



ESTIMATING SETBACK DISTANCES USING THE ODOR FOOTPRINT TOOL
Worksheet for Calculating Separation Distances for a Particular Animal Production Site

Project description: _____ Location: _____
Region: _____

GENERAL INFORMATION FOR BASE PLAN						INFORMATION FOR ODOR CONTROL OPTION				
Column A	Column B	Column C	Column D	Column E	Column F	Column G	Column H	Column I	Column J	Column K
Source Facility	Plan Dimensions (sq. ft. x ft.)	Plan Area (sq. ft.)	Odor Emission Number (OEN)	Odor Control Factor	Scaled Odor Emission Rate (x 10 ⁶ OEN) C x D x E = J, 0.001,000	Odor Control Practice Being Considered	Odor Control Factor	Scaled Odor Emission Rate (x 10 ⁶ OEN) F x H		
1)										
2)										
3)										
4)										
5)										
Total scaled odor emission rate = Sum of values in Column F						Total scaled odor emission rate = Sum of values in Column J				
Annoyance-Free Percentage Circle value chosen by you or by community		Directional Setback Distances (miles or fraction thereof) Locate using set of setback curves for region				Directional Setback Distances (miles or fraction thereof) Locate using set of setback curves for region				
90 94 96 98 99 %		North / NE East / SE South / SW West / NW				N / NE E / SE S / SW W / NW				
Base separation distance Read off of regional curves										
Applicable terrain factor From Table 4										
Adjusted separation distance Base distance x Terrain factor										

Common Uses for NOFT Results:

Develop simple odor footprints that:

- Check and/or improve siting of proposed livestock facilities
- Illustrate impacts of utilizing odor control technologies
- Help inform zoning policy-making

Check Siting of Livestock Facilities

X indicates preferred site for livestock facility of given size

Y indicates an alternative site for the livestock facility

Objective: Assess odor risk of site X and compare to Y

Check Siting of Livestock Facilities

No residences within 94% annoyance-free setbacks for site X

Four or five within 98% annoyance-free setbacks for site X

Seems site Y may have advantage.

Improve Siting of Livestock Facilities

No residences within 94% annoyance-free setbacks for site Y

Two within 98% annoyance-free setbacks for site Y

Shows site Y's advantage over X.

Show Effect of Odor Control

Odor footprints for proposed swine finishing facility
98% o.a.f.f.

Without biofilter

With biofilter

