



MINING AND COMMUNITY 2014

Mining worldwide is getting a new face, and mining in the Upper Peninsula is shaping it.

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EXECUTIVE SUMMARY

When Lundin Mining, a Canadian based company, acquired Eagle Mine from Rio Tinto, a British-Australian company, in July 2013, the Eagle Mine continued its practice of systematically soliciting input from local residents and stakeholders in the Michigan counties of Marquette and Baraga. The input collected from the community in 2014 on the strengths, weaknesses, opportunities, and threats (SWOT) of mining is intended to help shape decisions at the Eagle Mine. This “Mining and Community” effort was first launched by the Eagle Mine of Kennecott in 2010. Two years later, it was supported again by the Eagle Mine of Rio Tinto in 2012.

As with the 2012 study, the overall purpose of this research is threefold. One, it systematically identifies the 2014 views on modern mining and the local community held by a broad, representative sample of local people. Two, it compares the views from 2014 to those of 2012 and of 2010 and interprets significant changes. Three, it creates a summarized report of the comparative findings for public consumption.

Focus Groups

The focus group methodology can be used to systematically summarize the perspectives, opinions, and relative as well as absolute values on an issue held by targeted groups of people. It was selected because this method permits the researchers to confirm what are believed to be generalized facts about different associations across variables, while allowing to grasp the meaning behind these “facts” and to discover the preferential rankings. Statistical analysis can then be used to develop rankings and allow associations between variables to be highlighted. Focus groups encourage individuals to think freely, consider others’ ideas, respond to others’ ideas, and tweak their own in fashions that move discussions along smoothly.

Across the counties of Baraga and Marquette, 146 people came together and joined 19 focus groups between November 6, 2014 and January 29, 2015. This number was a slight decrease from the 152 focus group participants in 2012. Of these 146 participants (referred to in the study as “community members”) 32.2% were female and 66.4% were male. All participants were at least high school graduates, with over 90% having at least some level of college education.

Methodology

The methodology used in 2014 was identical to that used in 2012. S.W.O.T. stands for perceived Strengths (present), Weaknesses (present), Opportunities (future) and Threats (future) of modern mining. Numbers are assigned to give weight to S.W.O.T. rankings. A value of 10 indicates the item ranked 1st out of the top five. Though still in the top 5, a value of 2 suggests the item ranked 5 out of 5. “Mean index” values were then computed from the weighted rankings. These values were used to identify the overall placement of the top five items in each S.W.O.T. category, according to the whole 2014 focus group.

In order of importance, the majority of 2014 representative groups place Jobs and Employment at the top of the 2014 **Strengths** list. The Multiplier Effect falls second. Infrastructure and Taxes follow in third and fourth place, respectively. Corporate Philanthropy concludes the list. In 2010, there were very few signs of new mining and the Great Recession was just ending. As in 2012, community members in 2014 were instead seeing some of the positive effects of new investments in modern mining.

Environmental Risks are at the top of the 2012 **Weaknesses** list. Chemical spills, water contamination and other concerns were expressed. Water contamination in particular was a concern, with Water Pollution coming in second on the list. Third and fourth on the list are Boom and Bust and Short Term Jobs. The final item was Traffic, as some residents value the peace and quiet of the current environment, which could be affected by increased traffic.

First in the **Opportunities** list is Model Mine, as community members see opportunities in the high-tech aspects of modern mining. Second and third are Infrastructure and Increase Mining. Numerous community residents see that a flurry of mining exploration is underway, which will likely lead to more investment in mining in the future and can help fuel sustainable growth in the regional economy. Fourth, community members see the opportunity to Develop Products That Use Copper and Nickel. The final variable on the opportunities list was Education and Training.

Environmental threats are ubiquitous, and threats to the water supply were especially on everyone's mind. This is shown by the first and second items on the **Threats** list, Water Supply and Environmental Threats. The fourth item on the list, Catastrophic Environmental Disaster, also shows the high level of environmental concern shown by the focus groups. The third and fifth items on the threats list relate to the market: Decreased World Demand for Minerals and Market Volatility. Next, participants recognize that the booms of the mining expansions are always followed by the busts, especially in areas overly dependent on mines for business, investment, and employment.

2014 vs. Previous Years

Overall, the results appeared very similar in 2012 and 2014. If anything, the environmental issues showed up even more in the Weaknesses and Threats rankings in 2014. This is especially true in the case of water, as the water supply or water pollution were either first or second on both the Weaknesses and Threats lists this year. These variables had not previously appeared on either the 2010 or 2012 lists. As with 2012, we still see an increased concern for specific issues that could have a direct and clear impact on the community. Variables related to economic issues move to the top or show a significant increase in their index values (Jobs and Employment, Multiplier Effect, Taxes, Infrastructure, Market Volatility). The Strengths rankings changed very little between 2012 and 2014. A new variable, Model Mine, tops the Opportunities rankings in 2014. This could come from a growing awareness that mining is not the same as in the past; it

requires highly skilled personnel and the opportunity exists to develop new technologies through modern mining.

Recommendations

1. The environment is important to local residents; be mindful that people living and working in Marquette and Baraga counties actively hold themselves and others accountable for balancing “economic development” and “stewardship.”
2. Always keep in mind that community matters deeply to the residents of this region.
3. Continue and expand the work of the Superior Watershed Partnership.
4. Conduct research on the new mining rules and regulations stemming from the Eagle Mine and Humboldt Mill.
5. Share the best practices and experiences of new mining in Marquette County and Baraga County with other states and other international companies with mining interests.
6. Create educational materials that explain the evolution of mining as an industry.
7. As the Empire Mine slows production, consider using the Eagle Mine’s practices of transparency, community engagement, and education to help the community visualize how a modern mine brings production to a halt and reclaims the land with community input.
8. Educate the public on uranium.