

THE ECONOMICS OF SAND MINING AND BUFFALO COUNTY

- Executive Summary -

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As part of the March 2012 sand mining moratorium resolution, the Buffalo County Board instructed the University of Wisconsin-Cooperative Extension Office to study the economics of frac sand mining as it pertains to Buffalo County. The findings in this study are based on the available peer reviewed literature, empirical data gathered for Buffalo County, and community-wide discussions.

As part of this study, three public meetings on the economics of frac sand mining in Buffalo County were held. These were open public meetings that encouraged discussion on the economics of frac sand mining in Buffalo County. Discussion was limited to the specific topic. Input from the meetings was incorporated into this report in the form of issues/concerns to consider, but is not considered research data.

The limited available literature that explores the impact of mining on local communities raises two central issues:

1. Who benefits from the mining activity?
2. Is the economic activity generated by mining activity sustainable?

The first question hinges on the ownership of the mining company itself and the resource that is being mined. Generally, if both are owned by non-local persons (outside mining companies and non-resident landowners) much of the proceeds from the mining operation will “leak” out of or be removed from the local economy. Because non-local ownership is prevalent in many rural mining communities, the potential economic impacts seldom achieve the predicted levels. The question also hinges on the nature of the jobs being created at the mine itself. What are the required occupations and the corresponding wages? In addition, do the mining jobs have associated benefits such as health insurance and pension options?

The second question has both short- and long-term implications. Short-term implications include potential environmental degradation, incompatibility with other industries (e.g., tourism and recreation), as well as employment instability. Long-term concerns center on the impact of the closure of the mine on the local community. By its nature, once the resource is exhausted or no longer needed, the mines will close and is often referred to as the “boom-bust cycle”. There is some evidence that many rural communities are worse-off post-mine than they were pre-mine. The overall size of the mining operation(s) relative to the rest of the local economy is a key predictor.

Unfortunately, there is no definitive “right or wrong” answer concerning the operation of mining facilities. For some communities, the conflict between sand truck traffic and tourism may make mining a less desirable option. In other communities, no such conflict exists. At best, each community must decide if sand mining is compatible with their community and put into place policies to minimize the harm while maximizing the benefits.

Topics that Buffalo County should consider based on this study:

- **Flickering and instability** of mining is significant and should be considered in any economic discussion of mining or other boom and bust industries (industries that have relatively short cycles of high employment followed by rapid slowdowns). There is already evidence that as the price of natural gas has declined, some sand mining operations are laying off truckers or operating at less than full capacity. This is direct evidence of the flickering and/or instability of the industry. *How will the County prepare to minimize the negative effects of that instability?*
- **Where is the ownership of the businesses**, or in other words are the profits of the business staying local or are the profits sent away to a different region, state, or country? Economic impacts of businesses with non-local ownership are generally lower than businesses that are owned locally where profits remain local. Generally we see lower economic growth rates for communities when the mines are owned and/or operated by non-locally owned businesses. *Should preferential treatment be given to Wisconsin based companies?*
- **Who owns the resources?** This considers the ownership of the sand resources themselves. Are the lands owned by local or non-local residents? Are the payments by the mining companies for the land resources going to remain in the local economy (i.e., local owners), or leave to non-local owners?
- **Effect of mining on current businesses** – tourism, agriculture, among others. Discussions with businesses currently operating in Buffalo County centered mostly over concerns about increased truck traffic. More tourist dependent industries (art galleries, gift shops, bicycle traffic, etc.) are concerned about loss of tourism traffic. Some restaurants and hotels see mining as a benefit while others believe it will negatively impact their businesses. Other businesses are concerned

but had no real opinions on the effect of sand mining traffic. Existing businesses had not considered the potential loss of employees to mining operations. *Can policies be implemented to minimize the potential traffic conflicts between mining and tourism?*

- **Where do the employees for added jobs come from?** Do new jobs help people improve their economic well-being through higher pay? Do new employees relocate to Buffalo County (build a home, send children to school, volunteer, etc.) or do they commute? For mines in other counties, the antidotal evidence (firm proprietary data is guarded) suggests that management positions are filled with people with similar experience and generally relocate into the local community, middle management positions, such as head mechanics, may be local, and standard laborers are usually local residents. Wages vary depending on the competition in the area of the mine. Management positions are in the range of \$50,000 – 80,000 dollars per year, standard laborers are \$14 – 16 per hour. Research suggests, however, that people prefer not to live within proximity of mining operations and are more likely to commute. Research also suggests that the mining labor force is highly transient and is willing to temporarily relocate for mining employment.
- **Loss in agricultural productivity** depends on the current quality of the soil. Reclamation of agricultural lands back into productivity is measured in decades not years. Soil properties almost never “catch up” and the productivity will always be less than the land before mining. *So the question for the County is two-fold: (1) How much productive farmland can be displaced by mining and (2) What are the reclamation plans for productive farm land?*
- **Tax benefits of mining** are set by the State of Wisconsin. We have not been able to obtain how the taxes will be determined for new mines. But, loss of dairy farms (land removed from production) and downtown businesses (sand truck traffic harms businesses) in Buffalo County means a declining tax base. *The County must address the costs and benefits of foregone economic growth strategies.*
- **Tourism in Buffalo County** is not a large industry, but it is one industry that has had steady growth. It is reasonable to expect that a large increase in heavy truck traffic will reduce tourism in the County especially in small river towns. Most noticeable will be decreases in the number of visits from car clubs, motorcycle riders, and bicyclists. No alternative routes for trucks are available through towns located along the Mississippi River. For the most part, it would be impractical if not impossible to construct a by-pass highway around downtowns in Buffalo County. *The County must consider if the increase in sand truck traffic is compatible with tourism dependent businesses.*
- **Buffalo County has a low multiplier effect for all industry** due to the limited business infrastructure in the county. Buffalo County does not have the retail and service businesses developed to capture the economic benefits from increased industry. This is a bit of a “Catch

22” whereas, the county needs retail and service businesses to capture the benefits of increased industry, but they need increased industry to make retail and service businesses viable.

Recommendations:

- Buffalo County needs to become active in economic development planning. Buffalo County does not have an organized response to economic growth and development activities. The County also has never put any significant resources behind economic development activities or planning. The significant conflict that has arisen from the proposed mining operations points to the need for the County to have in place a viable and active economic growth and development plan with adequate resources to move the County forward.
- Buffalo County government in cooperation with Town and city governments should look for ways to approve sand mining businesses while protecting the reasons that people live and work in the County. *How can the County be strategic in promoting the potential economic benefits from mining while not displacing other important elements of the local economy and community?* Some examples that came from the community meetings include, but are not limited to: (1) limit the number/size of mines operating at any given time; (2) limit sand truck traffic to certain days of the week to minimize conflict with tourists; (3) impose landscaping standards on mining operations to minimize visual disamenities (e.g., road setbacks, landscaping as a visual screen); and (4) prohibit mines from operating in particularly high-amenity or environmentally sensitive areas.
- The County, in cooperation with other local governments within the County, must put in place proactive strategies to address short-term fluctuations in mining employment. The regional community must be prepared to address the difficulties caused by the flickering effect associated with mining operations.
- The County and local governments must insure that mining companies: (1) have sufficient bonding to ensure more than adequate reclamation of mined lands in the case of bankruptcy of the mining company; (2) more than adequate reclamation plans that are site specific and approved by the County; (3) more than adequate payments to a highway trust fund based on local road studies, to ensure adequate maintenance of the local road system ; (4) more than adequate payments in an environmental trust fund to cover the costs of clean-up in the event of an environmental accident (e.g., sand spillage into a waterway, a road ditch, neighboring property, etc.).
- The controversy around sand mining in Buffalo County has created an opportunity for the County and communities that comprise the County, to put into place more proactive economic growth and development strategies. Many participants of the community meetings expressed concern over the reactive tendencies of local governments and the lack of proactive approaches.