

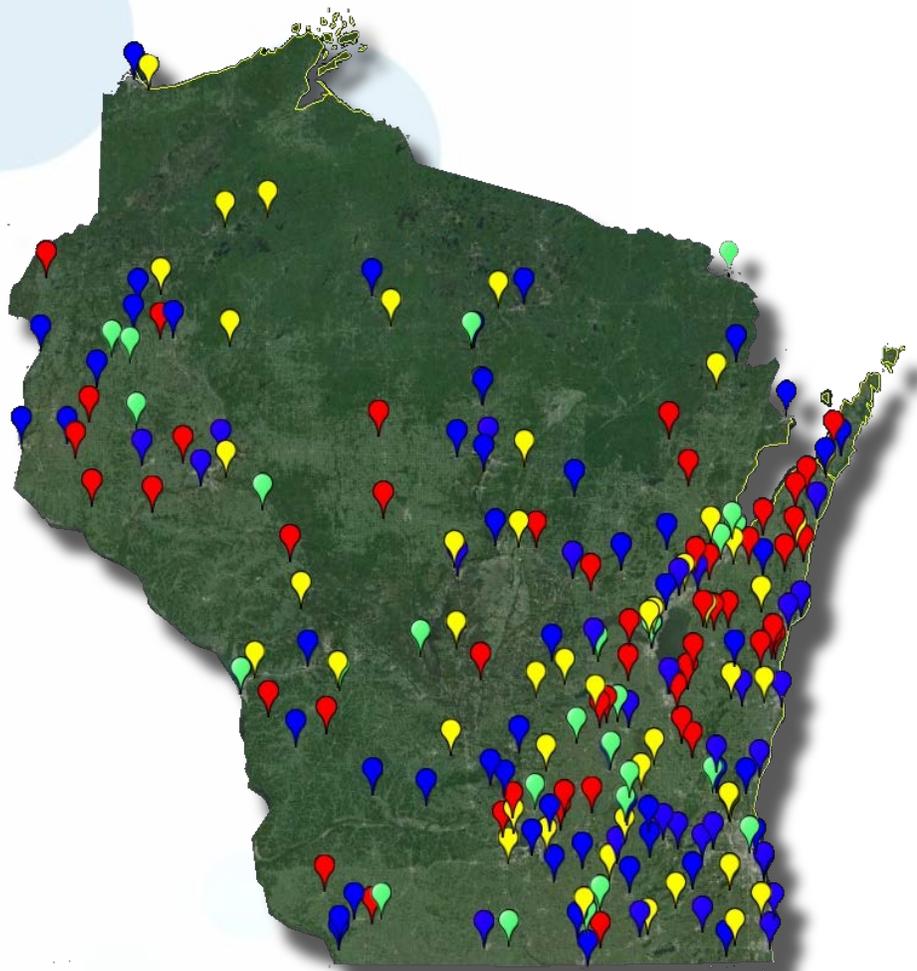
Biogas Development Opportunities in Wisconsin

Tom Nowakowski

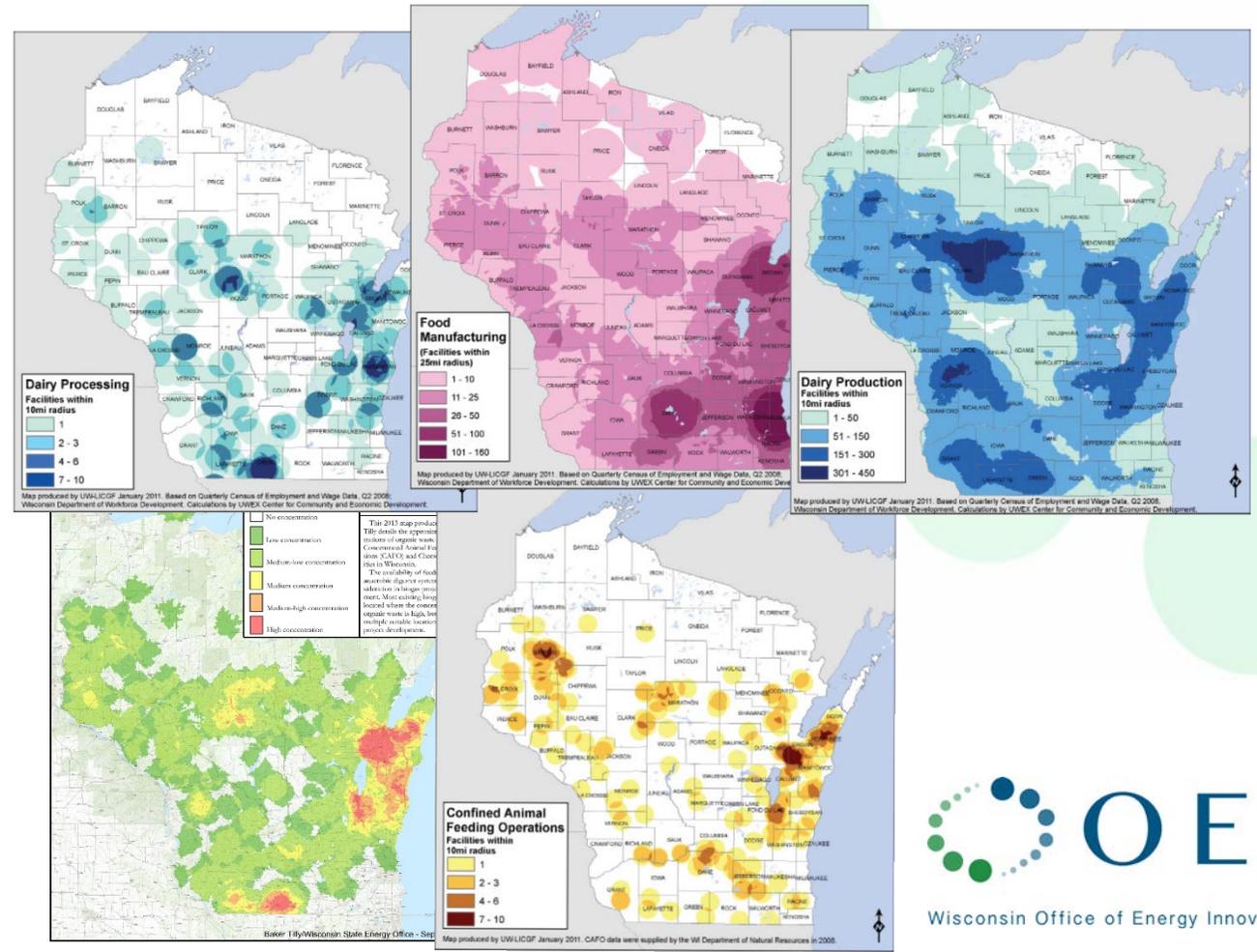
Energy Innovations Manager

Wisconsin Office of Energy Innovation

Digesters in Wisconsin



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Status of Digesters in Wisconsin

Digesters

- Approximately 172 anaerobic digesters
- Generate 140 MW of electrical capacity

Primary Feedstock Sources:

- Agriculture By-products
- Food and Cheese Processing
- Waste Treatment
- Manufacturing

Wisconsin Biogas Survey

Goals

- Determine the status of biogas utilization in the State of Wisconsin
- Provide an update for policy-makers, food and fuel industry specialists, municipal officials, ag field, etc. about biogas in Wisconsin

Sample Survey Questions

- What are the barriers to biogas utilization? Where are the success stories?
- What are feedstock sources?
- What are the current biogas applications, as well as future plans?

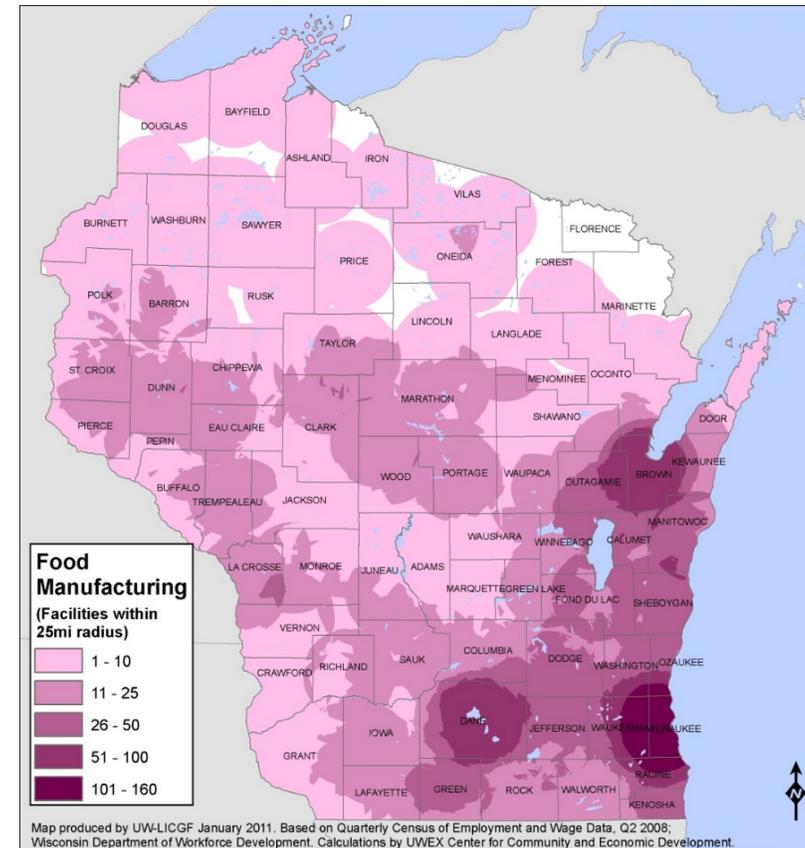
Survey Results

- Cost concerns: Permitting/Regulation, Capital Cost and Funding
- Lack of Regional Coordination, waste streams, biosolids

Digester Feedstock-Food Processing

High strength waste water produced by:

- ❑ Canning Facilities
- ❑ Dairy Processors
- ❑ Meat Packing and Slaughtering Plants



Digester Drivers

- Waste Use or Reduction**
- Regulation/Discharge Fee reduction or avoidance**
- Pollution control**
 - Phosphorous
 - Pathogen Destruction
- Value added/Economic benefits**
 - Energy production, transportation fuel production, potential byproducts
- Policy – Low Carbon Fuel Standard, Renewable Fuel Standard**

Wisconsin's Dairy Digester Program

- ❑ **Wisconsin's Public Service Commission** originally allocated \$6.4 million in Focus on Energy funds for “a dairy digester program” exploring feasibility of installing anaerobic digesters on small-to medium-sized farms.
- ❑ **A revised RFP** removed the “small to medium farm size limit”, directed an **inter-agency effort** to focus instead on projects that explore concentrating biogas production by bringing together large and small farms in the same areas to achieve economies of scale in biogas production.
- ❑ **The RFP recommendation** resulted in direction to the Focus Program Administrator to award \$15 million to support the Integrated Anaerobic Digester System proposed by BCO, with conditions “necessary to ensure the project is successful”

On the Horizon...

- ❑ The Organic Waste and Biogas Feedstock Survey will canvass biogas industry stakeholders to provide a report synthesizing data to be used as a decision-making tool by industry stakeholders. The report will:
 - ❑ Provide an understanding of production and availability of biogas in Wisconsin
 - ❑ provide a detailed case study (or multiple) from each sector (i.e. stakeholder group/category)
 - ❑ Use results to inform OEI's sector support initiative for the biogas industry
- ❑ Track the installation and energy production of the "hub and spoke" digester project in NE WI
- ❑ The new Rural Initiatives program offers more than \$8 million in incentives for farmers and the industrial sector, among others.

Thank you!

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