ECONOMIC MULTIPLIERS

One of the major motivations for supporting the frac sand mining industry in Western Wisconsin is the potential impact on the local economy. Through the multiplier effect the jobs that are created at the sand mines have a ripple effect throughout the whole of the local or regional economy. Care must be taken because the notion of the multiplier is often misunderstood and distorted in the discussion.

Advocates for particular industries often overstate the scale of the potential economic impact by using an inflated economic multiplier. As a general rule, any economic multiplier that is larger than two (2) should be questioned.

The size of an economic multiplier hinges on two concepts. The first is the level of linkages an industry has with other businesses within the local economy. The second is the notion of "leakages" and the ability of the local economy to retain dollars. How many inputs that a particular business purchases can and are purchased in the local economy. For example, can a mining company buy the specialized equipment that it requires from local businesses or does the company buy that equipment from businesses from outside the local area? Because so much of the larger pieces of equipment the mining companies will require are so specialized, the likelihood of buying this equipment in the local economy is small. This represents a "leakage" from the local economy.

Consider a simple visual representation of the logic of a multiplier. Consider a newly employed worker at a new mine that is paid $1. This worker spends this new income in the local economy. Suppose, for example, this worker spends that $1 at a local grocery store. The question is how much of that dollar spent at the grocery store stays in the local economy. In this example, 60₵ leaks out of the economy and goes to pay for the vegetables from California, the canned goods from Texas, and the boxed goods from Illinois. In other words, the grocer must pay for the stock in the store. Here the grocer keeps 40₵ and uses that 40₵ to pay, perhaps the utility bill. That represents 40₵ going to the local utility company. Now suppose the local utility company uses Montana coal to create the electricity the grocer

OCCUPATIONAL WAGES SCALES

Top 15 Occupations in Mining	Percent of Jobs in Mining	Mean Annual Wages
Management occupations	5.2	94,180
Service unit operators, oil, gas, and mining	5.1	42,810
Operating engineers and other construction equipment operators	4.5	51,220
First-line supervisors/managers of construction trades and	4.0	62,260
Industrial machinery installation, repair, and maintenance	4.0	47,100
Truck drivers, heavy and tractor-trailer	3.9	39,450
Engineers	3.6	91,770
Derrick operators, oil and gas	3.4	44,790
Mining machine operators	3.3	44,010
Helpers—Extraction workers	2.8	37,060
Secretaries and administrative assistants	2.5	32,000
Wellhead pumpers	2.5	42,540

is buying. In this example, 24¢ of that 40¢ immediately leaves (or leaks out) the local economy and goes to Montana. Suppose the utility company uses the remaining 16¢ to pay its employees. Now suppose that utility worker takes that 16¢ and takes the family to the movies. Part of that 16¢ immediately leaves the local economy and goes to Hollywood to pay for the movie itself. This respending continues till all of the money leaks out of the economy. In this example, the economic multiplier is 1.66: for every dollar of new activity creates $1.66 in economic activity, the original dollar plus 66¢ through the multiplier effect.
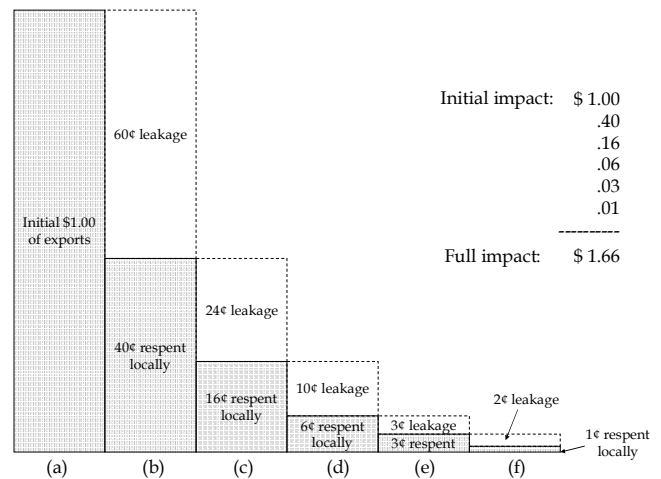
Generally, the size of the multiplier will reflect the size of the local economy. Larger more urban economies tend to have larger multipliers than smaller more rural economies. The key here is the ability of larger economies to capture and retain those dollars being spent. For smaller economies, like much of western Wisconsin, the ability to retain those dollars is weaker, money will leak out of the local economy faster, and the multiplier will be smaller.

Example Multipliers for Wisconsin 2009	
Dairy cattle and milk production	1.736
Poultry processing	1.728
Mining and quarrying sand, gravel, clay, and ceramic and refractory minerals	1.795
Cattle ranching and farming	1.604
Construction of new residential housing	1.862
Farm machinery and equipment manufacturing	1.599
Breweries	1.635
Paper mills	1.713
Veneer and plywood manufacturing	1.858
Hospitals	1.927
Veterinary services	1.871
Transport by truck	1.859

When considering the development of a sand mine there are several issues that the community should consider. These range from the potential economic benefits associated with employment opportunities to the compatibility of open pit mines with tourism and environmental concerns. When considering these issues it is important that local elected decision-makers and concerned citizens have access to the best information available. This series of factsheets is aimed at providing some insights into a range of issues surrounding the development of frac sand mines.