

# MINNESOTA'S ARROWHEAD: THE LAST FRONTIER

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Minnesota's Palisade Head on Lake Superior

## Excerpted from Minnesota's official song "Hail Minnesota"

*Like the stream the bends to sea,  
Like the pine that seeks the blue;  
Minnesota still for thee  
They sons are strong and true.  
From the woods and waters fair,  
From the prairies waving far;  
At thy call they throng with their shout and song;  
Hailing thee their Northern Star.  
1904-1905*

Much has changed in the state of Minnesota over the past hundred years. Gone are all but remnants of the great forests of white pine and big woods. Prairies and prairie wetlands have been replaced by industry farming. An increasingly populated metro area is wrapping itself around the twin cities of Minneapolis and St. Paul and into central Minnesota. The Iron Range is Swiss-cheesed with underground tunnels, open pits, waste rock piles, and tailings basins.

Due to the fact that it consisted mostly of lakes and wetlands, and that it was free of iron ore deposits, a portion of northeastern Minnesota remained untamed over this past century. This area was named the Arrowhead Region because its shape ends in a pointed tip, tucked in between the Canadian border and alongside Lake Superior. During the first half of the 20<sup>th</sup> century, much of this land became state or federally

owned, including what is now the Boundary Waters Canoe Area Wilderness and Superior National Forest

This landscape is also dotted with private ownership. Homes, cabins, and hunting shacks are scattered along lakes and streams. Remnants of homesteads lie within and adjacent to the forests and wetlands, many now occupied by modern day pioneers. Tourist areas are located at strategic lake entry points and along Lake Superior. Further south, on the Iron Range, mining towns struggle to exist in an increasingly down-sized mining era.

Those of us living in the Arrowhead Region do so because we love the land and its rural, wilderness character. We value the woods, lakes, wildlife, and sense of open spaces. We have prided ourselves on the quality of our air and water.

Yet the Arrowhead of our hearts is being altered, piece by piece, in ways that we don't totally comprehend. Plans are being orchestrated beneath the surface of public awareness.

## **Mining Exploration**

Many residents of the Arrowhead are aware of mining exploration that has been taking place in recent years—if only because of continuous drilling, overhead low flying plane surveys, and roads popping up in unexpected places.

The Duluth Complex of bedrock that underlies the Arrowhead is known to contain less-than-1%-deposits of copper, nickel, platinum, palladium, and gold, bonded to sulfide ores. Because of the highly disseminated low-grade nature of the formation, mining would be very energy intensive. A copper-nickel industry in Minnesota would be producing 99% waste rock. As part of the footprint, toxic heavy metal leaching in combination with the formation of sulfuric acid would require water treatment for centuries after mine closure.

The Department of Natural Resources Lands and Minerals Division is actively promoting copper nickel exploration. In the past five years alone, more than one million feet of core samples have been extracted on state lands. Mining companies control most of the mineral rights in the state, but state and federal regulations can place restrictions on exploratory activities.

The U.S. Forest Service is preparing a Hardrock Mineral Prospecting Permits Environmental Impact Statement (EIS) for lands where the federal government owns the mineral rights. The purpose of the EIS is to inventory the wetlands, plants, wildlife, and other scenic or wilderness values of the area before allowing any land to be disrupted or exchanged for mining purposes. Concurrently, the USFS is allowing exploration to take place on lands with severed mineral rights. This piece meal approach exemplifies policy conflicts that require agencies to protect resources while at the same time managing for development. The USFS is also ignoring the federal Weeks Act which prevents strip mining on any forest service lands that

were originally purchased for watershed protection, thus halting open pit mining on USFS land as proposed by PolyMet.



**Mineral Exploration residue along the Kawishiwi River near the BWCAW**

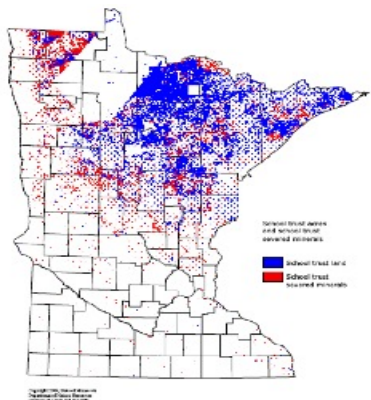
The extent of exploration taking place is already having an impact on public lands. Twenty-four hour a day drilling creates noise and disturbs habitat. Drill wastes and residues may not have proper disposal. When citizens have requested environmental impact statements for large ton bulk sampling, those requests were denied. Roads constructed to access drill sites interfere with wildlife habitat and open up new areas of the landscape to off-road vehicles. Openings in the forest allow for the entrance of invasive species. This fragmentation is taking place throughout the Arrowhead Region where potential copper-nickel mineralization is present in the bedrock.

## **The Selling and Exchange of Public School Trust Lands**

The selling and exchange of School Trust Lands is connected to mining. There is an erroneous perception at the State Legislature that remaining school trust fund lands locked within the BWCAW should be exchanged for lands that could be mined or logged in order to provide money for school funding. Because non-federal land within the wilderness boundaries is considered more valuable than federal land outside the BWCAW, the ratio of exchange may be 2:1 or greater. As a result, a significant portion of Superior National Forest could be removed from federal

ownership, along with the strip mining protections of the Weeks Act.

The concept of exchanging lands to provide income for schools fails to acknowledge that metals are a finite resource and that mining destroys the land for future use, thus leaving future generations without school funding. The wiser choice would be to sell all school trust lands to the Federal government for a one-time payment that could be added to the Permanent School Fund.



### Minnesota's School Trust Lands and Severed Minerals - Source MDNR

Local county governments have already exchanged lands within the BWCAW, and are seeking to exchange other inaccessible county land for land that is located along roadways with access for development.

### 450 Foot Cell Phone Towers

Another new threat is AT&T's placement of 450 foot cell phone towers along the BWCAW and Highway 1 to the North Shore. There currently are no state or federal regulations in place regarding placement of cell towers, but the 1996 Telecommunications Act allows local jurisdiction to set maximum heights.

The question remains as to why AT&T is choosing to place 450 foot towers in sparsely populated areas, in many cases near existing Verizon towers and even when the height will not compensate for dead zones. Any tower higher than 200 feet requires strobe lights during the day and red flashing lights at night. It is these lights that can attract night flying flocks of

migrating birds, which then get caught in the tower and guy wires. Since some flocks contain thousands of birds, the bird kill can be extremely high, especially if tower placement is in a migratory pathway. The U.S. Fish and Wildlife Service estimates that cell towers are responsible for up to 50 million bird fatalities annually, and the Service has established guidelines for tower siting and construction, including elimination of guy wires.

Flashing cell towers can ruin the value of real estate property as well as harming birds. Placement of towers can also interfere with wildlife habitat. Towers need access, requiring roads and accompanying use of herbicides.

Cell phone companies seek to place towers in strategic places that give them an edge over any competition. In addition, \$70 million in stimulus money has been dedicated to expanding broadband service in Lake, Cook, and St. Louis Counties. Although fiber optics can be installed underground along with phone lines, tower access may also be needed. Even though the Arrowhead is sparsely populated, the company installing the broadband may install systems designed for projected greater future use. Public stimulus fund money is being used to build a system without much public input.

GPS signals can also be transmitted using cell phone towers. The potential for the opening of a copper mining district in the Arrowhead may be encouraging AT&T to erect 450 foot towers that would assist the mining companies in their data transmissions, thus assuring AT&T a customer base.

### ARMER Towers

Also impacting the environment is the system of 350 foot towers being built as part of the Allied Radio Matrix for Emergency Response system (ARMER). This system involves implementation of an 800 megahertz radio communication system. Sixty-eight of Minnesota's 87 counties are participating, including St. Louis, Lake, and Koochiching. However, changing from the current VHF system to the ARMER system requires

new equipment that costs millions of dollars, with additional maintenance costs. Law enforcement has stated that the current system is working adequately for the rural needs being served.

In 2004, the Minnesota Legislature approved the ARMER system as part of the Homeland Security Bill. The MnDOT Electronic Communications office is facing a 2013 deadline to get towers sited and the system operating across the state, so is exempting some local siting ordinances. Counties may be installing towers in unwanted places for a system that won't be used because the county can't afford the equipment or maintenance. This is being done with very little public awareness.

### **Wind Turbines**

If cell towers aren't enough, there are also plans to situate wind turbines along the shore of Lake Superior. The North Shore may be windy, but it is also a main bird migratory route. Along with concern about bird and bat kill, the noise or placement of wind turbines may be incompatible with residential housing or tourist areas.

### **Bio-Mass**

In addition to all of the above initiatives, governmental agencies are holding forums to promote harvesting of our forests for bio-mass. The theory is that waste materials from logging could be used to fuel electricity. The reality is that whole forests would have to be turned into wood pellets in order for bio-mass to become a viable source of alternative energy. Changing our forests into bio-mass producers would alter the entire ecology of the Arrowhead at a time when forests are already being stressed by changing weather patterns and warming temperatures.

### **The New Frontier**

Citizens choosing to live on the lands of northern Minnesota, amid her extremes of rugged

terrain and rare beauty, are at risk of losing what we most love.

Those of us living here must become stewards of our land. While we all want cell phone service and high speed internet, we also want to protect our birds and wildlife. While we want to live more sustainably, if we site wind turbines along the North Shore or convert our forests into power plants, we radically affect the integrity of the ecosystem. New technologies must be installed in ways that are compatible with the landscape and the ecology.

In addition, mineral exploration is crisscrossing the Arrowhead and prompting land exchanges that reduce protections on public lands. Actual mining of sulfide ores would result in permanent loss of wilderness, wetlands, and water quality.

If we are truly pioneers of the New Frontier, then we must demand a voice and a vision. Pioneers are those who break ground. If we choose to turn the Last Frontier into a New Frontier, then we need to recall the words written one hundred years ago in our State Song. This is the land of streams and woods, the land that is calling us to defend its historic natural qualities and scenic values. This is the Arrowhead-- land of the Northern Star.

**By Elanne Palcich, Chisholm, Minnesota**



**Jay Cooke State Park near Duluth**

Photos courtesy **Save Our Sky Blue Waters**  
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