

CONCLUSIONS FROM THE MANURE IRRIGATION WORKGROUP

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The Wisconsin Manure Irrigation Workgroup was convened in Spring 2013 by University of Wisconsin-Extension (UWEX) and University of Wisconsin-Madison (UW-Madison) College of Agricultural and Life Sciences at the request of Wisconsin Department of Natural Resources (WDNR) and Wisconsin Department of Agriculture, Trade and Consumer Protection (WDATCP). The workgroup was asked to review a broad set of issues associated with manure irrigation and to develop guidance and recommendations for state agencies, local governments, and citizens seeking to understand this expanding technology. The workgroup has no formal authority and expects that any public policy action by local or state governments related to workgroup recommendations would involve appropriate public participation and input.

After hosting two public presentations and input sessions in May 2013, the workgroup met 16 times between July 2013 and September 2015. Throughout its duration, the workgroup maintained open channels for public input and comments through a website and email. Over this same time period, an independent but related study (funded by the WDNR and United States Department of Agriculture-Agricultural Research Service (USDA-ARS)) was being conducted to quantify the risk of illness associated with airborne pathogens from manure irrigation. The timeline and results for that study influenced the timing of final conversations and recommendations from the workgroup.

The workgroup reviewed a range of issues related to manure irrigation including the benefits and concerns around the practice that led to the workgroup formation, discussions of health and environmental risk, review of manure as a material, manure management, and existing rules and regulations associated with various aspects of manure irrigation. Decisions and recommendations made by the workgroup were based on a consensus seeking process. For many aspects of guidance and recommendations, the workgroup did achieve consensus. In particular, the workgroup reached consensus about recommendations for baseline conditions that should be in place if manure irrigation practices are used. The workgroup reached lower levels of agreement (near consensus or close-to-near consensus) for recommendations related to setback distances for different land uses under various combinations of conditions (such as wind speed, wind direction, etc.).

Consensus baseline recommendations for all uses of manure irrigation practices are that operators must:

- ▶ Follow all existing relevant state and local laws regarding animal waste and nutrient management

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- ▶ Have and follow a NRCS CPS 590 Nutrient Management Plan
- ▶ Take appropriate steps to minimize drift
- ▶ Ensure no overspray of irrigated manure
- ▶ Have suitable means of supervising/controlling the equipment (e.g., active supervision, automatic sensors/controls, etc.)
- ▶ Have suitable means of determining relevant weather information (to include: wind speed, wind direction, and temperature)
- ▶ Have means of preventing contaminated backflow if equipment is connected to water sources
- ▶ Ensure that no human waste or septage is added to (or processed with) the manure.

Additional recommendations apply depending on whether and how the manure is processed. Those include issues related to time of day, wind speed, total number of applications per year, and equipment (such as nozzles that produce larger droplet sizes).

Recommendations for setback distances generally do not reflect consensus among all group members. Setback distance refers to distance from the edge of the area wetted by irrigated manure. They included distances of zero feet to property lines for forests, adjacent agricultural lands, and road right-of-way. Minimum setback distances of 100 feet were recommended (at near consensus or close-to-near consensus) for property lines of public recreational areas, including property lines for schools or playgrounds, and distances ranging from as high as 750 feet to as low as 250 feet (with additional conditions) for dwellings and occupied buildings. In all cases, setback distances to an occupied building would take precedence over setback distance to a property line. The full set of baseline conditions and setback distances are described in Chapter 5, along with degree of consensus.

This workgroup represents a compilation of science and knowledge vetted through the varied perspectives of workgroup members. Although a comprehensive review of all concerns was beyond the resources of this group, many issues were examined. The emphasis was placed on understanding additional risk incurred when land application of manure is conducted with irrigation practices in comparison to conventional manure application practices. As noted, the outcome of this group does not establish policy for any jurisdiction in Wisconsin. It is intended to serve as a resource for citizens and elected officials engaged in discussions about appropriate next steps for their communities around the issue of manure irrigation. Details of the workgroup findings can be found in the report which is available for download at <http://fyi.uwex.edu/manureirrigation/>.