Benton County, Missouri Print date: 08/23/2002

Table J1a.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
8:														
Dumps----------	---	---	---	---	---	---	---	---	---	---	---	--	8	0
Pits----------	---	---	---	---	---	---	---	---	---	---	---	--	8	0
9:														
Udorthents----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
13B:														
Sampsel----------	0-10	5-20	45-65	27-35	1.30-1.50	1.40-4.00	0.21-0.24	3.0-5.9	3.0-4.0	.37	.37	2	7	38
	10-60	3-20	20-55	35-60	1.40-1.60	0.42-1.40	0.11-0.13	6.0-8.9	0.5-2.0	.32	.37			
13C:														
Sampsel----------	0-11	5-20	45-65	27-35	1.30-1.50	1.40-4.00	0.21-0.24	3.0-5.9	3.0-4.0	.37	.37	2	7	38
	11-60	3-20	20-55	35-60	1.40-1.60	0.42-1.40	0.11-0.13	6.0-8.9	0.5-2.0	.32	.37			
15:														
Ashton----------	0-10	5-25	50-75	10-25	1.20-1.40	4.00-14.00	0.16-0.23	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	10-49	5-25	50-70	18-34	1.20-1.50	4.00-14.00	0.18-0.23	0.0-2.9	---	.43	.43			
	49-60	5-60	20-70	10-27	1.25-1.55	4.00-14.00	0.14-0.20	0.0-2.9	---	.43	.43			
20B:														
Creldon----------	0-14	5-30	50-70	10-25	1.20-1.40	4.00-14.00	0.22-0.24	0.0-2.9	1.0-3.0	.32	.32	4	5	56
	14-26	3-20	45-65	35-45	1.30-1.50	1.40-4.00	0.12-0.17	3.0-5.9	0.5-1.0	.28	.32			
	26-33	5-20	45-65	27-35	1.60-1.85	0.01-0.42	0.05-0.12	0.0-2.9	0.0-0.5	.10	.43			
	33-60	5-25	20-40	40-70	1.30-1.55	14.00-42.00	0.04-0.10	6.0-8.9	0.0-0.5	.10	.32			
20C:														
Creldon----------	0-19	5-30	50-70	10-25	1.20-1.40	4.00-14.00	0.22-0.24	0.0-2.9	1.0-3.0	.32	.32	4	5	56
	19-26	3-20	45-65	35-45	1.30-1.50	1.40-4.00	0.12-0.17	3.0-5.9	0.5-1.0	.28	.32			
	26-33	5-20	45-65	27-35	1.60-1.85	0.01-0.42	0.05-0.12	0.0-2.9	0.0-0.5	.10	.43			
	33-60	5-25	20-40	40-70	1.30-1.55	14.00-42.00	0.04-0.10	6.0-8.9	0.0-0.5	.15	.32			
23F:														
Goss----------	0-5	10-30	50-70	10-27	1.10-1.30	14.00-42.00	0.06-0.17	0.0-2.9	1.0-2.0	.24	.37	5	8	0
	5-13	5-30	45-70	20-30	1.10-1.30	14.00-42.00	0.06-0.10	0.0-2.9	0.0-0.5	.10	.37			
	13-60	5-30	20-60	35-60	1.30-1.50	4.00-14.00	0.04-0.09	3.0-5.9	0.0-0.5	.10	.32			
30:														
Verdigris----------	0-27	3-20	50-75	15-27	1.30-1.40	4.00-14.00	0.20-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	27-60	3-20	50-75	18-35	1.40-1.65	4.00-14.00	0.17-0.22	3.0-5.9	---	.32	.32			

Table J1a.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
32:														
Racket----------	0-7	10-30	50-65	15-27	1.25-1.45	4.00-14.00	0.18-0.24	0.0-2.9	2.0-3.0	.32	.32	5	6	48
	7-42	10-45	35-60	18-35	1.25-1.45	4.00-14.00	0.14-0.20	3.0-5.9	1.0-2.0	.32	.32			
	42-60	---	---	3-10	1.35-1.55	42.00-141.00	0.01-0.04	0.0-2.9	0.5-1.0	.10	.17			
33:														
Quarles----------	0-9	10-30	50-75	20-27	1.20-1.40	1.40-4.00	0.22-0.24	0.0-2.9	1.0-3.0	.32	.32	3	6	48
	9-18	10-30	50-75	20-27	1.20-1.40	1.40-4.00	0.22-0.24	0.0-2.9	---	.32	.32			
	18-60	3-20	45-65	35-50	1.40-1.60	0.42-1.40	0.12-0.20	6.0-8.9	---	.32	.32			
35:														
Aquents----------	---	---	---	---	---	---	---	---	---	---	---	--	8	0
50B:														
Mcgirk----------	0-14	5-30	50-70	15-27	1.30-1.45	4.00-14.00	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	3	6	48
	14-21	5-20	45-65	27-40	1.30-1.40	1.40-4.00	0.18-0.20	3.0-5.9	0.5-1.0	.43	.43			
	21-54	3-15	45-60	35-50	1.25-1.35	0.42-1.40	0.10-0.18	6.0-8.9	0.0-0.5	.32	.32			
	54-60	5-25	45-65	20-35	1.30-1.40	1.40-4.00	0.14-0.18	3.0-5.9	0.0-0.5	.32	.32			
51C:														
Claiborne----------	0-10	5-30	50-70	20-27	1.30-1.50	4.00-14.00	0.17-0.21	0.0-2.9	1.0-3.0	.32	.37	5	6	48
	10-60	5-20	45-65	27-35	1.35-1.55	4.00-14.00	0.14-0.17	3.0-5.9	---	.24	.28			
52B:														
Deepwater----------	0-11	5-20	60-75	15-27	1.20-1.40	4.00-14.00	0.17-0.20	0.0-2.9	2.0-5.0	.32	.32	5	6	48
	11-48	5-35	30-70	18-32	1.25-1.45	4.00-14.00	0.18-0.22	0.0-2.9	0.5-1.0	.32	.32			
	48-60	5-40	30-65	27-35	1.40-1.60	4.00-14.00	0.18-0.20	3.0-5.9	0.0-0.5	.37	.43			
52C:														
Deepwater----------	0-13	5-20	60-75	15-27	1.20-1.40	4.00-14.00	0.17-0.20	0.0-2.9	2.0-5.0	.32	.32	5	6	48
	13-42	5-35	30-70	18-32	1.25-1.45	4.00-14.00	0.18-0.22	0.0-2.9	0.5-1.0	.32	.32			
	42-60	5-40	30-65	27-35	1.40-1.60	4.00-14.00	0.18-0.20	3.0-5.9	0.0-0.5	.37	.43			
53B:														
Mandeville----------	0-13	10-30	50-70	15-27	1.35-1.45	4.00-14.00	0.22-0.24	0.0-2.9	1.0-2.0	.32	.37	3	6	48
	13-26	10-20	45-65	27-32	1.30-1.40	4.00-14.00	0.14-0.20	0.0-2.9	0.5-1.0	.32	.43			
	26-32	10-40	30-65	20-32	1.30-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.43			
	32-60	---	---	---	---	0.00-1.40	---	---	---	---	---			
54:														
Moniteau----------	0-14	3-15	60-75	18-27	1.20-1.40	4.00-14.00	0.21-0.23	0.0-2.9	1.0-2.0	.37	.37	5	6	48
	14-49	3-15	55-65	27-35	1.30-1.50	1.40-4.00	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
	49-60	3-15	55-70	18-30	1.25-1.45	1.40-4.00	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			

Table J1a.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
55B:														
Barco----------	0-13	30-50	20-50	10-25	1.20-1.45	14.00-42.00	0.16-0.21	0.0-2.9	1.0-3.0	.32	.32	3	5	56
	13-26	30-60	15-50	18-35	1.40-1.60	4.00-14.00	0.12-0.16	3.0-5.9	0.5-1.0	.28	.32			
	26-33	---	---	---	---	1.40-4.00	---	---	---	---	---			
	33-43	---	---	---	---	1.40-4.00	---	---	---	---	---			
55C:														
Barco----------	0-9	30-50	20-50	10-25	1.20-1.45	14.00-42.00	0.16-0.21	0.0-2.9	1.0-3.0	.32	.32	3	5	56
	9-30	30-60	15-50	18-35	1.40-1.60	4.00-14.00	0.12-0.16	3.0-5.9	0.5-1.0	.28	.32			
	30-60	---	---	---	---	1.40-4.00	---	---	---	---	---			
56C:														
Bolivar----------	0-8	55-70	10-30	12-18	1.20-1.45	14.00-42.00	0.16-0.18	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	8-26	30-60	10-45	20-35	1.30-1.50	4.00-14.00	0.12-0.16	3.0-5.9	0.5-1.0	.32	.32			
	26-60	---	---	---	---	1.40-4.00	---	---	---	---	---			
56D:														
Bolivar----------	0-8	55-70	10-30	12-18	1.20-1.45	14.00-42.00	0.16-0.18	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	11-26	30-60	10-45	20-35	1.30-1.50	4.00-14.00	0.12-0.16	3.0-5.9	0.5-1.0	.32	.32			
	26-40	---	---	---	---	1.40-4.00	---	---	---	---	---			
	40-60	---	---	---	---	0.00-1.40	---	---	---	---	---			
58:														
Hartwell----------	0-13	5-30	50-75	15-27	1.30-1.40	1.40-4.00	0.22-0.24	0.0-2.9	2.0-4.0	.43	.43	3	6	48
	13-28	5-30	25-50	40-55	1.30-1.40	0.42-1.40	0.09-0.13	6.0-8.9	0.5-1.0	.32	.32			
	28-60	5-25	40-65	25-45	1.30-1.40	0.42-1.40	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
58B2:														
Hartwell----------	0-8	5-30	50-75	15-27	1.30-1.40	1.40-4.00	0.22-0.24	0.0-2.9	2.0-4.0	.43	.43	3	6	48
	8-28	5-30	25-50	40-55	1.30-1.40	0.42-1.40	0.09-0.13	6.0-8.9	0.5-1.0	.32	.32			
	28-60	5-25	40-65	25-45	1.30-1.40	0.42-1.40	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
58B3:														
Hartwell----------	0-5	5-20	45-65	27-32	1.30-1.40	1.40-4.00	0.22-0.24	0.0-2.9	0.5-1.0	.43	.43	3	7	38
	5-12	5-30	25-50	40-55	1.30-1.40	0.42-1.40	0.09-0.13	6.0-8.9	0.5-1.0	.32	.32			
	12-60	5-25	40-65	25-45	1.30-1.40	0.42-1.40	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
60B:														
Barden----------	0-11	5-30	50-75	15-27	1.40-1.50	4.00-14.00	0.21-0.24	0.0-2.9	1.0-3.0	.37	.37	3	6	48
	11-14	5-20	45-65	28-35	1.35-1.45	1.40-4.00	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	14-23	3-30	30-60	36-55	1.25-1.40	0.42-1.40	0.11-0.19	6.0-8.9	0.0-0.5	.37	.37			
	23-60	5-30	30-60	28-40	1.30-1.45	1.40-4.00	0.10-0.14	3.0-5.9	0.0-0.5	.37	.37			

Table J1a.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
60B2:														
Barden----------	0-7	5-30	50-75	15-27	1.40-1.50	4.00-14.00	0.21-0.24	0.0-2.9	1.0-3.0	.37	.37	3	6	48
	7-14	5-20	45-65	28-35	1.35-1.45	1.40-4.00	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	14-23	3-30	30-60	36-55	1.25-1.40	0.42-1.40	0.11-0.19	6.0-8.9	0.0-0.5	.37	.37			
	23-60	5-30	30-60	28-40	1.30-1.45	1.40-4.00	0.10-0.14	3.0-5.9	0.0-0.5	.37	.37			
63B:														
Union----------	0-7	5-30	50-70	10-27	1.35-1.45	4.00-14.00	0.18-0.22	3.0-5.9	0.5-2.0	.43	.43	4	5	56
	7-27	5-20	45-60	27-45	1.30-1.40	4.00-14.00	0.14-0.19	3.0-5.9	0.5-1.0	.43	.43			
	27-42	5-30	35-65	15-35	1.60-1.90	0.42-1.40	0.01-0.05	3.0-5.9	0.0-0.5	.15	.43			
	42-60	5-25	25-45	40-80	1.30-1.40	1.40-4.00	0.02-0.06	6.0-8.9	0.0-0.5	.17	.43			
63C:														
Union----------	0-7	5-30	50-70	10-27	1.35-1.45	4.00-14.00	0.18-0.22	3.0-5.9	0.5-2.0	.43	.43	4	5	56
	7-27	5-20	45-60	27-45	1.30-1.40	4.00-14.00	0.14-0.19	3.0-5.9	0.5-1.0	.43	.43			
	27-42	5-30	35-65	15-35	1.60-1.90	0.42-1.40	0.01-0.05	3.0-5.9	0.0-0.5	.15	.43			
	42-60	5-25	25-60	27-80	1.30-1.40	1.40-4.00	0.02-0.06	6.0-8.9	0.0-0.5	.17	.43			
66C:														
Doniphan----------	0-8	5-30	50-70	18-27	1.10-1.30	14.00-42.00	0.08-0.15	0.0-2.9	0.5-2.0	.24	.37	5	8	0
	8-18	5-25	15-40	48-70	1.20-1.40	4.00-14.00	0.08-0.10	3.0-5.9	---	.20	.32			
	18-60	5-25	15-40	48-70	1.20-1.40	4.00-14.00	0.08-0.10	3.0-5.9	---	.28	.28			
66D:														
Doniphan----------	0-13	5-30	50-70	18-27	1.10-1.30	14.00-42.00	0.08-0.15	0.0-2.9	0.5-2.0	.24	.37	5	8	0
	13-18	5-25	15-40	48-70	1.20-1.40	4.00-14.00	0.08-0.10	3.0-5.9	---	.24	.32			
	18-60	5-25	15-40	48-70	1.20-1.40	4.00-14.00	0.08-0.10	3.0-5.9	---	.28	.28			
67C:														
Bardley----------	0-12	5-30	50-70	18-27	1.40-1.55	4.00-14.00	0.12-0.17	0.0-2.9	0.5-2.0	.24	.37	2	8	0
	12-37	5-30	10-50	50-85	1.20-1.40	4.00-14.00	0.08-0.12	3.0-5.9	0.0-0.5	.20	.28			
	37-60	---	---	---	---	0.00-0.42	---	---	---	---	---			
67E:														
Bardley----------	0-4	10-30	50-70	25-27	1.40-1.55	4.00-14.00	0.12-0.17	3.0-5.9	0.5-2.0	.15	.37	2	8	0
	4-10	10-30	45-60	25-35	1.40-1.55	4.00-14.00	0.04-0.08	0.0-2.9	0.5-1.0	.17	.43			
	10-30	5-25	15-40	50-85	1.20-1.40	4.00-14.00	0.08-0.12	3.0-5.9	0.0-0.5	.17	.28			
	30-60	---	---	---	---	0.00-0.42	---	---	---	---	---			
68C:														
Eldon----------	0-10	5-30	50-70	15-27	1.40-1.55	14.00-42.00	0.13-0.18	0.0-2.9	1.0-3.0	.24	.37	2	8	0
	10-28	5-20	45-65	35-50	1.35-1.45	4.00-14.00	0.03-0.08	3.0-5.9	0.5-1.0	.15	.43			
	28-60	5-20	5-50	35-95	1.35-1.45	4.00-14.00	0.10-0.14	3.0-5.9	0.0-0.5	.32	.32			

Table J1a.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
68D:														
Eldon----------	0-15	5-30	50-70	15-27	1.40-1.55	14.00-42.00	0.13-0.18	0.0-2.9	1.0-3.0	.24	.37	2	8	0
	15-28	5-20	45-65	35-50	1.35-1.45	4.00-14.00	0.03-0.08	3.0-5.9	0.5-1.0	.15	.43			
	28-60	5-20	5-50	35-95	1.35-1.45	4.00-14.00	0.10-0.14	3.0-5.9	0.0-0.5	.32	.32			
72C:														
Gasconade----------	0-8	3-20	50-70	35-40	1.35-1.50	4.00-14.00	0.10-0.12	3.0-5.9	2.0-4.0	.15	.28	1	8	0
	8-15	3-20	20-65	35-60	1.45-1.70	1.40-4.00	0.05-0.07	3.0-5.9	0.5-1.0	.05	.28			
	15-25	---	---	---	---	0.00-4.20	---	---	---	---	---			
Rock Outcrop---------	0-60	---	---	---	---	---	---	---	---	---	---	--	8	0
72F:														
Gasconade----------	0-3	3-20	50-70	35-40	1.35-1.50	4.00-14.00	0.10-0.12	3.0-5.9	2.0-4.0	.15	.28	1	8	0
	3-14	3-20	20-65	35-60	1.45-1.70	1.40-4.00	0.05-0.07	3.0-5.9	0.5-1.0	.05	.28			
	14-25	---	---	---	---	0.00-4.20	---	---	---	---	---			
Rock Outcrop---------	0-60	---	---	---	---	---	---	---	---	---	---	--	8	0
74C:														
Knobby----------	0-3	40-50	25-45	10-18	1.30-1.50	4.00-14.00	0.13-0.17	0.0-2.9	1.0-2.0	.15	.32	1	8	0
	3-7	40-60	25-45	10-18	1.30-1.50	4.00-14.00	0.07-0.11	0.0-2.9	2.0-8.0	.10	.28			
	7-60	---	---	---	---	0.00-0.42	---	---	---	---	---			
Rock Outcrop---------	0-60	---	---	---	---	---	---	---	---	---	---	--	8	0
74F:														
Knobby----------	0-5	40-50	25-45	10-18	1.30-1.50	4.00-14.00	0.13-0.17	0.0-2.9	1.0-2.0	.15	.32	1	8	0
	5-8	40-60	25-45	10-18	1.30-1.50	4.00-14.00	0.07-0.11	0.0-2.9	2.0-8.0	.10	.28			
	8-60	---	---	---	---	0.00-0.42	---	---	---	---	---			
Rock Outcrop---------	0-60	---	---	---	---	---	---	---	---	---	---	--	8	0
80:														
Osage----------	0-8	3-15	45-70	35-40	1.45-1.65	0.01-0.42	0.21-0.23	6.0-8.9	1.0-4.0	.28	.28	5	4	86
	8-60	3-15	25-60	35-60	1.50-1.70	0.01-0.42	0.08-0.12	9.0-25.0	0.5-1.0	.28	.28			
AED:														
Orthent----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
W:														
Water----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---