



NEBRASKA ODOR FOOTPRINT TOOL Separation Distance Results



Project title:
Site location:
Location for weather data:

Beatrice, Neb. (Southeast Neb.)

Prepared for:
Prepared by:
Date prepared:

Type of facility:

	Source Facility 1	Source Facility 2	Source Facility 3	Source Facility 4
	Poultry, Broiler Floor-raised on litter			
Total plan area: (sq. ft.)	120,000			
Total number of animals:	37,499			
Base odor control:	No supplemental odor			
Percentage of total odor:	100%			
Alternate odor control:	No supplemental odor			
New Percentage of total odor:	100%			

Separation Distance (miles)

		North	East	South	West
BASE PLAN	90%	0.15	0.06	0.08	0.11
	94%	0.19	0.11	0.12	0.16
	96%	0.25	0.15	0.15	0.20
	98%	0.38	0.26	0.26	0.33
	99%	0.59	0.50	0.47	0.59

Odor Annoyance-Free
Frequency

ALTERNATE PLAN	90%	0.15	0.06	0.08	0.11
	94%	0.19	0.11	0.12	0.16
	96%	0.25	0.15	0.15	0.20
	98%	0.38	0.26	0.26	0.33
	99%	0.59	0.50	0.47	0.59

Odor Annoyance-Free
Frequency

	North	East	South	West
Terrain: (apply on receptor-by-receptor basis)	Flat terrain	Flat terrain	Flat terrain	Flat terrain

Funding provided by: The Nebraska Environmental Trust
Pork Checkoff



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	Source Facility 1	Source Facility 2	Source Facility 3	Source Facility 4
	Poultry, Broiler Floor-raised on litter			
Total plan area: (sq. ft.)	75,600			
Total number of animals:	80,000			

Base odor control:
 Percentage of total odor:
 Alternate odor control:
 New Percentage of total odor:

Base odor control:	No supplemental odor			
Percentage of total odor:	100%			
Alternate odor control:	No supplemental odor			
New Percentage of total odor:	100%			

Separation Distance (miles)

BASE PLAN

Odor Annoyance-Free
 Frequency

	North	East	South	West
90%	0.11	0.05	0.06	0.09
94%	0.15	0.09	0.10	0.12
96%	0.19	0.12	0.12	0.16
98%	0.29	0.21	0.21	0.26
99%	0.45	0.39	0.37	0.45

ALTERNATE PLAN

Odor Annoyance-Free
 Frequency

90%	0.11	0.05	0.06	0.09
94%	0.15	0.09	0.10	0.12
96%	0.19	0.12	0.12	0.16
98%	0.29	0.21	0.21	0.26
99%	0.45	0.39	0.37	0.45

Terrain: (apply on receptor-by-receptor basis)

North	East	South	West
Flat terrain	Flat terrain	Flat terrain	Flat terrain

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Type of facility:

	Source Facility 1	Source Facility 2	Source Facility 3	Source Facility 4
Type of facility:	Poultry, Broiler Floor-raised on litter			
Total plan area: (sq. ft.)	151,200			
Total number of animals:	190,000			
Base odor control:	No supplemental odor			
Percentage of total odor:	100%			
Alternate odor control:	No supplemental odor			
New Percentage of total odor:	100%			

Separation Distance (miles)

	North	East	South	West
BASE PLAN				
90%	0.16	0.06	0.08	0.12
94%	0.21	0.12	0.13	0.18
96%	0.28	0.16	0.16	0.22
98%	0.44	0.30	0.29	0.37
99%	0.67	0.57	0.53	0.67

Odor Annoyance-Free
 Frequency

ALTERNATE PLAN

90%	0.16	0.06	0.08	0.12
94%	0.21	0.12	0.13	0.18
96%	0.28	0.16	0.16	0.22
98%	0.44	0.30	0.29	0.37
99%	0.67	0.57	0.53	0.67

Odor Annoyance-Free
 Frequency

Terrain: (apply on receptor-by-receptor basis)

North	East	South	West
Flat terrain	Flat terrain	Flat terrain	Flat terrain

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Type of facility:

Source Facility 1 Source Facility 2 Source Facility 3 Source Facility 4

Poultry, Turkey Litter			
Total plan area: (sq. ft.)	151,200		
Total number of animals:	190,000		
Base odor control:	No supplemental odor		
Percentage of total odor:	100%		
Alternate odor control:	No supplemental odor		
New Percentage of total odor:	100%		

Separation Distance (miles)

		North	East	South	West
BASE PLAN	90%	0.16	0.06	0.08	0.12
	94%	0.21	0.12	0.13	0.18
	96%	0.28	0.16	0.16	0.22
	98%	0.44	0.30	0.29	0.37
	99%	0.67	0.57	0.53	0.67

Odor Annoyance-Free
Frequency

ALTERNATE PLAN	90%	0.16	0.06	0.08	0.12
	94%	0.21	0.12	0.13	0.18
	96%	0.28	0.16	0.16	0.22
	98%	0.44	0.30	0.29	0.37
	99%	0.67	0.57	0.53	0.67

Odor Annoyance-Free
Frequency

		North	East	South	West
Terrain: (apply on receptor-by-receptor basis)		Flat terrain	Flat terrain	Flat terrain	Flat terrain

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Prepared for:
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	Source Facility 1	Source Facility 2	Source Facility 3	Source Facility 4
Type of facility:	Swine, Farrowing Bldg Shallow pit Far (pull plug)			
Total plan area: (sq. ft.)	151,200			
Total number of animals:	4,000			
Base odor control:	No supplemental odor			
Percentage of total odor:	100%			
Alternate odor control:	No supplemental odor			
New Percentage of total odor:	100%			

		Separation Distance (miles)			
		North	East	South	West
BASE PLAN	90%	0.44	0.12	0.17	0.26
	94%	0.59	0.26	0.32	0.45
	Odor Annoyance-Free Frequency	0.79	0.42	0.44	0.60
	98%	1.32	0.76	0.75	1.07
	99%	2.18	1.63	1.56	2.03

ALTERNATE PLAN	90%	0.44	0.12	0.17	0.26
	94%	0.59	0.26	0.32	0.45
	Odor Annoyance-Free Frequency	0.79	0.42	0.44	0.60
	98%	1.32	0.76	0.75	1.07
	99%	2.18	1.63	1.56	2.03

	North	East	South	West
Terrain: (apply on receptor-by-receptor basis)	Flat terrain	Flat terrain	Flat terrain	Flat terrain

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Type of facility:

	Source Facility 1	Source Facility 2	Source Facility 3	Source Facility 4
	Swine, Farrowing Bldg Litter			
Total plan area: (sq. ft.)	151,200			
Total number of animals:	4,000			
Base odor control:	Oil sprinkling used to			
Percentage of total odor:	100%			
Alternate odor control:	Oil sprinkling used to			
New Percentage of total odor:	100%			

BASE PLAN

Odor Annoyance-Free
Frequency

		Separation Distance (miles)			
		North	East	South	West
	90%	0.15	0.06	0.08	0.11
	94%	0.19	0.11	0.12	0.16
	96%	0.25	0.15	0.15	0.20
	98%	0.39	0.27	0.26	0.33
	99%	0.59	0.50	0.47	0.59

ALTERNATE PLAN

Odor Annoyance-Free
Frequency

	90%	0.13	0.05	0.07	0.10
	94%	0.17	0.10	0.11	0.14
	96%	0.22	0.13	0.13	0.18
	98%	0.34	0.24	0.24	0.30
	99%	0.52	0.45	0.42	0.52

Terrain: (apply on receptor-by-receptor basis)

North	East	South	West
Flat terrain	Flat terrain	Flat terrain	Flat terrain

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Type of facility:

	Source Facility 1	Source Facility 2	Source Facility 3	Source Facility 4
	Poultry, Broiler Floor-raised on litter			
Total plan area: (sq. ft.)	151,200			
Total number of animals:	190,000			
Base odor control:	Oil sprinkling used to			
Percentage of total odor:	100%			
Alternate odor control:	Oil sprinkling used to			
New Percentage of total odor:	100%			

Separation Distance (miles)

BASE PLAN

Odor Annoyance-Free
 Frequency

	North	East	South	West
90%	0.15	0.06	0.08	0.11
94%	0.19	0.11	0.12	0.16
96%	0.25	0.15	0.15	0.20
98%	0.39	0.27	0.26	0.33
99%	0.59	0.50	0.47	0.59

ALTERNATE PLAN

Odor Annoyance-Free
 Frequency

	North	East	South	West
90%	0.13	0.05	0.07	0.10
94%	0.17	0.10	0.11	0.14
96%	0.22	0.13	0.13	0.18
98%	0.34	0.24	0.24	0.30
99%	0.52	0.45	0.42	0.52

Terrain: (apply on receptor-by-receptor basis)

North	East	South	West
Flat terrain	Flat terrain	Flat terrain	Flat terrain

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Type of facility:

	Source Facility 1	Source Facility 2	Source Facility 3	Source Facility 4
Poultry, Turkey Litter				
Total plan area: (sq. ft.)	151,200			
Total number of animals:	190,000			

Base odor control:
Percentage of total odor:
Alternate odor control:
New Percentage of total odor:

Oil sprinkling used to				
100%				
Oil sprinkling used to				
100%				

Separation Distance (miles)

		North	East	South	West	
BASE PLAN	90%	0.15	0.06	0.08	0.11	
	94%	0.19	0.11	0.12	0.16	
	Odor Annoyance-Free Frequency	96%	0.25	0.15	0.15	0.20
	98%	0.39	0.27	0.26	0.33	
	99%	0.59	0.50	0.47	0.59	
ALTERNATE PLAN	90%	0.13	0.05	0.07	0.10	
	94%	0.17	0.10	0.11	0.14	
	Odor Annoyance-Free Frequency	96%	0.22	0.13	0.13	0.18
	98%	0.34	0.24	0.24	0.30	
	99%	0.52	0.45	0.42	0.52	

Terrain: (apply on receptor-by-receptor basis)

North	East	South	West
Flat terrain	Flat terrain	Flat terrain	Flat terrain

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Type of facility:

Source Facility 1 Source Facility 2 Source Facility 3 Source Facility 4

Poultry, Turkey Floor-raised on litter			
Total plan area: (sq. ft.)	151,200		
Total number of animals:	190,000		
Base odor control:	Biofilter: Minimum Airflow		
Percentage of total odor:	100%		
Alternate odor control:	Biofilter: Receiving 100%		
New Percentage of total odor:	100%		

Separation Distance (miles)

		North	East	South	West
BASE PLAN	90%	0.14	0.06	0.07	0.10
	94%	0.18	0.11	0.11	0.15
Odor Annoyance-Free Frequency	96%	0.23	0.14	0.14	0.19
	98%	0.36	0.25	0.25	0.31
	99%	0.55	0.47	0.44	0.55
ALTERNATE PLAN	90%	0.03	0.02	0.02	0.02
	94%	0.04	0.03	0.03	0.03
Odor Annoyance-Free Frequency	96%	0.05	0.03	0.03	0.04
	98%	0.07	0.06	0.05	0.07
	99%	0.11	0.10	0.09	0.11

	North	East	South	West
Terrain: (apply on receptor-by-receptor basis)	Rolling terrain	Flat terrain	Flat terrain	Flat terrain

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Type of facility:

	Source Facility 1	Source Facility 2	Source Facility 3	Source Facility 4
Swine, Farrowing Bldg Shallow pit Far (pull plug)				
Total plan area: (sq. ft.)	151,200			
Total number of animals:	190,000			
Base odor control:	Biofilter: Minimum Airflow			
Percentage of total odor:	100%			
Alternate odor control:	Biofilter: Receiving 100%			
New Percentage of total odor:	100%			

Separation Distance (miles)

		North	East	South	West
BASE PLAN	90%	0.37	0.11	0.15	0.23
	94%	0.49	0.23	0.28	0.38
	96%	0.66	0.35	0.37	0.50
	98%	1.09	0.65	0.64	0.88
	99%	1.76	1.34	1.28	1.68

Odor Annoyance-Free
Frequency

		North	East	South	West
ALTERNATE PLAN	90%	0.11	0.05	0.06	0.09
	94%	0.15	0.09	0.09	0.12
	96%	0.19	0.12	0.11	0.16
	98%	0.29	0.21	0.20	0.25
	99%	0.44	0.38	0.36	0.44

Odor Annoyance-Free
Frequency

		North	East	South	West
Terrain: (apply on receptor-by-receptor basis)		Rolling terrain	Flat terrain	Flat terrain	Flat terrain

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Poultry, Broiler Floor-raised on litter				
Total plan area: (sq. ft.)	151,200			
Total number of animals:	190,000			
Base odor control:	Biofilter: Receiving 100%			
Percentage of total odor:	100%			
Alternate odor control:	Biofilter: Receiving 100%			
New Percentage of total odor:	100%			

Separation Distance (miles)

		North	East	South	West
BASE PLAN Odor Annoyance-Free Frequency	90%	0.04	0.02	0.03	0.04
	94%	0.06	0.04	0.04	0.05
	96%	0.07	0.05	0.05	0.06
	98%	0.10	0.08	0.08	0.10
	99%	0.15	0.14	0.13	0.16

ALTERNATE PLAN Odor Annoyance-Free Frequency	90%	0.00	0.00	0.00	0.00
	94%	0.01	0.00	0.00	0.00
	96%	0.01	0.00	0.00	0.01
	98%	0.01	0.01	0.01	0.01
	99%	0.02	0.01	0.01	0.02

		North	East	South	West
Terrain: (apply on receptor-by-receptor basis)		Rolling terrain	Flat terrain	Flat terrain	Flat terrain

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