



**Great Lakes Protection Fund**

1560 Sherman Avenue, Suite 1370, Evanston, Illinois 60201

Tel 847-425-8150 Fax 847-424-9832 [glpf.org](http://glpf.org)

**Funded Project**

# Implementation and Evaluation of Accurate Dairy Feeding

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Project No.	989
Timeline	2013 – Active
Award Amount	\$690,000
Team Leader	Michael Barry, AgModels LLC, <a href="mailto:mcb4@cornell.edu">mcb4@cornell.edu</a>

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A precision feeding system transponder mounted on a feeding wagon. It relays the weight of each ingredient as it is loaded into the wagon to enable a highly accurate recipe.

This project will reduce the dairy industry's contribution of excess nutrients, particularly phosphorus, to the Great Lakes. With an estimated three million dairy cows in the Great Lakes region, the team expects to reduce annual contributions of phosphorus by 20,000 metric tonnes per year. (To put this into perspective, the Great Lakes Water Quality Agreement of 2012 specified the combined maximum phosphorus loading target for all of the Great Lakes at 31,360 metric tonnes per year.) The team will do this by developing a novel feed management and nutritional accounting system that will intervene directly in farm feed management practices to streamline dairy operations and reduce nutrient waste. The cloud-based system will interact with feeding systems already available in the marketplace. In its final form, the system will consist of a series of modules (mixing, feed inventory, animal inventory and production), and a custom analytical engine that will perform statistical analysis and reporting and provide real-time feedback to on-farm decision-makers. The team will pilot the system on ten large dairy farms in Ontario, Ohio, Wisconsin, and New York.

Once the system has been successfully piloted, the team will develop and initiate a multi-faceted education and outreach program with an emphasis on developing a market for the system. The team will tap into diverse outreach channels that will include: commercial dairy industries, dairy producers, environmental and conservation outreach programs, animal science extension programs, and government agencies. As part of this effort, the team will promote targeted adoption in priority watersheds where CAFOs (concentrated animal feeding operations) impact water quality such as Green Bay, Wisconsin and the Genesee River watershed in New York.