



Setbacks and Odor in ATCP 51

Tim Jackson – Bureau of Land & Water Resources, DARM

WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION (DATCP)

4/11/2023

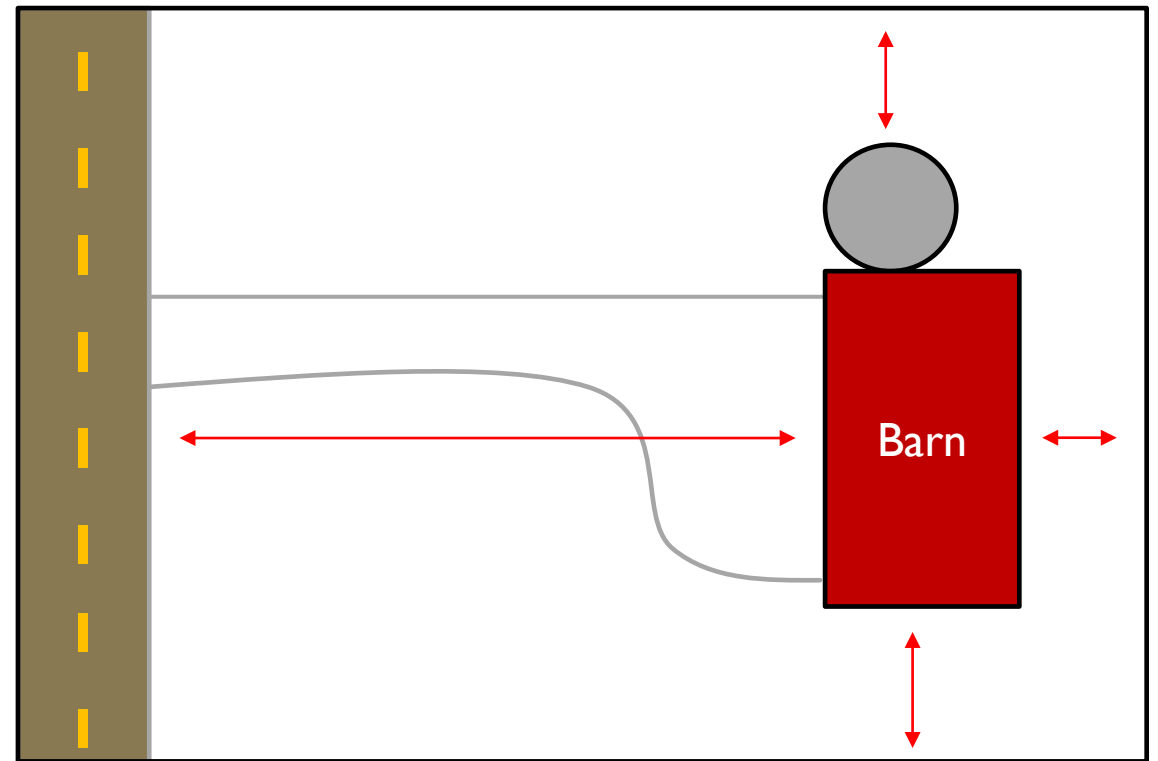
GOALS OF SETBACKS AND ODOR SCORE

- Determine whether manure storage structures, animal housing, and animal lots can be sited at a livestock facility, and if so, where
- Create a record that a livestock facility meets established standards which are intended to prevent land use conflicts



WHAT ARE SETBACKS?

- Required distances between two objects
- Common in general and shoreland zoning ordinances
- In livestock siting: Between a livestock structure or manure storage structure and property lines or road right-of-ways



SETBACKS IN ATCP 51

- Local ordinances may not require setbacks greater than the following:
 - 100' from property lines for livestock structures
 - 200' for facilities 1,000 AU or greater
 - 100' from road right-of-way for livestock structures
 - 150' for facilities 1,000 AU or greater
 - 350' from property lines or road right-of-way for manure storage structures
- Livestock structures shall comply with NR 811 and 812 for setbacks from new and existing wells, regardless of ownership of the land where the wells are located

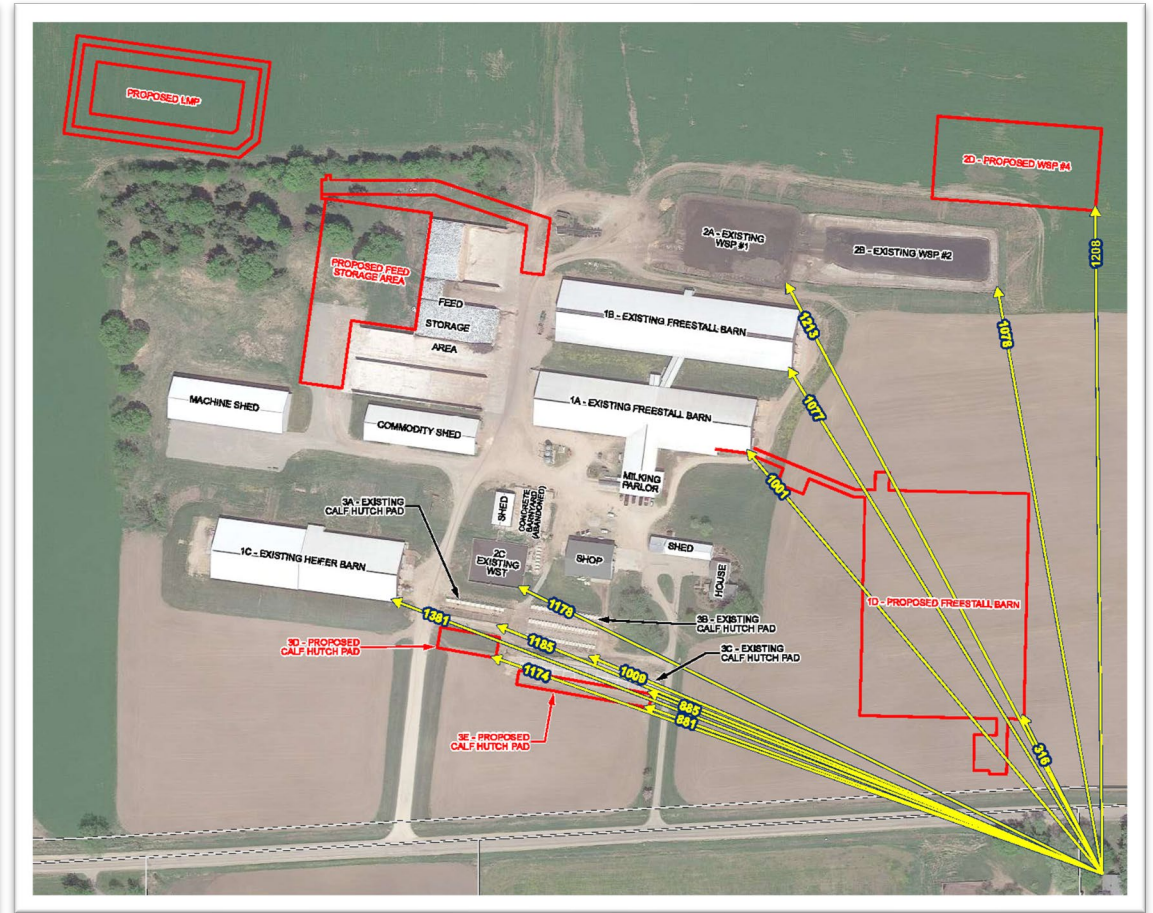
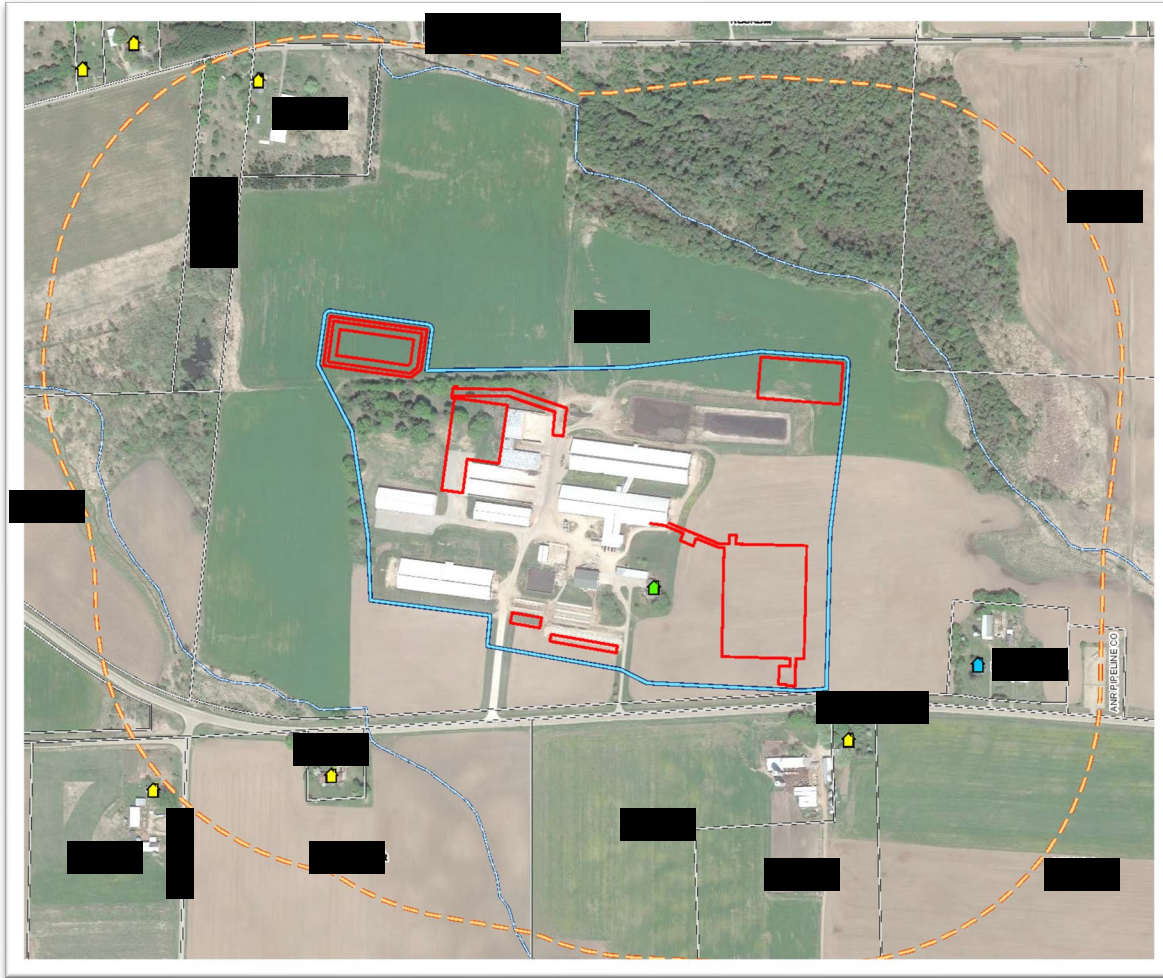


ODOR SCORE IN ATCP 51

- Predicts odor from livestock structures based on odor generation and control practice effectiveness numbers established in 2004
 - Product of the same research used to create the Odor from Feedlot – Setbacks Estimation Tool (OFFSET) model by University of Minnesota in 2005
- Requires a passing score of 500
 - Local govt's may approve a score as low as 470 with discretion
 - 80 points given for completing required incident response and employee training plans, 20 additional points for completing optional odor management plan



Example farm odor score



1. Animal Housing

ID	Manure Management	Generation number	Occupied Area (Ft. ²)	Dist. to Nearest Neighbor (Ft.)	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Predicted Odor
1A	Freestall - Dairy - Scrape (incl. Beef and Heifers on forage ration)	4	30,400	1,011	Cleaning Frequently (3 or more per day)	0.9	Diet manipulation	0.8	None	1	9
1B	Freestall - Dairy - Scrape (incl. Beef and Heifers on forage ration)	4	40,796	1,077	Cleaning Frequently (3 or more per day)	0.9	Diet manipulation	0.8	None	1	12
1C	Freestall - Dairy - Scrape (incl. Beef and Heifers on forage ration)	4	28,220	1,311	Cleaning Frequently (3 or more per day)	0.9	Diet manipulation	0.8	None	1	8
1D	Freestall - Dairy - Scrape (incl. Beef and Heifers on forage ration)	4	106,164	318	Cleaning Frequently (3 or more per day)	0.9	Diet manipulation	0.8	None	1	31
1E											
1F											
1G											
1H											
1I											
1J											
1K											
1L											

2. Waste Storage

ID	Storage type	Generation number	Surface Area (Ft. ²)	Dist. to Nearest Neighbor (Ft.)	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Predicted Odor
2A	Liquid storage - Long term (pit and tank) Open anaerobic	13	34,297	1,213	Bottom Fill	0.9	Natural Crust	0.3	None	1	12
2B	Liquid storage - Long term (pit and tank) Open anaerobic	13	42,450	1,078	None	1	None	1	None	1	55
2C	Liquid storage - Long term (pit and tank) Open anaerobic	13	8,000	1,178	Bottom Fill	0.9	None	1	None	1	9
2D	Liquid storage - Long term (pit and tank) Open anaerobic	13	45,000	1,208	None	1	None	1	None	1	59
2E											
2F											

3. Animal Lots

ID	Lot type	Generation number	Surface Area (Ft. ²)	Dist. to Nearest Neighbor (Ft.)	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Predicted Odor
3A	Paved	4	4,125	1,185	None	1	None	1	None	1	2
3B	Paved	4	9,984	1,009	None	1	None	1	None	1	4
3C	Paved	4	6,125	885	None	1	None	1	None	1	2
3D	Paved	4	4,050	1,174	None	1	None	1	None	1	2
3E	Paved	4	6,125	881	None	1	None	1	None	1	2
3F											

Example farm odor score

4. Separation Distance

Weighted Distance to Neighbor	1,018
Direction of Nearest Neighbor	Southeast
Adjusted Weighted Distance	1,222
Density (neighbors within 1,300 ft.)	High

5. Management

Basic Management Plans	Required
Advanced Odor Management Plan?	Yes

Total Predicted Odor **207**

Separation Score **657**

Basic Management Score **80**

Advanced Management Score **20**

Odor Score **550**

