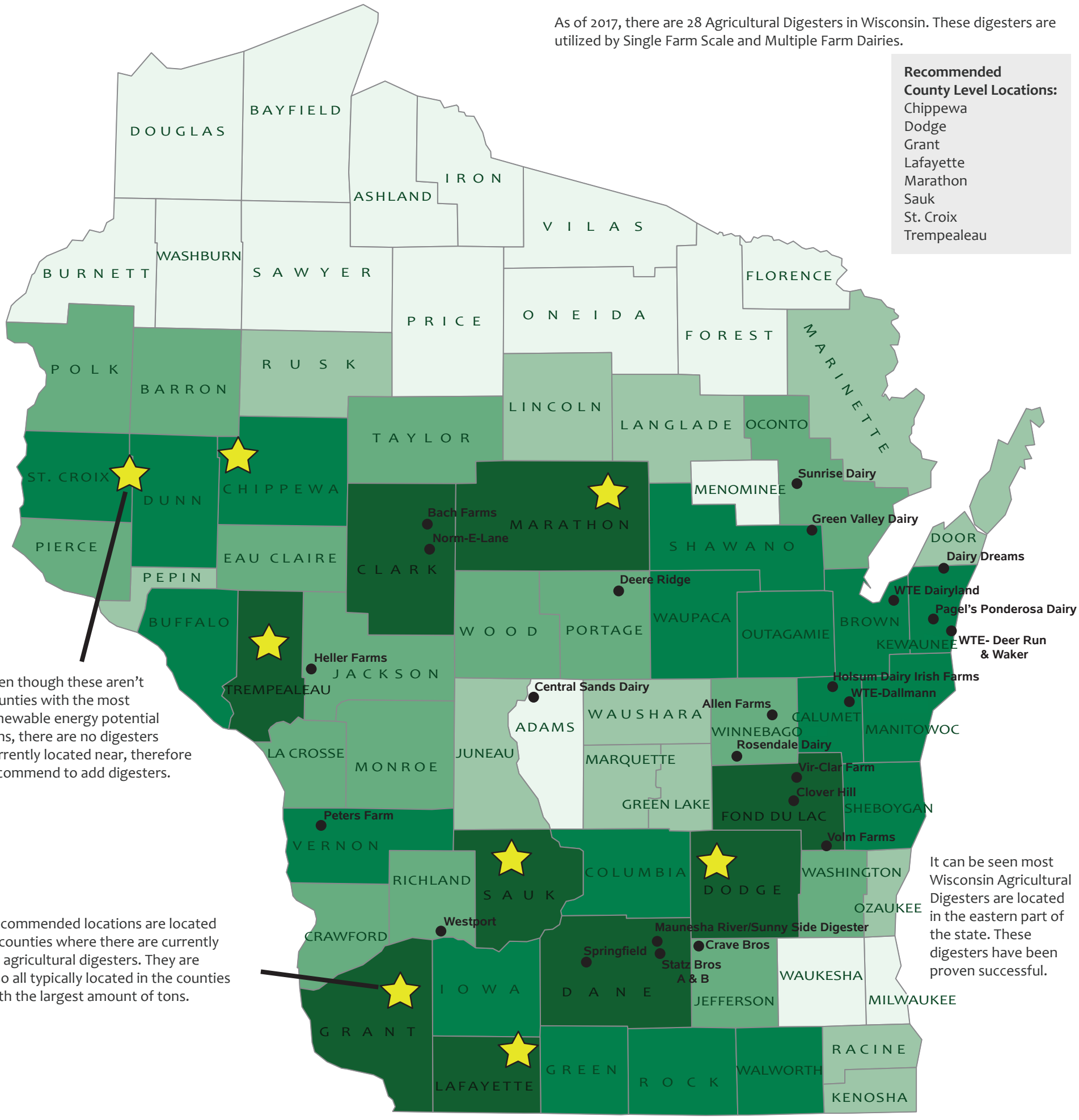
Recommended New Locations for Agricultural Biogas Digesters Based on Biomethane Potential

Agricultural Biogas Operations have the largest growth potential compared to Industrial Food and Fuel Producers, Wastewater Treatment Facilities, and Landfill Biogas Capture Programs.

Agricultural Anaerobic Digestion is a biological process that produces a gas principally composed of methane (CH_4) and carbon dioxide (CO_2) otherwise known as biogas. These gases are produced from livestock manure.

As of 2017, there are 28 Agricultural Digesters in Wisconsin. These digesters are utilized by Single Farm Scale and Multiple Farm Dairies.

Recommended County Level Locations:
Chippewa
Dodge
Grant
Lafayette
Marathon
Sauk
St. Croix
Trempealeau



Even though these aren't counties with the most renewable energy potential tons, there are no digesters currently located near, therefore recommend to add digesters.

Recommended locations are located in counties where there are currently no agricultural digesters. They are also all typically located in the counties with the largest amount of tons.

It can be seen most Wisconsin Agricultural Digesters are located in the eastern part of the state. These digesters have been proven successful.

Wisconsin Data:
97% of Agricultural Digesters produce electricity
100% of Agricultural Digesters produce heat

Potential for between 353 and 1,168 additional digester systems on dairy farms. It is recommended a digester have at least 500 head to make it feasible. Current trends show dairy farms are getting fewer and larger; therefore, small farms are shutting down and existing farms are getting larger

Current Issues:
- Achieving economically sustainable operation
- Incorporating new systems into the existing on-farm framework of waste logistics and labor allocation
- Insuring farm personnel are equipped to operate and manage these complex biological and energy generation systems

Animal Manure Renewable Energy Potential in Tons
516 - 1236
271 - 515
146 - 270
52 - 145
0 - 51

Current Manure Digesters as of 2017
Recommended New Manure Digesters

N

20 Miles

Biomethane data based on 2014 data
Manure Digester locations based on 2017 data.

Cartographer: Jordan Ripp
Projection: Transverse Mercator
Central Meridian: -90°
Class Breaks: Natural Breaks
Sources: Natural Renewable Energy Laboratory & Renew Wisconsin