

Supplementary Information: Millennial-Scale Fire and Vegetation Change from a Rare Mid-Latitude Permafrost Fen (Beartooth Plateau, WY)

Table S1. Radiocarbon age information.

Lab ID	Depth Below Surface (cm)	Uncalibrated Age (14C yr BP)	Median Calibrated Age Range (14C yr BP)(Probability)	Calibrated Age Range (14C yr BP)(Probability)
197571	21	4650	5408	5385-5446 (0.88)
181577	37	4750	5526	5460-5582 (0.90)
202384	47	4580	5307	5289-5321 (0.89)
197572	66	8030	8898	8776-9012 (0.97)
181576	97	8280	7314	7521- 7074 (1.0)
202385	127	8720	9662	9590-9707 (.82)
181571	147	9020	10208	10191-10229 (1.0)
181590	150	8660	9606	9541-9689 (1.0)
181594	154	8670	9613	9541-9697 (1.0)

Table S2. Macroscopic charcoal (>125 μm) raw data counts (pieces per cm^{-2}).

Depth below surface	Macroscopic charcoal >125 μm (pieces per cm^{-2})
1	16
2	6
3	14
4	21
5	21
6	18
7	21
8	32
9	27
10	21
11	22
12	42
13	25

14	22
15	20
16	23
17	16
18	28
19	35
20	46
21	32
22	62
23	32
24	64
25	69
26	43
27	30
28	64
29	51
30	62
31	59
32	87
33	42
34	55
35	48
36	50
37	66
38	52
39	80

40	60
41	75
42	47
43	53
44	59
45	67
46	64
47	66
48	60
49	63
50	64
51	20
52	14
53	17
54	24
55	12
56	22
57	20
58	16
59	2
60	18
61	5
62	2
63	4
64	0
65	0

66	6
67	7
68	7
69	15
70	20
71	9
72	10
73	2
74	9
75	5
76	14
77	20
78	20
79	3
80	1
81	5
82	3
83	5
84	4
85	1
86	4
87	6
88	4
89	2
90	11
91	3

92	5
93	6
94	11
95	8
96	7
97	4
98	13
99	14
100	7
101	10
102	9
103	8
104	10
105	15
106	14
107	7
108	1
109	7
110	16
111	17
112	14
113	11
114	15
115	10
116	22
117	9

118	4
119	15
120	8
121	9
122	8
123	4
124	4
125	4
126	3
127	7
128	24
129	20
130	32
131	17
132	19
133	28
134	12
135	164
136	21
137	34
138	53
139	55
140	75
141	11
142	2
143	6

144	31
145	20
146	18
147	19
148	19
149	9
150	10