

**Attachment L**

**Smectitic Soils**

**Keystone XL Project – Montana Major Facility Siting Act Application**

**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
<b>Route A</b>							
0.000	0.730	Bearpaw Shale	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
0.730	0.745	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
0.745	0.871	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
0.871	1.073	Bearpaw Shale	Phillips	33B	Phillips loam, 0 to 4 percent slopes	None	Partially hydric
1.238	1.486	Judith River Formation	Phillips	56B	Scobey clay loam, 0 to 4 percent slopes	None	Partially hydric
1.486	1.585	Judith River Formation	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
1.585	1.771	Judith River Formation	Phillips	33B	Phillips loam, 0 to 4 percent slopes	None	Partially hydric
1.771	2.047	Judith River Formation	Phillips	56B	Scobey clay loam, 0 to 4 percent slopes	None	Partially hydric
2.047	2.278	Judith River Formation	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
2.278	2.519	Judith River Formation	Phillips	38B	Ethridge clay loam, 0 to 4 percent slopes	None	Not hydric
2.519	3.546	Judith River Formation	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
3.546	3.735	Bearpaw Shale	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
3.735	3.999	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
3.999	5.953	Bearpaw Shale	Phillips	333C	Phillips-Kevin, gravelly complex, 2 to 8 percent slopes	None	Partially hydric
5.953	6.182	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
6.182	6.464	Bearpaw Shale	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
6.464	6.862	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
6.862	7.162	Bearpaw Shale	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
7.162	7.753	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
7.753	7.931	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
7.931	8.049	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
8.131	8.262	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
8.350	8.561	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
8.850	8.953	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
8.953	9.042	Bearpaw Shale	Phillips	392B	Creed-Gerdrum complex, 0 to 4 percent slopes	None	Not hydric
9.042	9.191	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
9.191	9.406	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
9.406	9.643	Bearpaw Shale	Phillips	444C	Kevin-Sunburst clay loams, 2 to 8 percent slopes	None	Partially hydric
9.643	9.713	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
9.713	9.803	Bearpaw Shale	Phillips	444C	Kevin-Sunburst clay loams, 2 to 8 percent slopes	None	Partially hydric
9.803	10.074	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
10.074	10.169	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
10.169	10.222	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
10.222	10.419	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
10.419	11.459	Bearpaw Shale	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
11.459	12.019	Bearpaw Shale	Phillips	97D	Neldore-Bascovy clays, 4 to 15 percent slopes	None	Unknown
12.019	12.320	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
12.320	12.454	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
12.454	12.728	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
12.728	12.745	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
12.745	13.011	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

<b>MP Start</b>	<b>MP End</b>	<b>Geology</b>	<b>County</b>	<b>Map Unit Symbol</b>	<b>Soil Name</b>	<b>Flooding</b>	<b>Hydric Rating</b>
13.011	13.066	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.066	13.317	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
13.317	13.359	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.359	13.386	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
13.386	13.474	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
13.474	13.527	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.527	13.611	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
13.611	13.785	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.785	14.343	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
15.391	15.533	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
15.533	15.714	Bearpaw Shale	Phillips	923F	Sunburst-Kevin complex, 15 to 45 percent slopes	None	Not hydric
15.714	16.181	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
16.181	16.343	Bearpaw Shale	Phillips	1920F	Sunburst-Neldore association, 15 to 45 percent slopes	None	Not hydric
16.343	16.360	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
16.383	16.520	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
16.520	16.756	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
16.756	16.794	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
16.924	16.978	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
17.023	17.137	Bearpaw Shale	Phillips	1030D	Marvan-Gerdrum association, 2 to 15 percent slopes	None	Not hydric
17.290	17.639	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
17.936	18.194	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
18.194	18.280	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
18.280	18.367	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
18.367	18.434	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
18.434	18.473	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
18.473	18.540	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
18.540	18.646	Bearpaw Shale	Phillips	251C	Bascovy-Neldore clays, 2 to 8 percent slopes	None	Unknown
18.646	19.114	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
19.944	19.982	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
19.982	19.993	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
19.993	20.246	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
20.334	20.503	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
20.503	20.523	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
20.670	20.704	Bearpaw Shale	Phillips	334C	Phillips-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
20.799	20.901	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
21.165	21.636	Bearpaw Shale	Phillips	334C	Phillips-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
21.636	22.458	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
22.458	22.494	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
22.494	23.318	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
23.318	23.499	Judith River Formation	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
23.550	24.062	Judith River Formation	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
25.544	25.590	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric

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MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
25.590	26.606	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
26.750	28.463	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
28.463	28.674	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
28.674	28.882	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
28.882	28.959	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
28.959	29.142	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
29.142	29.324	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
29.324	29.416	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
29.416	29.514	Judith River Formation	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric
29.553	29.603	Judith River Formation	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric
29.603	29.697	Judith River Formation	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
29.697	29.898	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
29.898	30.187	Judith River Formation	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
30.187	30.207	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
30.308	30.385	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
30.385	31.009	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
31.009	31.352	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
31.352	31.829	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
31.829	32.072	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
32.072	32.304	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
32.466	32.479	Judith River Formation	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric
32.845	33.285	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
33.285	33.307	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
33.307	33.403	Bearpaw Shale	Valley	35	Lisam-Dilts-Rock outcrop complex, 9 to 35 percent slopes	None	Not hydric
33.403	33.627	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
33.627	33.842	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
33.842	33.920	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
33.920	34.089	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
34.089	34.418	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
34.418	34.769	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
34.769	34.970	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
34.970	35.246	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
35.246	35.498	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
35.498	35.609	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
35.657	35.771	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
35.771	36.050	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
36.050	36.365	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
36.365	36.522	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
36.522	36.742	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
36.789	36.843	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
36.843	37.165	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
37.165	37.453	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

<b>MP Start</b>	<b>MP End</b>	<b>Geology</b>	<b>County</b>	<b>Map Unit Symbol</b>	<b>Soil Name</b>	<b>Flooding</b>	<b>Hydric Rating</b>
37.507	37.552	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
37.552	37.586	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
37.586	37.709	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
37.709	37.902	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
37.902	38.020	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
38.020	38.914	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
38.914	38.920	Judith River Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
39.017	39.021	Judith River Formation	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric
39.302	39.314	Judith River Formation	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
39.314	39.446	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
39.446	39.510	Judith River Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
39.510	39.663	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
39.663	39.759	Judith River Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
39.759	39.879	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
39.879	39.914	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
39.914	39.966	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
40.509	40.567	Judith River Formation	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric
40.666	40.801	Bearpaw Shale	Valley	35	Lisam-Dilts-Rock outcrop complex, 9 to 35 percent slopes	None	Not hydric
40.801	40.994	Bearpaw Shale	Valley	55	Rock outcrop		Not hydric
40.994	41.442	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
41.442	41.627	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
41.627	43.541	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
43.541	43.847	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
43.847	45.570	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
45.570	45.741	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
45.741	46.332	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
46.332	46.537	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
46.537	46.934	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
46.934	46.992	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
46.992	47.477	Bearpaw Shale	Valley	35	Lisam-Dilts-Rock outcrop complex, 9 to 35 percent slopes	None	Not hydric
47.477	47.747	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
47.747	47.865	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
47.865	48.011	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
50.661	50.699	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
50.820	50.828	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
50.828	51.055	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
51.802	51.959	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
52.717	52.782	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
52.782	52.802	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
52.802	52.827	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
52.827	52.871	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
52.871	53.049	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric

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53.770	54.034	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
54.034	54.276	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
54.276	54.357	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
54.357	54.628	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
54.628	55.631	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
55.631	55.959	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
55.959	56.363	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
56.363	56.600	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
56.600	56.809	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
56.809	56.874	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
57.152	57.176	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
57.176	57.426	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
57.426	57.437	Bearpaw Shale	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric
57.898	57.920	Bearpaw Shale	Valley	52	Redvale loam, 0 to 3 percent slopes	None	Not hydric
57.920	58.030	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
58.030	58.440	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
58.440	58.518	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
58.570	58.616	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
58.616	59.037	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
61.071	61.195	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
61.755	61.970	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
61.970	62.300	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
62.300	62.437	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
62.437	62.689	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
62.689	62.964	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
62.964	63.088	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
63.153	63.212	Bearpaw Shale	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
63.312	63.466	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
63.466	63.597	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
63.730	64.202	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
64.639	64.693	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
64.693	65.682	Bearpaw Shale	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
65.682	65.744	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
65.744	67.558	Bearpaw Shale	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
68.297	68.456	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
68.456	68.757	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
73.737	74.472	Bearpaw Shale	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
74.472	74.853	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
74.853	75.121	Bearpaw Shale	Valley	52	Redvale loam, 0 to 3 percent slopes	None	Not hydric
75.121	75.188	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
75.188	75.671	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
75.671	75.764	Bearpaw Shale	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
75.764	75.823	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
75.823	75.897	Bearpaw Shale	Valley	67	Thebo-Elloam clays, 2 to 9 percent slopes	None	Not hydric
75.897	75.944	Fox Hills Formation	Valley	67	Thebo-Elloam clays, 2 to 9 percent slopes	None	Not hydric
75.944	76.899	Fox Hills Formation	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
76.899	77.022	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
77.022	77.223	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
77.223	77.296	Fox Hills Formation	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
77.296	77.597	Fox Hills Formation	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
77.597	77.933	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
78.054	78.388	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
78.388	78.782	Fox Hills Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
78.782	78.802	Hell Creek Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
78.802	78.851	Hell Creek Formation	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
78.851	79.127	Fox Hills Formation	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
79.127	79.215	Fox Hills Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
79.215	79.382	Fox Hills Formation	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
79.382	79.789	Bearpaw Shale	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
79.789	79.834	Bearpaw Shale	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
79.834	79.977	Bearpaw Shale	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
79.977	79.981	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
79.981	80.031	Bearpaw Shale	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
80.031	80.158	Bearpaw Shale	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
80.158	80.207	Bearpaw Shale	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
80.207	80.211	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
80.211	80.211	Fox Hills Formation	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
80.211	80.364	Fox Hills Formation	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
80.364	80.573	Fox Hills Formation	Valley	67	Thebo-Elloam clays, 2 to 9 percent slopes	None	Not hydric
80.573	83.052	Hell Creek Formation	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
83.052	83.061	Hell Creek Formation	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
83.061	83.120	Fox Hills Formation	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
83.120	83.386	Fox Hills Formation	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
83.386	83.467	Fox Hills Formation	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
83.467	85.385	Fox Hills Formation	Valley	56	Savage clay loam, 0 to 3 percent slopes	None	Not hydric
85.385	85.465	Fox Hills Formation	Valley	56	Savage clay loam, 0 to 3 percent slopes	None	Not hydric
85.465	85.560	Fox Hills Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
85.560	87.182	Fox Hills Formation	Valley	2	Aquic Ustifluvents, saline	Occasional	Partially hydric
87.182	87.224	Fox Hills Formation	Valley	2	Aquic Ustifluvents, saline	Occasional	Partially hydric
87.224	88.672	Fox Hills Formation	Valley	2	Aquic Ustifluvents, saline	Occasional	Partially hydric
88.672	88.752	Fox Hills Formation	Valley	2	Aquic Ustifluvents, saline	Occasional	Partially hydric
88.752	91.601	Fox Hills Formation	Valley	74	Typic Fluvaquents, gently sloping	Frequent	Partially hydric
91.601	91.695	Fox Hills Formation	Valley	74	Typic Fluvaquents, gently sloping	Frequent	Partially hydric
91.695	122.930	Hell Creek Formation	Daniels/Ro	61	Typic Ustifluvents, 0 to 2 percent slopes	None	Not hydric
122.930	122.937	Hell Creek Formation	Daniels/Ro	61	Typic Ustifluvents, 0 to 2 percent slopes	None	Not hydric
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0.000	0.730	Bearpaw Shale	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
0.730	0.745	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
0.745	0.871	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
0.871	1.073	Bearpaw Shale	Phillips	33B	Phillips loam, 0 to 4 percent slopes	None	Partially hydric
1.073	1.238	Judith River Formation	Phillips	56B	Scobey clay loam, 0 to 4 percent slopes	None	Partially hydric
1.238	1.486	Judith River Formation	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
1.486	1.585	Judith River Formation	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
1.585	1.771	Judith River Formation	Phillips	33B	Phillips loam, 0 to 4 percent slopes	None	Partially hydric
1.771	2.047	Judith River Formation	Phillips	56B	Scobey clay loam, 0 to 4 percent slopes	None	Partially hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
2.047	2.278	Judith River Formation	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
2.278	2.519	Judith River Formation	Phillips	38B	Ethridge clay loam, 0 to 4 percent slopes	None	Not hydric
2.519	3.546	Judith River Formation	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
3.546	3.735	Bearpaw Shale	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
3.735	3.999	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
3.999	5.953	Bearpaw Shale	Phillips	333C	Phillips-Kevin, gravelly complex, 2 to 8 percent slopes	None	Partially hydric
5.953	6.182	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
6.182	6.464	Bearpaw Shale	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
6.464	6.862	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
6.862	7.162	Bearpaw Shale	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
7.162	7.752	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
7.752	7.931	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
7.931	8.049	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
8.131	8.262	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
8.350	8.561	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
8.850	8.953	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
8.953	9.042	Bearpaw Shale	Phillips	392B	Creed-Gerdrum complex, 0 to 4 percent slopes	None	Not hydric
9.042	9.191	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
9.191	9.406	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
9.406	9.643	Bearpaw Shale	Phillips	444C	Kevin-Sunburst clay loams, 2 to 8 percent slopes	None	Partially hydric
9.643	9.713	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
9.713	9.803	Bearpaw Shale	Phillips	444C	Kevin-Sunburst clay loams, 2 to 8 percent slopes	None	Partially hydric
9.803	10.074	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
10.074	10.169	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
10.169	10.222	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
10.222	10.419	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
10.419	11.459	Bearpaw Shale	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
11.459	12.019	Bearpaw Shale	Phillips	97D	Neldore-Bascovy clays, 4 to 15 percent slopes	None	Unknown
12.019	12.320	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
12.320	12.454	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
12.454	12.727	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
12.727	12.745	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
12.745	13.011	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
13.011	13.066	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.066	13.317	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
13.317	13.359	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.359	13.386	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
13.386	13.474	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
13.474	13.527	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.527	13.611	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
13.611	13.785	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.785	14.343	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric



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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
15.391	15.533	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
15.533	15.714	Bearpaw Shale	Phillips	923F	Sunburst-Kevin complex, 15 to 45 percent slopes	None	Not hydric
15.714	16.181	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
16.181	16.343	Bearpaw Shale	Phillips	1920F	Sunburst-Neldore association, 15 to 45 percent slopes	None	Not hydric
16.343	16.360	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
16.383	16.520	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
16.520	16.756	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
16.756	16.794	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
16.924	16.978	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
17.023	17.137	Bearpaw Shale	Phillips	1030D	Marvan-Gerdrom association, 2 to 15 percent slopes	None	Not hydric
17.290	17.639	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
17.936	18.194	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
18.194	18.280	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
18.280	18.367	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
18.367	18.434	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
18.434	18.472	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
18.472	18.540	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
18.540	18.646	Bearpaw Shale	Phillips	251C	Bascovy-Neldore clays, 2 to 8 percent slopes	None	Unknown
18.646	19.114	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
19.944	19.982	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
19.982	19.993	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
19.993	20.246	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
20.334	20.503	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
20.503	20.523	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
20.670	20.704	Bearpaw Shale	Phillips	334C	Phillips-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
20.799	20.901	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
21.165	21.636	Bearpaw Shale	Phillips	334C	Phillips-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
21.636	22.458	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
22.458	22.494	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
22.494	23.318	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
23.318	23.499	Judith River Formation	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
23.550	24.062	Judith River Formation	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
25.544	25.590	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
25.590	26.606	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
26.750	28.463	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
28.463	28.674	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
28.674	28.882	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
28.882	28.959	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
28.959	29.142	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
29.142	29.324	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
29.324	29.416	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
29.416	29.514	Judith River Formation	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
29.553	29.603	Judith River Formation	Valley	75	Ustic Torrifuvents, gently sloping	Occasional	Not hydric
29.603	29.697	Judith River Formation	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
29.697	29.898	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
29.898	30.187	Judith River Formation	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
30.187	30.207	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
30.308	30.385	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
30.385	31.009	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
31.009	31.352	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
31.352	31.829	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
31.829	32.072	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
32.072	32.304	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
32.466	32.479	Judith River Formation	Valley	75	Ustic Torrifuvents, gently sloping	Occasional	Not hydric
32.845	33.285	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
33.285	33.307	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
33.307	33.403	Bearpaw Shale	Valley	35	Lisam-Dilts-Rock outcrop complex, 9 to 35 percent slopes	None	Not hydric
33.403	33.627	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
33.627	33.842	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
33.842	33.920	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
33.920	34.089	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
34.089	34.418	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
34.418	34.769	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
34.769	34.970	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
34.970	35.246	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
35.246	35.498	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
35.498	35.609	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
35.657	35.771	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
35.771	36.050	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
36.050	36.365	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
36.365	36.522	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
36.522	36.742	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
36.789	36.843	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
36.843	37.165	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
37.165	37.453	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
37.507	37.552	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
37.552	37.586	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
37.586	37.709	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
37.709	37.902	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
37.902	38.019	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
38.019	38.914	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
38.914	38.920	Judith River Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
39.017	39.021	Judith River Formation	Valley	75	Ustic Torrifuvents, gently sloping	Occasional	Not hydric
39.302	39.314	Judith River Formation	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
39.314	39.446	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
39.446	39.510	Judith River Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
39.510	39.663	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
39.663	39.759	Judith River Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
39.759	39.879	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
39.879	39.914	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
39.914	39.966	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
40.509	40.567	Judith River Formation	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric
40.666	40.801	Bearpaw Shale	Valley	35	Lisam-Dilts-Rock outcrop complex, 9 to 35 percent slopes	None	Not hydric
40.801	40.994	Bearpaw Shale	Valley	55	Rock outcrop		Not hydric
40.994	41.442	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
41.442	41.627	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
41.627	43.541	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
43.541	43.847	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
43.847	45.570	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
45.570	45.741	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
45.741	46.332	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
46.332	46.537	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
46.537	46.934	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
46.934	46.992	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
46.992	47.477	Bearpaw Shale	Valley	35	Lisam-Dilts-Rock outcrop complex, 9 to 35 percent slopes	None	Not hydric
47.477	47.747	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
47.747	47.865	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
47.865	48.011	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
50.661	50.699	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
50.820	50.828	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
50.828	51.055	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
51.802	52.078	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
53.344	53.421	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
54.142	54.219	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
54.219	54.258	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
54.259	54.386	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
54.386	54.403	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
54.403	54.846	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
54.846	55.086	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
55.086	55.104	Bearpaw Shale	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric
55.166	55.959	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
56.263	56.940	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
56.940	57.084	Bearpaw Shale	Valley	9	Elloam-Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
57.084	57.112	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
63.014	63.144	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
63.144	63.181	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
63.571	63.576	Bearpaw Shale	Valley	2	Aquic Ustifluvents, saline	Occasional	Partially hydric
63.576	64.710	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
64.710	64.724	Bearpaw Shale	Valley	74	Typic Fluvaquents, gently sloping	Frequent	Partially hydric
64.816	64.990	Bearpaw Shale	Valley	74	Typic Fluvaquents, gently sloping	Frequent	Partially hydric
64.990	65.345	Bearpaw Shale	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
71.573	71.649	Bearpaw Shale	Valley	74	Typic Fluvaquents, gently sloping	Frequent	Partially hydric
74.222	74.274	Bearpaw Shale	Valley	74	Typic Fluvaquents, gently sloping	Frequent	Partially hydric
91.753	91.892	Hell Creek Formation	Daniels/Ro	11	Cabba-Cambert-Rock outcrop complex, 15 to 45 percent slopes	None	Not hydric
91.935	92.003	Hell Creek Formation	Daniels/Ro	11	Cabba-Cambert-Rock outcrop complex, 15 to 45 percent slopes	None	Not hydric
92.003	92.099	Hell Creek Formation	Daniels/Ro	10	Cabba-Cambert-Cherry silt loams, 8 to 15 percent slopes	None	Not hydric
93.818	93.849	Hell Creek Formation	Daniels/Ro	61	Typic Ustifluvents, 0 to 2 percent slopes	None	Not hydric
94.484	94.512	Hell Creek Formation	Daniels/Ro	10	Cabba-Cambert-Cherry silt loams, 8 to 15 percent slopes	None	Not hydric
96.867	96.884	Hell Creek Formation	Daniels/Ro	63	Ustifluvents, saline, 0 to 2 percent slopes	None	Partially hydric
<b>Route B</b>							
0.000	0.740	Bearpaw Shale	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
0.740	0.752	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
0.752	0.877	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
0.877	1.082	Bearpaw Shale	Phillips	33B	Phillips loam, 0 to 4 percent slopes	None	Partially hydric
1.082	1.150	Bearpaw Shale	Phillips	37B	Evanston loam, 0 to 4 percent slopes	None	Not hydric
1.150	1.242	Judith River Formation	Phillips	37B	Evanston loam, 0 to 4 percent slopes	None	Not hydric
1.242	1.492	Judith River Formation	Phillips	56B	Scobey clay loam, 0 to 4 percent slopes	None	Partially hydric
1.492	1.582	Judith River Formation	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
1.582	1.717	Judith River Formation	Phillips	33B	Phillips loam, 0 to 4 percent slopes	None	Partially hydric
1.717	2.061	Judith River Formation	Phillips	56B	Scobey clay loam, 0 to 4 percent slopes	None	Partially hydric
2.061	2.275	Judith River Formation	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
2.275	2.527	Judith River Formation	Phillips	38B	Ethridge clay loam, 0 to 4 percent slopes	None	Not hydric
2.527	3.553	Judith River Formation	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
3.553	3.740	Bearpaw Shale	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
3.740	3.999	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
3.999	5.949	Bearpaw Shale	Phillips	333C	Phillips-Kevin, gravelly complex, 2 to 8 percent slopes	None	Partially hydric
5.949	6.179	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
6.179	6.465	Bearpaw Shale	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
6.465	6.865	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
6.865	7.147	Bearpaw Shale	Phillips	561B	Scobey-Phillips complex, 0 to 4 percent slopes	None	Partially hydric
7.147	7.761	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
7.761	7.949	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
7.949	8.074	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
8.074	8.148	Bearpaw Shale	Phillips	37B	Evanston loam, 0 to 4 percent slopes	None	Not hydric
8.148	8.276	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
8.276	8.364	Bearpaw Shale	Phillips	37B	Evanston loam, 0 to 4 percent slopes	None	Not hydric
8.364	8.606	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
8.606	9.057	Bearpaw Shale	Phillips	37B	Evanston loam, 0 to 4 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
9.057	9.118	Bearpaw Shale	Phillips	392B	Creed-Gerdrum complex, 0 to 4 percent slopes	None	Not hydric
9.118	9.255	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
9.255	9.442	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
9.442	9.670	Bearpaw Shale	Phillips	444C	Kevin-Sunburst clay loams, 2 to 8 percent slopes	None	Partially hydric
9.670	9.736	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
9.736	9.838	Bearpaw Shale	Phillips	444C	Kevin-Sunburst clay loams, 2 to 8 percent slopes	None	Partially hydric
9.838	10.093	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
10.093	10.199	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
10.199	10.246	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
10.246	10.453	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
10.453	10.463	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
10.463	10.955	Bearpaw Shale	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
10.955	11.019	Bearpaw Shale	Phillips	251C	Bascovy-Neldore clays, 2 to 8 percent slopes	None	Unknown
11.019	11.549	Bearpaw Shale	Phillips	1441D	Kevin-Scobey-Phillips association, 2 to 15 percent slopes	None	Partially hydric
11.549	12.088	Bearpaw Shale	Phillips	97D	Neldore-Bascovy clays, 4 to 15 percent slopes	None	Unknown
12.088	12.406	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
12.406	12.523	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
12.523	13.066	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
13.066	13.152	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.152	13.467	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
13.467	13.556	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
13.556	13.575	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.575	13.693	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
13.693	13.858	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
13.858	14.416	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
14.416	15.376	Bearpaw Shale	Phillips	221D	Hillon-Kevin complex, 8 to 15 percent slopes	None	Partially hydric
15.376	15.471	Bearpaw Shale	Phillips	250E	Bascovy-Neldore-Weingart clays, 8 to 25 percent slopes	None	Unknown
15.471	15.487	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
15.487	15.504	Bearpaw Shale	Phillips	923F	Sunburst-Kevin complex, 15 to 45 percent slopes	None	Not hydric
15.504	15.516	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
15.516	15.857	Bearpaw Shale	Phillips	923F	Sunburst-Kevin complex, 15 to 45 percent slopes	None	Not hydric
15.857	16.254	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
16.254	16.402	Bearpaw Shale	Phillips	1920F	Sunburst-Neldore association, 15 to 45 percent slopes	None	Not hydric
16.402	16.421	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
16.438	16.584	Bearpaw Shale	Phillips	1970F	Neldore-Bascovy-Rock outcrop association, 8 to 60 percent slopes	None	Unknown
16.584	16.804	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
16.804	16.868	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
16.868	16.985	Bearpaw Shale	Phillips	442C	Kevin-Hillon complex, 2 to 8 percent slopes	None	Partially hydric
16.985	17.055	Bearpaw Shale	Phillips	921D	Sunburst-Kevin gravelly clay loams, 8 to 15 percent slopes	None	Partially hydric
17.055	17.093	Bearpaw Shale	Phillips	442C	Kevin-Hillon complex, 2 to 8 percent slopes	None	Partially hydric
17.093	17.214	Bearpaw Shale	Phillips	1030D	Marvan-Gerdrum association, 2 to 15 percent slopes	None	Not hydric
17.214	17.357	Bearpaw Shale	Phillips	442C	Kevin-Hillon complex, 2 to 8 percent slopes	None	Partially hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
17.357	17.717	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
17.717	17.866	Bearpaw Shale	Phillips	442C	Kevin-Hillon complex, 2 to 8 percent slopes	None	Partially hydric
17.866	17.898	Bearpaw Shale	Phillips	924E	Sunburst-Bascovy-Neldore complex, 8 to 35 percent slopes	None	Unknown
17.898	18.003	Bearpaw Shale	Phillips	442C	Kevin-Hillon complex, 2 to 8 percent slopes	None	Partially hydric
18.003	18.269	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
18.269	18.345	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
18.345	18.435	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
18.435	18.492	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
18.492	18.543	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
18.543	18.543	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
18.543	18.576	Bearpaw Shale	Phillips	251C	Bascovy-Neldore clays, 2 to 8 percent slopes	None	Unknown
18.576	18.599	Bearpaw Shale	Phillips	332B	Phillips-Elloam complex, 0 to 4 percent slopes	None	Partially hydric
18.599	18.800	Bearpaw Shale	Phillips	251C	Bascovy-Neldore clays, 2 to 8 percent slopes	None	Unknown
18.800	19.359	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
19.359	19.694	Bearpaw Shale	Phillips	1066D	Twilight-Cabbart-Marmarth association, 4 to 15 percent slopes	None	Not hydric
19.694	19.793	Bearpaw Shale	Phillips	334C	Phillips-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
19.793	19.833	Bearpaw Shale	Phillips	925C	Sunburst-Bascovy-Weingart complex, 2 to 8 percent slopes	None	Unknown
19.833	20.058	Bearpaw Shale	Phillips	334C	Phillips-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
20.058	20.300	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
20.300	20.380	Bearpaw Shale	Phillips	334C	Phillips-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
20.380	20.735	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
20.735	20.739	Bearpaw Shale	Phillips	1022F	Hillon-Cabbart-Rock outcrop association, 15 to 65 percent slopes	None	Unknown
20.845	21.118	Bearpaw Shale	Phillips	221D	Hillon-Kevin complex, 8 to 15 percent slopes	None	Partially hydric
21.118	21.327	Bearpaw Shale	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
21.327	21.339	Bearpaw Shale	Phillips	1022F	Hillon-Cabbart-Rock outcrop association, 15 to 65 percent slopes	None	Unknown
21.339	21.359	Judith River Formation	Phillips	1022F	Hillon-Cabbart-Rock outcrop association, 15 to 65 percent slopes	None	Unknown
21.359	21.457	Judith River Formation	Phillips	601A	Havre-Harlake-Glendive complex, 0 to 2 percent slopes	Rare	Not hydric
21.538	21.587	Judith River Formation	Phillips	1022F	Hillon-Cabbart-Rock outcrop association, 15 to 65 percent slopes	None	Unknown
21.587	21.628	Judith River Formation	Phillips	566C	Scobey-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
21.628	21.653	Judith River Formation	Phillips	1022F	Hillon-Cabbart-Rock outcrop association, 15 to 65 percent slopes	None	Unknown
21.653	21.718	Judith River Formation	Phillips	221D	Hillon-Kevin complex, 8 to 15 percent slopes	None	Partially hydric
21.718	21.826	Bearpaw Shale	Phillips	221D	Hillon-Kevin complex, 8 to 15 percent slopes	None	Partially hydric
21.826	22.026	Bearpaw Shale	Phillips	334C	Phillips-Kevin complex, 2 to 8 percent slopes	None	Partially hydric
22.026	22.082	Bearpaw Shale	Phillips	1022F	Hillon-Cabbart-Rock outcrop association, 15 to 65 percent slopes	None	Unknown
22.082	22.924	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
22.924	22.979	Bearpaw Shale	Phillips	564C	Scobey-Kevin-Elloam clay loams, 2 to 8 percent slopes	None	Partially hydric
22.979	23.788	Bearpaw Shale	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
23.788	23.956	Judith River Formation	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
23.956	24.037	Judith River Formation	Phillips	1022F	Hillon-Cabbart-Rock outcrop association, 15 to 65 percent slopes	None	Unknown
24.037	24.534	Judith River Formation	Phillips	563C	Scobey-Kevin clay loams, 2 to 8 percent slopes	None	Partially hydric
24.534	25.227	Judith River Formation	Phillips	503C	Telstad-Joplin loams, 2 to 8 percent slopes	None	Partially hydric
25.227	25.401	Judith River Formation	Phillips	1022F	Hillon-Cabbart-Rock outcrop association, 15 to 65 percent slopes	None	Unknown

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
25.401	25.418	Judith River Formation	Phillips	79C	Yamacall loam, 2 to 8 percent slopes	None	Not hydric
26.031	26.045	Judith River Formation	Valley	74	Typic Fluvaquents, gently sloping	Frequent	Partially hydric
26.045	26.097	Judith River Formation	Valley	6	Cabbart-Delpoint complex, 9 to 35 percent slopes	None	Not hydric
26.097	26.146	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
26.146	27.127	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
27.203	27.312	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
27.312	27.724	Judith River Formation	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
27.724	27.806	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
27.806	27.868	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
27.868	28.242	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
28.242	28.725	Judith River Formation	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
28.725	29.102	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
29.102	29.402	Judith River Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
29.402	29.594	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
29.594	30.086	Judith River Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
30.086	30.402	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
30.402	30.658	Judith River Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
30.658	30.685	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
30.685	30.936	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
30.936	31.324	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
31.324	31.845	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
31.845	32.305	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
32.305	32.377	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
32.377	32.505	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
32.505	32.672	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
32.672	32.930	Bearpaw Shale	Valley	68	Thebo-Lisam clays, 2 to 15 percent slopes	None	Not hydric
32.930	32.954	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
32.954	33.061	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
33.061	33.862	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
33.862	33.977	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
33.977	34.285	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
34.726	34.742	Bearpaw Shale	Valley	34	Lisam-Dilts clays, 5 to 35 percent slopes	None	Partially hydric
34.986	35.113	Bearpaw Shale	Valley	34	Lisam-Dilts clays, 5 to 35 percent slopes	None	Partially hydric
35.389	35.456	Bearpaw Shale	Valley	34	Lisam-Dilts clays, 5 to 35 percent slopes	None	Partially hydric
35.456	35.472	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
35.803	35.878	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
35.878	36.010	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
36.010	36.092	Judith River Formation	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
36.092	36.286	Judith River Formation	Valley	39	Marmarth-Cabbart loams, 5 to 25 percent slopes	None	Not hydric
36.286	36.339	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
36.339	36.606	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
36.606	37.116	Bearpaw Shale	Valley	58	Scobey stony clay loams, 2 to 15 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
37.116	37.978	Judith River Formation	Valley	58	Scobey stony clay loams, 2 to 15 percent slopes	None	Not hydric
38.052	38.222	Judith River Formation	Valley	58	Scobey stony clay loams, 2 to 15 percent slopes	None	Not hydric
38.222	38.675	Judith River Formation	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
38.675	38.777	Judith River Formation	Valley	6	Cabbart-Delpoint complex, 9 to 35 percent slopes	None	Not hydric
38.777	38.873	Judith River Formation	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
38.873	38.958	Judith River Formation	Valley	6	Cabbart-Delpoint complex, 9 to 35 percent slopes	None	Not hydric
39.373	39.466	Claggett Shale	Valley	6	Cabbart-Delpoint complex, 9 to 35 percent slopes	None	Not hydric
39.466	39.622	Judith River Formation	Valley	6	Cabbart-Delpoint complex, 9 to 35 percent slopes	None	Not hydric
39.622	40.102	Judith River Formation	Valley	65	Telstad loam, 1 to 9 percent slopes	None	Partially hydric
40.102	40.157	Judith River Formation	Valley	6	Cabbart-Delpoint complex, 9 to 35 percent slopes	None	Not hydric
40.157	40.378	Claggett Shale	Valley	6	Cabbart-Delpoint complex, 9 to 35 percent slopes	None	Not hydric
40.378	40.399	Claggett Shale	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric
40.994	41.081	Claggett Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
41.081	41.115	Claggett Shale	Valley	37	Lonna-Marias complex, 1 to 3 percent slopes	None	Not hydric
41.115	41.234	Claggett Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
41.234	41.438	Claggett Shale	Valley	37	Lonna-Marias complex, 1 to 3 percent slopes	None	Not hydric
41.438	41.469	Judith River Formation	Valley	37	Lonna-Marias complex, 1 to 3 percent slopes	None	Not hydric
41.469	41.531	Judith River Formation	Valley	6	Cabbart-Delpoint complex, 9 to 35 percent slopes	None	Not hydric
41.531	41.711	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
41.711	42.369	Judith River Formation	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
42.369	42.454	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
42.454	42.581	Judith River Formation	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
42.581	42.845	Judith River Formation	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
42.845	42.992	Judith River Formation	Valley	11	Evanston loam, 2 to 9 percent slopes	None	Not hydric
42.992	43.174	Judith River Formation	Valley	39	Marmarth-Cabbart loams, 5 to 25 percent slopes	None	Not hydric
43.174	43.262	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
43.262	43.550	Judith River Formation	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
43.550	43.681	Judith River Formation	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
43.681	44.019	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
44.019	44.161	Judith River Formation	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
44.161	44.411	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
44.411	44.492	Judith River Formation	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
44.492	44.497	Judith River Formation	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
44.580	44.811	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
44.811	44.817	Bearpaw Shale	Valley	39	Marmarth-Cabbart loams, 5 to 25 percent slopes	None	Not hydric
44.817	44.857	Judith River Formation	Valley	39	Marmarth-Cabbart loams, 5 to 25 percent slopes	None	Not hydric
44.857	44.887	Judith River Formation	Valley	75	Ustic Torrifluvents, gently sloping	Occasional	Not hydric
45.019	45.078	Judith River Formation	Valley	11	Evanston loam, 2 to 9 percent slopes	None	Not hydric
45.078	45.168	Judith River Formation	Valley	39	Marmarth-Cabbart loams, 5 to 25 percent slopes	None	Not hydric
45.168	45.214	Bearpaw Shale	Valley	39	Marmarth-Cabbart loams, 5 to 25 percent slopes	None	Not hydric
45.214	45.460	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
45.460	45.771	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric



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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

<b>MP Start</b>	<b>MP End</b>	<b>Geology</b>	<b>County</b>	<b>Map Unit Symbol</b>	<b>Soil Name</b>	<b>Flooding</b>	<b>Hydric Rating</b>
45.771	45.842	Bearpaw Shale	Valley	38	Marias clay, 1 to 9 percent slopes	None	Not hydric
45.842	46.153	Bearpaw Shale	Valley	66	Thebo clay, 2 to 9 percent slopes	None	Not hydric
46.153	46.189	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
46.189	46.322	Bearpaw Shale	Valley	34	Lisam-Dilts clays, 5 to 35 percent slopes	None	Partially hydric
46.322	46.617	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
46.617	46.931	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
46.931	46.945	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
46.945	47.023	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
47.023	47.060	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
47.380	47.571	Bearpaw Shale	Valley	70	Tinsley complex, 9 to 35 percent slopes	None	Not hydric
47.571	47.811	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
47.920	47.922	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
47.922	48.039	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
48.039	48.451	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
48.589	48.655	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
48.655	48.706	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
48.706	48.730	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
48.730	48.784	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
48.784	48.849	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
48.849	49.010	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
49.010	49.053	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
49.053	49.125	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
49.125	51.085	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
51.085	51.151	Bearpaw Shale	Valley	1	Absher-Vaeda complex, 1 to 5 percent slopes	None	Not hydric
51.330	51.495	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
51.495	51.571	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
51.571	51.738	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
51.738	52.152	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
52.152	52.219	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
52.410	52.458	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
52.458	52.895	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
52.895	52.964	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
52.964	53.143	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
53.143	53.225	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
53.225	53.272	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
53.272	53.279	Bearpaw Shale	Valley	1	Absher-Vaeda complex, 1 to 5 percent slopes	None	Not hydric
53.435	53.492	Bearpaw Shale	Valley	1	Absher-Vaeda complex, 1 to 5 percent slopes	None	Not hydric
53.492	53.593	Bearpaw Shale	Valley	68	Thebo-Lisam clays, 2 to 15 percent slopes	None	Not hydric
53.593	54.028	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
54.028	54.321	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
54.321	54.762	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
54.762	55.218	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

<b>MP Start</b>	<b>MP End</b>	<b>Geology</b>	<b>County</b>	<b>Map Unit Symbol</b>	<b>Soil Name</b>	<b>Flooding</b>	<b>Hydric Rating</b>
55.218	55.219	Bearpaw Shale	Valley	75	Ustic Torrifuvents, gently sloping	Occasional	Not hydric
55.656	55.669	Bearpaw Shale	Valley	27	Havre-Harlem silty clays	Rare	Not hydric
55.669	55.799	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
55.799	55.930	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
55.930	55.973	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
55.973	56.475	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
56.475	56.547	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
56.547	56.799	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
56.799	56.856	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
56.856	56.897	Bearpaw Shale	Valley	2	Aquic Ustifuvents, saline	Occasional	Partially hydric
57.030	57.169	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
57.169	57.234	Bearpaw Shale	Valley	34	Lisam-Dilts clays, 5 to 35 percent slopes	None	Partially hydric
57.234	57.301	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
57.301	57.366	Bearpaw Shale	Valley	34	Lisam-Dilts clays, 5 to 35 percent slopes	None	Partially hydric
57.366	57.560	Bearpaw Shale	Valley	61	Sunburst-Lisam complex, 9 to 35 percent slopes	None	Not hydric
57.560	57.763	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
57.763	58.344	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
58.344	59.209	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
59.209	59.255	Bearpaw Shale	Valley	75	Ustic Torrifuvents, gently sloping	Occasional	Not hydric
59.374	59.427	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
59.427	59.593	Bearpaw Shale	Valley	7	Elloam clay loam, 1 to 5 percent slopes	None	Not hydric
59.593	59.701	Bearpaw Shale	Valley	8	Elloam gravelly clay, 2 to 9 percent slopes	None	Not hydric
59.808	59.889	Bearpaw Shale	Valley	2	Aquic Ustifuvents, saline	Occasional	Partially hydric
59.889	60.094	Bearpaw Shale	Valley	52	Redvale loam, 0 to 3 percent slopes	None	Not hydric
60.094	61.106	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
61.106	61.545	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
61.545	61.689	Bearpaw Shale	Valley	75	Ustic Torrifuvents, gently sloping	Occasional	Not hydric
61.689	61.697	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
61.885	61.897	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
61.897	63.188	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
63.188	63.596	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
63.596	64.121	Bearpaw Shale	Valley	46	Phillips loam, 0 to 5 percent slopes	None	Partially hydric
64.121	64.918	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
64.918	66.809	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
66.809	66.848	Bearpaw Shale	Valley	59	Scobey-Sunburst clay loams, 5 to 25 percent slopes	None	Not hydric
67.135	67.194	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
67.194	67.422	Bearpaw Shale	Valley	52	Redvale loam, 0 to 3 percent slopes	None	Not hydric
67.422	67.564	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
67.564	67.768	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
67.768	67.991	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
67.991	68.293	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
68.293	68.387	Bearpaw Shale	Valley	52	Redvale loam, 0 to 3 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
68.488	68.556	Bearpaw Shale	Valley	75	Ustic Torrifuvents, gently sloping	Occasional	Not hydric
68.556	69.164	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
69.164	69.206	Bearpaw Shale	Valley	79	Water		Not hydric
69.206	69.400	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
69.400	70.217	Bearpaw Shale	Valley	69	Thoeny-Phillips complex, 1 to 5 percent slopes	None	Partially hydric
70.217	70.286	Bearpaw Shale	Valley	2	Aquic Ustifuvents, saline	Occasional	Partially hydric
70.435	70.438	Bearpaw Shale	Valley	28	Havre-Rivra complex	Rare	Not hydric
70.438	70.529	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
70.529	70.744	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
70.744	70.819	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
71.065	72.870	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
72.870	73.398	Bearpaw Shale	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
73.398	73.495	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
73.495	73.567	Bearpaw Shale	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
73.567	75.769	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
75.769	75.827	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
75.949	76.449	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
76.449	76.475	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
76.475	77.720	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
77.720	77.798	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
77.798	77.812	Bearpaw Shale	Valley	75	Ustic Torrifuvents, gently sloping	Occasional	Not hydric
77.896	78.016	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
78.016	78.247	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
78.247	78.645	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
78.645	78.817	Bearpaw Shale	Valley	42	Nishon loam	None	Partially hydric
78.817	79.265	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
79.265	79.636	Bearpaw Shale	Valley	57	Scobey clay loam, 1 to 9 percent slopes	None	Partially hydric
79.636	80.744	Bearpaw Shale	Valley	49	Phillips-Scobey complex, 2 to 9 percent slopes	None	Partially hydric
80.744	82.090	Bearpaw Shale	Valley	52	Redvale loam, 0 to 3 percent slopes	None	Not hydric
82.090	82.373	Bearpaw Shale	Valley	60	Sunburst clay loam, 9 to 35 percent slopes	None	Not hydric
82.373	82.443	Bearpaw Shale	Valley	47	Phillips-Elloam complex, 1 to 9 percent slopes	None	Partially hydric
84.715	84.811	Bearpaw Shale	Valley	23	Harlem clay	Rare	Not hydric
84.811	84.915	Bearpaw Shale	Valley	30	Hillon-Telstad loams, 9 to 15 percent slopes	None	Not hydric
89.892	89.957	Bearpaw Shale	McCone	81	Harlem silty clay, protected	None	Partially hydric
89.957	90.025	Bearpaw Shale	McCone	115	Neldore-Badland-Bascovy complex, 15 to 45 percent slopes	None	Not hydric
90.025	90.042	Bearpaw Shale	McCone	163	Yamac-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
91.162	91.375	Fox Hills Formation	McCone	163	Yamac-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
91.375	91.472	Fox Hills Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
91.472	91.553	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
91.553	91.698	Hell Creek Formation	McCone	163	Yamac-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
91.698	91.914	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
91.914	91.943	Fox Hills Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
91.943	91.988	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
91.988	92.167	Hell Creek Formation	McCone	142	Twilight-Yetull fine sandy loams, 8 to 15 percent slopes	None	Not hydric
92.167	92.173	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
92.173	92.375	Hell Creek Formation	McCone	142	Twilight-Yetull fine sandy loams, 8 to 15 percent slopes	None	Not hydric
92.375	92.403	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
92.403	92.511	Fox Hills Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
92.511	92.551	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
92.551	92.589	Fox Hills Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
92.589	92.646	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
92.646	92.832	Hell Creek Formation	McCone	163	Yamac-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
92.832	93.136	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.136	93.136	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.136	93.136	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.136	93.410	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.410	93.448	Fox Hills Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.448	93.483	Fox Hills Formation	McCone	4	Aeric Fluvaquents, loamy	None	Partially hydric
93.483	93.519	Fox Hills Formation	McCone	129	Sunburst clay loam, 8 to 15 percent slopes	None	Not hydric
93.519	93.540	Fox Hills Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.540	93.586	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.586	93.600	Hell Creek Formation	McCone	129	Sunburst clay loam, 8 to 15 percent slopes	None	Not hydric
93.600	93.629	Fox Hills Formation	McCone	129	Sunburst clay loam, 8 to 15 percent slopes	None	Not hydric
93.629	93.708	Fox Hills Formation	McCone	130	Sunburst clay loam, 15 to 45 percent slopes	None	Not hydric
93.708	93.733	Fox Hills Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.733	93.819	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.819	93.877	Fox Hills Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.877	93.912	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
93.912	94.031	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
94.031	94.132	Hell Creek Formation	McCone	129	Sunburst clay loam, 8 to 15 percent slopes	None	Not hydric
94.132	94.147	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
94.147	94.166	Hell Creek Formation	McCone	130	Sunburst clay loam, 15 to 45 percent slopes	None	Not hydric
94.166	94.312	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
94.312	94.356	Fox Hills Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
94.356	94.398	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
94.398	94.399	Hell Creek Formation	McCone	130	Sunburst clay loam, 15 to 45 percent slopes	None	Not hydric
94.399	94.595	Fox Hills Formation	McCone	130	Sunburst clay loam, 15 to 45 percent slopes	None	Not hydric
94.595	94.683	Fox Hills Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
94.683	94.789	Fox Hills Formation	McCone	130	Sunburst clay loam, 15 to 45 percent slopes	None	Not hydric
94.789	94.961	Fox Hills Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
94.961	95.277	Fox Hills Formation	McCone	130	Sunburst clay loam, 15 to 45 percent slopes	None	Not hydric
95.277	95.314	Fox Hills Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
95.314	95.774	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
95.774	95.859	Hell Creek Formation	McCone	92	Hillon loam, 8 to 15 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
95.859	95.936	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
95.936	96.317	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
96.317	96.443	Hell Creek Formation	McCone	19	Busby fine sandy loam, 8 to 15 percent slopes	None	Not hydric
96.443	96.516	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
96.516	96.672	Hell Creek Formation	McCone	130	Sunburst clay loam, 15 to 45 percent slopes	None	Not hydric
96.672	96.794	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
96.794	96.893	Hell Creek Formation	McCone	130	Sunburst clay loam, 15 to 45 percent slopes	None	Not hydric
96.893	96.928	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
96.928	97.205	Hell Creek Formation	McCone	130	Sunburst clay loam, 15 to 45 percent slopes	None	Not hydric
97.205	97.454	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
97.454	97.571	Hell Creek Formation	McCone	129	Sunburst clay loam, 8 to 15 percent slopes	None	Not hydric
97.698	97.767	Hell Creek Formation	McCone	97	Kremlin loam, 0 to 4 percent slopes	None	Not hydric
97.767	97.815	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
97.939	97.940	Hell Creek Formation	McCone	128	Sunburst clay loam, 2 to 8 percent slopes	None	Not hydric
97.940	98.015	Hell Creek Formation	McCone	162	Yamac-Twilight complex, 2 to 8 percent slopes	None	Not hydric
98.015	98.147	Hell Creek Formation	McCone	160	Yamacall loam, 4 to 8 percent slopes	None	Not hydric
98.147	98.203	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
98.203	98.388	Hell Creek Formation	McCone	160	Yamacall loam, 4 to 8 percent slopes	None	Not hydric
98.388	98.587	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
98.587	98.783	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
98.783	98.929	Hell Creek Formation	McCone	161	Yamac loam, 8 to 15 percent slopes	None	Not hydric
98.929	99.103	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
99.103	99.231	Hell Creek Formation	McCone	163	Yamac-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
99.231	99.234	Hell Creek Formation	McCone	129	Sunburst clay loam, 8 to 15 percent slopes	None	Not hydric
99.234	99.291	Hell Creek Formation	McCone	163	Yamac-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
99.291	99.375	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
99.375	99.410	Hell Creek Formation	McCone	160	Yamacall loam, 4 to 8 percent slopes	None	Not hydric
99.410	99.543	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
99.543	99.598	Hell Creek Formation	McCone	163	Yamac-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
99.598	99.655	Hell Creek Formation	McCone	120	Rominell loam, 0 to 8 percent slopes	None	Not hydric
99.655	99.873	Hell Creek Formation	McCone	163	Yamac-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
99.873	100.057	Hell Creek Formation	McCone	129	Sunburst clay loam, 8 to 15 percent slopes	None	Not hydric
100.057	100.127	Hell Creek Formation	McCone	22	Busby-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
100.127	100.173	Hell Creek Formation	McCone	97	Kremlin loam, 0 to 4 percent slopes	None	Not hydric
100.173	100.215	Hell Creek Formation	McCone	129	Sunburst clay loam, 8 to 15 percent slopes	None	Not hydric
100.215	100.242	Hell Creek Formation	McCone	97	Kremlin loam, 0 to 4 percent slopes	None	Not hydric
100.242	100.476	Hell Creek Formation	McCone	134	Telstad-Hillon loams, 2 to 8 percent slopes	None	Not hydric
100.476	100.548	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
100.548	100.667	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
100.667	100.770	Hell Creek Formation	McCone	133	Telstad loam, 2 to 8 percent slopes	None	Not hydric
100.770	100.979	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
100.979	101.160	Hell Creek Formation	McCone	72	Gerdrum-Yawdim-Fleak complex, 8 to 45 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
101.160	101.201	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
101.201	101.202	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
101.202	101.384	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
101.384	101.499	Hell Creek Formation	McCone	129	Sunburst clay loam, 8 to 15 percent slopes	None	Not hydric
101.499	101.545	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
101.545	101.607	Hell Creek Formation	McCone	95	Hillon-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
101.607	101.678	Hell Creek Formation	McCone	61	Evanston loam, 2 to 8 percent slopes	None	Not hydric
101.678	101.856	Hell Creek Formation	McCone	51	Creed-Gerdrum complex, 0 to 8 percent slopes	None	Not hydric
101.856	102.088	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
102.088	102.160	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
102.160	102.271	Hell Creek Formation	McCone	120	Rominell loam, 0 to 8 percent slopes	None	Not hydric
102.271	102.317	Hell Creek Formation	McCone	46	Chinook fine sandy loam, 0 to 4 percent slopes	None	Not hydric
102.317	102.368	Hell Creek Formation	McCone	106	Lonna-Havre-Glendive complex, 0 to 2 percent slopes	Occasional	Partially hydric
102.368	102.398	Hell Creek Formation	McCone	24	Busby-Yetull fine sandy loams, 2 to 8 percent slopes	None	Not hydric
102.398	102.435	Hell Creek Formation	McCone	106	Lonna-Havre-Glendive complex, 0 to 2 percent slopes	Occasional	Partially hydric
102.435	102.594	Hell Creek Formation	McCone	24	Busby-Yetull fine sandy loams, 2 to 8 percent slopes	None	Not hydric
102.594	102.725	Hell Creek Formation	McCone	18	Busby fine sandy loam, 2 to 8 percent slopes	None	Not hydric
102.725	102.773	Hell Creek Formation	McCone	24	Busby-Yetull fine sandy loams, 2 to 8 percent slopes	None	Not hydric
102.773	102.820	Hell Creek Formation	McCone	121	Rominell loam, gullied, 0 to 8 percent slopes	None	Not hydric
102.820	103.013	Hell Creek Formation	McCone	24	Busby-Yetull fine sandy loams, 2 to 8 percent slopes	None	Not hydric
103.013	103.057	Hell Creek Formation	McCone	70	Gerdrum-Absher clay loams, 0 to 8 percent slopes	None	Not hydric
103.057	103.242	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
103.242	103.279	Hell Creek Formation	McCone	70	Gerdrum-Absher clay loams, 0 to 8 percent slopes	None	Not hydric
103.279	103.351	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
103.351	103.743	Hell Creek Formation	McCone	70	Gerdrum-Absher clay loams, 0 to 8 percent slopes	None	Not hydric
103.743	103.800	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
103.800	103.977	Hell Creek Formation	McCone	93	Hillon loam, 15 to 45 percent slopes	None	Not hydric
103.977	104.126	Hell Creek Formation	McCone	134	Telstad-Hillon loams, 2 to 8 percent slopes	None	Not hydric
104.126	104.156	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
104.156	104.204	Hell Creek Formation	McCone	70	Gerdrum-Absher clay loams, 0 to 8 percent slopes	None	Not hydric
104.204	104.345	Hell Creek Formation	McCone	133	Telstad loam, 2 to 8 percent slopes	None	Not hydric
104.345	104.449	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
104.449	104.501	Hell Creek Formation	McCone	22	Busby-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
104.501	104.615	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
104.615	104.739	Hell Creek Formation	McCone	59	Ethridge silty clay loam, 4 to 8 percent slopes	None	Not hydric
104.739	105.024	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
105.112	105.169	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
105.169	105.254	Hell Creek Formation	McCone	147	Ustic torriorthents-Ustic torrifuvents association	None	Partially hydric
106.910	106.969	Hell Creek Formation	McCone	134	Telstad-Hillon loams, 2 to 8 percent slopes	None	Not hydric
106.969	107.349	Hell Creek Formation	McCone	50	Creed loam, 0 to 8 percent slopes	None	Not hydric
107.349	107.417	Hell Creek Formation	McCone	147	Ustic torriorthents-Ustic torrifuvents association	None	Partially hydric
107.417	107.613	Hell Creek Formation	McCone	50	Creed loam, 0 to 8 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
107.613	108.128	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
108.544	108.573	Hell Creek Formation	McCone	166	Yawdim-Badland-Gerdrum association	None	Not hydric
108.573	108.638	Hell Creek Formation	McCone	12	Benz clay loam, 0 to 8 percent slopes	None	Not hydric
108.638	108.688	Hell Creek Formation	McCone	46	Chinook fine sandy loam, 0 to 4 percent slopes	None	Not hydric
108.688	108.714	Hell Creek Formation	McCone	7	Badland		Unknown
108.714	108.813	Hell Creek Formation	McCone	62	Evanston-Gerdrum complex, 2 to 8 percent slopes	None	Not hydric
108.813	108.874	Hell Creek Formation	McCone	121	Rominell loam, gullied, 0 to 8 percent slopes	None	Not hydric
108.874	108.983	Hell Creek Formation	McCone	62	Evanston-Gerdrum complex, 2 to 8 percent slopes	None	Not hydric
108.983	109.064	Hell Creek Formation	McCone	97	Kremlin loam, 0 to 4 percent slopes	None	Not hydric
109.064	109.139	Hell Creek Formation	McCone	62	Evanston-Gerdrum complex, 2 to 8 percent slopes	None	Not hydric
109.139	109.261	Hell Creek Formation	McCone	21	Busby-Twilight fine sandy loams, 2 to 8 percent slopes	None	Not hydric
109.261	109.365	Hell Creek Formation	McCone	22	Busby-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
109.365	109.457	Hell Creek Formation	McCone	21	Busby-Twilight fine sandy loams, 2 to 8 percent slopes	None	Not hydric
109.457	109.528	Hell Creek Formation	McCone	62	Evanston-Gerdrum complex, 2 to 8 percent slopes	None	Not hydric
109.528	109.693	Hell Creek Formation	McCone	21	Busby-Twilight fine sandy loams, 2 to 8 percent slopes	None	Not hydric
109.693	109.734	Hell Creek Formation	McCone	62	Evanston-Gerdrum complex, 2 to 8 percent slopes	None	Not hydric
109.734	109.826	Hell Creek Formation	McCone	21	Busby-Twilight fine sandy loams, 2 to 8 percent slopes	None	Not hydric
109.826	109.893	Hell Creek Formation	McCone	62	Evanston-Gerdrum complex, 2 to 8 percent slopes	None	Not hydric
109.893	109.954	Hell Creek Formation	McCone	21	Busby-Twilight fine sandy loams, 2 to 8 percent slopes	None	Not hydric
109.954	110.280	Hell Creek Formation	McCone	22	Busby-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
110.280	110.292	Hell Creek Formation	McCone	74	Glendive loam	Rare	Partially hydric
110.395	110.414	Hell Creek Formation	McCone	74	Glendive loam	Rare	Partially hydric
110.414	110.524	Hell Creek Formation	McCone	105	Lonna silty clay loam, 0 to 4 percent slopes	None	Not hydric
110.524	110.566	Hell Creek Formation	McCone	22	Busby-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
110.566	110.617	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
110.617	110.660	Hell Creek Formation	McCone	22	Busby-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
110.660	110.711	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
110.711	110.749	Hell Creek Formation	McCone	22	Busby-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
110.749	110.881	Hell Creek Formation	McCone	23	Busby-Yamac-Fleak complex, 15 to 45 percent slopes	None	Not hydric
110.881	110.956	Hell Creek Formation	McCone	22	Busby-Twilight-Fleak complex, 8 to 15 percent slopes	None	Not hydric
110.956	111.064	Hell Creek Formation	McCone	62	Evanston-Gerdrum complex, 2 to 8 percent slopes	None	Not hydric
111.064	111.128	Hell Creek Formation	McCone	97	Kremlin loam, 0 to 4 percent slopes	None	Not hydric
111.128	111.238	Hell Creek Formation	McCone	62	Evanston-Gerdrum complex, 2 to 8 percent slopes	None	Not hydric
111.238	111.274	Hell Creek Formation	McCone	145	Typic Ustifluvents, saline	None	Partially hydric
111.274	111.284	Hell Creek Formation	McCone	147	Ustic torriorthents-Ustic torrifuvents association	None	Partially hydric
111.284	111.322	Hell Creek Formation	McCone	159	Yamac loam, 0 to 4 percent slopes	None	Not hydric
111.322	111.431	Hell Creek Formation	McCone	70	Gerdrum-Absher clay loams, 0 to 8 percent slopes	None	Not hydric
111.431	111.475	Hell Creek Formation	McCone	120	Rominell loam, 0 to 8 percent slopes	None	Not hydric
111.475	111.538	Hell Creek Formation	McCone	121	Rominell loam, gullied, 0 to 8 percent slopes	None	Not hydric
111.538	111.578	Hell Creek Formation	McCone	48	Chinook fine sandy loam, 8 to 15 percent slopes	None	Not hydric
111.578	111.690	Hell Creek Formation	McCone	62	Evanston-Gerdrum complex, 2 to 8 percent slopes	None	Not hydric
111.690	111.729	Hell Creek Formation	McCone	121	Rominell loam, gullied, 0 to 8 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
111.729	111.863	Hell Creek Formation	McCone	12	Benz clay loam, 0 to 8 percent slopes	None	Not hydric
111.863	112.180	Hell Creek Formation	McCone	7	Badland		Unknown
112.221	112.249	Hell Creek Formation	McCone	7	Badland		Unknown
112.249	112.375	Hell Creek Formation	McCone	121	Rominell loam, gullied, 0 to 8 percent slopes	None	Not hydric
112.375	112.380	Hell Creek Formation	McCone	20	Busby-Fleak complex, 15 to 45 percent slopes	None	Not hydric
113.011	113.045	Hell Creek Formation	McCone	122	Rominell-Yamac loams, 4 to 15 percent slopes	None	Not hydric
113.045	113.087	Hell Creek Formation	McCone	120	Rominell loam, 0 to 8 percent slopes	None	Not hydric
113.087	113.100	Hell Creek Formation	McCone	93	Hillon loam, 15 to 45 percent slopes	None	Not hydric
113.100	113.157	Hell Creek Formation	McCone	120	Rominell loam, 0 to 8 percent slopes	None	Not hydric
113.157	113.214	Hell Creek Formation	McCone	93	Hillon loam, 15 to 45 percent slopes	None	Not hydric
113.294	113.379	Hell Creek Formation	McCone	93	Hillon loam, 15 to 45 percent slopes	None	Not hydric
113.379	113.480	Hell Creek Formation	McCone	91	Hillon loam, 2 to 8 percent slopes	None	Not hydric
113.480	113.585	Hell Creek Formation	McCone	147	Ustic torriorthents-Ustic torrifluvents association	None	Partially hydric
113.585	113.618	Hell Creek Formation	McCone	91	Hillon loam, 2 to 8 percent slopes	None	Not hydric
113.618	113.642	Hell Creek Formation	McCone	160	Yamacall loam, 4 to 8 percent slopes	None	Not hydric
113.642	113.723	Hell Creek Formation	McCone	147	Ustic torriorthents-Ustic torrifluvents association	None	Partially hydric
113.723	113.825	Hell Creek Formation	McCone	142	Twilight-Yetull fine sandy loams, 8 to 15 percent slopes	None	Not hydric
113.825	113.869	Hell Creek Formation	McCone	36	Cabbart-Yawdim complex, 15 to 45 percent slopes	None	Not hydric
113.869	113.958	Hell Creek Formation	McCone	70	Gerdrum-Absher clay loams, 0 to 8 percent slopes	None	Not hydric
113.958	113.982	Hell Creek Formation	McCone	36	Cabbart-Yawdim complex, 15 to 45 percent slopes	None	Not hydric
113.982	113.996	Hell Creek Formation	McCone	36	Cabbart-Yawdim complex, 15 to 45 percent slopes	None	Not hydric
113.996	114.016	Hell Creek Formation	McCone	43	Cambeth-Twilight-Cabbart complex, 4 to 15 percent slopes	None	Not hydric
114.016	114.079	Hell Creek Formation	McCone	70	Gerdrum-Absher clay loams, 0 to 8 percent slopes	None	Not hydric
114.079	114.118	Hell Creek Formation	McCone	97	Kremlin loam, 0 to 4 percent slopes	None	Not hydric
114.118	114.124	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
114.124	114.127	Hell Creek Formation	McCone	106	Lonna-Havre-Glendive complex, 0 to 2 percent slopes	Occasional	Partially hydric
114.210	114.315	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
114.315	114.470	Hell Creek Formation	McCone	49	Chinook fine sandy loam, gullied, 2 to 8 percent slopes	None	Not hydric
114.470	114.488	Hell Creek Formation	McCone	7	Badland		Unknown
114.488	114.569	Hell Creek Formation	McCone	49	Chinook fine sandy loam, gullied, 2 to 8 percent slopes	None	Not hydric
114.569	114.593	Hell Creek Formation	McCone	7	Badland		Unknown
114.855	114.874	Hell Creek Formation	McCone	12	Benz clay loam, 0 to 8 percent slopes	None	Not hydric
114.874	114.903	Hell Creek Formation	McCone	121	Rominell loam, gullied, 0 to 8 percent slopes	None	Not hydric
114.903	114.949	Hell Creek Formation	McCone	12	Benz clay loam, 0 to 8 percent slopes	None	Not hydric
114.949	115.000	Hell Creek Formation	McCone	121	Rominell loam, gullied, 0 to 8 percent slopes	None	Not hydric
115.000	115.271	Hell Creek Formation	McCone	120	Rominell loam, 0 to 8 percent slopes	None	Not hydric
115.271	115.313	Hell Creek Formation	McCone	1	Absher clay loam, 8 to 15 percent slopes	None	Not hydric
115.313	115.360	Hell Creek Formation	McCone	68	Gerdrum clay loam, 0 to 8 percent slopes	None	Not hydric
115.360	115.451	Hell Creek Formation	McCone	106	Lonna-Havre-Glendive complex, 0 to 2 percent slopes	Occasional	Partially hydric
115.451	115.474	Hell Creek Formation	McCone	159	Yamac loam, 0 to 4 percent slopes	None	Not hydric
115.474	115.507	Hell Creek Formation	McCone	147	Ustic torriorthents-Ustic torrifluvents association	None	Partially hydric
115.507	115.544	Hell Creek Formation	McCone	91	Hillon loam, 2 to 8 percent slopes	None	Not hydric



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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
115.544	115.630	Hell Creek Formation	McCone	164	Yawdim silty clay, 2 to 8 percent slopes	None	Not hydric
115.630	115.704	Hell Creek Formation	McCone	91	Hillon loam, 2 to 8 percent slopes	None	Not hydric
115.704	115.745	Hell Creek Formation	McCone	97	Kremlin loam, 0 to 4 percent slopes	None	Not hydric
115.745	116.014	Hell Creek Formation	McCone	120	Rominell loam, 0 to 8 percent slopes	None	Not hydric
116.014	116.102	Hell Creek Formation	McCone	166	Yawdim-Badland-Gerdrum association	None	Not hydric
116.117	116.163	Hell Creek Formation	McCone	166	Yawdim-Badland-Gerdrum association	None	Not hydric
244.235	244.395	Hell Creek Formation	Fallon	91C	Bonfri loam, 2 to 8 percent slopes	None	Not hydric
250.540	250.584	Hell Creek Formation	Fallon	191C	Bonfri-Cambeth complex, 2 to 8 percent slopes	None	Not hydric
250.584	250.815	Hell Creek Formation	Fallon	160E	Cabbart-Rock outcrop-Delpoint complex, 15 to 50 percent slopes	None	Partially hydric
250.815	250.844	Hell Creek Formation	Fallon	291D	Bonfri-Cabbart loams, 8 to 15 percent slopes	None	Not hydric
250.890	250.894	Hell Creek Formation	Fallon	291D	Bonfri-Cabbart loams, 8 to 15 percent slopes	None	Not hydric
250.894	250.998	Hell Creek Formation	Fallon	60D	Cabbart silt loam, 4 to 15 percent slopes	None	Not hydric
250.998	251.081	Hell Creek Formation	Fallon	260D	Cabbart-Cambeth silt loams, 8 to 15 percent slopes	None	Not hydric
251.292	251.376	Hell Creek Formation	Fallon	260D	Cabbart-Cambeth silt loams, 8 to 15 percent slopes	None	Not hydric
251.376	251.436	Hell Creek Formation	Fallon	160E	Cabbart-Rock outcrop-Delpoint complex, 15 to 50 percent slopes	None	Partially hydric
251.436	251.520	Hell Creek Formation	Fallon	164C	Tanna-Ethridge silty clay loams, 2 to 8 percent slopes	None	Not hydric
251.520	251.747	Hell Creek Formation	Fallon	65C	Gerdrum clay loam, 2 to 8 percent slopes	None	Not hydric
251.747	251.781	Hell Creek Formation	Fallon	291D	Bonfri-Cabbart loams, 8 to 15 percent slopes	None	Not hydric
251.781	251.892	Hell Creek Formation	Fallon	65C	Gerdrum clay loam, 2 to 8 percent slopes	None	Not hydric
251.892	251.978	Hell Creek Formation	Fallon	160E	Cabbart-Rock outcrop-Delpoint complex, 15 to 50 percent slopes	None	Partially hydric
251.978	252.099	Hell Creek Formation	Fallon	69D	Twilight fine sandy loam, 8 to 15 percent slopes	None	Not hydric
253.563	253.681	Hell Creek Formation	Fallon	160E	Cabbart-Rock outcrop-Delpoint complex, 15 to 50 percent slopes	None	Partially hydric
253.777	254.067	Hell Creek Formation	Fallon	160E	Cabbart-Rock outcrop-Delpoint complex, 15 to 50 percent slopes	None	Partially hydric
254.196	254.413	Hell Creek Formation	Fallon	160E	Cabbart-Rock outcrop-Delpoint complex, 15 to 50 percent slopes	None	Partially hydric
254.413	254.595	Hell Creek Formation	Fallon	13F	Badland		Not hydric
254.595	254.648	Hell Creek Formation	Fallon	286C	Yamacall-Delpoint loams, 2 to 8 percent slopes	None	Not hydric
254.648	254.847	Hell Creek Formation	Fallon	13F	Badland		Not hydric
254.847	254.924	Hell Creek Formation	Fallon	69C	Twilight fine sandy loam, 2 to 8 percent slopes	None	Not hydric
254.924	254.955	Hell Creek Formation	Fallon	13F	Badland		Not hydric
254.955	255.100	Hell Creek Formation	Fallon	69C	Twilight fine sandy loam, 2 to 8 percent slopes	None	Not hydric
255.100	255.229	Hell Creek Formation	Fallon	13F	Badland		Not hydric
255.229	255.386	Hell Creek Formation	Fallon	69C	Twilight fine sandy loam, 2 to 8 percent slopes	None	Not hydric
255.386	255.526	Hell Creek Formation	Fallon	286C	Yamacall-Delpoint loams, 2 to 8 percent slopes	None	Not hydric
255.526	255.652	Hell Creek Formation	Fallon	175C	Archin loam, 2 to 8 percent slopes	None	Not hydric
255.652	255.743	Hell Creek Formation	Fallon	70D	Busby fine sandy loam, 8 to 15 percent slopes	None	Not hydric
255.743	255.904	Hell Creek Formation	Fallon	375C	Archin-Ynot complex, 2 to 8 percent slopes	None	Not hydric
255.904	256.004	Hell Creek Formation	Fallon	54C	Creed loam, 2 to 8 percent slopes	None	Not hydric
256.004	256.345	Hell Creek Formation	Fallon	114C	Carfall-Assinniboine complex, 2 to 8 percent slopes	None	Not hydric
256.345	256.477	Hell Creek Formation	Fallon	114D	Carfall-Assinniboine complex, 8 to 15 percent slopes	None	Not hydric
256.597	256.625	Hell Creek Formation	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
256.625	256.775	Hell Creek Formation	Fallon	175C	Archin loam, 2 to 8 percent slopes	None	Not hydric
256.775	257.089	Hell Creek Formation	Fallon	375C	Archin-Ynot complex, 2 to 8 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

<b>MP Start</b>	<b>MP End</b>	<b>Geology</b>	<b>County</b>	<b>Map Unit Symbol</b>	<b>Soil Name</b>	<b>Flooding</b>	<b>Hydric Rating</b>
257.305	257.519	Hell Creek Formation	Fallon	114C	Carfall-Assinniboine complex, 2 to 8 percent slopes	None	Not hydric
257.598	257.783	Pierre Shale	Fallon	114D	Carfall-Assinniboine complex, 8 to 15 percent slopes	None	Not hydric
257.783	257.905	Pierre Shale	Fallon	175C	Archin loam, 2 to 8 percent slopes	None	Not hydric
258.237	258.349	Pierre Shale	Fallon	75A	Archin-Absher complex, 0 to 2 percent slopes	None	Not hydric
258.349	258.458	Pierre Shale	Fallon	175C	Archin loam, 2 to 8 percent slopes	None	Not hydric
258.458	258.579	Pierre Shale	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
258.579	258.591	Hell Creek Formation	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
258.591	258.652	Hell Creek Formation	Fallon	375C	Archin-Ynot complex, 2 to 8 percent slopes	None	Not hydric
258.652	258.719	Hell Creek Formation	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
258.719	258.735	Hell Creek Formation	Fallon	386E	Yamacall-Cabbart loams, 15 to 35 percent slopes	None	Partially hydric
258.813	258.880	Hell Creek Formation	Fallon	386E	Yamacall-Cabbart loams, 15 to 35 percent slopes	None	Partially hydric
258.880	259.085	Hell Creek Formation	Fallon	269D	Twilight-Bonfri complex, 8 to 15 percent slopes	None	Not hydric
259.085	259.274	Hell Creek Formation	Fallon	375C	Archin-Ynot complex, 2 to 8 percent slopes	None	Not hydric
259.274	259.375	Hell Creek Formation	Fallon	170D	Busby-Blacksheep-Twilight fine sandy loams, 8 to 25 percent slopes	None	Not hydric
259.375	259.407	Hell Creek Formation	Fallon	375C	Archin-Ynot complex, 2 to 8 percent slopes	None	Not hydric
259.407	259.518	Hell Creek Formation	Fallon	175C	Archin loam, 2 to 8 percent slopes	None	Not hydric
259.518	259.665	Hell Creek Formation	Fallon	269D	Twilight-Bonfri complex, 8 to 15 percent slopes	None	Not hydric
259.665	260.103	Hell Creek Formation	Fallon	114C	Carfall-Assinniboine complex, 2 to 8 percent slopes	None	Not hydric
260.103	260.184	Hell Creek Formation	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
260.184	260.391	Hell Creek Formation	Fallon	114D	Carfall-Assinniboine complex, 8 to 15 percent slopes	None	Not hydric
260.391	260.578	Hell Creek Formation	Fallon	375C	Archin-Ynot complex, 2 to 8 percent slopes	None	Not hydric
260.578	260.702	Hell Creek Formation	Fallon	14C	Carfall loam, 2 to 8 percent slopes	None	Not hydric
260.702	260.810	Hell Creek Formation	Fallon	375C	Archin-Ynot complex, 2 to 8 percent slopes	None	Not hydric
260.810	260.879	Hell Creek Formation	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
260.879	261.038	Hell Creek Formation	Fallon	175C	Archin loam, 2 to 8 percent slopes	None	Not hydric
261.038	261.109	Hell Creek Formation	Fallon	167C	Eapa-Yamacall loams, 2 to 8 percent slopes	None	Not hydric
261.884	262.130	Hell Creek Formation	Fallon	14C	Carfall loam, 2 to 8 percent slopes	None	Not hydric
262.130	262.132	Hell Creek Formation	Fallon	7B	Hanly-Ryell fine sandy loams, 0 to 4 percent slopes	Rare	Partially hydric
262.480	262.532	Hell Creek Formation	Fallon	262E	Yawdim-Blacksheep-Rock outcrop complex, 15 to 45 percent slopes	None	Not hydric
262.806	263.242	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
263.305	263.356	Hell Creek Formation	Fallon	83D	Chinook sandy loam, 8 to 15 percent slopes	None	Not hydric
263.390	263.414	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
263.458	263.866	Hell Creek Formation	Fallon	183C	Chinook-Assinniboine complex, 2 to 8 percent slopes	None	Not hydric
263.866	263.957	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
263.957	264.035	Hell Creek Formation	Fallon	83C	Chinook sandy loam, 2 to 8 percent slopes	None	Not hydric
264.035	264.267	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
264.267	264.382	Hell Creek Formation	Fallon	13F	Badland		Not hydric
264.382	264.783	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
264.783	264.894	Hell Creek Formation	Fallon	13F	Badland		Not hydric
264.894	264.944	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
265.376	265.401	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
265.401	265.510	Hell Creek Formation	Fallon	165C	Gerdrum-Absher complex, 2 to 8 percent slopes	None	Not hydric

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**Table L-1 Smectitic Soils Associated with Cretaceous Shales**

MP Start	MP End	Geology	County	Map Unit Symbol	Soil Name	Flooding	Hydric Rating
265.510	265.917	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
265.917	266.445	Hell Creek Formation	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
266.445	266.632	Hell Creek Formation	Fallon	183C	Chinook-Assinniboine complex, 2 to 8 percent slopes	None	Not hydric
266.632	266.808	Hell Creek Formation	Fallon	170D	Busby-Blacksheep-Twilight fine sandy loams, 8 to 25 percent slopes	None	Not hydric
266.808	267.106	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
267.106	267.227	Hell Creek Formation	Fallon	275D	Archin, gullied-Delpoint complex, 4 to 15 percent slopes	None	Not hydric
267.227	267.377	Hell Creek Formation	Fallon	170D	Busby-Blacksheep-Twilight fine sandy loams, 8 to 25 percent slopes	None	Not hydric
267.377	267.602	Hell Creek Formation	Fallon	83C	Chinook sandy loam, 2 to 8 percent slopes	None	Not hydric
267.602	267.923	Hell Creek Formation	Fallon	170D	Busby-Blacksheep-Twilight fine sandy loams, 8 to 25 percent slopes	None	Not hydric
267.923	268.012	Hell Creek Formation	Fallon	83C	Chinook sandy loam, 2 to 8 percent slopes	None	Not hydric
268.012	268.681	Hell Creek Formation	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
268.681	268.710	Hell Creek Formation	Fallon	193C	Lonna-Cambeth silt loams, 2 to 8 percent slopes	None	Not hydric
268.710	268.928	Hell Creek Formation	Fallon	170D	Busby-Blacksheep-Twilight fine sandy loams, 8 to 25 percent slopes	None	Not hydric
268.928	269.123	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
269.123	269.168	Hell Creek Formation	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
269.168	269.183	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
269.183	269.248	Hell Creek Formation	Fallon	55E	Blacksheep-Twilight fine sandy loams, 15 to 45 percent slopes	None	Not hydric
270.058	270.139	Hell Creek Formation	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
270.139	270.216	Hell Creek Formation	Fallon	175C	Archin loam, 2 to 8 percent slopes	None	Not hydric
270.216	270.249	Hell Creek Formation	Fallon	75C	Archin-Absher complex, 2 to 8 percent slopes	None	Not hydric
270.249	270.363	Hell Creek Formation	Fallon	175C	Archin loam, 2 to 8 percent slopes	None	Not hydric
270.445	270.631	Hell Creek Formation	Fallon	170D	Busby-Blacksheep-Twilight fine sandy loams, 8 to 25 percent slopes	None	Not hydric
270.631	270.735	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
270.735	270.836	Hell Creek Formation	Fallon	369C	Twilight-Delpoint complex, 2 to 8 percent slopes	None	Not hydric
270.836	270.899	Hell Creek Formation	Fallon	170D	Busby-Blacksheep-Twilight fine sandy loams, 8 to 25 percent slopes	None	Not hydric
270.899	271.007	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
271.007	271.453	Hell Creek Formation	Fallon	83C	Chinook sandy loam, 2 to 8 percent slopes	None	Not hydric
271.453	271.544	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
271.544	271.620	Hell Creek Formation	Fallon	13F	Badland		Not hydric
271.620	271.738	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
271.738	271.824	Hell Creek Formation	Fallon	83C	Chinook sandy loam, 2 to 8 percent slopes	None	Not hydric
271.824	271.969	Hell Creek Formation	Fallon	270E	Busby, gullied-Delpoint-Yawdim complex, 8 to 25 percent slopes	None	Partially hydric
271.969	271.999	Hell Creek Formation	Fallon	69C	Twilight fine sandy loam, 2 to 8 percent slopes	None	Not hydric
271.999	272.197	Hell Creek Formation	Fallon	55D	Blacksheep-Twilight fine sandy loams, 8 to 15 percent slopes	None	Not hydric
272.197	272.299	Hell Creek Formation	Fallon	283C	Chinook-Archin complex, 2 to 8 percent slopes	None	Not hydric
272.299	272.337	Hell Creek Formation	Fallon	83C	Chinook sandy loam, 2 to 8 percent slopes	None	Not hydric