

Social Risk Analysis

Mesabi Iron Ore Project



ENODO
GLOBAL

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“The Mesabi iron ore project will be a catalyst for socio-economic change in the region.”



EXECUTIVE SUMMARY

For more than a century, taconite mining has been an important socio-economic activity across Minnesota. It portrays the rich and storied legacy that fueled the nation's industrial revolution and represents a core identity among the people living in the Mesabi Iron Range. For the past two decades, however, mining in the Iron Range has been mired by delays and stoppages to projects that include Mesabi Iron Ore and Mesabi Nugget. Ownership changes, management issues, and economic downturns have negatively shaped public perceptions and prevented the project from breathing life back into the region. With the proper investment, management team, communications plan, and stakeholder engagement activities, the Mesabi project has the potential to become Minnesota's largest private investment project, fuel the region's socio-economic development, employ hundreds of workers that includes 250 full-time employees, restore a sense of individual pride and ownership, and deliver long-term benefits to individuals and communities throughout Minnesota.



The project will breathe life back into the region.

KEY FINDINGS

- Social Risks associated with the Mesabi Iron Ore project are negligible--creates a sound investment opportunity
 - ▷ Overwhelming support among key stakeholders (e.g., DNR, contractors, state / local politicians (i.e., Range Area Mayors), and communities)
 - ▷ Fully permitted project with minimal environmental impact (source: interviews)
 - ▷ Contains some of the highest quality ore in the world (source: interviews)
 - ▷ Potential to increase the project's scope to steel production (source: interviews)
 - ▷ Strong partnerships that ensure the project's success (e.g., [Fluor](#))
 - ▷ Highly skilled / professional workforce
- Social Risks associated with the project are negligible and can be easily mitigated
 - ▷ Tribal concerns associated with land infringement
 - ▷ Cleveland-Cliffs activities are not a threat to the project
- Communications and community engagement efforts are non-existent
 - ▷ Prevents Essar from building trust and positively shaping public perception
 - ▷ Enables Cliffs to dominate the discourse and negatively influence public opinion



RECOMMENDATIONS

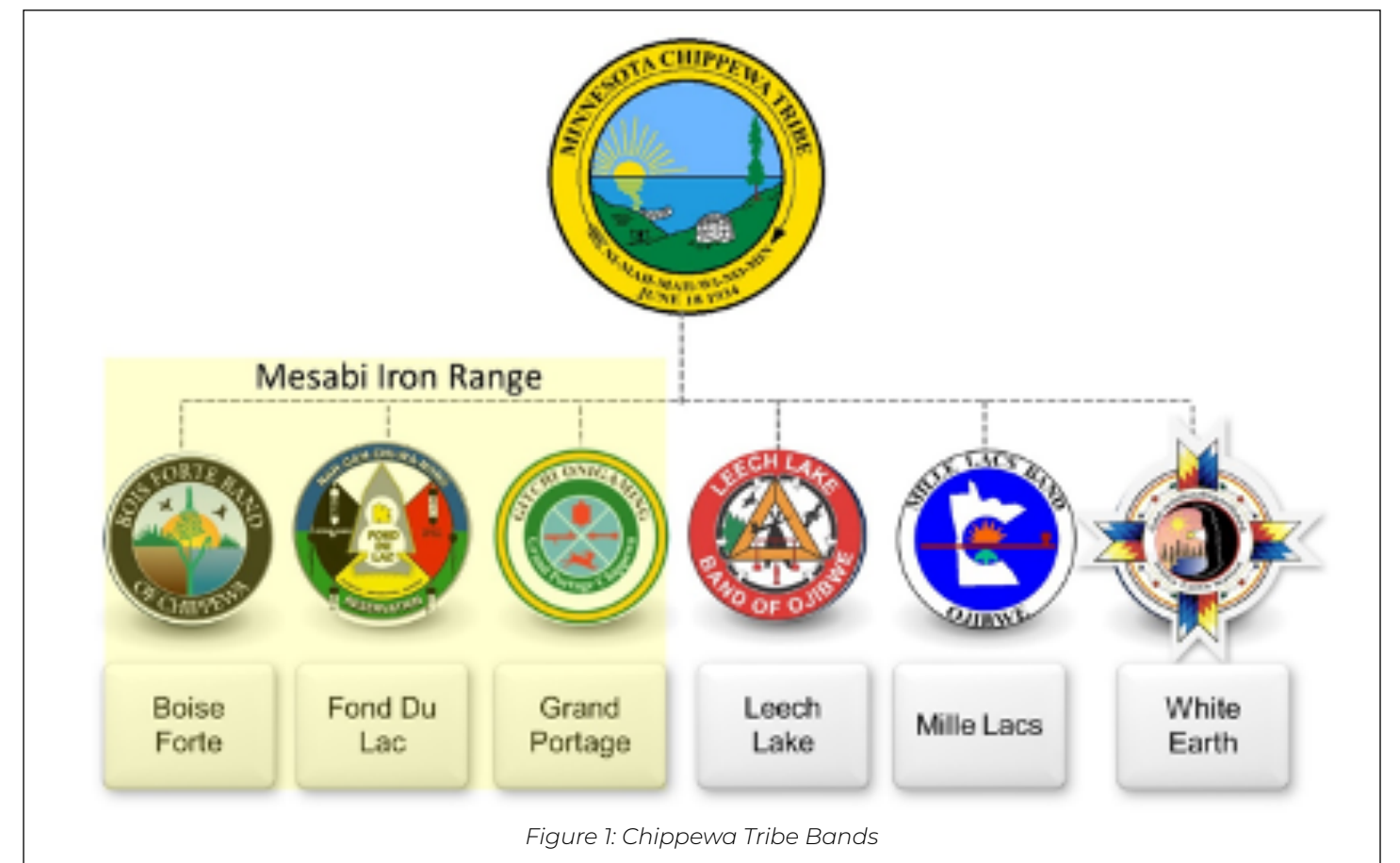
- Invest in the Mesabi Iron Ore project contingent upon the following:
 - ▷ Assignment of a full-time project manager responsible for coordinating key stakeholder activities (i.e., internal / external) and maintaining project oversight (i.e., construction, safety)
 - Provide regular updates to investors regarding critical project milestones
 - ▷ Hiring of a communications / public relations firm to design and execute an overarching communications strategy and tailored community engagement activities for the particular nuances of the project and key stakeholders
- Begin work as quickly as possible
 - ▷ mobilize the workforce to ensure project milestones are achieved



CHALLENGES

Project funding is the most immediate and greatest obstacle to creating a social license to operate and the project's overall success. Once project funding is attained, the greatest impediments to the Mesabi Iron Ore project's long-term success emanate from potential issues over infringement of tribal homelands from the Minnesota Chippewa Tribe and the activities of Cleveland-Cliffs to acquire ore from land owned by Mesabi Metallics around Nashwauk. Both issues, however, can be easily mitigated by implementing the proper communications and engagement strategies. Beyond funding, tribal concerns, and competitors, there are no significant challenges that impede the project's success.

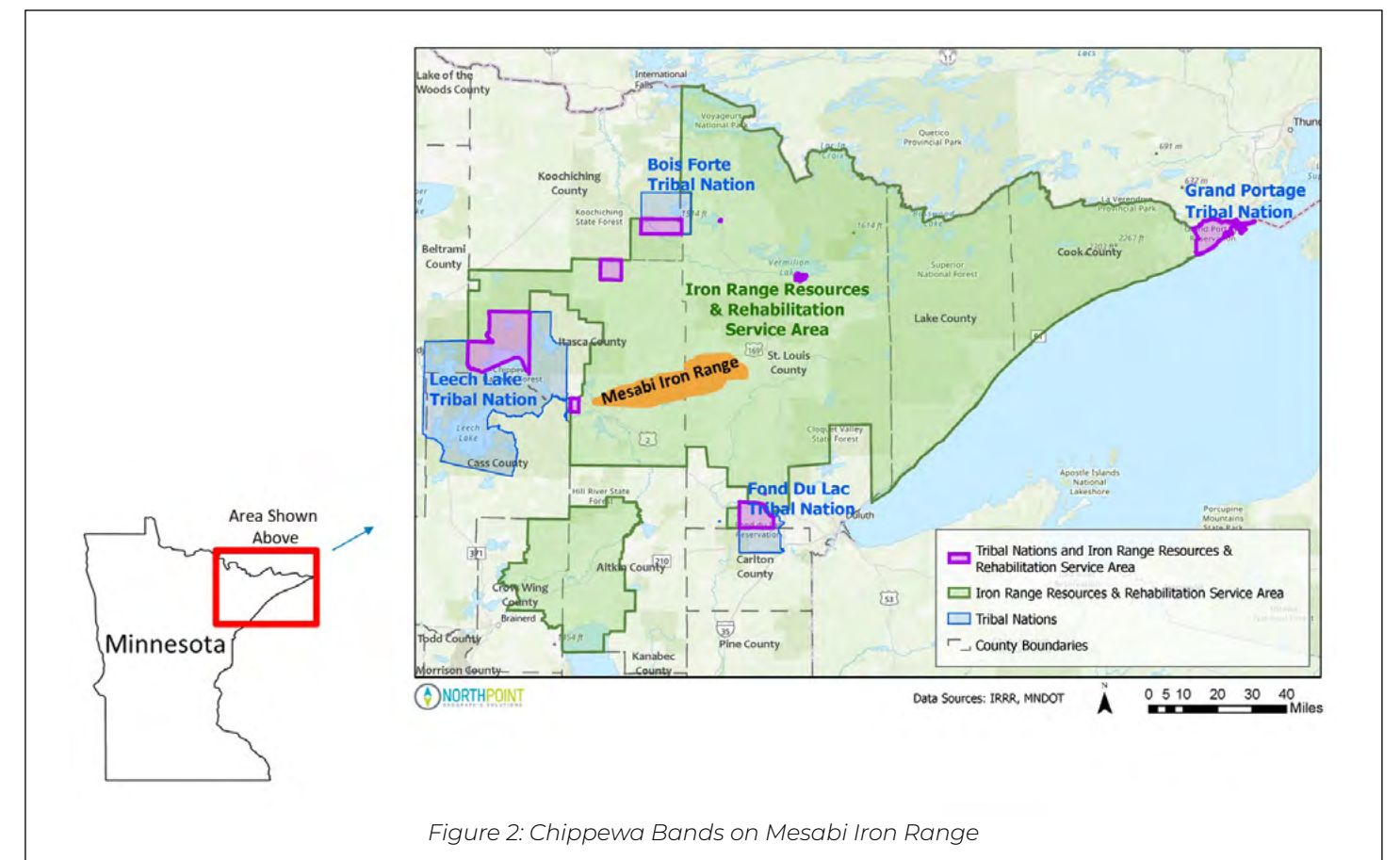
“Mining has polluted water all over the area. Fond du Lac Band has every right to ask that their water be cleaned up; the rice beds, the fish.”



Minnesota Chippewa Tribe

The Minnesota Chippewa Tribe (MCT) is one of the largest Native American Indian tribes in Northern Minnesota, representing over 40,000 members. The tribe is comprised of six (6) Tribal Bands (Figure 1) that govern their reservations across four counties. Three of the band’s territorial lands (i.e., Boise Forte, Fond du Lac, and Grand Portage) fall within the Mesabi iron range and are located near the Mesabi Iron Ore mine (Figure 2). Although the American Indian population in the region is heavily dependent on the mining industry for their livelihoods, an interview with Mr. Kevin DuPuis, Chairman of the Fond du Lac Band, revealed concern with the potential scope of future project expansion, which could be easily resolved with improved communications.

Key Takeaway: Invite Chippewa Tribe representatives (i.e., Band Chairperson) to participate in project planning meetings and community engagement activities to accommodate each tribe’s unique identity, culture, and traditions.



“The ideal situation for Cliffs is not to just extend Hibbing Taconite. It’s to expand Hibbing Taconite. The first step is to have full access to Nashwauk to use the ore.”



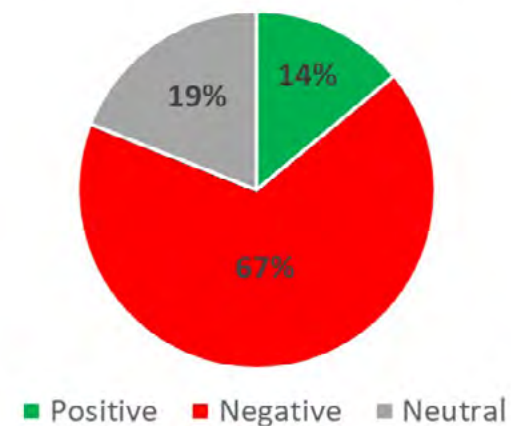
DATA ANALYTICS

Cleveland-Cliffs, Inc.

Cleveland-Cliffs is one of the largest vertically integrated producers of iron ore and steel products in North America. Cleveland-Cliffs’ Hibbing Taconite Company (a.k.a. HibTac) mines about 29 million tons of Iron ore annually from the Mesabi Iron Range located in Hibbing, Minnesota. Cliffs’ CEO, Mr. Lourenco Goncalves’ hopes to acquire ore from land owned by Mesabi Metallics in Nashwauk to mix with the lesser quality ore from HibTac and facilitate Cliff’s transition into steel production. Although Cliffs has not submitted any formal proposals or documentation, they continue to dominate the discourse and heavily influence public perception about the Mesabi project, Essar, and Mesabi Metallics. Negative sentiment toward Cleveland-Cliffs, however, impedes the company’s potential role as a viable stakeholder in the Mesabi Iron Ore project.

Key Takeaway: Cliff’s influence is localized to the area where they operate and does not pose a threat to the project—considered a nuisance by the majority of key stakeholders.

Cleveland-Cliffs Sentiment



ENODO’s chief data scientist built a semi-automated data collection platform and used third-party vendor tools to capture and synthesize social media and other online information from November 7, 2020 to February 7, 2021. The platform automatically collected online data through relevant terms, topics, hashtags, and accounts associated with Mesabi Metallics, Essar and the Mesabi Iron Ore project using a combination of publicly available Application Programming Interface (APIs). ENODO’s analysts collected over 274,365 data points on discussions concerning the Mesabi iron project in Northeastern Minnesota, which included 87,978 New sites, 71,578 Tweets, 62,879 YouTube posts, 12,897 Facebook posts, 7,658 Reddit posts to produce this Social Risk Analysis. Analysts also integrated information from interviews, and other data sources (e.g., polls, and MN demographic data) to optimize the analysis and create accurate findings and recommendations.

“We have and will continue to work collaboratively with the Governor and the Iron Range legislative delegation to seek a workable solution that will benefit all concerned stakeholders.”

INTERVIEWS

ENODO’s data analytics was supplemented by a series of interviews with individuals that possess unique insights obtained from previous work and personal experiences with the project (Table 3). Interviews were designed to collect qualitative information to enhance social media-based analysis, and to obtain ground-level information regarding grievances, concerns, and impressions associated with the Mesabi iron project.

Name	Organization	Title	Location
Ben DeNucci	Itasca County District #5	Commissioner	Grand Rapids, MN
Cal Saari	City of Nashwauk	Mayor	Nashwauk MN
Dan Hendrickson	Electrical Workers Union 294	Business Manager	Hibbing, MN
Derek Bostyancic	Northern Industrial Erectors	Contractor	Grand Rapids, MN
Kevin Dupuis	Fond du Lac Band of Lake Superior Chippewa	Chairman	Carlton, MN
Rich Ross	Parsons Electric	Contractor	Duluth, MN
Thomas Hammerlund	Hammerlund Construction	Contractor	Grand Rapids, MN
Troy Sundbom	Jamar Speciality Contractor	BD Manager	Duluth, MN
Dee DeePass	Star Tribune	Journalist	Minneapolis, MN

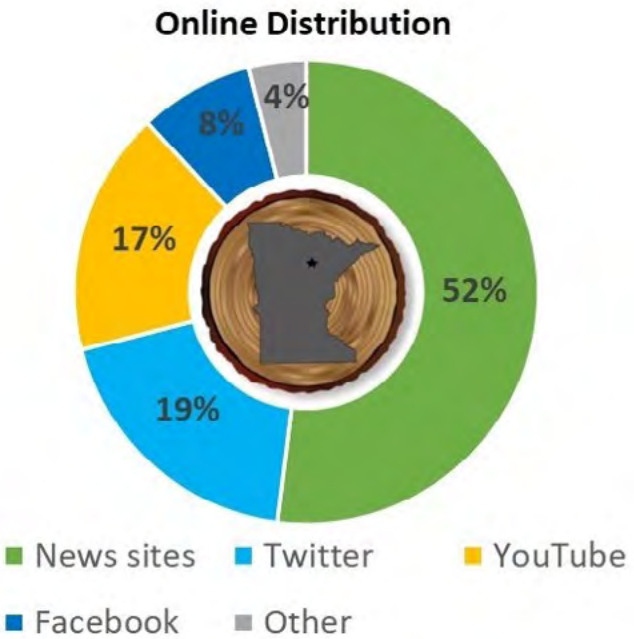
Table 3: List of Interview Participants



ONLINE DISTRIBUTION

Mapped the distribution of online discussions associated with the Mesabi iron project:

- 52% of all content appeared on local and regional news sites (e.g. Duluth News Tribune)
 - 73% were related to news pertaining to lease deadline
 - 61% of discussions since December 2020
- 19% of discussions were Twitter
 - 68% were posted by steel and mining industry (e.g. bloggers, U.S. commodities watchdogs)





SENTIMENT ANALYSIS

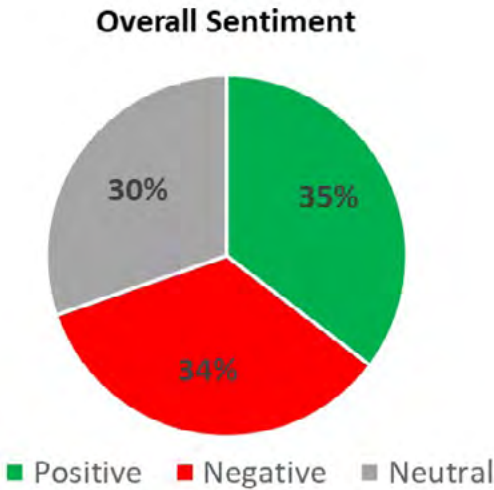
Provides the primary mechanism to measure trust among stakeholders and the attitudes and perceptions of individuals within the project’s surrounding communities. Moreover, it provides unique insights into the behaviors and beliefs of different stakeholder groups and their impact on the project that can be used to inform a potential investment decision. ENODO analysts measured sentiment associated with the Mesabi iron ore project over a three-month period (November 2020 - February 2021) to identify and track changes in public sentiment.

“This ore is going to be mined someday, by someone, it’s just a question of when.”

Overall Sentiment

Measured overall public sentiment related to the Mesabi iron project across Minnesota by classifying online discussions based upon positive, negative, and neutral sentiment polarities.

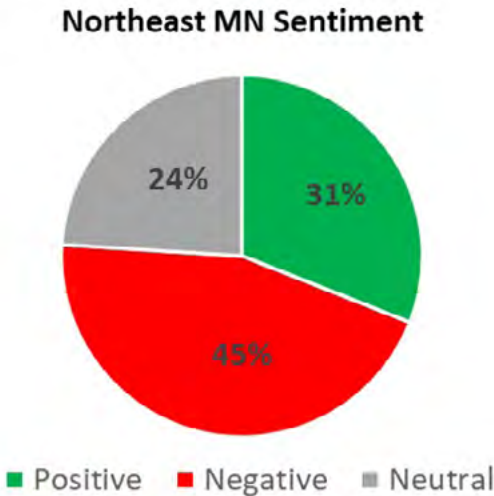
- Negative sentiment (34%) is attributed to delays in starting the project and employment uncertainty due to COVID-19 pandemic
- Positive sentiment (35%) is primarily linked to overall interest and support to commence the project
- Neutral sentiment (30%) is associated to ambivalence toward the project due status quo—project has not started in 14 years



Northeast Minnesota

Measured public sentiment that included all online discussions pertaining to the Mesabi iron project across the Mesabi iron range region that includes Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, and Saint Louis counties.

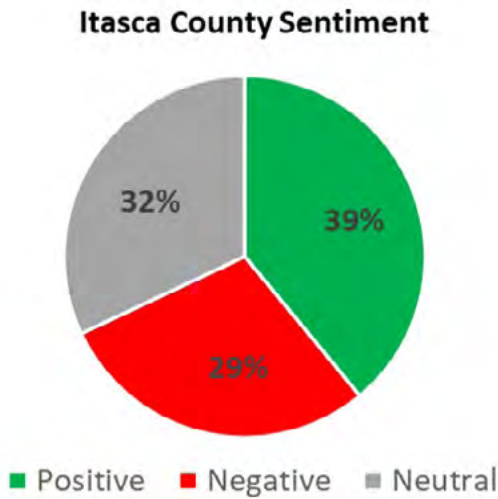
- Negative sentiment (45%) is due to concerns that profits will not directly benefit communities and multiple stakeholders vying for mining rights
- Positive sentiment (31%) is associated with efforts from local mayors and county administration to bring investment into the iron range
- Neutral sentiment (24%) is linked to low volume of discussions across predominately rural communities in the region



Itasca County Sentiment

Sentiment in Itasca county—the largest population served by the Mesabi iron project—shows an increase in neutral sentiment due to increased ambivalence on the future of the iron project.

- Negative sentiment (29%) is linked to conflict between Cleveland-Cliffs and Mesabi Metallics to acquire ore in the region
- Positive sentiment (39%) is associated with Itasca county leaders affirming their support for the proposed amendment to the state mineral leases
- Neutral sentiment (32%) is due to low engagement in social media platforms and overall disinterest in topics associated with the iron project

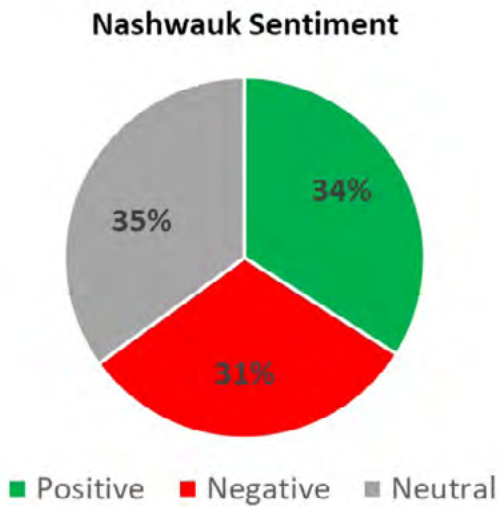


Local Sentiment

Local populations that are impacted most by the mine project are predominately located in the cities of Nashwauk and Hibbing. These cities also represent the flashpoint of ongoing strife between two companies that are currently vying for the region’s iron ore—Mesabi Metallics (Nashwauk) and Cleveland-Cliffs (Hibbing).

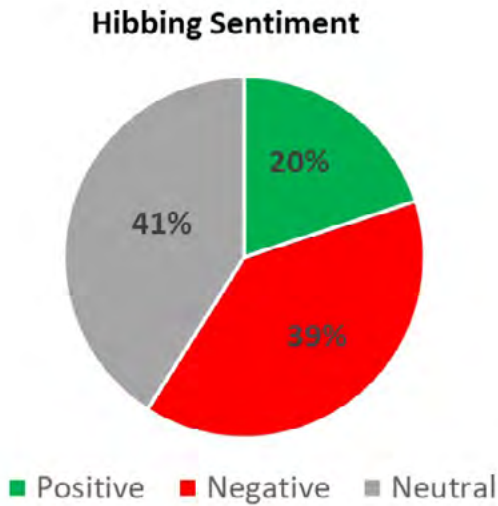
Nashwauk Sentiment

- Negative sentiment (31%) is linked to Cleveland-Cliffs’ efforts to acquire iron ore around Nashwauk
- Positive sentiment (34%) is due to support toward local government leaders (e.g. Nashwauk Mayor Calvin Saari)
- Neutral sentiment (35%) stems from no significant online interaction on social media



Hibbing Sentiment

- Negative sentiment (39%) is associated with
- Positive sentiment (20%) is the result of Cleveland-Cliffs’ decision to keep the Hibbing Taconite mine running beyond 2025
- Neutral sentiment (41%) is linked to low volume of online discussions linked to the project





COMMUNITY ASSESSMENTS

The long-term success of the Mesabi iron project is dependent on building trust and generating public will among the population both within and across the iron range. This requires more nuanced, in-depth understanding of the discussions among people living within the region. The community assessment section provides insights into the underlying topics that can be used to shape their communication activities, develop tailor messages, and ultimately generate trust to regain the social license to operate.

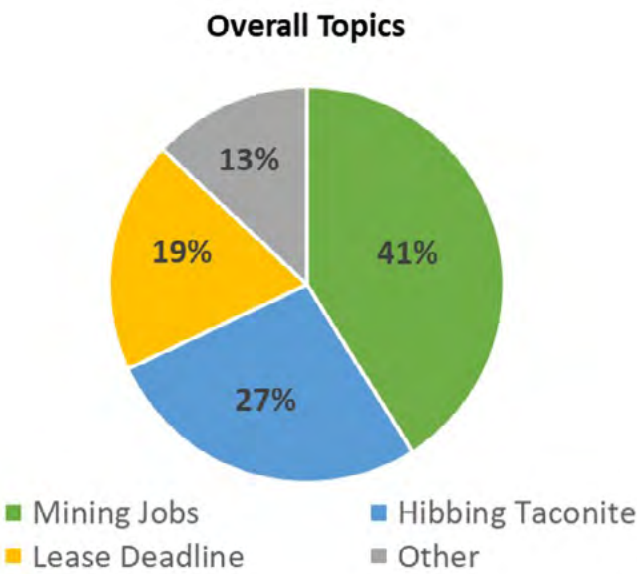
“I have been skeptical about the project for a decade and nothing has changed.”

Topics in Minnesota

Topics related to mining jobs, future employment opportunities, and Hibbing Taconite dominated online discussions. Although conversations regarding environmental issues were not significant in number, they were captured in the other category and woven throughout the overall discussion topics.

Trending Topics

- 41% commented on the future of mining jobs in the area
- 27% discussed the Hibbing Taconite project led by Cleveland-Cliffs around Hibbing
- 19% commented discussed the impending May 2021 deadline to execute the new lease renewed by the Minnesota DNR

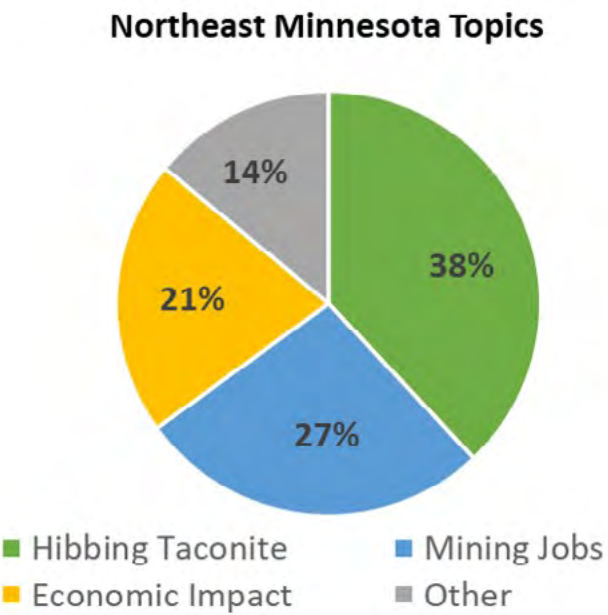


Northeast Minnesota

The population within Northeast Minnesota is primarily concerned with Cleveland Cliffs’ Hibbing Taconite project and future mining opportunities in the region.

Trending Topics in Northeast Minnesota:

- 38% discussed the Hibbing Taconite project
- 27% commented on the future of mining jobs in the area
- 21% were concerned on the economic impact if the delay in opening the plant continued beyond May 2021

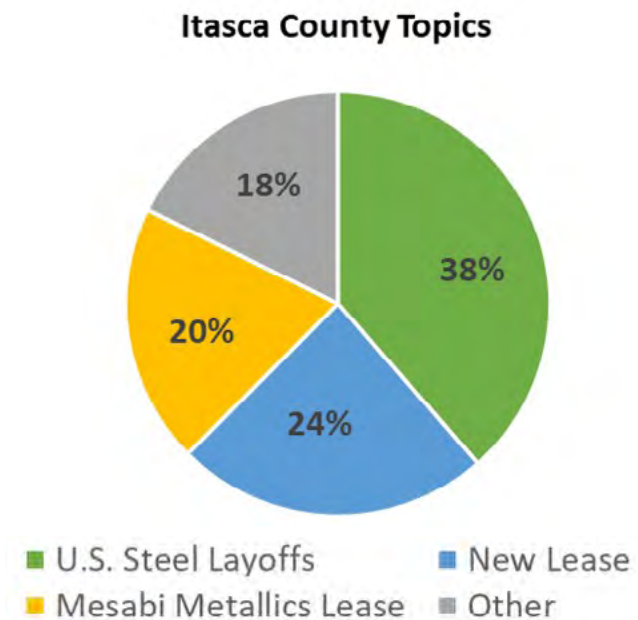


Itasca County

The majority of Itasca County's 45,000 residents are supportive of the Mesabi Iron project, however, they are wary of layoffs by U.S. Steel in early 2019 and are interested in the new lease by the Minnesota Department of Natural Resources.

Trending Topics in Itasca County:

- 38% discussed the layoffs of 650 employees by U.S. Steel
- 24% commented on the new lease renewed by Minnesota DNR
- 20% discussed on the role of Mesabi Metallica in the lease renewal

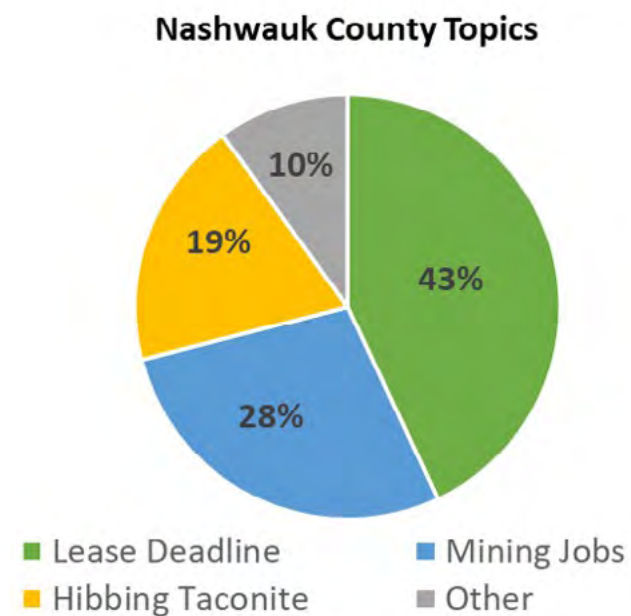


Nashwauk

For over 14 years, the city of Nashwauk has been in the center of controversy surrounding the mine project. Despite support from its city leadership and general public, the involvement of Cleveland-Cliffs and the impending May 2021 lease deadline are significant topics within the population.

Trending Topics in Nashwauk:

- 43% of the discussions were related to the new lease approved by the Minnesota DNR
- 28% were linked to the future of mining jobs in the area
- 19% were associated with Hibbing Taconite's intention to acquire iron ore from Nashwauk area



Research Design and Methodology:

The ENODO team applied a convergent / divergent methodology to maximize data collection, optimize analysis, and create a real-time, continuous feedback mechanism to inform the activities and events surrounding the Mesabi iron project. ENODO employed tailored social listening tools, applied qualitative and quantitative research techniques, and utilized advanced data analytics (e.g., natural language processing, machine learning, and artificial intelligence) to conduct an in-depth examination of the information environment within Northeast Minnesota, Itasca County, Nashwauk, and Hibbing.

"We support the project because the DNR has negotiated an incredibly strong agreement that contains protections we just have not seen in other mineral leases."



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