

	A	B	C	L	M	N	O	P	Q	R	S	T	U	V	W	X
1	activity product or service	aspect	impact	severity	frequency	duration	zone of impact	volume	legal requirement	public concern	cost	Score	significant?	positive?	control measures	notes
2	general farm	farm garbage including paint sticks, office waste, insemination tubes, semen bags	solid waste/landfill	1	3	3	3	2	3	3	3	21	Y			
3	manure management	lagoon level and integrity management	potential surface water contamination	3	2	1	3	3	3	3	2	20	Y		weekly inspection	
4	manure management	land application to reduce commercial fertilizer use, increases organic matter in soil	conserves natural resources	2	3	3	2	3	3	1	3	20	Y			
5	buildings	leak from flush or recycle water pipes	contamination of surface water	3	1	2	3	1	3	3	3	19	Y			
6	general farm	fuel use	consumption of natural resources	1	3	2	3	3	2	2	3	19	Y			
7	manure management	maintenance of center pivot and reel system	reduces potential for surface water contamination	3	1	1	3	3	3	3	2	19	Y		rain gauge check, nozzle inspection, oil gear box, etc.	
8	manure management	application system malfunction	contamination of surface water	2	1	2	2	3	3	3	3	19	Y			
9	medicine	antibiotic use - oral	potential resistance, potential increase in animal health	3	3	3	3	2	1	3	1	19	Y		reduce oral use due to preventative measures (injectable)	oral use lowers overall antibiotic use, feed to pigs in water

	A	B	C	L	M	N	O	P	Q	R	S	T	U	V	W	X
10	medicine	antibiotic use - injectable	potential resistance, potential increase in animal health	3	3	3	3	1	1	3	2	19	Y			
11	general farm	well water use	consumption of natural resources, lagoon loading	1	3	3	3	3	1	2	2	18		Y		
12	general farm	record-keeping - manure management		3	3	1	1	1	3	3	3	18	Y			legal requirement
13	general farm	disease vector control - fly and rodent	increased animal health/decreased disease transference	3	3	2	3	1	1	3	2	18				
14	general farm	use of septic field	contamination of groundwater	2	3	2	2	2	3	2	2	18	Y			
15	manure management	building odor	degraded air quality	1	3	1	3	3	3	3	1	18	Y			
16	manure management	ammonia emissions	degraded air quality	2	3	3	3	2	1	3	1	18				
17	manure management	lagoon odor	degraded air quality	2	3	3	2	2	2	3	1	18				

	A	B	C	L	M	N	O	P	Q	R	S	T	U	V	W	X
18	animal health	mortality - rendering	conservation of natural resources	2	3	1	2	3	3	2	1	17	Y	Y		
19	manure management	over application/improper management	excess nutrients in soil, potential contamination of surface and groundwater	2	1	2	2	1	3	3	3	17	Y			
20	general farm	diesel generator - air emissions	degraded air quality	1	2	2	2	2	2	2	3	16				
21	general farm	county water use	consumption of natural resources	1	3	1	1	2	2	3	3	16				office water consumption, shower use, laundry, back-up for pigs; septic field
22	animal health	mortality - catastrophic/incineration	potential degraded air quality/groundwater	2	1	1	1	2	3	2	3	15	Y			follow state vet plan
23	general farm	disinfection of tires and houses - Tectrol	decreases disease transference	3	3	1	1	2	1	2	2	15				
24	general farm	storm water management	reduced lagoon loading, reduced impact to surface water	2	2	1	2	2	2	2	2	15			grass waterways, divert rainwater from lagoon, field borders/buffers	NRCS BMP?
25	manure management	use of center pivot	reduces air contamination, reduces consumption of natural resources	1	3	1	2	3	1	1	3	15				uses less HP/natural resources over reel, operates under lower pressure which reduces odor and volatilization

	A	B	C	L	M	N	O	P	Q	R	S	T	U	V	W	X
26	general farm	electricity use	consumption of natural resources	1	3	1	1	3	1	1	3	14				Roanoke EMC
27	general farm	LP gas use	consumption of natural resources	1	3	1	1	3	1	1	3	14				
28	manure management	excess sludge accumulation	potential increase in odor/air degradation	1	1	1	2	2	3	1	3	14	Y		track feed efficiency	observe color of lagoon
29	animal health	pig movement to create uniform health status	decreased drug use, host population	2	3	1	1	3	1	1	1	13		Y	consider under control	
30	general farm	fuel spill	land contamination	2	1	1	1	1	2	2	3	13			concrete floor with containment structure	
31	general farm	diesel generator - failure	potential animal mortality	3	1	1	1	1	1	2	3	13				
32	general farm	well water abnormal use	consumption of natural resources, lagoon loading	2	1	2	2	1	1	1	3	13			weekly meter reading	use approx. 8.6 gal/sow/day
33	general farm	participate in peak shaving program	conserves natural resources	1	2	1	1	3	1	1	3	13				
34	general farm	sharps disposal	biohazard/incineration, air quality	2	3	1	1	1	2	2	1	13				
35	manure management	pit recharge	conservation of natural resources	1	3	1	2	3	1	1	1	13				helps reduce odors
36	animal health	use of autogeneous vaccines	decreases potential resistance, increased animal health	3	2	1	2	1	1	1	1	12		Y	every 6 weeks, blood samples are monitored	more effective disease control vs. traditional vaccines
37	animal health	vaccine use	increased animal health/decreased disease transference	3	2	1	2	1	1	1	1	12		Y	take blood samples	

	A	B	C	L	M	N	O	P	Q	R	S	T	U	V	W	X
38	buildings	electric motor failure/spilled oil	potential animal mortality and air quality from fire	3	1	1	1	1	1	1	3	12				
39	buildings	fans - damage from cleaning	potential animal mortality and air quality from fire	3	1	1	1	1	1	1	3	12				
40	general farm	feed consumption	consumption of natural resources	1	3	1	1	3	1	1	1	12				
41	general farm	record-keeping - production		1	3	1	1	2	1	1	2	12				productivity gauge to minimum feed consumption for under-productive sows
42	general farm	building cleaning	lagoon loading, consumption of natural resources, disease control	1	3	1	1	2	1	1	2	12				
43	buildings	electric motor use	consumption of natural resources	1	3	1	1	1	1	1	2	11				
44	general farm	feed spills	lagoon loading	2	2	1	1	2	1	1	1	11			feed in less quantity and higher frequency to reduce feed waste	
45	general farm	mowing	degraded air quality	1	2	1	1	1	1	1	3	11				
46	general farm	LP gas storage failure	degraded air quality	1	1	2	1	1	1	1	3	11			gas company owns and inspects tanks and lines, paints tank	

	A	B	C	L	M	N	O	P	Q	R	S	T	U	V	W	X
47	general farm	CFC use - refrigerator and AC maintenance	solid waste, potential contamination of air	2	1	2	1	1	1	1	2	11	Y			
48	general farm	truck traffic - dust	degraded air quality	1	3	1	1	1	1	1	1	10				all delivery trucks and visitors to farm
49	general farm	use of Round-Up	potential land impacts	1	1	1	1	1	1	1	3	10				
50	animal health	unusable vaccine	solid waste/landfill	1	1	2	1	1	1	1	1	9		N		some goes out-of-date, some wasted due to container volume excess
51	animal health	other medicine use	solid waste/landfill, increased animal health	2	1	1	1	1	1	1	1	9		Y		
52	general farm	used oil recycling	conservation of natural resources	1	1	1	1	1	1	2	1	9				
53	general farm	flourescent lights	solid waste/landfill space/groundwater contamination	1	1	1	1	1	1	1	2	9				
54	general farm	batteries - tractor, generator, sow cart	recycled, conservation of natural resources	1	1	1	1	1	1	1	1	8				returned to vendor, carry to county collection site
55	general farm	recycle office paper and cardboard	conservation of natural resources	1	1	1	1	1	1	1	1	8				

activity product or service	aspect	impact	severity	frequency	duration	zone of impact	volume	legal requirement	public concern	cost	Score	significant?	positive?	control measures	notes		
general farm	farm garbage including paint sticks, office waste, insemination tubes, semen bags	solid waste/landfill	1	3	3	3	2	3	3	3	21	Y					
manure management	lagoon level and integrity management	potential surface water contamination	3	2	1	3	3	3	3	2	20	Y		weekly inspection			
manure management	land application to reduce commercial fertilizer use, increases organic matter in soil	conserves natural resources	2	3	3	2	3	3	1	3	20	Y		record-keeping - manure management			
buildings	leak from flush or recycle water pipes	contamination of surface water	3	1	2	3	1	3	3	3	19	Y					
general farm	fuel use	consumption of natural resources	1	3	2	3	3	2	2	3	19	Y					
manure management	maintenance of center pivot and reel system	reduces potential for surface water contamination	3	1	1	3	3	3	3	2	19	Y		rain gauge check, nozzle inspection, oil gear box, etc.			
manure management	application system malfunction	contamination of surface water	2	1	2	2	3	3	3	3	19	Y					
medicine	antibiotic use - oral	potential resistance, potential increase in animal health	3	3	3	3	2	1	3	1	19	Y		reduce oral use due to preventative measures (injectable)	oral use lowers overall antibiotic use, feed to pigs in water		
medicine	antibiotic use - injectable	potential resistance, potential increase in animal health	3	3	3	3	1	1	3	2	19	Y					
general farm	well water use	consumption of natural resources, lagoon loading	1	3	3	3	3	1	2	2	18		Y				
general farm	disease vector control - fly and rodent	increased animal health/decreased disease transference	3	3	2	3	1	1	3	2	18						
general farm	use of septic field	contamination of groundwater	2	3	2	2	2	3	2	2	18	Y					
manure management	building odor	degraded air quality	1	3	1	3	3	3	3	1	18	Y					
manure management	ammonia emissions	degraded air quality	2	3	3	3	2	1	3	1	18						
manure management	lagoon odor	degraded air quality	2	3	3	2	2	2	3	1	18						
animal health	mortality - rendering	conservation of natural resources	2	3	1	2	3	3	2	1	17	Y	Y				
manure management	over application/improper management	excess nutrients in soil, potential contamination of surface and groundwater	2	1	2	2	1	3	3	3	17	Y					
general farm	diesel generator - air emissions	degraded air quality	1	2	2	2	2	2	2	3	16						

general farm	county water use	consumption of natural resources	1	3	1	1	2	2	3	3	16				office water consumption, shower use, laundry, back-up for pigs; septic field		
animal health	mortality - catastrophic/incineration	potential degraded air quality/groundwater	2	1	1	1	2	3	2	3	15	Y			follow state vet plan		
general farm	disinfection of tires and houses - Tectrol	decreases disease transference	3	3	1	1	2	1	2	2	15						
general farm	storm water management	reduced lagoon loading, reduced impact to surface water	2	2	1	2	2	2	2	2	15			grass waterways, divert rainwater from lagoon, field borders/buffers	NRCS BMP?		
manure management	use of center pivot	reduces air contamination, reduces consumption of natural resources	1	3	1	2	3	1	1	3	15				uses less HP/natural resources over reel, operates under lower pressure which reduces odor and volatilization		
general farm	electricity use	consumption of natural resources	1	3	1	1	3	1	1	3	14				Roanoke EMC		
general farm	LP gas use	consumption of natural resources	1	3	1	1	3	1	1	3	14						
manure management	excess sludge accumulation	potential increase in odor/air degradation	1	1	1	2	2	3	1	3	14	Y		track feed efficiency	observe color of lagoon		
animal health	pig movement to create uniform health status	decreased drug use, host population	2	3	1	1	3	1	1	1	13		Y	consider under control			
general farm	fuel spill	land contamination	2	1	1	1	1	2	2	3	13			concrete floor with containment structure			
general farm	diesel generator - failure	potential animal mortality	3	1	1	1	1	1	2	3	13						
general farm	well water abnormal use	consumption of natural resources, lagoon loading	2	1	2	2	1	1	1	3	13			weekly meter reading	use approx. 8.6 gal/sow/day		
general farm	participate in peak shaving program	conserves natural resources	1	2	1	1	3	1	1	3	13						
general farm	sharps disposal	biohazard/incineration, air quality	2	3	1	1	1	2	2	1	13						
manure management	pit recharge	conservation of natural resources	1	3	1	2	3	1	1	1	13				helps reduce odors		
animal health	use of autogeneuous vaccines	decreases potential resistance, increased animal health	3	2	1	2	1	1	1	1	12		Y	every 6 weeks, blood samples are monitored	more effective disease control vs. traditional vaccines		
animal health	vaccine use	increased animal health/decreased disease transference	3	2	1	2	1	1	1	1	12		Y	take blood samples			
buildings	electric motor failure/spilled oil	potential animal mortality and air quality from fire	3	1	1	1	1	1	1	3	12						

sorted by legal requirement															
activity product or service	aspect	impact	severity	frequency	duration	zone of impact	volume	legal requirement	public concern	cost	Score	significant?	positive?	control measures	notes
general farm	farm garbage including paint sticks, office waste, insemination tubes, semen bags	solid waste/landfill	1	3	3	3	2	3	3	3	21	Y			
manure management	lagoon level and integrity management	potential surface water contamination	3	2	1	3	3	3	3	2	20	Y		weekly inspection	
manure management	land application to reduce commercial fertilizer use, increases organic matter in soil	conserves natural resources	2	3	3	2	3	3	1	3	20	Y			
buildings	leak from flush or recycle water pipes	contamination of surface water	3	1	2	3	1	3	3	3	19	Y			
manure management	maintenance of center pivot and reel system	reduces potential for surface water contamination	3	1	1	3	3	3	3	2	19	Y		rain gauge check, nozzle inspection, oil gear box, etc.	
manure management	application system malfunction	contamination of surface water	2	1	2	2	3	3	3	3	19	Y			
general farm	record-keeping - manure management		3	3	1	1	1	3	3	3	18	Y			legal requirement
general farm	use of septic field	contamination of groundwater	2	3	2	2	2	3	2	2	18	Y			
manure management	building odor	degraded air quality	1	3	1	3	3	3	3	1	18	Y			
animal health	mortality - rendering	conservation of natural resources	2	3	1	2	3	3	2	1	17	Y	Y		
manure management	over application/improper management	excess nutrients in soil, potential contamination of surface and groundwater	2	1	2	2	1	3	3	3	17	Y			
animal health	mortality - catastrophic/incineration	potential degraded air quality/groundwater	2	1	1	1	2	3	2	3	15	Y			follow state vet plan
manure management	excess sludge accumulation	potential increase in odor/air degradation	1	1	1	2	2	3	1	3	14	Y		track feed efficiency	observe color of lagoon

general farm	fuel use	consumption of natural resources	1	3	2	3	3	2	2	3	19	Y			
manure management	lagoon odor	degraded air quality	2	3	3	2	2	2	3	1	18				
general farm	diesel generator - air emissions	degraded air quality	1	2	2	2	2	2	2	3	16				
general farm	county water use	consumption of natural resources	1	3	1	1	2	2	3	3	16				office water consumption, shower use, laundry, back-up for pigs; septic field
general farm	storm water management	reduced lagoon loading, reduced impact to surface water	2	2	1	2	2	2	2	2	15			grass waterways, divert rainwater from lagoon, field borders/buffers	NRCS BMP?
general farm	fuel spill	land contamination	2	1	1	1	1	2	2	3	13			concrete floor with containment structure	
general farm	sharps disposal	biohazard/incineration, air quality	2	3	1	1	1	2	2	1	13				
medicine	antibiotic use - oral	potential resistance, potential increase in animal health	3	3	3	3	2	1	3	1	19	Y		reduce oral use due to preventative measures (injectable)	oral use lowers overall antibiotic use, feed to pigs in water
medicine	antibiotic use - injectable	potential resistance, potential increase in animal health	3	3	3	3	1	1	3	2	19	Y			
general farm	well water use	consumption of natural resources, lagoon loading	1	3	3	3	3	1	2	2	18		Y		
general farm	disease vector control - fly and rodent	increased animal health/decreased disease transference	3	3	2	3	1	1	3	2	18				
manure management	ammonia emissions	degraded air quality	2	3	3	3	2	1	3	1	18				
general farm	disinfection of tires and houses - Tectrol	decreases disease transference	3	3	1	1	2	1	2	2	15				

manure management	use of center pivot	reduces air contamination, reduces consumption of natural resources	1	3	1	2	3	1	1	3	15				uses less HP/natural resources over reel, operates under lower pressure which reduces odor and volatilization
general farm	electricity use	consumption of natural resources	1	3	1	1	3	1	1	3	14				Roanoke EMC
general farm	LP gas use	consumption of natural resources	1	3	1	1	3	1	1	3	14				
animal health	pig movement to create uniform health status	decreased drug use, host population	2	3	1	1	3	1	1	1	13		Y	consider under control	
general farm	diesel generator - failure	potential animal mortality	3	1	1	1	1	1	2	3	13				
general farm	well water abnormal use	consumption of natural resources, lagoon loading	2	1	2	2	1	1	1	3	13			weekly meter reading	use approx. 8.6 gal/sow/day
general farm	participate in peak shaving program	conserves natural resources	1	2	1	1	3	1	1	3	13				
manure management	pit recharge	conservation of natural resources	1	3	1	2	3	1	1	1	13				helps reduce odors
animal health	use of autogeneous vaccines	decreases potential resistance, increased animal health	3	2	1	2	1	1	1	1	12		Y	every 6 weeks, blood samples are monitored	more effective disease control vs. traditional vaccines
animal health	vaccine use	increased animal health/decreased disease transference	3	2	1	2	1	1	1	1	12		Y	take blood samples	
buildings	electric motor failure/spilled oil	potential animal mortality and air quality from fire	3	1	1	1	1	1	1	3	12				
buildings	fans - damage from cleaning	potential animal mortality and air quality from fire	3	1	1	1	1	1	1	3	12				
general farm	feed consumption	consumption of natural resources	1	3	1	1	3	1	1	1	12				
general farm	record-keeping - production		1	3	1	1	2	1	1	2	12				productivity gauge to minimum feed consumption for under-productive sows
general farm	building cleaning	lagoon loading, consumption of natural resources, disease control	1	3	1	1	2	1	1	2	12				

