

Cost / Benefit

The Situation: Hydraulic fracturing, while at best an industry lacking scruples, is also one of great financial gain that serves a wide and demanding customer base. Silica sand mining is a cleaner alternative to chemical proppants, but also comes with its own benefits and risks.

BIG MONEY

Many proponents of silica sand mining advocate the many economic benefits the industry will bring to communities. These are generally false hopes; an often-cited paper promoting mine development in Wood county is based on 15 years' worth of conjecture. To contrast this, study by Powers Consulting found that residency and job growth tend to plateau or even slump during operational phases of mining.

Bedrock

Below Wisconsin's varied glacial soils lie rich deposits of **Carbonate**, **Metamorphic** rock and **Shale** - as well as **Sandstone** capable of producing fine silica sand for industrial use. Although much of the state has been left sandy at the surface (see below), the sand itself isn't the **primary objective**. The guide in the upper right describes currently operating facilities involved in the silica sand industry. Facility-dense areas have been marked with double-sized icons denoting the number of similar features in the area.

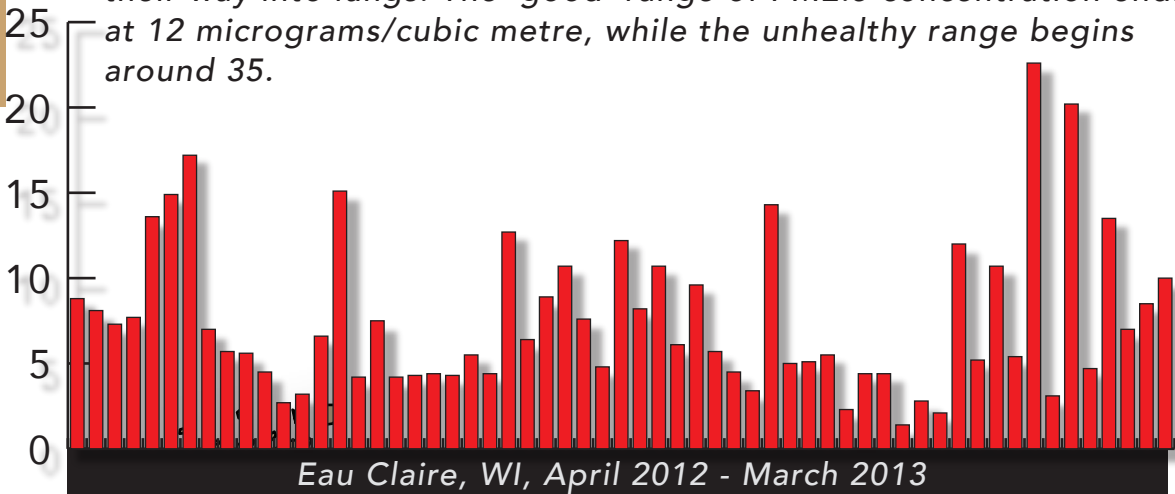
50 Miles



Coordinate System: NAD 1983 HARN Transverse Mercator
Units: Meter; Cartographer: Samuel Schumacher
Data courtesy of Wisconsin Dept. of Natural Resources; USDA NRCS web soil survey,
IUCN Red List, WisconsinWatch.org (Facility sites provided by consumer reporting).
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BreatheEasy:

One of the concerns about silica sand mining often the risk of contracting silocosis, a lung disease caused by minute solids making their way into lungs. The 'good' range of PM2.5 concentration ends at 12 micrograms/cubic metre, while the unhealthy range begins around 35.



Yearly PM2.5 measurements at various sites are shown in red. It is worthy to note the prevailing wind blows SE. Private industry is not required to report PM2.5 data.



Where have all the REPTILES GONE?

Extirpation is the extinction of a certain species within a given range. Although it does not imply the total extinction of a species, extirpation causes massive instabilities in local biomes. Silica sand mining occurs over sandstone deposits, which are situated underneath the most well-drained, healthy prairie **loam** in the state. As a result, 25 of 36 endangered vertebrates find their range in these areas. This includes **Ophisaurus attenuatus** of which only about 5 are known to exist in Wisconsin.

Sand/Gravel Sand Peat Clay