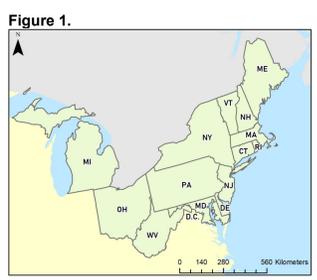


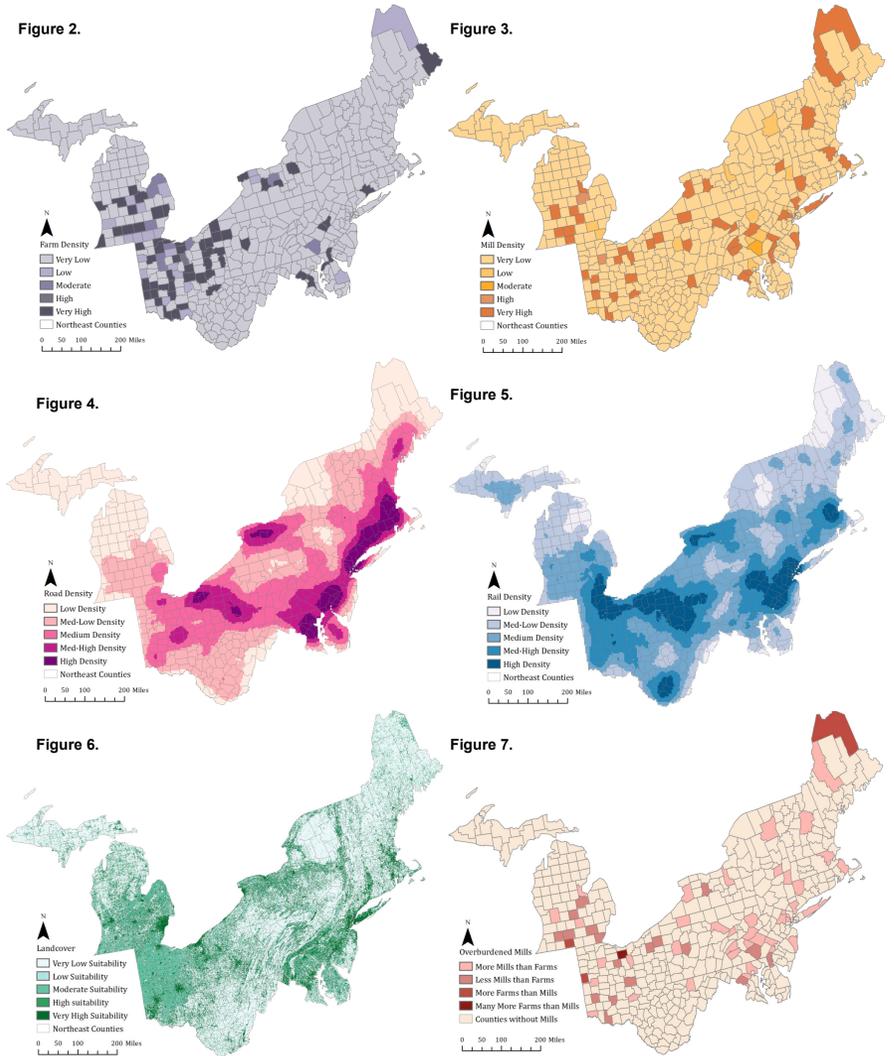
# GOOD MILL HUNTING: A SUITABILITY ANALYSIS FOR ADDITIONAL MILLS IN THE NORTHEAST

## MILLING IN THE NORTHEAST

In the early 19<sup>th</sup> century, practically every neighborhood in the U.S. had its own mill, grinding one or more different kinds of grain. Now the milling industry is intensely concentrated in the upper Midwest where the majority of grain is grown. Rather than celebrating diversity within the U.S. food system, monoculture and small genetic variation create a large amount of risk in terms of food security, environmental health, and regional economic security. Spreading out the production of grain from consolidated centers would improve national food security and strengthen a market for regional grains that celebrates flavor particular to a landscape i.e. a grain's terroir. Despite the benefits of this model and the growing interest in artisanal baking, a lack of mills and the loss of the milling tradition prevent the spread of regional grain varieties and robust regional systems. This analysis seeks to identify locations most suitable for new mills in the Northeastern U.S., as defined by the NRCS (Figure 1), in order to address gaps within the grain supply chain.

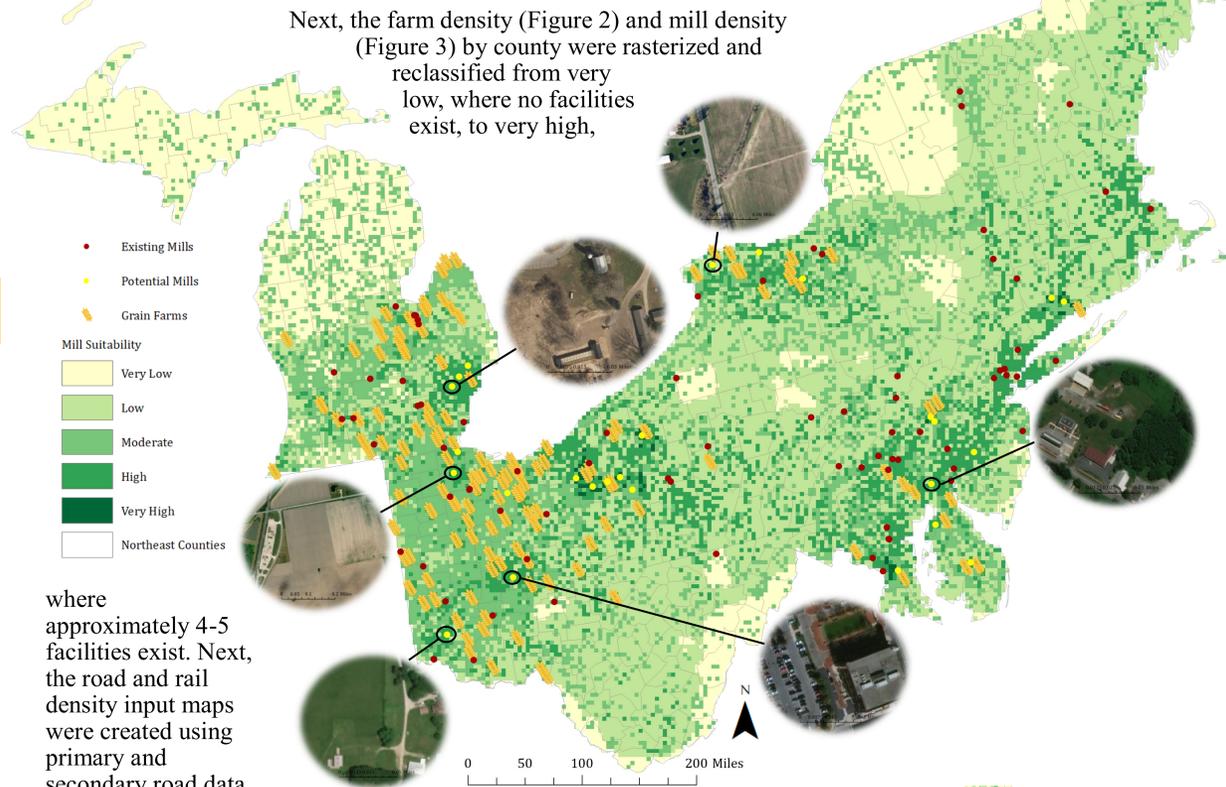


## FACTOR MAPS



## WHAT IS SUITABLE?

In order to identify the most suitable locations for new mills in the Northeast a suitability analysis was conducted. The analysis included variables important in considering mill construction and location such as access to transportation networks (rail and road), density of existing mills and farms, the farm demand placed on existing mills, and finally the type of land cover. Eighty-three existing small grain and wheat farms were identified using the NAICS business codes (111140, 111199) from the Reference USA Database. Along with farms, 138 existing mill sites were also collected from the database (311211). All locations were geocoded and spatially joined to the county dataset.



## DISCUSSION

The potential mill locations identified through the location allocation solver tell different stories. Some potential sites (sites 7 and 8) fill a much needed gap in the market, supporting farms that before the hypothetical creation of new mills would have had no mills within a 50-mile driving network distance. There are also examples (sites 1-6) that show reductions in driving time and distance for farms after the creation of potential mills. The largest reduction in time and distance found would occur at Gary Cronk Farm (site 4) where travel time would be reduced by 50.4 minutes and distance by over 40 miles. Some of the limitations to this analysis are related to mill and grain farm identification using the NAICS codes. The NAICS data may have misclassified certain businesses as mills while excluding smaller mills and farms that sell grain grown as a cover crop that is not their primary cash crop. Without collecting data first-hand it is unknown whether all mills included in the data set are actually functioning. To deepen this analysis, a follow-up study identifying farms of varying scale that grow grain along with suitable locations for additional grain farms would be useful.

## SOURCES

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 ADVANCED GIS, FALL 2018

Projection: Lambert\_Azimuthal\_Equal\_Area

- 1) Northeast Region: National Resource Conservation Service regional boundaries, accessed Nov. 2018
- 2) Grain Farm and Mill Locations: Reference USA Database for NAICS codes, accessed Nov. 2018
- 3) Roads: US Census Bureau, 2018 Tiger Line Roads, accessed Nov. 2018
- 4) Railroads: National Transportation Research Center (NTRC), CTA Railroad Network, accessed Nov. 2018
- 5) Land Cover: USGS National Land Cover Data 2011, accessed Nov. 2018

