

Agricultural Waste Management

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Marion County, Iowa

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8B: Judson-----	100	Not limited		Not limited		Somewhat limited Too steep for surface application	0.08
8C: Judson-----	100	Not limited		Not limited		Somewhat limited Too steep for surface application Too steep for sprinkler application	0.91 0.02
11B: Colo-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Too steep for surface application	1.00 0.08
Ely-----	40	Somewhat limited Depth to saturated zone	0.43	Somewhat limited Depth to saturated zone	0.43	Somewhat limited Depth to saturated zone Too steep for surface application	0.43 0.08
13B: Nodaway-----	50	Somewhat limited Flooding	0.60	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
Vesser-----	30	Very limited Depth to saturated zone Flooding	1.00 0.60	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding Too steep for surface application	1.00 0.60 0.08
24D2: Shelby-----	100	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application	1.00

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24E2: Shelby-----	100	Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	0.77
		Too acid	0.02	Too acid	0.07	Restricted permeability	0.22
						Too acid	0.07
		Very limited Slope	1.00	Very limited Slope	1.00	Too steep for surface application	1.00
43: Bremer-----	95	Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	1.00
		Too acid	0.02	Too acid	0.07	Restricted permeability	0.22
						Too acid	0.07
		Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
51: Vesser-----	90	Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
		Very limited Depth to saturated zone	1.00	Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00
53: Riverwash-----	95	Flooding	0.60	Depth to saturated zone	1.00	Flooding	0.60
		Not rated		Not rated		Not rated	
54: Zook-----	95	Not rated		Not rated		Not rated	
		Very limited Restricted permeability	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Very limited Depth to saturated zone	1.00	Flooding	1.00	Restricted permeability	1.00

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
54+: Zook-----	95	Flooding	0.60	Restricted permeability	1.00	Flooding	0.60
		Leaching limitation	0.50				
		Very limited Restricted permeability	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00	Restricted permeability	1.00
		Flooding	0.60	Restricted permeability	1.00	Flooding	0.60
		Leaching limitation	0.50				
63C: Chelsea-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Droughty	0.46	Droughty	0.46	Too steep for surface application	0.91
		Leaching limitation	0.45			Droughty	0.46
						Too steep for sprinkler application	0.02
63E2: Chelsea-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Too steep for surface application	1.00
		Slope	0.96	Slope	0.96	Filtering capacity	1.00
		Droughty	0.46	Droughty	0.46	Too steep for sprinkler application	0.97
		Leaching limitation	0.45			Droughty	0.46
65D2: Lindley-----	100	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application	1.00

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Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
65E: Lindley-----	100	Restricted permeability	0.30	Too acid	0.31	Too steep for sprinkler application	0.77
		Too acid	0.08	Restricted permeability	0.22	Too acid	0.31
						Restricted permeability	0.22
		Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Restricted permeability	0.30	Too acid	0.31	Too steep for sprinkler application	1.00
		Too acid	0.08	Restricted permeability	0.22	Too acid	0.31
65E3: Lindley-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Restricted permeability	0.30	Too acid	0.31	Too steep for sprinkler application	1.00
		Too acid	0.08	Restricted permeability	0.22	Too acid	0.31
						Restricted permeability	0.22
		Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Restricted permeability	0.30	Too acid	0.31	Too steep for sprinkler application	1.00
65F: Lindley-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Restricted permeability	0.30	Too acid	0.31	Too steep for sprinkler application	1.00
		Too acid	0.08	Restricted permeability	0.22	Too acid	0.31
						Restricted permeability	0.22
		Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Restricted permeability	0.30	Too acid	0.31	Too steep for sprinkler application	1.00

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Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
69C2: Clearfield-----	100	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone Too steep for surface application Too steep for sprinkler application	1.00 1.00 0.91 0.02
75: Givin-----	90	Somewhat limited Depth to saturated zone Restricted permeability	0.43 0.30	Somewhat limited Depth to saturated zone Restricted permeability	0.43 0.22	Somewhat limited Depth to saturated zone Restricted permeability	0.43 0.22
76B: Ladoga-----	95	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Restricted permeability Too steep for surface application	0.22 0.08
76C2: Ladoga-----	100	Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Too steep for surface application Restricted permeability Too steep for sprinkler application	0.91 0.22 0.02
76D2: Ladoga-----	95	Somewhat limited Slope Restricted permeability	0.63 0.30	Somewhat limited Slope Restricted permeability	0.63 0.22	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.77

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						Restricted permeability	0.22
80B: Clinton-----	95	Somewhat limited Restricted permeability Too acid	0.30 0.02	Somewhat limited Restricted permeability Too acid	0.22 0.07	Somewhat limited Restricted permeability Too steep for surface application Too acid	0.22 0.08 0.07
80C2: Clinton-----	100	Somewhat limited Restricted permeability Too acid	0.30 0.02	Somewhat limited Restricted permeability Too acid	0.22 0.07	Somewhat limited Too steep for surface application Restricted permeability Too acid Too steep for sprinkler application	0.91 0.22 0.07 0.02
80D2: Clinton-----	100	Somewhat limited Slope Restricted permeability Too acid	0.63 0.30 0.02	Somewhat limited Slope Restricted permeability Too acid	0.63 0.22 0.07	Very limited Too steep for surface application Too steep for sprinkler application Restricted permeability Too acid	1.00 0.77 0.22 0.07
88: Nevin-----	90	Somewhat limited Depth to saturated zone	0.43	Somewhat limited Depth to saturated zone	0.43	Somewhat limited Depth to saturated zone	0.43
93D2: Shelby-----	60	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application	1.00

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Adair-----	35	Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	0.77
		Too acid	0.02	Too acid	0.07	Restricted permeability	0.22
						Too acid	0.07
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Too steep for surface application	1.00
		Depth to saturated zone Slope	1.00 0.63	Depth to saturated zone Slope	1.00 0.63	Restricted permeability Depth to saturated zone Too steep for sprinkler application	1.00 1.00 0.77
94D2: Caleb-----	70	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application	1.00
		Too acid	0.08	Too acid	0.31	Too steep for sprinkler application	0.77
						Too acid	0.31
Mystic-----	30	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Too steep for surface application	1.00
		Slope	0.63	Slope	0.63	Restricted permeability	1.00
		Too acid	0.08	Too acid	0.31	Too steep for sprinkler application	0.77
						Too acid	0.31
98: Huntsville-----	90	Somewhat limited Flooding	0.60	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
119: Muscatine-----	95	Somewhat limited Depth to saturated zone	0.43	Somewhat limited Depth to saturated zone	0.43	Somewhat limited Depth to saturated zone	0.43

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Too acid	0.02	Too acid	0.07	Too acid	0.07
120B: Tama-----	100	Somewhat limited Too acid	0.02	Somewhat limited Too acid	0.07	Somewhat limited Too steep for surface application Too acid	0.08 0.07
120C2: Tama-----	100	Somewhat limited Too acid	0.02	Somewhat limited Too acid	0.07	Somewhat limited Too steep for surface application Too acid Too steep for sprinkler application	0.91 0.07 0.02
120D2: Tama-----	100	Somewhat limited Slope  Too acid	0.63  0.02	Somewhat limited Slope  Too acid	0.63  0.07	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00  0.77 0.07
130: Belinda-----	95	Very limited Restricted permeability Depth to saturated zone Runoff limitation	1.00 1.00 0.40	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00 1.00
131B: Pershing-----	95	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 0.43 0.08	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 0.43 0.31	Very limited Restricted permeability Depth to saturated zone Too acid Too steep for surface application	1.00 0.43 0.31 0.08

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
131C2: Pershing-----	100	Very limited Restricted permeability Depth to saturated zone  Too acid	1.00 0.43  0.08	Very limited Restricted permeability Depth to saturated zone  Too acid	1.00 0.43  0.31	Very limited Restricted permeability Too steep for surface application Depth to saturated zone Too acid Too steep for sprinkler application	1.00 0.91  0.43 0.31 0.02
132B: Weller-----	100	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 0.43 0.08	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 0.43 0.31	Very limited Restricted permeability Depth to saturated zone Too acid Too steep for surface application	1.00 0.43 0.31 0.08
132C2: Weller-----	100	Very limited Restricted permeability Depth to saturated zone  Too acid	1.00 0.43  0.08	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 0.43 0.31	Very limited Restricted permeability Too steep for surface application Depth to saturated zone Too acid Too steep for sprinkler application	1.00 0.91  0.43 0.31 0.02
133: Colo-----	90	Very limited Depth to saturated zone Leaching limitation Flooding	1.00 0.70 0.60	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.60

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
133+: Colo-----	100	Very limited Depth to saturated zone Leaching limitation Flooding	1.00 0.70 0.60	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
133B: Colo-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Too steep for surface application	1.00 0.08
162B: Downs-----	100	Somewhat limited Too acid	0.02	Somewhat limited Too acid	0.07	Somewhat limited Too steep for surface application Too acid	0.08 0.07
162C2: Downs-----	100	Somewhat limited Too acid	0.02	Somewhat limited Too acid	0.07	Somewhat limited Too steep for surface application Too acid Too steep for sprinkler application	0.91 0.07 0.02
162D2: Downs-----	100	Somewhat limited Slope  Too acid	0.63  0.02	Somewhat limited Slope  Too acid	0.63  0.07	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00  0.77 0.07
163B: Fayette-----	100	Somewhat limited Too acid	0.02	Somewhat limited Too acid	0.07	Somewhat limited Too steep for surface application	0.08

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						Too acid	0.07
163C2: Fayette-----	90	Somewhat limited Too acid	0.02	Somewhat limited Too acid	0.07	Somewhat limited Too steep for surface application Too acid Too steep for sprinkler application	0.91 0.07 0.02
163D2: Fayette-----	100	Somewhat limited Slope  Too acid	0.63  0.02	Somewhat limited Slope  Too acid	0.63  0.07	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 0.77 0.07
163E2: Fayette-----	100	Very limited Slope  Too acid	1.00  0.02	Very limited Slope  Too acid	1.00  0.07	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.07
163F2: Fayette-----	100	Very limited Slope  Too acid	1.00  0.02	Very limited Slope  Too acid	1.00  0.07	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.07
179D2: Gara-----	100	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application	1.00

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
179E2: Gara-----	100	Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	0.77
						Restricted permeability	0.22
		Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	1.00
179F: Gara-----	100					Restricted permeability	0.22
		Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	1.00
						Restricted permeability	0.22
185D: Bauer-----	100	Very limited Restricted permeability	1.00	Very limited Droughty	1.00	Very limited Droughty	1.00
		Droughty	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Slope	0.63	Slope	0.63	Too steep for surface application	1.00
		Depth to bedrock	0.46	Depth to bedrock	0.46	Too steep for sprinkler application	0.77
		Too acid	0.02	Too acid	0.07	Depth to bedrock	0.46
185D2: Bauer-----	100	Very limited Restricted permeability	1.00	Very limited Droughty	1.00	Very limited Droughty	1.00
		Droughty	1.00	Restricted permeability	1.00	Restricted permeability	1.00

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
185E2: Bauer-----	100	Slope	0.63	Slope	0.63	Too steep for surface application	1.00
		Depth to bedrock	0.46	Depth to bedrock	0.46	Too steep for sprinkler application	0.77
		Too acid	0.02	Too acid	0.07	Depth to bedrock	0.46
		Very limited Restricted permeability	1.00	Very limited Droughty	1.00	Droughty	1.00
		Droughty	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	0.46	Depth to bedrock	0.46	Too steep for sprinkler application	1.00
208: Landes-----	95	Too acid	0.02	Too acid	0.07	Depth to bedrock	0.46
		Very limited Filtering capacity	1.00	Very limited Flooding	1.00	Very limited Filtering capacity	1.00
		Flooding	0.60	Filtering capacity	1.00	Flooding	0.60
212: Kennebec-----	95	Somewhat limited Flooding	0.60	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
220: Nodaway-----	95	Somewhat limited Flooding	0.60	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
222C: Clarinda-----	100	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40	Too acid	0.07	Too steep for surface application	0.91
		Too acid	0.02			Too acid	0.07

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
222C2: Clarinda-----	100	Very limited		Very limited		Too steep for sprinkler application	0.02
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.89	Restricted permeability	0.78	Too steep for surface application	0.91
		Runoff limitation	0.40	Too acid	0.07	Restricted permeability	0.78
		Too acid	0.02			Too acid	0.07
						Too steep for sprinkler application	0.02
230C: Clearfield-----	60	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Too steep for surface application	0.91
						Too steep for sprinkler application	0.02
Arispe-----	30	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Too steep for surface application	0.91
						Depth to saturated zone	0.43
						Too steep for sprinkler application	0.02
230C2: Clearfield-----	60	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Arispe-----	30	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Too steep for surface application	0.91
						Too steep for sprinkler application	0.02
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
248: Wabash-----	95	Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
						Too steep for sprinkler application	0.02
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
273B: Olmitz-----	100	Runoff limitation	0.40	Flooding	1.00	Flooding	1.00
		Not limited		Not limited		Somewhat limited Too steep for surface application	0.08
273C: Olmitz-----	100	Not limited		Not limited		Somewhat limited Too steep for surface application	0.91
						Too steep for sprinkler application	0.02
279: Taintor-----	100	Very limited		Very limited		Very limited	

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
280: Mahaska-----	95	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Leaching limitation	0.50	Restricted permeability	0.22	Restricted permeability	0.22
		Restricted permeability	0.30				
281B: Otley-----	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
281C2: Otley-----	100	Too acid	0.02	Too acid	0.07	Too acid	0.07
						Too steep for surface application	0.08
281D2: Otley-----	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Too acid	0.02	Too acid	0.07	Too steep for surface application	0.07
						Too acid	0.07
313D2: Gosport-----	100	Too steep for sprinkler application	0.02	Too steep for sprinkler application	0.02	Too steep for sprinkler application	0.02
		Slope	0.63	Slope	0.63	Too steep for surface application	1.00
		Too acid	0.02	Too acid	0.07	Too steep for sprinkler application	0.77
313D2: Gosport-----	100	Too acid	0.02	Too acid	0.07	Too acid	0.07
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
313D2: Gosport-----	100	Depth to saturated zone	0.95	Depth to saturated zone	0.95	Too steep for surface application	1.00

Agricultural Waste Management

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Marion County, Iowa

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
313E2: Gosport-----	100	Droughty	0.86	Droughty	0.86	Depth to saturated zone	0.95
		Slope	0.63	Slope	0.63	Droughty	0.86
		Depth to bedrock	0.46	Depth to bedrock	0.46	Too steep for sprinkler application	0.77
		Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
313F2: Gosport-----	100	Depth to saturated zone	0.95	Depth to saturated zone	0.95	Too steep for sprinkler application	1.00
		Droughty	0.86	Droughty	0.86	Depth to saturated zone	0.95
		Depth to bedrock	0.46	Depth to bedrock	0.46	Droughty	0.86
		Very limited		Very limited		Very limited	
		Slope	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Restricted permeability	1.00	Slope	1.00	Too steep for surface application	1.00
315: Alluvial Land-----	40	Depth to saturated zone	0.95	Depth to saturated zone	0.95	Too steep for sprinkler application	1.00
		Droughty	0.86	Droughty	0.86	Depth to saturated zone	0.95
		Depth to bedrock	0.46	Depth to bedrock	0.46	Droughty	0.86
		Not rated		Not rated		Not rated	
Landes-----	40	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Flooding	1.00	Filtering capacity	1.00
		Flooding	0.60	Filtering capacity	1.00	Flooding	0.60
362: Haig-----	100	Very limited		Very limited		Very limited	

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Marion County, Iowa

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Restricted permeability	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Leaching limitation	0.50				
364B: Grundy-----	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Depth to saturated zone	0.95	Depth to saturated zone	0.95	Depth to saturated zone	0.95
						Too steep for surface application	0.08
368: Macksburg-----	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
		Too acid	0.02	Too acid	0.07	Too acid	0.07
368B: Macksburg-----	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.43	Depth to saturated zone	0.43	Depth to saturated zone	0.43
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
		Too acid	0.02	Too acid	0.07	Too steep for surface application	0.08
						Too acid	0.07
369: Winterset-----	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
370B: Sharpsburg-----	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22

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Marion County, Iowa

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
370C: Sharpsburg-----	100	Too acid	0.02	Too acid	0.07	Too steep for surface application	0.08
						Too acid	0.07
		Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Too steep for surface application	0.91
		Too acid	0.02	Too acid	0.07	Restricted permeability	0.22
370C2: Sharpsburg-----	95					Too acid	0.07
						Too steep for sprinkler application	0.02
		Somewhat limited Restricted permeability	0.30	Somewhat limited Restricted permeability	0.22	Somewhat limited Too steep for surface application	0.91
		Too acid	0.02	Too acid	0.07	Restricted permeability	0.22
370D2: Sharpsburg-----	95					Too acid	0.07
						Too steep for sprinkler application	0.02
		Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	0.77
373E: Tallula-----	60	Too acid	0.02	Too acid	0.07	Restricted permeability	0.22
						Too acid	0.07
		Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00

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Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation					
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value				
Downs-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Too steep for sprinkler application	1.00				
						Too acid	0.02	Too acid	0.07	Too steep for surface application	1.00
										Too steep for sprinkler application	1.00
428B: Ely-----	90	Somewhat limited Depth to saturated zone	0.43	Somewhat limited Depth to saturated zone	0.43	Too acid	0.07				
										Too steep for surface application	0.08
430: Ackmore-----	95	Very limited Flooding Depth to saturated zone	1.00	Very limited Flooding Depth to saturated zone	1.00	Very limited Flooding	1.00				
										Depth to saturated zone	1.00
453: Tuskeego-----	100	Very limited Restricted permeability Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00	Very limited Restricted permeability	1.00				
										Depth to saturated zone	1.00
										Leaching limitation	0.50
										Too acid	0.02
478G: Gosport-----	50	Very limited Slope	1.00	Very limited Restricted permeability Slope	1.00	Very limited Restricted permeability	1.00				
										Too steep for surface application	1.00
										Depth to saturated zone	0.95
						Too steep for sprinkler application	1.00				

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Marion County, Iowa

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Rock Outcrop-----	35	Droughty	0.86	Droughty	0.86	Depth to saturated zone	0.95
		Depth to bedrock	0.46	Depth to bedrock	0.46	Droughty	0.86
		Not rated		Not rated		Not rated	
485: Spillville-----	90	Somewhat limited Flooding	0.60	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
570B: Nira-----	100	Not limited		Not limited		Somewhat limited Too steep for surface application	0.08
570C2: Nira-----	100	Not limited		Not limited		Somewhat limited Too steep for surface application Too steep for sprinkler application	0.91 0.02
822D2: Lamoni-----	100	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Too steep for surface application	1.00
		Slope	0.63	Slope	0.63	Restricted permeability	1.00
		Depth to saturated zone	0.09	Depth to saturated zone	0.09	Too steep for sprinkler application	0.77
		Too acid	0.01	Too acid	0.01	Depth to saturated zone Too acid	0.09 0.01
831B: Pershing-----	100	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Too acid	0.08	Too acid	0.31	Too acid	0.31

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Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						Too steep for surface application	0.08
870B: Sharpsburg-----	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
		Too acid	0.02	Too acid	0.07	Too steep for surface application	0.08
						Too acid	0.07
870C: Sharpsburg-----	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for surface application	0.91
		Too acid	0.02	Too acid	0.07	Restricted permeability	0.22
						Too acid	0.07
						Too steep for sprinkler application	0.02
876B: Ladoga-----	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
						Too steep for surface application	0.08
993D2: Gara-----	70	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Too steep for surface application	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	0.77
						Restricted permeability	0.22
Armstrong-----	25	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
993E2: Gara-----	60	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slope	0.63	Slope	0.63	Depth to saturated zone	1.00
						Too steep for sprinkler application	0.77
		Very limited Slope	1.00	Very limited Slope	1.00	Too steep for surface application	1.00
Armstrong-----	35	Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	1.00
						Restricted permeability	0.22
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Too steep for surface application	1.00
		Slope	1.00	Slope	1.00	Too steep for sprinkler application	1.00
1075: Givin-----	90	Depth to saturated zone	0.43	Depth to saturated zone	0.43	Restricted permeability	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Depth to saturated zone	1.00
		Somewhat limited Depth to saturated zone	0.43	Somewhat limited Depth to saturated zone	0.43	Restricted permeability	1.00
1220: Nodaway-----	90	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
1315: Alluvial Land-----	70	Not rated		Not rated		Not rated	

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Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Landes-----	20	Very limited Flooding Filtering capacity	1.00 1.00	Very limited Flooding Filtering capacity	1.00 1.00	Very limited Flooding Filtering capacity	1.00 1.00
1316: Alluvial Land-----	95	Not rated		Not rated		Not rated	
1368: Macksburg-----	95	Somewhat limited Depth to saturated zone Restricted permeability Too acid	0.43 0.30 0.02	Somewhat limited Depth to saturated zone Restricted permeability Too acid	0.43 0.22 0.07	Somewhat limited Depth to saturated zone Restricted permeability Too acid	0.43 0.22 0.07
5020G: Strip Mine Spoils---	100	Not rated		Not rated		Not rated	
5040: Cut And Fill Land---	100	Not rated		Not rated		Not rated	