Keokuk County, Iowa
Chemical Soil Properties

Print date: 10/02/2014

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
8B:								
Judson	0-9	20-27	---	5.6-7.3	0	0	---	---
	9-28	23-27	---	5.6-7.3	0	0	---	---
	28-35	24-29	---	5.6-7.3	0	0	---	---
	35-60	17-25	---	6.1-7.8	0-10	0	---	---
8C:								
Judson	0-9	20-27	---	5.6-7.3	0	0	---	---
	9-28	23-27	---	5.6-7.3	0	0	---	---
	28-35	24-29	---	5.6-7.3	0	0	---	---
	35-60	17-25	---	6.1-7.8	0-10	0	---	---
13B:								
Olmitz	0-9	20-25	---	5.6-7.3	0	---	---	---
	9-32	20-25	---	5.6-7.3	0	---	---	---
	32-80	20-25	---	5.1-6.5	0	---	---	---
Vesser, rarely flooded	0-12	25-30	---	5.6-7.3	0	---	---	---
	12-31	20-25	---	5.1-6.0	0	---	---	---
	31-80	25-30	---	5.6-6.5	0	---	---	---
Zook, Frequently flooded	0-9	36-41	---	5.6-7.3	0	---	---	---
	9-51	36-41	---	5.6-7.8	0	---	---	---
	51-80	30-36	---	5.6-7.8	0	---	---	---
24D2:								
Shelby, moderately eroded	0-7	20-25	---	5.1-7.3	0	---	---	---
	7-12	20-25	---	5.1-7.3	0	---	---	---
	12-52	20-25	---	5.1-7.3	0	---	---	---
	52-80	20-25	---	6.6-8.4	0-30	---	---	---
24E2:								
Shelby, moderately eroded	0-7	20-25	---	5.1-7.3	0	---	---	---
	7-12	20-25	---	5.1-7.3	0	---	---	---
	12-50	20-25	---	5.1-7.3	0	---	---	---
	50-80	20-25	---	6.6-8.4	0-30	---	---	---

51:								
Vesser, occasionally flooded	0-13	25-30	---	5.6-7.3	0	---	---	---
	13-31	20-25	---	5.1-6.0	0	---	---	---
	31-80	25-30	---	5.1-6.5	0	---	---	---
51B:								
Vesser, rarely flooded	0-12	25-30	---	5.6-7.3	0	---	---	---
	12-31	20-25	---	5.1-6.0	0	---	---	---
	31-80	25-30	---	5.1-6.5	0	---	---	---
54:								
Zook, occasionally flooded	0-9	36-41	---	5.6-7.3	0	---	---	---
	9-51	36-41	---	5.6-7.8	0	---	---	---
	51-80	30-36	---	5.6-7.8	0	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
54+:								
Zook, overwash, occasionally flooded	0-14	25-30	---	5.6-7.3	0	---	---	---
	14-56	36-41	---	5.6-7.8	0	---	---	---
	56-80	30-36	---	5.6-7.8	0	---	---	---
56B:								
Cantril	0-19	15-20	---	5.1-7.3	0	---	---	---
	19-80	20-25	---	5.1-6.5	0	---	---	---
56C:								
Cantril	0-19	15-20	---	5.1-7.3	0	---	---	---
	19-80	20-25	---	5.1-6.5	0	---	---	---
65D2:								
Lindley, moderately eroded	0-7	10-16	---	4.5-7.3	0	---	---	---
	7-60	15-20	---	4.5-6.5	0	---	---	---
	60-80	10-16	---	6.1-7.8	0	---	---	---
65E:								
Lindley	0-9	10-16	---	4.5-7.3	0	---	---	---
	9-61	15-20	---	4.5-6.5	0	---	---	---
	61-80	10-16	---	6.1-7.8	0	---	---	---
65E2:								

Lindley, moderately eroded	0-7	10-16	---	4.5-7.3	0	---	---	---
	7-59	15-20	---	4.5-6.5	0	---	---	---
	59-80	10-16	---	6.1-7.8	0	---	---	---
65F:								
Lindley	0-9	10-16	---	4.5-7.3	0	---	---	---
	9-60	15-20	---	4.5-6.5	0	---	---	---
	60-80	10-16	---	6.1-7.8	0	---	---	---
65F2:								
Lindley, moderately eroded	0-7	10-16	---	4.5-7.3	0	---	---	---
	7-58	15-20	---	4.5-6.5	0	---	---	---
	58-80	10-16	---	6.1-7.8	0	---	---	---
65G:								
Lindley	0-9	10-16	---	4.5-7.3	0	---	---	---
	9-59	15-20	---	4.5-6.5	0	---	---	---
	59-80	10-16	---	6.1-7.8	0	---	---	---
74:								
Rubio	0-8	20-25	---	5.1-7.3	0	---	---	---
	8-14	15-20	---	5.1-6.0	0	---	---	---
	14-60	---	25-30	5.1-5.5	0	---	---	---
	60-80	20-25	---	5.1-7.3	0	---	---	---
75:								
Givin	0-12	20-25	---	5.6-7.3	0	---	---	---
	12-42	---	20-25	5.1-5.5	0	---	---	---
	42-80	20-25	---	5.1-6.0	0	---	---	---
75B:								
Givin	0-12	20-25	---	5.6-7.3	0	---	---	---
	12-40	---	20-25	5.1-5.5	0	---	---	---
	40-80	20-25	---	5.1-6.0	0	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
76B:								
Ladoga	0-7	16-28	---	5.6-7.3	0	0	0.0-2.0	0
	7-10	13-24	---	5.6-6.5	0	0	0.0-2.0	0
	10-14	16-27	---	5.1-6.5	0	0	0.0-2.0	0
	14-19	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	19-25	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	25-32	21-31	---	5.1-6.0	0	0	0.0-2.0	0

----------	32-45	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	45-51	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	51-60	17-24	---	5.1-6.5	0	0	0.0-2.0	0
76B2:								
Ladoga, eroded-------	0-6	17-28	---	5.1-6.5	0	0	0.0-2.0	0
----------	6-10	16-27	---	5.1-6.5	0	0	0.0-2.0	0
----------	10-19	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	19-25	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	25-32	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	32-45	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	45-51	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	51-60	17-24	---	5.1-6.5	0	0	0.0-2.0	0
76C:								
Ladoga----------	0-7	16-28	---	5.6-7.3	0	0	0.0-2.0	0
----------	7-10	13-24	---	5.6-6.5	0	0	0.0-2.0	0
----------	10-14	16-27	---	5.1-6.5	0	0	0.0-2.0	0
----------	14-19	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	19-25	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	25-32	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	32-45	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	45-51	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	51-60	17-24	---	5.1-6.5	0	0	0.0-2.0	0
76C2:								
Ladoga, eroded-------	0-6	17-28	---	5.1-6.5	0	0	0.0-2.0	0
----------	6-10	16-27	---	5.1-6.5	0	0	0.0-2.0	0
----------	10-19	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	19-25	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	25-32	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	32-45	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	45-51	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	51-60	17-24	---	5.1-6.5	0	0	0.0-2.0	0
76D2:								
Ladoga, eroded-------	0-6	17-28	---	5.1-6.5	0	0	0.0-2.0	0
----------	6-10	16-27	---	5.1-6.5	0	0	0.0-2.0	0
----------	10-19	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	19-25	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	25-32	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	32-45	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	45-51	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	51-60	17-24	---	5.1-6.5	0	0	0.0-2.0	0

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	

80B:								
Clinton----------	0-8	16-24	---	5.1-7.3	0	0	0.0-2.0	0
----------	8-15	13-20	---	5.1-7.3	0	0	0.0-2.0	0
----------	15-20	---	14-30	4.5-6.5	0	0	0.0-2.0	0
----------	20-27	---	15-30	4.5-6.5	0	0	0.0-2.0	0
----------	27-39	---	18-30	4.5-6.5	0	0	0.0-2.0	0
----------	39-47	---	18-30	4.5-6.5	0	0	0.0-2.0	0
----------	47-58	---	15-30	4.5-6.5	0	0	0.0-2.0	0
----------	58-72	---	14-30	4.5-6.5	0	0	0.0-2.0	0
----------	72-79	13-24	---	6.1-7.3	0	0	0.0-2.0	0
80C:								
Clinton----------	0-8	16-24	---	5.1-7.3	0	0	0.0-2.0	0
----------	8-15	13-20	---	5.1-7.3	0	0	0.0-2.0	0
----------	15-20	---	14-30	4.5-6.5	0	0	0.0-2.0	0
----------	20-27	---	15-30	4.5-6.5	0	0	0.0-2.0	0
----------	27-39	---	18-30	4.5-6.5	0	0	0.0-2.0	0
----------	39-47	---	18-30	4.5-6.5	0	0	0.0-2.0	0
----------	47-58	---	15-30	4.5-6.5	0	0	0.0-2.0	0
----------	58-72	---	14-30	4.5-6.5	0	0	0.0-2.0	0
----------	72-79	13-24	---	6.1-7.3	0	0	0.0-2.0	0
80C2:								
Clinton, eroded------	0-6	15-28	---	5.1-7.3	0	0	0.0-2.0	0
----------	6-11	15-27	---	5.1-7.3	0	0	0.0-2.0	0
----------	11-16	---	14-30	4.5-6.5	0	0	0.0-2.0	0
----------	16-23	---	15-30	4.5-6.5	0	0	0.0-2.0	0
----------	23-35	---	18-30	4.5-6.5	0	0	0.0-2.0	0
----------	35-43	---	18-30	4.5-6.5	0	0	0.0-2.0	0
----------	43-54	---	15-30	4.5-6.5	0	0	0.0-2.0	0
----------	54-68	---	14-30	4.5-6.5	0	0	0.0-2.0	0
----------	68-79	13-24	---	6.1-7.3	0	0	0.0-2.0	0
80D:								
Clinton----------	0-8	16-24	---	5.1-7.3	0	0	0.0-2.0	0
----------	8-15	13-20	---	5.1-7.3	0	0	0.0-2.0	0
----------	15-20	---	14-30	4.5-6.5	0	0	0.0-2.0	0
----------	20-27	---	15-30	4.5-6.5	0	0	0.0-2.0	0
----------	27-39	---	18-30	4.5-6.5	0	0	0.0-2.0	0
----------	39-47	---	18-30	4.5-6.5	0	0	0.0-2.0	0
----------	47-58	---	15-30	4.5-6.5	0	0	0.0-2.0	0
----------	58-72	---	14-30	4.5-6.5	0	0	0.0-2.0	0
----------	72-79	13-24	---	6.1-7.3	0	0	0.0-2.0	0
80D2:								
Clinton, eroded------	0-6	15-28	---	5.1-7.3	0	0	0.0-2.0	0
----------	6-11	15-27	---	5.1-7.3	0	0	0.0-2.0	0
----------	11-16	---	14-30	4.5-6.5	0	0	0.0-2.0	0
----------	16-23	---	15-30	4.5-6.5	0	0	0.0-2.0	0
----------	23-35	---	18-30	4.5-6.5	0	0	0.0-2.0	0
----------	35-43	---	18-30	4.5-6.5	0	0	0.0-2.0	0
----------	43-54	---	15-30	4.5-6.5	0	0	0.0-2.0	0
----------	54-68	---	14-30	4.5-6.5	0	0	0.0-2.0	0

	68-79	13-24	---	6.1-7.3	0	0	0.0-2.0	0
87B:								
Colo, occasionally flooded	0-16	36-41	---	5.6-7.3	0	---	---	---
	16-46	36-41	---	5.6-7.3	0	---	---	---
	46-80	30-36	---	6.1-7.3	0	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
Zook, occasionally flooded	0-9	36-41	---	5.6-7.3	0	---	---	---
	9-51	36-41	---	5.6-7.8	0	---	---	---
	51-80	30-36	---	5.6-7.8	0	---	---	---
93D2:								
Shelby, moderately eroded	0-7	20-25	---	5.1-7.3	0	---	---	---
	7-12	20-25	---	5.1-7.3	0	---	---	---
	12-52	20-25	---	5.1-7.3	0	---	---	---
	52-80	20-25	---	6.6-8.4	0-30	---	---	---
Adair, moderately eroded	0-8	30-35	---	5.6-7.3	0	---	---	---
	8-42	41-50	---	5.1-6.5	0	---	---	---
	42-80	25-30	---	5.6-7.8	5-10	---	---	---
122:								
Sperry	0-8	25-30	---	5.6-7.3	0	0	---	---
	8-10	25-30	---	5.6-7.3	0	0	---	---
	10-17	20-25	---	5.6-7.3	0	0	---	---
	17-28	30-36	---	5.1-6.5	0	0	---	---
	28-47	30-36	---	5.1-6.5	0	0	---	---
	47-79	25-30	---	5.6-6.5	0	0	---	---
133:								
Colo, occasionally flooded	0-16	36-41	---	5.6-7.3	0	---	---	---
	16-49	36-41	---	5.6-7.3	0	---	---	---
	49-80	30-36	---	6.1-7.3	0	---	---	---
133+:								
Colo, overwash, occasionally flooded	0-14	25-30	---	5.6-7.3	0	---	---	---
	14-59	36-41	---	5.6-7.3	0	---	---	---
	59-80	30-36	---	6.1-7.3	0	---	---	---

133B:								
Colo, rarely flooded-	0-16	36-41	---	5.6-7.3	0	---	---	---
	16-46	36-41	---	5.6-7.3	0	---	---	---
	46-80	30-36	---	6.1-7.3	0	---	---	---
163E:								
Fayette	0-10	15-20	---	5.1-7.3	0	---	---	---
	10-56	15-20	---	4.5-6.5	0	---	---	---
	56-80	15-20	---	5.1-7.8	0-15	---	---	---
163E2:								
Fayette, moderately eroded	0-8	18-25	---	5.1-7.3	0	---	---	---
	8-54	---	15-20	4.5-6.0	0	---	---	---
	54-80	15-20	---	5.1-7.8	0-15	---	---	---
163F:								
Fayette	0-8	15-20	---	5.1-7.3	0	0	0	0
	8-14	15-20	---	5.1-7.3	0	0	0	0
	14-34	15-20	---	4.5-6.5	0	0	0	0
	34-80	15-20	---	5.1-7.8	0-15	0	0	0

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
179D2:								
Gara, moderately eroded	0-9	25-30	---	5.6-7.3	0	---	---	---
	9-67	25-30	---	4.5-6.5	0	---	---	---
	67-80	25-30	---	5.6-8.4	0-25	---	---	---
179E:								
Gara	0-8	25-30	---	5.6-7.3	0	---	---	---
	8-12	25-30	---	5.6-7.3	0	---	---	---
	12-45	25-30	---	4.5-6.5	0	---	---	---
	45-80	25-30	---	5.6-8.4	0-25	---	---	---
179E2:								
Gara, moderately eroded	0-9	25-30	---	5.6-7.3	0	---	---	---
	9-65	25-30	---	4.5-6.5	0	---	---	---
	65-80	25-30	---	5.6-8.4	0-25	---	---	---
179F2:								
Gara, moderately eroded	0-9	25-30	---	5.6-7.3	0	---	---	---

	9-63	25-30	---	4.5-6.5	0	---	---	---
	63-80	25-30	---	5.6-8.4	0-25	---	---	---
180:								
Keomah	0-7	15-20	---	4.5-7.3	0	---	---	---
	7-14	15-20	---	4.5-7.3	0	---	---	---
	14-25	---	25-30	4.5-5.5	0	---	---	---
	25-80	15-20	---	5.1-7.3	0	---	---	---
220:								
Nodaway, occasionally flooded	0-7	20-25	---	6.1-7.3	0	---	---	---
	7-31	20-25	---	6.1-7.3	0	---	---	---
	31-42	20-25	---	6.1-7.3	0	---	---	---
	42-80	20-25	---	6.1-7.3	0	---	---	---
222C:								
Clarinda	0-11	36-41	---	5.1-7.3	0	---	---	---
	11-38	41-50	---	5.1-6.5	0	---	---	---
	38-80	41-50	---	5.6-8.4	0-30	---	---	---
222C2:								
Clarinda, moderately eroded	0-7	36-41	---	5.1-7.3	0	---	---	---
	7-34	41-50	---	5.1-6.5	0	---	---	---
	34-80	41-50	---	5.6-8.4	0-30	---	---	---
223C2:								
Rinda, moderately eroded	0-9	30-36	---	5.6-7.3	0	---	---	---
	9-20	30-36	---	5.1-6.5	0	---	---	---
	20-80	41-50	---	5.1-7.3	0	---	---	---
273C:								
Olmitz	0-9	20-25	---	5.6-7.3	0	---	---	---
	9-32	20-25	---	5.6-7.3	0	---	---	---
	32-80	20-25	---	5.1-6.5	0	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
279:								
Taintor	0-9	21-29	---	5.6-7.3	0	0	0.0-2.0	0
	9-16	21-32	---	5.6-7.3	0	0	0.0-2.0	0
	16-20	21-31	---	5.6-7.3	0	0	0.0-2.0	0
	20-24	22-31	---	5.1-7.3	0	0	0.0-2.0	0
	24-28	22-31	---	5.1-7.3	0	0	0.0-2.0	0

----------	28-36	22-31	---	5.1-7.3	0	0	0.0-2.0	0
----------	36-46	21-30	---	5.6-7.3	0	0	0.0-2.0	0
----------	46-60	15-26	---	6.1-7.8	0-5	0	0.0-2.0	0
280:								
Mahaska----------	0-7	23-26	---	5.1-7.3	0	0	0.0-2.0	0
----------	7-13	22-26	---	4.5-7.3	0	0	0.0-2.0	0
----------	13-18	22-26	---	4.5-7.3	0	0	0.0-2.0	0
----------	18-24	22-29	---	5.1-6.5	0	0	0.0-2.0	0
----------	24-30	27-32	---	4.5-6.5	0	0	0.0-2.0	0
----------	30-40	27-32	---	4.5-6.5	0	0	0.0-2.0	0
----------	40-61	26-31	---	4.5-7.3	0	0	0.0-2.0	0
----------	61-79	17-24	---	5.6-7.8	0	0	0.0-2.0	0
280B:								
Mahaska----------	0-7	23-26	---	5.1-7.3	0	0	0.0-2.0	0
----------	7-13	22-26	---	4.5-7.3	0	0	0.0-2.0	0
----------	13-18	22-26	---	4.5-7.3	0	0	0.0-2.0	0
----------	18-24	22-29	---	5.1-6.5	0	0	0.0-2.0	0
----------	24-30	27-32	---	4.5-6.5	0	0	0.0-2.0	0
----------	30-40	27-32	---	4.5-6.5	0	0	0.0-2.0	0
----------	40-61	26-31	---	4.5-7.3	0	0	0.0-2.0	0
----------	61-79	17-24	---	5.6-7.8	0	0	0.0-2.0	0
281B:								
Otley----------	0-7	22-32	---	5.1-7.3	0	0	0.0-2.0	0
----------	7-17	22-32	---	5.1-7.3	0	0	0.0-2.0	0
----------	17-26	25-35	---	4.5-6.5	0	0	0.0-2.0	0
----------	26-32	25-34	---	4.5-6.5	0	0	0.0-2.0	0
----------	32-40	24-34	---	4.5-6.5	0	0	0.0-2.0	0
----------	40-46	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	46-53	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	53-61	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	61-73	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
----------	73-79	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
281B2:								
Otley, eroded--------	0-8	22-32	---	5.1-7.3	0	0	0.0-2.0	0
----------	8-17	25-35	---	4.5-6.5	0	0	0.0-2.0	0
----------	17-23	25-34	---	4.5-6.5	0	0	0.0-2.0	0
----------	23-31	24-34	---	4.5-6.5	0	0	0.0-2.0	0
----------	31-37	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	37-44	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	44-52	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	52-64	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
----------	64-79	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio

	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
281C:								
Otley----------	0-7	22-32	---	5.1-7.3	0	0	0.0-2.0	0
----------	7-17	22-32	---	5.1-7.3	0	0	0.0-2.0	0
----------	17-26	25-35	---	4.5-6.5	0	0	0.0-2.0	0
----------	26-32	25-34	---	4.5-6.5	0	0	0.0-2.0	0
----------	32-40	24-34	---	4.5-6.5	0	0	0.0-2.0	0
----------	40-46	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	46-53	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	53-61	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	61-73	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
----------	73-79	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
281C2:								
Otley, eroded--------	0-8	22-32	---	5.1-7.3	0	0	0.0-2.0	0
----------	8-17	25-35	---	4.5-6.5	0	0	0.0-2.0	0
----------	17-23	25-34	---	4.5-6.5	0	0	0.0-2.0	0
----------	23-31	24-34	---	4.5-6.5	0	0	0.0-2.0	0
----------	31-37	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	37-44	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	44-52	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	52-64	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
----------	64-79	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
281D2:								
Otley, moderately								
eroded----------	0-8	22-32	---	5.1-7.3	0	0	0.0-2.0	0
----------	8-17	25-35	---	4.5-6.5	0	0	0.0-2.0	0
----------	17-23	25-34	---	4.5-6.5	0	0	0.0-2.0	0
----------	23-31	24-34	---	4.5-6.5	0	0	0.0-2.0	0
----------	31-37	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	37-44	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	44-52	21-29	---	5.1-7.3	0	0	0.0-2.0	0
----------	52-64	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
----------	64-79	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
293C:								
Chelsea----------	0-6	5.0-10	---	5.6-7.3	0	---	---	---
----------	6-80	5.0-10	---	5.1-6.5	0	---	---	---
Fayette----------	0-10	15-20	---	5.1-7.3	0	---	---	---
----------	10-60	15-20	---	4.5-6.5	0	---	---	---
----------	60-80	15-20	---	5.1-7.8	0-15	---	---	---
293D:								
Chelsea----------	0-6	5.0-10	---	5.6-7.3	0	---	---	---
----------	6-80	5.0-10	---	5.1-6.5	0	---	---	---
Fayette----------	0-10	15-20	---	5.1-7.3	0	---	---	---
----------	10-58	15-20	---	4.5-6.5	0	---	---	---
----------	58-80	15-20	---	5.1-7.8	0-15	---	---	---

293E:								
Chelsea	0-6	5.0-10	---	5.6-7.3	0	---	---	---
	6-80	5.0-10	---	5.1-6.5	0	---	---	---
Fayette	0-10	15-20	---	5.1-7.3	0	---	---	---
	10-56	15-20	---	4.5-6.5	0	---	---	---
	56-80	15-20	---	5.1-7.8	0-15	---	---	---
293F:								
Chelsea	0-6	5.0-10	---	5.6-7.3	0	---	---	---
	6-80	5.0-10	---	5.1-6.5	0	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
Fayette	0-10	15-20	---	5.1-7.3	0	---	---	---
	10-54	15-20	---	4.5-6.5	0	---	---	---
	54-80	15-20	---	5.1-7.8	0-15	---	---	---
294C:								
Billett	0-8	4.8-13	---	5.1-7.3	0	---	---	---
	8-13	8.6-15	---	5.1-6.5	0	---	---	---
	13-28	7.6-15	---	5.1-6.5	0	---	---	---
	28-41	6.2-15	---	5.6-7.3	0	---	---	---
	41-47	6.2-15	---	5.6-7.3	0	---	---	---
	47-52	1.8-6.3	---	5.1-7.8	0-15	---	---	---
	52-60	1.8-6.3	---	5.1-7.8	0-15	---	---	---
Ladoga	0-8	20-25	---	6.1-7.3	0	---	---	---
	8-41	20-23	---	5.1-7.3	0	---	---	---
	41-80	5.0-10	---	5.1-7.3	0	---	---	---
294D:								
Billett	0-8	4.8-13	---	5.1-7.3	0	---	---	---
	8-13	8.6-15	---	5.1-6.5	0	---	---	---
	13-28	7.6-15	---	5.1-6.5	0	---	---	---
	28-41	6.2-15	---	5.6-7.3	0	---	---	---
	41-47	6.2-15	---	5.6-7.3	0	---	---	---
	47-52	1.8-6.3	---	5.1-7.8	0-15	---	---	---
	52-60	1.8-6.3	---	5.1-7.8	0-15	---	---	---
Ladoga	0-8	20-25	---	6.1-7.3	0	---	---	---
	8-41	20-23	---	5.1-7.3	0	---	---	---
	41-80	5.0-10	---	5.1-7.3	0	---	---	---
319E:								
Dunbarton	0-7	6.0-15	---	5.6-7.3	---	---	---	---

	7-16	12-28	---	6.6-7.8	---	---	---	---
	16-80	---	---	---	---	---	0.0-2.0	---
422:								
Amana, occasionally flooded	0-15	25-30	---	5.6-7.3	0	---	---	---
	15-37	25-30	---	5.1-6.5	0	---	---	---
	37-80	25-30	---	5.6-6.5	0	---	---	---
423D2:								
Bucknell, moderately eroded	0-6	20-25	---	5.1-7.3	0	---	---	---
	6-53	---	36-41	4.5-6.0	0	---	---	---
	53-80	30-36	---	5.6-7.3	0	---	---	---
424D:								
Lindley	0-9	10-16	---	4.5-7.3	0	---	---	---
	9-62	15-20	---	4.5-6.5	0	---	---	---
	62-80	10-16	---	6.1-7.8	0	---	---	---
Keswick	0-9	20-25	---	4.5-7.3	0	---	---	---
	9-29	---	30-50	4.5-6.0	0	---	---	---
	29-80	30-36	---	4.5-7.8	0-15	---	---	---
424D2:								
Lindley, moderately eroded	0-7	10-16	---	4.5-7.3	0	---	---	---
	7-60	15-20	---	4.5-6.5	0	---	---	---
	60-80	10-16	---	6.1-7.8	0	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
Keswick, moderately eroded	0-7	25-30	---	4.5-7.3	0	---	---	---
	7-27	---	30-50	4.5-6.0	0	---	---	---
	27-80	30-36	---	4.5-7.8	0-15	---	---	---
424E2:								
Lindley, moderately eroded	0-7	10-16	---	4.5-7.3	0	---	---	---
	7-59	15-20	---	4.5-6.5	0	---	---	---
	59-80	10-16	---	6.1-7.8	0	---	---	---
Keswick, moderately eroded	0-7	---	25-30	2.5-7.3	0	---	---	---
	7-25	---	30-50	4.5-6.0	0	---	---	---

	25-80	30-36	---	4.5-7.8	0-15	---	---	---
425D:								
Keswick	0-9	20-25	---	4.5-7.3	0	---	---	---
	9-29	---	30-50	4.5-6.0	0	---	---	---
	29-80	30-36	---	4.5-7.8	0-15	---	---	---
425D2:								
Keswick, moderately eroded	0-7	25-30	---	4.5-7.3	0	---	---	---
	7-27	---	30-50	4.5-6.0	0	---	---	---
	27-80	30-36	---	4.5-7.8	0-15	---	---	---
428B:								
Ely	0-24	30-36	---	5.6-7.3	0	---	---	---
	24-47	30-36	---	6.1-7.3	0	---	---	---
	47-80	25-30	---	6.6-8.4	0	---	---	---
430:								
Ackmore, occasionally flooded	0-6	25-30	---	5.6-7.3	0	---	---	---
	6-22	25-30	---	5.6-7.3	0	---	---	---
	22-80	25-30	---	5.6-7.8	0	---	---	---
453:								
Tuskeego, occasionally flooded	0-8	20-25	---	5.1-7.3	0	0	0	0
	8-19	20-25	---	5.1-7.3	0	---	---	---
	19-24	30-36	---	5.1-6.5	0	---	---	---
	24-60	20-30	---	5.6-6.5	0	---	---	---
520:								
Coppock, occasionally flooded	0-8	20-25	---	6.1-7.3	0	---	---	---
	8-25	20-25	---	5.6-7.3	0	---	---	---
	25-45	---	20-25	4.5-6.0	0	---	---	---
	45-80	---	20-25	4.5-6.0	0	---	---	---
520B:								
Coppock, rarely flooded	0-8	20-25	---	6.1-7.3	0	---	---	---
	8-25	20-25	---	5.6-7.3	0	---	---	---
	25-45	---	20-25	4.5-6.0	0	---	---	---
	45-80	---	20-25	4.5-6.0	0	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	

570C:								
Nira----------	0-11	25-30	---	5.6-7.3	0	---	---	---
----------	11-40	25-30	---	5.1-6.0	0	---	---	---
----------	40-80	25-30	---	5.6-6.5	0	---	---	---
570C2:								
Nira, moderately eroded----------	0-8	25-30	---	5.6-7.3	0	---	---	---
----------	8-37	25-30	---	5.1-6.0	0	---	---	---
----------	37-80	25-30	---	5.6-6.5	0	---	---	---
571C2:								
Hedrick, moderately eroded----------	0-7	20-25	---	5.6-7.3	0	---	---	---
----------	7-48	20-25	---	5.1-6.5	0	---	---	---
----------	48-69	20-25	---	5.6-7.8	0	---	---	---
----------	69-80	41-50	---	5.6-7.8	0	---	---	---
571D2:								
Hedrick, moderately eroded----------	0-7	20-25	---	5.6-7.3	0	---	---	---
----------	7-48	20-25	---	5.1-6.5	0	---	---	---
----------	48-69	20-25	---	5.6-7.8	0	---	---	---
----------	69-80	41-50	---	5.6-7.8	0	---	---	---
572C2:								
Inton, moderately eroded----------	0-8	20-25	---	5.6-7.3	0	---	---	---
----------	8-39	20-25	---	5.1-6.5	0	---	---	---
----------	39-52	20-25	---	5.6-7.8	0	---	---	---
----------	52-80	41-50	---	5.1-7.8	0	---	---	---
572D2:								
Inton, moderately eroded----------	0-7	20-25	---	5.6-7.3	0	---	---	---
----------	7-35	20-25	---	5.1-6.5	0	---	---	---
----------	35-48	20-25	---	5.6-7.8	0	---	---	---
----------	48-80	41-50	---	5.1-7.8	0	---	---	---
587:								
Chequest, occasionally flooded	0-14	25-30	---	5.1-7.3	0	---	---	---
----------	14-80	25-30	---	5.1-6.0	0	---	---	---
587+:								
Chequest, overwash, occasionally flooded	0-8	20-25	---	5.1-7.3	0	---	---	---
----------	8-12	20-25	---	5.1-7.3	0	---	---	---
----------	12-24	20-25	---	5.1-7.3	0	---	---	---
----------	24-60	25-30	---	5.1-6.0	0	---	---	---
687B:								
Watkins----------	0-15	20-25	---	5.6-7.3	0	---	---	---

----------	15-65	20-25	---	5.1-6.5	0	---	---	---
----------	65-80	20-25	---	5.6-6.5	0	---	---	---
688:								
Koszta----------	0-15	20-25	---	5.1-7.3	0	---	---	---
----------	15-80	20-25	---	5.1-7.3	0	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
722:								
Nodaway, occasionally flooded	0-7	20-25	---	6.1-7.3	0	---	---	---
----------	7-31	20-25	---	6.1-7.3	0	---	---	---
----------	31-42	20-25	---	6.1-7.3	0	---	---	---
----------	42-80	20-25	---	6.1-7.3	0	---	---	---
Ackmore, occasionally flooded	0-6	25-30	---	5.6-7.3	0	---	---	---
----------	6-22	25-30	---	5.6-7.3	0	---	---	---
----------	22-80	25-30	---	5.6-7.8	0	---	---	---
Vesser, occasionally flooded----------	0-13	25-30	---	5.6-7.3	0	---	---	---
----------	13-31	20-25	---	5.1-6.0	0	---	---	---
----------	31-80	25-30	---	5.1-6.5	0	---	---	---
730B:								
Nodaway, Frequently flooded----------	0-7	20-25	---	6.1-7.3	0	---	---	---
----------	7-31	20-25	---	6.1-7.3	0	---	---	---
----------	31-42	20-25	---	6.1-7.3	0	---	---	---
----------	42-80	20-25	---	6.1-7.3	0	---	---	---
Coppock, rarely flooded----------	0-8	20-25	---	6.1-7.3	0	---	---	---
----------	8-25	20-25	---	5.6-7.3	0	---	---	---
----------	25-45	---	20-25	4.5-6.0	0	---	---	---
----------	45-80	---	20-25	4.5-6.0	0	---	---	---
Cantril----------	0-19	15-20	---	5.1-7.3	0	---	---	---
----------	19-80	20-25	---	5.1-6.5	0	---	---	---
779:								
Kalona----------	0-20	41-50	---	5.6-7.3	0	---	---	---
----------	20-51	36-41	---	5.6-7.3	0	---	---	---
----------	51-80	20-25	---	6.1-7.8	0-15	---	---	---

792C2:								
Armstrong, moderately eroded---	0-8	13-28	---	5.6-7.3	0	0	---	---
----------	8-11	21-28	---	5.1-7.3	0	0	---	---
----------	11-14	21-28	---	5.1-6.5	0	0	---	---
----------	14-26	24-43	---	4.5-6.5	0	0	---	---
----------	26-54	21-28	---	4.5-6.5	0	0	---	---
----------	54-80	19-26	---	5.6-7.8	0	0	---	---
792D2:								
Armstrong, moderately eroded---	0-8	13-28	---	5.6-7.3	0	0	---	---
----------	8-11	21-28	---	5.1-7.3	0	0	---	---
----------	11-14	21-28	---	5.1-6.5	0	0	---	---
----------	14-26	24-43	---	4.5-6.5	0	0	---	---
----------	26-54	21-28	---	4.5-6.5	0	0	---	---
----------	54-80	19-26	---	5.6-7.8	0	0	---	---
795C2:								
Ashgrove, moderately eroded----------	0-7	30-35	---	4.5-7.3	0	---	---	---
----------	7-62	41-50	---	4.5-7.3	0	---	---	---
----------	62-80	10-16	---	6.1-7.8	0	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
795D2:								
Ashgrove, moderately eroded----------	0-7	30-35	---	4.5-7.3	0	---	---	---
----------	7-60	41-50	---	4.5-7.3	0	---	---	---
----------	60-80	10-16	---	6.1-7.8	0	---	---	---
822D2:								
Lamoni, moderately eroded----------	0-6	25-30	---	5.1-7.3	0	---	---	---
----------	6-61	41-50	---	5.1-6.5	0	---	---	---
----------	61-80	25-30	---	5.6-7.3	0	---	---	---
876B:								
Ladoga, terrace------	0-7	16-28	---	5.6-7.3	0	0	0.0-2.0	0
----------	7-10	13-24	---	5.6-6.5	0	0	0.0-2.0	0
----------	10-14	16-27	---	5.1-6.5	0	0	0.0-2.0	0
----------	14-19	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	19-25	21-31	---	5.1-6.0	0	0	0.0-2.0	0
----------	25-32	21-31	---	5.1-6.0	0	0	0.0-2.0	0

	32-45	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	45-51	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	51-60	17-24	---	5.1-6.5	0	0	0.0-2.0	0
876C2:								
Ladoga, terrace, eroded	0-6	17-28	---	5.1-6.5	0	0	0.0-2.0	0
	6-10	16-27	---	5.1-6.5	0	0	0.0-2.0	0
	10-19	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	19-25	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	25-32	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	32-45	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	45-51	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	51-60	17-24	---	5.1-6.5	0	0	0.0-2.0	0
876D2:								
Ladoga, terrace, eroded	0-6	17-28	---	5.1-6.5	0	0	0.0-2.0	0
	6-10	16-27	---	5.1-6.5	0	0	0.0-2.0	0
	10-19	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	19-25	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	25-32	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	32-45	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	45-51	21-31	---	5.1-6.0	0	0	0.0-2.0	0
	51-60	17-24	---	5.1-6.5	0	0	0.0-2.0	0
880B:								
Clinton, terrace	0-8	16-24	---	5.1-7.3	0	0	0.0-2.0	0
	8-15	13-20	---	5.1-7.3	0	0	0.0-2.0	0
	15-20	---	14-30	4.5-6.5	0	0	0.0-2.0	0
	20-27	---	15-30	4.5-6.5	0	0	0.0-2.0	0
	27-39	---	18-30	4.5-6.5	0	0	0.0-2.0	0
	39-47	---	18-30	4.5-6.5	0	0	0.0-2.0	0
	47-58	---	15-30	4.5-6.5	0	0	0.0-2.0	0
	58-72	---	14-30	4.5-6.5	0	0	0.0-2.0	0
	72-79	13-24	---	6.1-7.3	0	0	0.0-2.0	0

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
880C2:								
Clinton, terrace, eroded	0-6	15-28	---	5.1-7.3	0	0	0.0-2.0	0
	6-11	15-27	---	5.1-7.3	0	0	0.0-2.0	0
	11-16	---	14-30	4.5-6.5	0	0	0.0-2.0	0
	16-23	---	15-30	4.5-6.5	0	0	0.0-2.0	0
	23-35	---	18-30	4.5-6.5	0	0	0.0-2.0	0

	35-43	---	18-30	4.5-6.5	0	0	0.0-2.0	0
	43-54	---	15-30	4.5-6.5	0	0	0.0-2.0	0
	54-68	---	14-30	4.5-6.5	0	0	0.0-2.0	0
	68-79	13-24	---	6.1-7.3	0	0	0.0-2.0	0
880D2:								
Clinton, terrace, eroded	0-6	15-28	---	5.1-7.3	0	0	0.0-2.0	0
	6-11	15-27	---	5.1-7.3	0	0	0.0-2.0	0
	11-16	---	14-30	4.5-6.5	0	0	0.0-2.0	0
	16-23	---	15-30	4.5-6.5	0	0	0.0-2.0	0
	23-35	---	18-30	4.5-6.5	0	0	0.0-2.0	0
	35-43	---	18-30	4.5-6.5	0	0	0.0-2.0	0
	43-54	---	15-30	4.5-6.5	0	0	0.0-2.0	0
	54-68	---	14-30	4.5-6.5	0	0	0.0-2.0	0
	68-79	13-24	---	6.1-7.3	0	0	0.0-2.0	0
881B:								
Otley, terrace	0-7	22-32	---	5.1-7.3	0	0	0.0-2.0	0
	7-17	22-32	---	5.1-7.3	0	0	0.0-2.0	0
	17-26	25-35	---	4.5-6.5	0	0	0.0-2.0	0
	26-32	25-34	---	4.5-6.5	0	0	0.0-2.0	0
	32-40	24-34	---	4.5-6.5	0	0	0.0-2.0	0
	40-46	21-29	---	5.1-7.3	0	0	0.0-2.0	0
	46-53	21-29	---	5.1-7.3	0	0	0.0-2.0	0
	53-61	21-29	---	5.1-7.3	0	0	0.0-2.0	0
	61-73	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
	73-79	15-23	---	5.6-7.8	0-8	0	0.0-2.0	0
911B:								
Colo, Frequently flooded	0-38	36-41	---	5.6-7.3	0	---	---	---
	38-44	36-41	---	5.6-7.3	0	---	---	---
	44-80	30-36	---	6.1-7.3	0	---	---	---
Ely	0-24	30-36	---	5.6-7.3	0	---	---	---
	24-47	30-36	---	6.1-7.3	0	---	---	---
	47-80	25-30	---	6.6-8.4	0-25	---	---	---
993D2:								
Gara, moderately eroded	0-9	25-30	---	5.6-7.3	0	---	---	---
	9-67	25-30	---	4.5-6.5	0	---	---	---
	67-80	25-30	---	5.6-8.4	0-25	---	---	---
Armstrong, moderately eroded	0-8	13-28	---	5.6-7.3	0	0	---	---
	8-11	21-28	---	5.1-7.3	0	0	---	---
	11-14	21-28	---	5.1-6.5	0	0	---	---
	14-26	24-43	---	4.5-6.5	0	0	---	---
	26-54	21-28	---	4.5-6.5	0	0	---	---
	54-80	19-26	---	5.6-7.8	0	0	---	---

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
993E2:								
Gara, moderately eroded----------	0-9	25-30	---	5.6-7.3	0	---	---	---
----------	9-65	25-30	---	4.5-6.5	0	---	---	---
----------	65-80	25-30	---	5.6-8.4	0-25	---	---	---
Armstrong, moderately eroded---	0-8	13-28	---	5.6-7.3	0	0	---	---
----------	8-11	21-28	---	5.1-7.3	0	0	---	---
----------	11-14	21-28	---	5.1-6.5	0	0	---	---
----------	14-26	24-43	---	4.5-6.5	0	0	---	---
----------	26-54	21-28	---	4.5-6.5	0	0	---	---
----------	54-80	19-26	---	5.6-7.8	0	0	---	---
994D2:								
Galland, moderately eroded----------	0-9	20-25	---	5.6-7.3	0	---	---	---
----------	9-54	---	25-35	4.5-6.0	0	---	---	---
----------	54-60	10-35	---	6.1-6.5	0	---	---	---
Douds, moderately eroded----------	0-8	13-21	---	5.1-7.3	0	0	---	---
----------	8-48	8.7-19	---	4.5-6.0	0	0	---	---
----------	48-79	6.0-16	---	4.5-6.0	0	0	---	---
994E2:								
Galland, moderately eroded----------	0-9	20-25	---	5.6-7.3	0	---	---	---
----------	9-54	---	25-35	4.5-6.0	0	---	---	---
----------	54-60	10-35	---	6.1-6.5	0	---	---	---
Douds, moderately eroded----------	0-8	13-21	---	5.1-7.3	0	0	---	---
----------	8-48	8.7-19	---	4.5-6.0	0	0	---	---
----------	48-79	6.0-16	---	4.5-6.0	0	0	---	---
999F:								
Nordness----------	0-4	15-20	---	5.6-7.3	0	---	---	---
----------	4-13	15-20	---	5.6-7.3	0	---	---	---
----------	13-16	20-25	---	6.6-7.3	0	---	---	---
----------	16-80	---	---	---	---	---	---	---
Eleva----------	0-4	5.0-20	---	3.6-7.3	0	---	---	---
----------	4-17	1.0-7.0	---	3.6-7.3	0	---	---	---
----------	17-24	0.0-8.0	---	3.6-7.8	0	---	---	---

	24-36	---	---	---	---	---	---	---
	36-80	---	---	---	---	---	0.0-2.0	---
999G:								
Nordness	0-7	15-20	---	5.6-7.3	0	---	---	---
	7-11	20-25	---	6.6-7.3	0	---	---	---
	11-38	---	---	---	0	---	---	---
Eleva	0-4	5.0-20	---	3.6-7.3	0	---	---	---
	4-17	1.0-7.0	---	3.6-7.3	0	---	---	---
	17-24	0.0-8.0	---	3.6-7.8	0	---	---	---
	24-80	---	0.0-0.0	---	0	---	---	---
1075:								
Givin, terrace	0-12	20-25	---	5.6-7.3	0	---	---	---
	12-42	---	20-25	5.1-5.5	0	---	---	---
	42-80	20-25	---	5.1-6.0	0	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
1220:								
Nodaway, frequently flooded, channeled	0-7	20-25	---	6.1-7.3	0	---	---	---
	7-31	20-25	---	6.1-7.3	0	---	---	---
	31-42	20-25	---	6.1-7.3	0	---	---	---
	42-80	20-25	---	6.1-7.3	0	---	---	---
1279:								
Taintor, terrace	0-9	21-29	---	5.6-7.3	0	0	0.0-2.0	0
	9-16	21-32	---	5.6-7.3	0	0	0.0-2.0	0
	16-20	21-31	---	5.6-7.3	0	0	0.0-2.0	0
	20-24	22-31	---	5.1-7.3	0	0	0.0-2.0	0
	24-28	22-31	---	5.1-7.3	0	0	0.0-2.0	0
	28-36	22-31	---	5.1-7.3	0	0	0.0-2.0	0
	36-46	21-30	---	5.6-7.3	0	0	0.0-2.0	0
	46-60	15-26	---	6.1-7.8	0-5	0	0.0-2.0	0
1280:								
Mahaska, terrace	0-7	23-26	---	5.1-7.3	0	0	0.0-2.0	0
	7-13	22-26	---	4.5-7.3	0	0	0.0-2.0	0
	13-18	22-26	---	4.5-7.3	0	0	0.0-2.0	0
	18-24	22-29	---	5.1-6.5	0	0	0.0-2.0	0
	24-30	27-32	---	4.5-6.5	0	0	0.0-2.0	0
	30-40	27-32	---	4.5-6.5	0	0	0.0-2.0	0
	40-61	26-31	---	4.5-7.3	0	0	0.0-2.0	0
	61-79	17-24	---	5.6-7.8	0	0	0.0-2.0	0

1313F2:								
Munterville, moderately eroded	0-8	8.0-19	---	5.6-7.3	0	0	0	---
	8-13	13-21	---	5.6-6.5	0	0	0	---
	13-17	11-27	---	5.1-6.5	0	0	0	---
	17-47	---	1.2-14	3.5-6.5	0	0	0	---
	47-75	---	1.1-14	3.5-6.5	0	0	0	---
	75-79	---	---	---	0	0	---	---
1315:								
Nodaway, frequently flooded, channeled	0-7	20-25	---	6.1-7.3	0	---	---	---
	7-31	20-25	---	6.1-7.3	0	---	---	---
	31-42	20-25	---	6.1-7.3	0	---	---	---
	42-80	20-25	---	6.1-7.3	0	---	---	---
Klum, frequently flooded, channeled	0-8	10-15	---	5.6-7.3	0	0	0	0
	8-60	10-15	---	5.6-7.3	0	0	0	0
5010:								
Pits, sand and gravel	---	---	---	---	---	---	---	---
5020:								
Dumps, mine	---	---	---	---	---	---	---	---
5030:								
Pits, limestone quarry	---	---	---	---	---	---	---	---
5040:								
Udorthents, loamy	---	---	---	---	---	---	---	---

Chemical Soil Properties

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate	Gypsum	Salinity	Sodium adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
5048:								
Aquents, frequently flooded, ponded	0-40	---	---	---	---	---	---	---
5060:								
Pits, clay	---	---	---	---	---	---	---	---
5080:								
Udorthents	---	---	---	---	---	---	---	---

Map symbol	Depth	Cation	Effective	Soil	Calcium	Gypsum	Salinity	Sodium
6051:								
Vesser, Frequently flooded	0-13	25-30	---	5.6-7.3	0	---	---	---
	13-31	20-25	---	5.1-6.0	0	---	---	---
	31-80	25-30	---	5.1-6.5	0	---	---	---
6054:								
Zook, Frequently flooded	0-7	26-36	---	5.6-7.8	0-5	0	---	---
	7-20	26-36	---	5.6-7.8	0-5	0	---	---
	20-38	26-35	---	5.6-7.8	0-5	0	---	---
	38-61	28-35	---	5.6-7.3	0	0	---	---
	61-80	15-33	---	5.6-7.3	0	0	---	---
6133:								
Colo, Frequently flooded	0-16	36-41	---	5.6-7.3	0	---	---	---
	16-49	36-41	---	5.6-7.3	0	---	---	---
	49-80	30-36	---	6.1-7.3	0	---	---	---
6133+:								
Colo, frequently flooded, overwash	0-14	25-30	---	5.6-7.3	0	---	---	---
	14-59	36-41	---	5.6-7.3	0	---	---	---
	59-80	30-36	---	6.1-7.3	0	---	---	---
6220:								
Nodaway, Frequently flooded	0-7	20-25	---	6.1-7.3	0	---	---	---
	7-31	20-25	---	6.1-7.3	0	---	---	---
	31-42	20-25	---	6.1-7.3	0	---	---	---
	42-80	20-25	---	6.1-7.3	0	---	---	---
6315:								
Nodaway, Frequently flooded	0-7	20-25	---	6.1-7.3	0	---	---	---
	7-31	20-25	---	6.1-7.3	0	---	---	---
	31-42	20-25	---	6.1-7.3	0	---	---	---
	42-80	20-25	---	6.1-7.3	0	---	---	---
Klum, Frequently flooded	0-8	10-15	---	5.6-7.3	0	0	0	0
	8-60	10-15	---	5.6-7.3	0	0	0	0
6422:								
Amana, Frequently flooded	0-15	25-30	---	5.6-7.3	0	---	---	---
	15-37	25-30	---	5.1-6.5	0	---	---	---
	37-80	25-30	---	5.6-6.5	0	---	---	---

Chemical Soil Properties

and soil name		exchange capacity	cation exchange capacity	reaction	carbon-ate			adsorp-tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
6587:								
Chequest, Frequently flooded----------	0-14	25-30	---	5.1-7.3	0	---	---	---
----------	14-80	25-30	---	5.1-6.0	0	---	---	---
AW:								
Animal waste lagoon--	---	---	---	---	---	---	---	---
SL:								
Sewage lagoon--------	---	---	---	---	---	---	---	---
W:								
Water----------	---	---	---	---	---	---	---	---