

AGGREGATE v FRAC SAND

A company called *Muskie Property Holdings, LLC* received a Conditional Use Permit (CUP) from the Eau Claire Plan Commission in OCT 2011. In their oral and written application comments, they said the product they would be loading onto trains would be "aggregate." However, before the City Council on SEP 25, 2012, they used a different company name - *Muskie Proppants, LLC* - and said their product is frac sand. (Frac Sand is a proppant, used in oil and gas extraction.)

Why would Muskie use the company name that does **not** contain the word "proppants" and say their product was aggregate, when applying for their CUP? Was this deliberately misleading?

Industry and Government Define Aggregate Differently Than Frac Sand

[Mathy Construction / Milestone Materials Presentation](#)

"Industrial sand" is a high purity silica sand product sold for any of the following uses: glassmaking, metal casting, metal production, chemical production, paint and coatings, ceramics and refractories, and oil and gas recovery (i.e. "fracsand"). This sand is classified as 212322 Industrial Sand Mining according to the NAICS (North American Industry Classification System) Standard Industrial Classification (SIC) System.

"Construction aggregate" is either sand and gravel or crushed stone (stone crushed from bedrock) that is predominately produced and used for local construction purposes (i.e., asphalt or concrete roads, concrete, asphalt, building stone, decorative stone, revetment stone, agricultural uses and other similar uses) or used for bedding sand in livestock operations. Small amounts of sand and gravel or crushed stone may be produced and used for other purposes such as water filtration systems in septic systems and landfills, mortar sand, and sand for ice control.

"Because of the size, scope and nature of Industrial Sand mining, we feel this Industry should be regulated separately."

From MN DNR: http://www.dnr.state.mn.us/lands_minerals/silicasand.html

"Natural aggregates mined from sand and gravel deposits do not meet the specification for frac sand." [*Dustman, J.E., Gulbranson, B., Bell, P., Gregg, W., 2011: Characteristics of high quality frac sand, and where to find it in the upper Midwest., Geological Society of America Abstracts with Programs, Vol. 43, No 5."]

From WI Legislature: <https://docs.legis.wisconsin.gov/2011/related/proposals/sb406.pdf>

SECTION 1. 59.69 (4i) of the statutes is created to read: 59.69 (4i) FRAC SAND MINING. (a) Definition. In this subsection, "frac sand" means a type of industrial sand that could be used in deep well applications to prop open rock fissures and increase the flow rate of natural gas or oil.

From Canadian Silica Industries: <http://209.15.208.61/companies/canadian-silica-industries/>

Industry page is titled, "Frac Sand and Aggregates," implying two different materials. Plus:

"Our sand is deployed primarily by oil and gas service companies in hydraulic fracturing (frac) operations. Other uses include water filtration, golf course and equine arena construction."

"We also offer a full range of aggregate materials including rip rap for erosion control and manufactured gravel for road construction."

Differences in operations and potentially adverse off-site and long-term impacts are significant.

<--- **May be Treated Differently in Permitting Processes and Ordinances** --->

AGGREGATE or SAND and GRAVEL	FRAC SAND
<i>Aggregate</i> is often referred to as Sand and Gravel.	<i>Frac Sand</i> called Industrial Sand or Proppant.
Seasonal/project limited operations; daylight hours only	365 days a year, 24 hours a day
Portable wash plants may be used	Processing of extracted material requires special facilities such as wet plants and dry plants
Typically trucked locally, smaller sized loads	Transport of material requires transload facilities
Not used	Uses chemicals to separate marketable material from waste material
Application for a solid waster permit is not legally required for deposition of waste material as part of the reclamation process.	Application for solid waste permit is legally required for deposition of waste material as part of the reclamation process.
Volume much lower because demand is much lower	Volume of material extracted and processed in the millions of tons per year
Largely local use	Products shipped by rail, truck, or barge to other states and other countries
Aggregate hauling usually seasonally limited and smaller loads (less weight)	The weight and volume of truck traffic far exceeds that needed and used with local aggregate
Geology of aggregate deposits does not pose as great a risk to groundwater - at least in this region	The geology of the deposits in bedrock sandstone expose groundwater quality and quantity to greater risks of harm
Usually using a more "weathered" and mixed product, not pure quartz sandstone: Less volume of product likely means less volume of silica dust (lower dose or concentration)	The risk of exposure to carcinogenic respirable crystalline silica dust may be greater: -mining nearly pure quartz sandstone formations -higher volume = higher dose or concentration
Minimal infrastructure demands or damage	Infrastructure demands and damage far greater due to scale of projects - volume and demand.
Conflict-free: local nature, smaller scale operations	Conflict-filled projects due to all the above factors
Potential for expansion lower.	Potential for expansion high.