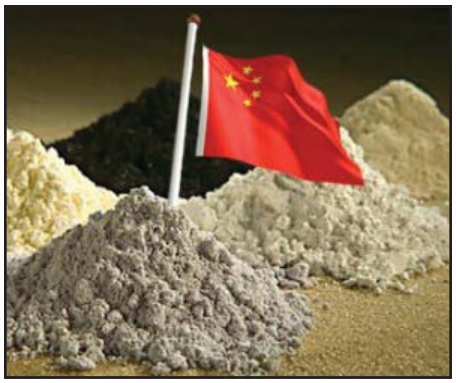
2010: Japan detains the captain of a fishing trawler after a collision with two Japanese coast guard ships. China responds by cutting off rare earth supplies to Japan.

2011: China sets up the China Rare Earth Industry Association to coordinate control of rare earth production and distribution.

2015: China floods the markets with rare earths, causing the prices to collapse and forcing Molycorp, the only US-based producer, into bankruptcy.

2017: Molycorp's Mountain Pass in southern California is acquired by MP Materials, a company minority-owned by the Shenghe Rare Earth Company, Limited, of China.

"Since 2002, the key US technology and defense sectors have been steadily 100% reliant on China for all imported rare earth materials."
—USGS, 2018 Mineral Commodity Summaries



Small amounts of rare earths are essential to providing certain high-tech attributes to more common materials.

American Policies Crippled Our Critical Minerals Mining and Production

The alarm bells are getting louder each year. America is now over 90% dependent on China for critical minerals according to the US Geological Survey—and some reports put that number as high as 95%.

While China set out to corner the market on critical minerals, the United States continued withdrawing lands from mineral entry. Some of these withdrawals were made without surveys of critical minerals completed, while others—like the 25-million-acre California Desert Conservation Area (CDCA)—were withdrawn for the specific purpose of locking up geologically diverse lands to prevent mining and create vast conservation areas.

Meanwhile, radical environmental groups continued to attack, filing lawsuits whenever possible, relying on the 9th Circuit Court to hand them victories in very questionable cases and on federal agencies to hand them millions in settlement and attorney fees. It's no wonder mining exploration investment fell from 20% of worldwide mining investment in 1997 to an anemic 7% in 2016.

China began copying and reproducing Apple's products on an industrial scale after the company relocated manufacturing to China to maintain supplies.

1973: US law banned the procurement of specialty metals produced outside the United States for use on American weapons.

1976: Congress passed the Federal Land Management and Policy Act (FLPMA), which began the process of creating more Wilderness Study Areas regardless of the mineral potential of many of those areas, and created the 25-million-acre California Desert Conservation Area, placing critical minerals in this geology-rich area off-limits.

1980: National Regulatory Commission establishes a threshold of 0.05% thorium for low level radioactive waste, which is so low it prevents the reprocessing of tailings (waste) at historic mining operations.

1984: The US Supreme Court grants deference to a government agency to interpret its own rules, denying miners and other public land users regulatory certainty, in *Chevron USA, Inc, v Natural Resources Defense Council, Inc.*(467 U.S. 837).

1987: The US Supreme Court warned "…it is at least clear that ***duplicative federal and state permit requirements create an intolerable conflict*** in decision-making. In view of the Property Clause of the Constitution, as well as common sense, federal authority must control with respect to land belonging to the United States."(*California Coastal Commission v. Granite Rock Co.* 480 U.S. 572.)

1995: US allows China's National Non-Ferrous Import Corporation to acquire US-based Magnequench, in Indiana, a rare earth pioneer and subsidiary of General Motors.

1996: President Bill Clinton begins closing the US Bureau of Mines.

1998: China closes Magnequench, the only producer of rare earth magnets in the US capable of producing magnets for national defense applications.

The Bureau of Mines led the world in the collection, analysis and dissemination of information until it was dismantled during the Clinton administration.

1999: House Select Committee on US National Security and Military/Commercial Concerns issues a 900-page report warning that China is capturing military and other technologies, including utilization of rare earths.

2003: Last remaining equipment at Magnequench is moved to China.

2005: Apple begins manufacturing iPhones in China.

2005: The US Department of Agriculture issues a final rule that allows individual national forests to create Travel Management Plans, which starts the process of removing access to roads and trails leading to known and potential future mining sites across America.

2006: A US law bans the purchase of end-use military items and components that include such specialty metals from China.

2012: 9th Circuit Court, in K*aruk v. US Forest Service* (681 F.3d 1006), rules an inaction can be deemed an action and subject to NEPA.

2012: 9th Circuit Court, in *PLP v. USDA* (697 F.3d 1192) allows the Forest Service to determine that a road is not a road, and rules the agency can force miners to submit a Plan of Operation. The agency then refuses to approve that Plan of Operation, locking out the mining investment.

2013: Brigadier General John Adams (US Army, Retired) reports that urgent action is needed to reduce dependence on China for military parts, finished products and raw materials.

2014: Obama administration issues a waiver to allow two American weapons manufacturers to avoid sanctions despite legal restrictions on using Chinese components because the high-strength magnets needed for the next-generation F-35 fighter can only be obtained from China.

2015: Molycorp's Mountain Pass rare earth mine, the only operating rare earth mine in the country, files for bankruptcy after China floods the market and deliberately guts rare earth prices.

2016: GAO report states the obvious—rare earths are a "bedrock national security issue."

2016: USGS estimates China produced approximately 157,000 tons of rare earths when licensed and illegal operations are combined, accounting for 95% of global output.

2017: Molycorp's Mountain Pass in southern California is acquired by MP Materials, a company minority-owned by the Shenghe Rare Earth Company, Limited, of China.

2017: In *People v. Rinehart* (No. S222620) the CA Supreme court upheld the conviction of miner Rinehart for not obtaining a CA State dredge permit even when the State refused to issue the permit on federal lands.

2018: China's trade surplus with the United States of America reaches $323 billion.

American Tech Companies: Destroying The Environment On A Massive Scale By Sourcing Critical Minerals From China

Mining in the United States has evolved. America has the strictest environmental regulations in the world. Despite having a wealth of critical mineral supplies available in the United States, we cannot attract adequate mining investment when it often takes more than a decade to obtain the necessary permits.

So America must get the critical minerals from outside sources, and at the top of that list is China. This begs the question, "How does China treat the environment?" It's difficult to get accurate data on China's environmental record due to the secrecy of the communist regime, but we do have some insight from a few brave souls who have spoken with the media.

Pipes coming from a rare-earth smelting plant spew into a tailings dam on the outskirts of Baotou in China's Inner Mongolia autonomous region. (David Gray/Reuters)

In "Rare-earth mining in China comes at a heavy cost for local villages" (theguardian.com), Cecile Bontron wrote:

Pollution is poisoning the farms and villages of the region that processes the precious minerals.

From the air it looks like a huge lake, fed by many tributaries, but on the ground it turns out to be a murky expanse of water, in which no fish or algae can survive. The shore is coated with a black crust, so thick you can walk on it. Into this huge, 10 sq km tailings pond nearby factories discharge water loaded with chemicals used to process the 17 most sought after minerals in the world, collectively known as rare earths.

The foul waters of the tailings pond contain all sorts of toxic chemicals, but also radioactive elements such as thorium which, if ingested, cause cancers of the pancreas and lungs, and leukaemia.

"Before the factories were built, there were just fields here as far as the eye can see. In the place of this radioactive sludge, there were watermelons, aubergines and tomatoes," says Li Guirong with a sigh.

Now the soil and groundwater are saturated with toxic substances. Five years ago Li had to get rid of his sick pigs, the last survivors of a collection of cows, horses, chickens and goats, killed off by the toxins.

A worker pours rare earth metal lanthanum into a mould near the town of Damao, in China's Inner Mongolia Autonomous Region. (David Gray/Reuters)

A mining.com article titled, "Rare earth mining in China: Low tech, dirty and devastating," declared a "report by state news agency Xinhua paints a particularly grim picture of China's rare earth industry which belies the notion, held by many in the West, that China's crackdown has more to do with managing supply and extracting lofty profits than it is about cleaning up a notoriously dirty business."

"The Yellow River, which provides water to millions of people in northern China, is now so badly polluted that 85 per cent of it is unsafe for drinking," said Malcolm Moore in an article for *The Telegraph*.

In "Made In China: Our Toxic, Imported Air Pollution," David Kirby of *Discover Magazine* writes:

Even as America tightens emission standards, the fast-growing economies of Asia are filling the air

with hazardous components that circumnavigate the globe.

China in particular stands out because of its sudden role as the world's factory, its enormous population, and the mass migration of that population to urban centers; 350 million people, equivalent to the entire U.S. population, will be moving to its cities over the next 10 years. China now emits more mercury than the United States, India, and Europe combined. "What's different about China is the scale and speed of pollution and environmental degradation," Turner says. "It's like nothing the world has ever seen."

Trace amounts of the poison can take less than a week to reach Oregon, where research suggests that about one-fifth of the mercury entering the Willamette River comes from abroad—increasingly from China.

China's smog-filled cities are ringed with heavy industry, metal smelters, and coal-fired power plants, all crucial to that fast-growing economy even as they spew tons of carbon, metals, gases, and soot into the air.

Shelby Wood, writing in *The Oregonian*, "The inky smoke belched by chimneys in Chinese cities such as Linfen and Datong contains mercury, a metal linked to fetal and child development problems. Trace amounts of the poison can take less than a week to reach Oregon, where research suggests that about one-fifth of the mercury entering the Willamette River comes from abroad—increasingly from China."

These are just a few of the high tech companies relying on environmentally destructive mining practices in China to get the critical minerals they need to manufacture their products.

Dan Jaffe, an atmospheric and environmental chemistry professor at the University of Washington at Bothell, calculated that Asia emits 1,460 metric tons of mercury a year, twice as much as previously thought—*and that was back in 2004!*

So how does all this relate to American tech companies?

Big American tech companies like Apple, Dell, Seagate, HP, Google, Facebook, Amazon, Tesla, Solar City, GE—are all complicit by sourcing critical minerals from China.

Computers, hard drives and servers contain critical minerals that could be mined and manufactured here in America with a return to reasonable mining regulations. An iPhone requires 54 minerals to construct, including 15 critical minerals sourced from China. Circuit boards require critical minerals sourced from China, including tin, silicon, aluminum, and the list goes on. Battery backups require aluminum, cobalt, lithium and graphite.

Green technology relies heavily on critical minerals. A Tesla electric car requires massive amounts of lithium, cobalt, aluminum and graphite, all critical minerals imported from China. Dysprosium, neodymium, terbium yttrium and europium are used in green energy products like solar panels and wind turbines. Gallium, tellurium and indium are utilized in solar panels. All of these critical minerals are sourced from dirty mining in China.

America has vast resources of critical minerals and the strictest environmental standards in the world, but miners need the regulatory certainty necessary to invest in sustainable operations and tech companies must take an ethical stand to stop the rampant, environmental destruction in China.

And Then There Is The Matter Of Intellectual Property Rights

China has swiped everything from plans for the F-35 fighter (2016) to supersonic missiles (2018) to a T-Mobile robot designed to test cellphones (2019).

The US' Commission on the Theft of American Intellectual Property (IP Commission) estimated that the counterfeit and pirated tangible goods–from fake Rolex watches and Nike shoes to Louis Vuitton bags and Apple iPhones–exported in 2015 from mainland China and Hong Kong accounted for ***87 per cent of the global total***, with a value of between US$50 billion and US$100 billion.

The IP commission estimated that in 2015 US losses from the theft of commercial and trade secrets were in the range of US$180 billion to US$540 billion, with most of those attributed to China.

According to Dr. Ned Mamula in "Groundbreaking! America's New Quest for Mineral Independence," companies like Apple were literally forced to manufacture products in China to maintain a supply chain.

Dr. Mamula writes, "China was able to copy and reproduce Apple's products on an industrial scale. In the fourth quarter 2015, China sold more knock-offs worldwide than Apple sold iPhones.

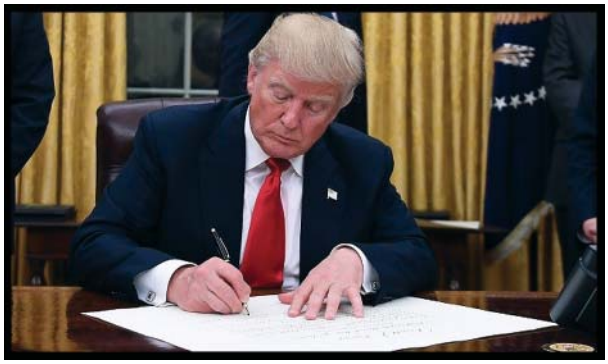
"As companies are forced to move to China to gain access to rare earths, this continual threat of loss of control over intellectual property greatly diminishes American leadership positions in strategic industries."

China's "Made in China 2025" industrial modernization program includes subsidies for state-run companies developing advanced semiconductors, so don't expect IP theft to slow down anytime soon.

The US Has A Wealth of Critical Minerals —And There Is A Supply Chain Solution

The National Mining Association estimates there is in excess of $6 trillion worth of minerals and metals beneath our feet. But like a cancer left untreated, America's national security will grind to an agonizing halt without reliable supplies of critical minerals and the regulatory certainty industry needs to locate, extract and refine them. This needs to end, right here, and right now.

History tends to repeat itself. In the early 1970s, the Organization of Petrolium Exporting Countries (OPEC) created chaos in America by withholding petroleum supplies to retaliate against America for supporting Israel. Gasoline prices in the United States quadrupled and the lack of supplies led to rationing across the United States.



Recognizing America's vulnerability to China's monopoly on critical minerals, President Trump signed Executive Order #13817 on December 20, 2017.

America is in an unenviable position with respect to China and critical minerals. If the Chinese want to cut off our supplies of critical minerals in a trade dispute or other conflict, America is currently helpless to respond. In 2010, China cut off rare earth supplies to Japan following a maritime dispute, which brought their technology and military industries to a standstill.

According to Dr. Ned Mamula, the US has no stockpiles available for 12 of the rare earths needed for national security. We are currently 100% dependent on China for all rare earth minerals and for 25 other critical minerals.

Current permitting schemes can take ten years, fifteen years, or even longer for a mining company to get from exploration to production. That's assuming the resource has already been identified and has not been locked up by a withdrawal. And there are currently no facilities in the United States to take rare earth ore and extract the minerals to produce a useable product.

The tide is beginning to turn, albeit very slowly.

On December 20, 2017, President Trump signed Executive Order #13817, requiring the federal government to develop and implement a strategy to reduce the nation's dependence on foreign sources for critical and strategic minerals and metals.

Former DOI Secretary Zinke followed up with secretarial order 3359 the next day to speed the process of defining critical minerals, improve identification of current and potential deposits, and streamline permitting.

For the past four years, the nonprofit group Public Lands for the People, along with monthly trade magazine *ICMJs Prospecting and Mining Journal*, have teamed up to design a solution. What came out of this effort is a set of proposed amendments to the National Defense Authorization Act that will allow for the extraction of critical minerals in America while still maintaining strong environmental safeguards.

The recommended changes in this proposed legislation can and will break China's stranglehold on our critical minerals supply chain.

China has achieved monopoly control of rare earths and other critical minerals essential to America's military and high-tech industries.

Without a reliable domestic supply of these minerals, we cannot maintain our advantage in industry nor on the battlefield.

China currently has the ability to bring our military to a standstill by cutting off our supplies of critical minerals.

These proposed amendments are a huge step in the right direction.

I urge you to support "Critical Minerals: National Security Amendments to the NDAA—Breaking China's Grip on America's Mining and Production of Critical Minerals."

It is a matter of national security.

— Brigadier General John Adams, US Army (Retired)

Without a reasonable permit system and access to known and potential mineral deposits, there cannot be regulatory certainty.

Without regulatory certainty, there will be no development of critical minerals in the United States and no critical minerals supply chain.

And without a critical minerals supply chain in America, our national security is continually in jeopardy.

I urge members of Congress to pass these proposed amendments to the NDAA <u>before</u> a conflict arises that provokes China to take advantage of our failed policies.

—Scott Harn, Editor/Publisher
ICMJ's Prospecting and Mining Journal

Critical Minerals: National Security Amendments to the NDAA

"Breaking China's Grip on America's Mining and Production of Critical Minerals"

(Submitted by Public Lands for the People and ICMJ's Prospecting and Mining Journal)

[Text in blue is for explanatory purposes only and shall be removed in the final, submitted version.]

Mining companies in America will not invest without **regulatory certainty**. US courts—especially the 9th Circuit—and federal agencies have muddied the waters, calling an "inaction" the same as an "action" in terms of NEPA and deferring to an agency's own interpretation of their regulations under the Chevron deference doctrine.

The EPA continues to require permits for insignificant activities, even those when there is *no addition* of a pollutant as required by statute.

Forest Service Travel Management Plans have blocked access to existing and promising exploration targets with the aid of the 9th Circuit which ruled the Forest Service can determine when "a road is not a road."

The US Forest Service continues to rely on varying interpretations of what constitutes a "significant disturbance of surface resources" which denies a miner regulatory certainty.

US permitting can take seven to ten years, or more—as compared to a two to three-year process with similar environmental constraints in Canada and Australia—which has made America an undesirable and unprofitable location for critical mineral development.

America's reliance on unfriendly countries for key minerals has created economic and national security risks that are unacceptable.

Congress finds that—

(1) in agreement with Executive Order 13817, the United States of America is heavily reliant on imports of certain mineral commodities that are vital to our national security and economic prosperity;

(2) in agreement with Executive Order 13771, the United States of America has a duty to manage the costs associated with the governmental imposition of private expenditures required to comply with federal regulations;

(3) in agreement with Executive Order 13777, the United States of America has a duty to alleviate unnecessary regulatory burdens on the American people;

(4) the dependence of the United States of America on foreign sources creates a strategic vulnerability for both its economic and military survival;

(5) the availability of minerals and mineral materials is essential for economic growth, national security, technological innovation, and the manufacturing and agricultural supply chains;

(6) the exploration, production, processing, use, and recycling of minerals contribute significantly to the economic well-being, national security, and general welfare of the United States of America;

(7) the United States of America has vast mineral resources but has become increasingly dependent on foreign sources of mineral resources and is subject to trade embargoes and immediate shortfalls should a conflict with a foreign entity arise;

(8) providing regulatory certainty will improve the exploration for and production of key minerals in the United States of America.

The recent inclusion of critical minerals in the NDAA by Congressman Mark Amodei and former Senator Dean Heller in the last NDAA cycle was a baby step in the right direction but fell far short of jump-starting critical mineral exploration and production in America.

We have proposed specific changes that maintain environmental protection while providing the critical minerals needed for America's national security.

[Section 101. Allows for the reimbursement of legal fees when a miner prevails in court and the federal government acted in bad faith.]

SECTION 101: IMPROVING REGULATORY ACCOUNTABILITY

Any federal unpatented mining claimant who prevails in a legal action shall be awarded his reasonable fees and expenses of attorneys, including any expert witness charges, to be paid as provided in sections 2414 and 2517 of title 28, except that if the basis for the award is a finding that the United States acted in bad faith, then the award shall be paid by any agency found to have acted in bad faith and shall be in addition to any relief provided in the judgment.

In any other case involving the exercise of rights under the 1872 Mining Act, as amended, section 2412(d)(1)(A) of title 28 shall be applied without regard to the language beginning with the word "unless" or "substantially justified".

[Section 102. Resolves access issues created by Travel Management Plans and allows access via historical RS2477 routes/roads. Eliminates duplication—state ***or*** federal regulations apply, but not both. The miner can choose whether to fall under state regulations in states (i.e. Nevada) that have a working knowledge of the needs of miners and reasonable regulations, and allows miners to choose federal regulations in states that are hostile to mining (i.e. California). Allows miners to file a complaint for undue material interference. Limits scope of Chevron deference.]

SECTION 102: REMOVING OVERLAPPING AND DUPLICATIVE AUTHORITIES

(a) 16 U.S.C. § 478 is amended by:

(i) Adding, after "such rules and regulations as may be prescribed by the Secretary of Agriculture," the phrase "provided, however, that neither the Secretary of Agriculture nor the Secretary of Interior may prohibit, require a permit, or materially restrict motorized access to federal mining claims over historical, visibly-existing or previously-existing trails and roads, or the reasonable restoration or maintenance of such implied easements"; and

(ii) Striking "for all proper and lawful purposes, including that of" and striking "the rules and regulations covering such national forests" and inserting "the rules of the Department of Interior concerning mineral development".

(b) 16 U.S.C. § 551 is amended by adding, after "to regulate their occupancy and use and to preserve the forests thereon from destruction" the phrase "provided, however, that the citation for violation of any such rules and regulations, civil or criminal, is subject to immediate appeal or petition as set forth in 30 U.S.C. § 612(d)."

(c) 16 U.S.C. § 1604 is amended by adding a new subsection (n):

"Renewable Energy" resource planning shall not extend to the development of mineral resources, and renewable resource planning shall be conducted to give full effect to federal mineral development policy as administered by the Secretary of Interior, the Bureau of Land Management."

(d) 30 U.S.C. § 612 is amended by:

(i) adding at the end of subsection 612(b): "Provided further, that no state or political subdivision of a state shall have authority to regulate any prospecting, mining or processing operations upon federal lands, within the boundaries of a federal mining claim(s), without the consent of the owner or operator."

(ii) Adding a new subsection 612(d) as follows:

"Any federal unpatented mining claimant may petition the Bureau of Land Management that any member of the public or any state or federal agency action endangers or materially interferes with prospecting, mining or processing operations or uses reasonably incident thereto."

[Section 103. Clearly defines "casual use" not requiring a permit. Places clear mitigation time limits on reviews and approvals. Places clear requirements to published best management practices and due process to operators through notices of non-compliance. Clearly defines a Notice of Intent is not a major federal action under NEPA or the ESA. Establishes minimum qualifications for those reviewing a Notice or Plan.]

SECTION 103: UNIFORM FEDERAL REGULATION

(a) 43 U.S.C. § 1702 is amended as follows:

(i) New subsections (q), (r) are added:

"(q) 'mine operator' means any person or entity exercising rights of or through the holder of a federal unpatented mining claim.

"(r) Generally 'mining casual use' means excavation and/or processing (including motorized excavation and processing) of less than 1,000 cubic yards of material annually per claim; or surface disturbance of less than five acres of ground; use, maintenance, or occupancy of visibly-existing or previously-existing roads / trails (implied easements), tunnels, mill sites, refining sites, bridges, or existing mining-related buildings; staging, use or occupancy of portable or removable equipment; subsurface operations; or any combination of the foregoing or similarly-limited mineral development activities."

(b) A new section is created at 43 U.S.C § 1748(c), titled: "Administration of Unpatented Mining Claims" with the following additions:

"(a) Federal unpatented mining claims are tracts of public land dedicated to the particular purpose of mineral development, and the exercise of the property rights in federal mining claims are to be managed exclusively in accordance with this section."

"(b) Notices of Intent (NOI) and Plans of Operation (POO)–"

"(i) Mine operators may proceed with mining casual use without notice to the Bureau of Land Management (BLM)."

"(ii) Mine operators must provide a Notice of Intent (NOI) to the BLM thirty (30) days in advance of commencing mining operations beyond casual use. If BLM fails to respond to the NOI within thirty (30) days, the mine operator may commence operations, unless the operation involves a surface disturbance in excess of 100 acres but less than 1,000 acres, in which case BLM shall have twelve (12) months to respond and mitigate impacts, after which the operation is approved by operation of law. All other operations exceeding 1,000 acres shall be covered under a plan of operations and approved by operation of law within twenty-four (24) months"

"(c) Upon receipt of a NOI, BLM shall review the proposed operations for compliance with best management practices and issue a determination as to what, if any, additional best management practices are required. NOIs may be of any duration specified by the mine operator, and the BLM's determination with respect to the NOI shall remain effective for so long as operations continue as specified in the NOI and may be assigned to future mine operators."

"(i) Final reclamation activity in general shall only be required if a mine operator and BLM geologist concur that an ore body is exhausted and that the reclamation will not impede future operations. Seasonal reclamation activity may be required if it will not materially interfere with future mining operations."

"(ii) Reclamation bonding shall only apply if surface disturbance exceeds 5 acres or 1,000 cu. yards annually of processed material per claim. Haul roads, utility roads, temporary milling sites and portable structures, and any other pre-existing land disturbance shall not be included in the 5-acre calculation. Reclamation costs shall be based upon the average of 3 independent bids. BLM shall recognize and give effect to bonding pools through a memorandum of understanding to assist large and small mine operators in meeting the requirements of this section. The bids for bonds and reclamation costs may not be reviewed more often than once every 7 years. Reclamation bonds shall be refunded to the mining operator within one (1) year of completion of the reclamation, even if the site is subject to continuing monitoring."

"(d) Any personnel employed by BLM to review an NOI shall have qualifications of at least a bachelor's degree in mine engineering with a minimum of three (3) years or more experience in private sector commercial mining operations or over five (5) years production mining experience in lode, placer and milling operations."

"(e) If BLM determines that any mine operator is conducting operations beyond casual use without providing an NOI, or that any mine operator is conducting operations contrary to published best management practices, BLM must provide formal, written notice to the mine operator through a Notice of Noncompliance. Such notice shall describe the noncompliance and shall specify the action to comply and the time within which such action is to be completed, generally not to exceed thirty (30) days, *provided, however*, that days during

which the area of operations is inaccessible shall not be included when computing the number of days allowed for compliance. The requirements to issue a Notice of Noncompliance shall apply whether or not the operator has a submitted NOI on file with the BLM and shall not be used to shut down the entire mineral operation. Actual notice shall be presumed effective when mailed by certified mail, return receipt requested to the owner of the mining claim and operator of record as specified in BLM records, or personally served upon the mine operator. No enforcement action by any agency, civil or criminal, may be commenced until after delivery of such notice, and no adverse action may be taken against a mine operator until after a hearing with the protections of 5 U.S.C. § 554. No enforcement action shall halt compliant aspects of the operations that the operator qualifies under casual use activities."

"(f) Action with respect to any NOI shall not be 'major federal action' within the meaning of 42 U.S.C. § 4332 or 'agency action' within the meaning of 16 U.S.C. § 1536(a)(2)."

[Section 104. Provides clarity and exemptions to the Clean Water Act where mine operations are not adding a pollutant or introducing a foreign substance.]

SECTION 104. MINE OPERATION EXEMPTIONS FROM THE CLEAN WATER ACT

(a) "Mining operations which do not add any chemicals to excavated aggregate or ore, other than water, and native materials, shall not be considered an "addition of any pollutant" within the meaning of 33 U.S.C. § 1362(12)."

(b) "Mining and processing discharges from mining and processing involving the use of biodegradable chemicals that have a Material Safety Data Sheet (MSDS) reading, 'This product is not classified as dangerous for the environment,' 'The risk of environmental effects is considered small', or substantially equivalent language shall not be considered the addition of any pollutant within the meaning of 33 USC section 1362(12)."

(c) "Suction dredge and bucket excavation mining within the natural 100-year flood plain of a water body, or operations contained through artificial impoundments to reduce offsite sediment transport comprise incidental fallback and do not represent an 'addition' or 'discharge' within the meaning of 33 U.S.C. §§ 1341, 1342 or 1344."

(i) "Incidental fallback" is defined as: native rock, sand, soil, or vegetative materials picked up, processed to remove or reclaim the mined metal or minerals, and then backfilled at or near the same excavation site. Offsite turbidity in connection with incidental fallback is also not an "addition" or "discharge" within the meaning of 33 U.S.C. §§ 1341, 1342 or 1344."

[Section 105. Provides exemptions to the Mine Safety and Health Administration (MSHA) rules provided the operation does not have employees. (These proposed changes were reviewed and blessed by the top three administrators at MSHA—Kevin Stricklin, Emily Hargrove, Brian Goepfert—during our in-person meeting in May 2018.) Provides clear due process for MSHA non-compliance that eliminates punitive, mine-killing citations while still incentivizing compliance.]

SECTION 105: SMALL MINER EXEMPTION

30 U.S.C. § 803 is amended to add the following two items at the end of the section:

"Provided, however, that operations without any employees, or who hire other non-mining work personnel, are exempt from the provisions of this Chapter and any regulations promulgated thereunder."

"The Mine Safety and Health Administration (MSHA) must provide formal, written due process notice to the mine operator through a Notice of Noncompliance prior to citation. Such notice shall describe the noncompliance and shall specify the action to comply and the time within which such action is to be completed, generally not to exceed thirty (30) days, *provided, however,* that days during which the area of operations is inaccessible shall not be included when computing the number of days allowed for compliance. The requirements to issue a citation shall apply only to visible violations that have not been complied with and shall not be used to shut down the entire mineral operation. Actual notice shall be presumed effective when mailed by certified mail, return receipt requested to the owner of the mining claim and operator of record as specified in MSHA records, or personally served upon the mine operator. No enforcement action by MSHA, civil or criminal, may commence until after delivery of such notice, and no adverse action may be taken against a mine operator until after a hearing with the protections of 5 U.S.C. § 554, unless death or injury has resulted from the non-compliance."

[Section 106. To review and revise regulations of the DOI, USDA, EPA and MSHA consistent with this Act.]

SECTION 106: REVIEW AND REVISE EXISTING FEDERAL REGULATIONS

The Secretary of Interior shall review and revise existing federal regulations, including but not limited to 36 C.F.R. Part 9 and 43 C.F.R. Parts 4 and 3800, to make them congruent with this Act. The Secretary of Agriculture shall review and revise existing federal regulations to make them congruent with this Act, including but not limited to the striking or repeal of 36 C.F.R. Part 228. The Secretary of Labor shall review and revise existing federal regulations to make them congruent with this Act, including but not limited to 30 C.F.R. Parts 1-199. The Administrator of the Environmental Protection Agency shall review and revise existing federal regulations to make them congruent with this Act, including but not limited to 40 C.F.R. Parts 1-50.

[Section 107. Provides for the non-binding of federal consent decrees without the express consent of miner owners.]

SECTION 107: FEDERAL CONSENT ON PUBLIC LANDS

No federal consent decree may be entered into or is binding which effects or affects mineral development upon federal lands without written concurrence of those federal unpatented mining claimants affected to be heard in connection with entry of the decree.

[Section 108. Provides for the mineral patent holder to opt out of duplicative state regulation unless the state declared its intentions to further regulate mine development at the time of patent issuance.]

SECTION 108: DISCRETION OF THE OWNER OR MINERAL OPERATOR

30 U.S.C. § 43 is amended by adding "Any patented mineral lands whereby the State has not declared its intent to regulate surface disturbances as required by provisions of this act; the land owner or

mineral operator at his/her own discretion, may continue to be regulated exclusively under federal law and this part as to surface disturbance and environmental compliance. Duplicative permitting authority by any State agency or subdivision thereof shall be deemed waived by the State, at the discretion of the owner or mineral operator of the property, unless expressly disclosed in the mineral patent."

[Section 109. Provides for the restoration of federal lands that are presently minerally withdrawn by administrative action. Provides opportunities to locate, explore and produce critical minerals for America's national security.]

SECTION 109: MINERAL WITHDRAWN LANDS

43 U.S.C. § 1712(e)(3) is amended by substituting for the phrase "public lands shall be removed from or restored to the operation of the Mining Law of 1872, as amended (R.S. 2318–2352; 30 U.S.C. 21 et seq.) or transferred to another department, bureau, or agency only by withdrawal action pursuant to section 1714 of this title or other action pursuant to applicable law:" and substituting the phrases "With the exception of military reserves and National Parks created prior to 1976, no existing federal managed lands after 1976 shall be removed from operation of the Mining Law of 1872, as amended (R.S. 2318–2352; 30 U.S.C. 21 et seq.), except by Act of Congress. Public lands and federal managed lands reserved under other laws prior to 1976 that have been withdrawn from mineral entry shall be reopened upon petition showing of valuable metals, minerals, or rare earths, upon concurrence of a competent geologist within six (6) months, and upon submission to Congress."

[Section 110. Provides for the removal of the 1980 Nuclear Regulatory Commission (NRC) rule regarding "source material" limits for critical minerals. The NRC adopted International Atomic Energy Agency (IAEA) rules that effectively banned processing of ore and mine tailings in the United States that exceed 0.05% content thorium and/or uranium. The NRC rule should apply only to uranium, which can be used for weapons, and exclude thorium, which is associated with most rare earths. Modification would allow American mining companies to establish a "thorium bank" and share costs. Current alternatives are to rebury tailings or ship them to China—which has a complete rare earth supply chain and a monopoly. NRC can adopt reasonable safeguards currently in use by Australia and Canada while still exercising environmental stewardship.]

SECTION 110: DEFINING SOURCE MATERIALS

"Rules promulgated by the Nuclear Regulatory Commission (NRC) under the Atomic Energy Act of 1954, secs. 53, 63, 103, 104, 122, 161, 223, 234, 1701 (42 U.S.C. 2073, 2093, 2133, 2134, 2152, 2201, 2273, 2282, 2297f); Energy Reorganization Act of 1974, sec. 201 (42 U.S.C. 5841); Nuclear Waste Policy Act of 1982, secs. 135, 141 (42 U.S.C. 10155, 10161) shall only apply to the extraction and processing of uranium ores for weapons-grade material and shall exclude monazite minerals, thorium and other ores that contain rare earth minerals for high technology applications. The NRC shall revise their regulations to exclude thorium from 'source material' limits, this would allow American mining companies to establish a thorium bank and share costs."

In 2012, in *Karuk v. Forest Service* (681 F.3d 1006), the 9th Circuit devastated the small mining community by ruling an inaction on the part of the agency (NOI) is still an action within the meaning of NEPA and the ESA, subjecting the miner to full environmental review even if the operation is "*de minimis*," throwing out a 40-year precedent that provided a modicum of reasonable regulation.

Dissenting Justice Smith explains why Congress must act to reign in the 9th Circuit:

Until today, it was well-established that a regulatory agency's "inaction" is not "action" that triggers the Endangered Species Act's (ESA) arduous inter-agency consultation process. W. Watersheds Project v. Matejko, 468 F.3d 1099, 1108 (9th Cir. 2006). Yet the majority now flouts this crystal-clear and common-sense precedent, and for the first time holds that an agency's decision not to act forces it into a bureaucratic morass.

In my view, decisions such as this one, and some other environmental cases recently handed down by our court, undermine the rule of law, and make poor Gulliver's situation seem fortunate when compared to the plight of those entangled in the ligatures of new rules created out of thin air by such decisions.

No legislature or regulatory agency would enact sweeping rules that create such economic chaos, shutter entire industries, and cause thousands of people to lose their jobs. That is because the legislative and executive branches are directly accountable to the people through elections, and its members know they would be removed swiftly from office were they to enact such rules. In contrast, in order to preserve the vitally important principle of judicial independence, we are not politically accountable. However, because of our lack of public accountability, our job is constitutionally confined to interpreting laws, not creating them out of whole cloth. Unfortunately, I believe the record is clear that our court has strayed with lamentable frequency from its constitutionally limited role (as illustrated supra) when it comes to construing environmental law. When we do so, I fear that we undermine public support for the independence of the judiciary, and cause many to despair of the promise of the rule of law. (Emphasis added.)

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