

Supplementary Material to “Shifts in forest structure in northwest Montana from 1972 to 2015 using the Landsat archive from Multispectral Scanner to Operational Land Imager”

Authors: Shannon L. Savage, Rick L. Lawrence, John R. Squires, Joseph D. Holbrook, Lucretia E. Olson, Justin D. Braaten, Warren B. Cohen

Table S1: Every Landsat image used in the production of yearly composite images for our study area

Overall Count	Count per Year	Image Name	Year	Sensor	Path/Row
1	1	LM10430271972222	1972	MSS	43/27
2	2	LM10430271972240	1972	MSS	43/27
3	3	LM10450261972242	1972	MSS	45/26
4	4	LM10450271972242	1972	MSS	45/27
5	5	LM10460261972243	1972	MSS	46/26
6	1	LM10430271973162	1973	MSS	43/27
7	2	LM10440261973199	1973	MSS	44/26
8	3	LM10440271973199	1973	MSS	44/27
9	4	LM10450271973200	1973	MSS	45/27
10	1	LM10440261974194	1974	MSS	44/26
11	2	LM10440261974212	1974	MSS	44/26
12	3	LM10440271974212	1974	MSS	44/27
13	4	LM10450261974195	1974	MSS	45/26
14	5	LM10450261974213	1974	MSS	45/26
15	6	LM10450271974213	1974	MSS	45/27
16	7	LM10460261974232	1974	MSS	46/26
17	1	LM20430271975215	1975	MSS	43/27
18	2	LM20430271975233	1975	MSS	43/27
19	3	LM20440261975216	1975	MSS	44/26
20	4	LM20440271975216	1975	MSS	44/27
21	5	LM10450261975190	1975	MSS	45/26
22	6	LM10450261975226	1975	MSS	45/26
23	7	LM20450261975217	1975	MSS	45/26
24	8	LM10450271975190	1975	MSS	45/27
25	9	LM20450271975199	1975	MSS	45/27
26	10	LM20450271975217	1975	MSS	45/27
27	11	LM10460261975227	1975	MSS	46/26
28	12	LM20460261975182	1975	MSS	46/26
29	13	LM20460261975218	1975	MSS	46/26
30	1	LM10430271976219	1976	MSS	43/27
31	2	LM10430271976237	1976	MSS	43/27
32	3	LM20430271976192	1976	MSS	43/27

33	4	LM20430271976210	1976	MSS	43/27
34	5	LM10440261976184	1976	MSS	44/26
35	6	LM10440261976202	1976	MSS	44/26
36	7	LM10440261976220	1976	MSS	44/26
37	8	LM20440261976193	1976	MSS	44/26
38	9	LM10440271976184	1976	MSS	44/27
39	10	LM20440271976193	1976	MSS	44/27
40	11	LM20440271976211	1976	MSS	44/27
41	12	LM20450271976230	1976	MSS	45/27
42	13	LM10460261976204	1976	MSS	46/26
43	14	LM20460261976195	1976	MSS	46/26
44	15	LM20460261976213	1976	MSS	46/26
45	1	LM20430271977186	1977	MSS	43/27
46	2	LM20430271977204	1977	MSS	43/27
47	3	LM20430271977222	1977	MSS	43/27
48	4	LM20440261977205	1977	MSS	44/26
49	5	LM20440261977222	1977	MSS	44/26
50	6	LM20440261977223	1977	MSS	44/26
51	7	LM20440271977222	1977	MSS	44/27
52	8	LM20440271977223	1977	MSS	44/27
53	9	LM20450261977188	1977	MSS	45/26
54	10	LM20450261977224	1977	MSS	45/26
55	11	LM20450271977188	1977	MSS	45/27
56	12	LM20450271977224	1977	MSS	45/27
57	13	LM20460261977189	1977	MSS	46/26
58	14	LM20460261977225	1977	MSS	46/26
59	1	LM20430271978217	1978	MSS	43/27
60	2	LM30430271978208	1978	MSS	43/27
61	3	LM20440261978218	1978	MSS	44/26
62	4	LM20440271978182	1978	MSS	44/27
63	5	LM20440271978218	1978	MSS	44/27
64	6	LM20450261978201	1978	MSS	45/26
65	7	LM20450261978219	1978	MSS	45/26
66	8	LM30450261978210	1978	MSS	45/26
67	9	LM20450271978183	1978	MSS	45/27
68	10	LM20450271978201	1978	MSS	45/27
69	11	LM20450271978219	1978	MSS	45/27
70	12	LM30450271978210	1978	MSS	45/27
71	13	LM20460261978202	1978	MSS	46/26
72	14	LM20460261978220	1978	MSS	46/26
73	15	LM30460261978211	1978	MSS	46/26
74	1	LM20430271979194	1979	MSS	43/27
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76	3	LM20440271979213	1979	MSS	44/27
77	4	LM20450271979196	1979	MSS	45/27
78	5	LM20450271979214	1979	MSS	45/27
79	6	LM20450271979232	1979	MSS	45/27
80	7	LM30450271979187	1979	MSS	45/27
81	8	LM30450271979205	1979	MSS	45/27
82	9	LM20460261979197	1979	MSS	46/26
83	10	LM20460261979215	1979	MSS	46/26
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87	3	LM20440271980190	1980	MSS	44/27
88	4	LM20450271980209	1980	MSS	45/27
89	5	LM20450271980227	1980	MSS	45/27
90	6	LM20460261980210	1980	MSS	46/26
91	7	LM20460261980228	1980	MSS	46/26
92	8	LM30460261980183	1980	MSS	46/26
93	9	LM30460261980237	1980	MSS	46/26
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99	6	LM20450261981239	1981	MSS	45/26
100	7	LM20450271981185	1981	MSS	45/27
101	8	LM20450271981203	1981	MSS	45/27
102	9	LM20450271981221	1981	MSS	45/27
103	10	LM20450271981239	1981	MSS	45/27
104	11	LM20460261981222	1981	MSS	46/26
105	12	LM20460261981240	1981	MSS	46/26
106	1	LM30440261982206	1982	MSS	44/26
107	2	LM30450271982207	1982	MSS	45/27
108	3	LM30460261982208	1982	MSS	46/26
109	4	LM40410261982232	1982	MSS	41/26
110	1	LM40410261983187	1983	MSS	41/26
111	2	LM40410271983187	1983	MSS	41/27
112	3	LM40420261983210	1983	MSS	42/26
113	4	LM40420261983242	1983	MSS	42/26
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115	2	LM40400271984231	1984	MSS	40/27
116	3	LM50400271984191	1984	MSS	40/27
117	4	LM50400271984207	1984	MSS	40/27
118	5	LM50400271984223	1984	MSS	40/27

119	6	LM50400271984239	1984	MSS	40/27
120	7	LM40410261984222	1984	MSS	41/26
121	8	LM40410261984238	1984	MSS	41/26
122	9	LM50410261984230	1984	MSS	41/26
123	10	LM40410271984190	1984	MSS	41/27
124	11	LM40410271984222	1984	MSS	41/27
125	12	LM40410271984238	1984	MSS	41/27
126	13	LM50410271984198	1984	MSS	41/27
127	14	LM50410271984230	1984	MSS	41/27
128	15	LM40420261984197	1984	MSS	42/26
129	16	LM40420261984229	1984	MSS	42/26
130	17	LM50420261984189	1984	MSS	42/26
131	18	LM50420261984221	1984	MSS	42/26
132	19	LM50420261984237	1984	MSS	42/26
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134	21	LT50400271984207	1984	TM	40/27
135	22	LT50400271984223	1984	TM	40/27
136	23	LT50400271984239	1984	TM	40/27
137	24	LT50410261984198	1984	TM	41/26
138	25	LT50410261984230	1984	TM	41/26
139	26	LT50410271984198	1984	TM	41/27
140	27	LT50420261984189	1984	TM	42/26
141	28	LT50420261984221	1984	TM	42/26
142	29	LT50420261984237	1984	TM	42/26
143	1	LM40400271985185	1985	MSS	40/27
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145	3	LM50400271985193	1985	MSS	40/27
146	4	LM40410261985192	1985	MSS	41/26
147	5	LM40410261985208	1985	MSS	41/26
148	6	LM40410261985240	1985	MSS	41/26
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155	13	LM50410271985216	1985	MSS	41/27
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157	15	LM40420261985199	1985	MSS	42/26
158	16	LM40420261985215	1985	MSS	42/26
159	17	LM40420261985231	1985	MSS	42/26
160	18	LM50420261985191	1985	MSS	42/26
161	19	LM50420261985207	1985	MSS	42/26

162	20	LM50420261985223	1985	MSS	42/26
163	21	LM50420261985239	1985	MSS	42/26
164	22	LT50400271985209	1985	TM	40/27
165	23	LT50400271985241	1985	TM	40/27
166	24	LT50410261985184	1985	TM	41/26
167	25	LT50410261985200	1985	TM	41/26
168	26	LT50410261985216	1985	TM	41/26
169	27	LT50410271985200	1985	TM	41/27
170	28	LT50420261985207	1985	TM	42/26
171	29	LT50420261985223	1985	TM	42/26
172	30	LT50420261985239	1985	TM	42/26
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175	3	LM50400271986228	1986	MSS	40/27
176	4	LM40410261986227	1986	MSS	41/26
177	5	LM50410261986203	1986	MSS	41/26
178	6	LM50410261986219	1986	MSS	41/26
179	7	LM40410271986227	1986	MSS	41/27
180	8	LM50410271986203	1986	MSS	41/27
181	9	LM50420261986210	1986	MSS	42/26
182	10	LM50420261986226	1986	MSS	42/26
183	11	LT50400271986196	1986	TM	40/27
184	12	LT50400271986212	1986	TM	40/27
185	13	LT50400271986228	1986	TM	40/27
186	14	LT50410261986187	1986	TM	41/26
187	15	LT50410261986203	1986	TM	41/26
188	16	LT50410261986219	1986	TM	41/26
189	17	LT50410271986219	1986	TM	41/27
190	18	LT50420261986210	1986	TM	42/26
191	19	LT50420261986226	1986	TM	42/26
192	1	LM50400271987231	1987	MSS	40/27
193	2	LM50400271987263	1987	MSS	40/27
194	3	LM50410261987254	1987	MSS	41/26
195	4	LM50410271987206	1987	MSS	41/27
196	5	LM50410271987222	1987	MSS	41/27
197	6	LM50420261987197	1987	MSS	42/26
198	7	LT50400271987231	1987	TM	40/27
199	8	LT50420261987197	1987	TM	42/26
200	9	LT50420261987213	1987	TM	42/26
201	1	LM50400271988186	1988	MSS	40/27
202	2	LM50410261988225	1988	MSS	41/26
203	3	LM50410271988209	1988	MSS	41/27
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205	5	LM50420261988200	1988	MSS	42/26
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209	9	LT50400271988218	1988	TM	40/27
210	10	LT50400271988234	1988	TM	40/27
211	11	LT50410261988209	1988	TM	41/26
212	12	LT50410261988225	1988	TM	41/26
213	13	LT50410261988241	1988	TM	41/26
214	14	LT50410271988241	1988	TM	41/27
215	15	LT50420261988216	1988	TM	42/26
216	16	LT50420261988232	1988	TM	42/26
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219	3	LM50400271989220	1989	MSS	40/27
220	4	LM50410261989211	1989	MSS	41/26
221	5	LM50410271989195	1989	MSS	41/27
222	6	LM50410271989211	1989	MSS	41/27
223	7	LM50410271989227	1989	MSS	41/27
224	8	LM50420261989186	1989	MSS	42/26
225	9	LM50420261989202	1989	MSS	42/26
226	10	LM50420261989218	1989	MSS	42/26
227	11	LT50400271989188	1989	TM	40/27
228	12	LT50400271989204	1989	TM	40/27
229	13	LT50400271989220	1989	TM	40/27
230	14	LT50410261989211	1989	TM	41/26
231	15	LT50410261989227	1989	TM	41/26
232	1	LM50400271990191	1990	MSS	40/27
233	2	LM50400271990239	1990	MSS	40/27
234	3	LM50410261990198	1990	MSS	41/26
235	4	LM50410271990198	1990	MSS	41/27
236	5	LM50410271990214	1990	MSS	41/27
237	6	LM50410271990230	1990	MSS	41/27
238	7	LM50420261990189	1990	MSS	42/26
239	8	LM50420261990205	1990	MSS	42/26
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242	11	LT50410261990214	1990	TM	41/26
243	12	LT50410261990230	1990	TM	41/26
244	13	LT50410271990214	1990	TM	41/27
245	1	LM50400271991194	1991	MSS	40/27
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247	3	LM50400271991242	1991	MSS	40/27

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250	6	LM50410261991217	1991	MSS	41/26
251	7	LM50410261991233	1991	MSS	41/26
252	8	LM50410271991185	1991	MSS	41/27
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254	10	LM50410271991217	1991	MSS	41/27
255	11	LM50410271991233	1991	MSS	41/27
256	12	LM50420261991208	1991	MSS	42/26
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268	3	LM40410271992244	1992	MSS	41/27
269	4	LM40420261992203	1992	MSS	42/26
270	5	LM40420261992219	1992	MSS	42/26
271	6	LM50420261992211	1992	MSS	42/26
272	7	LM50420261992227	1992	MSS	42/26
273	8	LM50420261992243	1992	MSS	42/26
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277	12	LT50410261992204	1992	TM	41/26
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279	14	LT50410271992204	1992	TM	41/27
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281	16	LT50420261992227	1992	TM	42/26
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284	2	LM50410261993222	1993	MSS	41/26
285	3	LM50410261993238	1993	MSS	41/26
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288	6	LT50400271993215	1993	TM	40/27
289	7	LT50400271993231	1993	TM	40/27
290	8	LT50410261993222	1993	TM	41/26

291	9	LT50410261993238	1993	TM	41/26
292	10	LT50420261993213	1993	TM	42/26
293	1	LM50400271994202	1994	MSS	40/27
294	2	LM50400271994218	1994	MSS	40/27
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302	10	LM50420261994216	1994	MSS	42/26
303	11	LM50420261994232	1994	MSS	42/26
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308	16	LT50410271994225	1994	TM	41/27
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310	18	LT50420261994216	1994	TM	42/26
311	19	LT50420261994232	1994	TM	42/26
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314	3	LT50400271995221	1995	TM	40/27
315	4	LT50400271995237	1995	TM	40/27
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326	9	LT50420261996222	1996	TM	42/26
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332	5	LT50410261997233	1997	TM	41/26
333	6	LT50420261997208	1997	TM	42/26

334	7	LT50420261997224	1997	TM	42/26
335	1	LT50400271998197	1998	TM	40/27
336	2	LT50410261998188	1998	TM	41/26
337	3	LT50410261998204	1998	TM	41/26
338	4	LT50410261998220	1998	TM	41/26
339	5	LT50410261998236	1998	TM	41/26
340	6	LT50410271998220	1998	TM	41/27
341	7	LT50420261998227	1998	TM	42/26
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343	2	LE70400271999208	1999	ETM+	40/27
344	3	LT50400271999184	1999	TM	40/27
345	4	LT50400271999200	1999	TM	40/27
346	5	LT50400271999232	1999	TM	40/27
347	6	LE70410261999215	1999	ETM+	41/26
348	7	LT50410261999191	1999	TM	41/26
349	8	LT50410261999207	1999	TM	41/26
350	9	LT50410261999239	1999	TM	41/26
351	10	LT50410271999207	1999	TM	41/27
352	1	LE70400272000195	2000	ETM+	40/27
353	2	LE70400272000211	2000	ETM+	40/27
354	3	LE70400272000227	2000	ETM+	40/27
355	4	LT50400272000187	2000	TM	40/27
356	5	LT50400272000203	2000	TM	40/27
357	6	LT50400272000219	2000	TM	40/27
358	7	LT50400272000235	2000	TM	40/27
359	8	LE70410262000202	2000	ETM+	41/26
360	9	LE70410262000218	2000	ETM+	41/26
361	10	LE70410262000234	2000	ETM+	41/26
362	11	LT50410262000194	2000	TM	41/26
363	12	LT50410262000226	2000	TM	41/26
364	13	LE70410272000202	2000	ETM+	41/27
365	14	LE70410272000218	2000	ETM+	41/27
366	15	LE70410272000234	2000	ETM+	41/27
367	16	LT50410272000194	2000	TM	41/27
368	17	LT50410272000226	2000	TM	41/27
369	18	LT50410272000242	2000	TM	41/27
370	19	LE70420262000193	2000	ETM+	42/26
371	20	LE70420262000209	2000	ETM+	42/26
372	21	LE70420262000225	2000	ETM+	42/26
373	22	LE70420262000241	2000	ETM+	42/26
374	23	LT50420262000201	2000	TM	42/26
375	24	LT50420262000217	2000	TM	42/26
376	25	LT50420262000233	2000	TM	42/26

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378	2	LE70400272001229	2001	ETM+	40/27
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380	4	LT50400272001205	2001	TM	40/27
381	5	LT50400272001221	2001	TM	40/27
382	6	LT50400272001237	2001	TM	40/27
383	7	LE70410262001188	2001	ETM+	41/26
384	8	LE70410262001204	2001	ETM+	41/26
385	9	LE70410262001236	2001	ETM+	41/26
386	10	LT50410262001228	2001	TM	41/26
387	11	LE70410272001188	2001	ETM+	41/27
388	12	LE70410272001204	2001	ETM+	41/27
389	13	LE70410272001220	2001	ETM+	41/27
390	14	LE70410272001236	2001	ETM+	41/27
391	15	LT50410272001228	2001	TM	41/27
392	16	LE70420262001195	2001	ETM+	42/26
393	17	LE70420262001211	2001	ETM+	42/26
394	18	LE70420262001227	2001	ETM+	42/26
395	19	LE70420262001243	2001	ETM+	42/26
396	20	LT50420262001219	2001	TM	42/26
397	1	LT50400272002192	2002	TM	40/27
398	2	LT50400272002224	2002	TM	40/27
399	3	LT50400272002240	2002	TM	40/27
400	4	LE70410262002191	2002	ETM+	41/26
401	5	LT50410262002183	2002	TM	41/26
402	6	LT50410262002199	2002	TM	41/26
403	7	LE70410272002191	2002	ETM+	41/27
404	8	LT50410272002183	2002	TM	41/27
405	9	LT50410272002199	2002	TM	41/27
406	10	LT50410272002215	2002	TM	41/27
407	11	LT50410272002231	2002	TM	41/27
408	12	LE70420262002198	2002	ETM+	42/26
409	13	LE70420262002214	2002	ETM+	42/26
410	14	LE70420262002230	2002	ETM+	42/26
411	15	LT50420262002190	2002	TM	42/26
412	16	LT50420262002206	2002	TM	42/26
413	1	LE70400272003203	2003	ETM+	40/27
414	2	LE70400272003219	2003	ETM+	40/27
415	3	LT50400272003195	2003	TM	40/27
416	4	LT50400272003211	2003	TM	40/27
417	5	LT50400272003227	2003	TM	40/27
418	6	LT50400272003243	2003	TM	40/27
419	7	LE70410262003210	2003	ETM+	41/26

420	8	LE70410262003226	2003	ETM+	41/26
421	9	LE70410262003242	2003	ETM+	41/26
422	10	LT50410262003202	2003	TM	41/26
423	11	LE70410272003210	2003	ETM+	41/27
424	12	LE70410272003226	2003	ETM+	41/27
425	13	LE70410272003242	2003	ETM+	41/27
426	14	LT50410272003186	2003	TM	41/27
427	15	LT50410272003202	2003	TM	41/27
428	16	LT50410272003218	2003	TM	41/27
429	17	LE70420262003201	2003	ETM+	42/26
430	18	LE70420262003233	2003	ETM+	42/26
431	19	LT50420262003193	2003	TM	42/26
432	20	LT50420262003209	2003	TM	42/26
433	21	LT50420262003225	2003	TM	42/26
434	22	LT50420262003241	2003	TM	42/26
435	1	LE70400272004206	2004	ETM+	40/27
436	2	LE70400272004222	2004	ETM+	40/27
437	3	LT50400272004198	2004	TM	40/27
438	4	LT50400272004214	2004	TM	40/27
439	5	LT50400272004230	2004	TM	40/27
440	6	LE70410262004197	2004	ETM+	41/26
441	7	LE70410262004213	2004	ETM+	41/26
442	8	LE70410262004229	2004	ETM+	41/26
443	9	LT50410262004189	2004	TM	41/26
444	10	LT50410262004205	2004	TM	41/26
445	11	LE70410272004197	2004	ETM+	41/27
446	12	LE70410272004213	2004	ETM+	41/27
447	13	LT50410272004189	2004	TM	41/27
448	14	LT50410272004205	2004	TM	41/27
449	15	LT50410272004221	2004	TM	41/27
450	16	LE70420262004204	2004	ETM+	42/26
451	17	LT50420262004196	2004	TM	42/26
452	18	LT50420262004212	2004	TM	42/26
453	19	LT50420262004228	2004	TM	42/26
454	1	LE70400272005192	2005	ETM+	40/27
455	2	LE70400272005208	2005	ETM+	40/27
456	3	LE70400272005240	2005	ETM+	40/27
457	4	LT50400272005184	2005	TM	40/27
458	5	LT50400272005200	2005	TM	40/27
459	6	LT50400272005216	2005	TM	40/27
460	7	LT50400272005232	2005	TM	40/27
461	8	LE70410262005183	2005	ETM+	41/26
462	9	LE70410262005199	2005	ETM+	41/26

463	10	LE70410262005215	2005	ETM+	41/26
464	11	LE70410262005231	2005	ETM+	41/26
465	12	LT50410262005207	2005	TM	41/26
466	13	LT50410262005223	2005	TM	41/26
467	14	LT50410262005239	2005	TM	41/26
468	15	LE70410272005183	2005	ETM+	41/27
469	16	LE70410272005199	2005	ETM+	41/27
470	17	LE70410272005215	2005	ETM+	41/27
471	18	LE70410272005231	2005	ETM+	41/27
472	19	LT50410272005207	2005	TM	41/27
473	20	LT50410272005223	2005	TM	41/27
474	21	LT50410272005239	2005	TM	41/27
475	22	LE70420262005222	2005	ETM+	42/26
476	23	LE70420262005238	2005	ETM+	42/26
477	24	LT50420262005182	2005	TM	42/26
478	25	LT50420262005214	2005	TM	42/26
479	1	LE70400272006195	2006	ETM+	40/27
480	2	LE70400272006211	2006	ETM+	40/27
481	3	LE70400272006227	2006	ETM+	40/27
482	4	LT50400272006187	2006	TM	40/27
483	5	LT50400272006203	2006	TM	40/27
484	6	LT50400272006219	2006	TM	40/27
485	7	LT50400272006235	2006	TM	40/27
486	8	LE70410262006202	2006	ETM+	41/26
487	9	LE70410262006218	2006	ETM+	41/26
488	10	LT50410262006194	2006	TM	41/26
489	11	LT50410262006210	2006	TM	41/26
490	12	LT50410262006226	2006	TM	41/26
491	13	LT50410262006242	2006	TM	41/26
492	14	LE70410272006202	2006	ETM+	41/27
493	15	LE70410272006218	2006	ETM+	41/27
494	16	LE70410272006234	2006	ETM+	41/27
495	17	LT50410272006194	2006	TM	41/27
496	18	LT50410272006210	2006	TM	41/27
497	19	LT50410272006226	2006	TM	41/27
498	20	LE70420262006209	2006	ETM+	42/26
499	21	LE70420262006225	2006	ETM+	42/26
500	22	LT50420262006185	2006	TM	42/26
501	23	LT50420262006201	2006	TM	42/26
502	24	LT50420262006217	2006	TM	42/26
503	25	LT50420262006233	2006	TM	42/26
504	1	LE70400272007182	2007	ETM+	40/27
505	2	LE70400272007214	2007	ETM+	40/27

506	3	LT50400272007190	2007	TM	40/27
507	4	LT50400272007206	2007	TM	40/27
508	5	LT50400272007222	2007	TM	40/27
509	6	LT50400272007238	2007	TM	40/27
510	7	LE70410262007205	2007	ETM+	41/26
511	8	LE70410262007221	2007	ETM+	41/26
512	9	LE70410262007237	2007	ETM+	41/26
513	10	LT50410262007197	2007	TM	41/26
514	11	LT50410262007213	2007	TM	41/26
515	12	LT50410262007229	2007	TM	41/26
516	13	LE70410272007189	2007	ETM+	41/27
517	14	LE70410272007221	2007	ETM+	41/27
518	15	LE70410272007237	2007	ETM+	41/27
519	16	LT50410272007197	2007	TM	41/27
520	17	LT50410272007213	2007	TM	41/27
521	18	LT50410272007229	2007	TM	41/27
522	19	LE70420262007196	2007	ETM+	42/26
523	20	LE70420262007212	2007	ETM+	42/26
524	21	LT50420262007188	2007	TM	42/26
525	22	LT50420262007204	2007	TM	42/26
526	23	LT50420262007236	2007	TM	42/26
527	1	LE70400272008185	2008	ETM+	40/27
528	2	LE70400272008201	2008	ETM+	40/27
529	3	LE70400272008217	2008	ETM+	40/27
530	4	LT50400272008193	2008	TM	40/27
531	5	LT50400272008209	2008	TM	40/27
532	6	LT50400272008225	2008	TM	40/27
533	7	LE70410262008192	2008	ETM+	41/26
534	8	LE70410262008208	2008	ETM+	41/26
535	9	LE70410272008192	2008	ETM+	41/27
536	10	LE70410272008208	2008	ETM+	41/27
537	11	LE70410272008224	2008	ETM+	41/27
538	12	LT50410272008200	2008	TM	41/27
539	13	LT50410272008216	2008	TM	41/27
540	14	LE70420262008199	2008	ETM+	42/26
541	15	LE70420262008215	2008	ETM+	42/26
542	16	LE70420262008231	2008	ETM+	42/26
543	17	LT50420262008191	2008	TM	42/26
544	18	LT50420262008207	2008	TM	42/26
545	1	LE70400272009203	2009	ETM+	40/27
546	2	LT50400272009211	2009	TM	40/27
547	3	LT50400272009243	2009	TM	40/27
548	4	LE70410262009242	2009	ETM+	41/26

549	5	LT50410262009186	2009	TM	41/26
550	6	LT50410262009202	2009	TM	41/26
551	7	LT50410262009234	2009	TM	41/26
552	8	LE70410272009210	2009	ETM+	41/27
553	9	LE70410272009242	2009	ETM+	41/27
554	10	LT50410272009186	2009	TM	41/27
555	11	LT50410272009202	2009	TM	41/27
556	12	LT50410272009234	2009	TM	41/27
557	13	LE70420262009185	2009	ETM+	42/26
558	14	LE70420262009201	2009	ETM+	42/26
559	15	LE70420262009233	2009	ETM+	42/26
560	1	LE70400272010190	2010	ETM+	40/27
561	2	LE70400272010206	2010	ETM+	40/27
562	3	LE70400272010238	2010	ETM+	40/27
563	4	LT50400272010182	2010	TM	40/27
564	5	LT50400272010198	2010	TM	40/27
565	6	LT50400272010214	2010	TM	40/27
566	7	LT50400272010230	2010	TM	40/27
567	8	LE70410262010197	2010	ETM+	41/26
568	9	LT50410262010189	2010	TM	41/26
569	10	LT50410262010205	2010	TM	41/26
570	11	LT50410262010221	2010	TM	41/26
571	12	LT50410262010237	2010	TM	41/26
572	13	LE70410272010197	2010	ETM+	41/27
573	14	LE70410272010229	2010	ETM+	41/27
574	15	LT50410272010189	2010	TM	41/27
575	16	LT50410272010205	2010	TM	41/27
576	17	LT50410272010221	2010	TM	41/27
577	18	LT50410272010237	2010	TM	41/27
578	19	LE70420262010188	2010	ETM+	42/26
579	20	LE70420262010236	2010	ETM+	42/26
580	21	LT50420262010196	2010	TM	42/26
581	22	LT50420262010228	2010	TM	42/26
582	1	LE70400272011193	2011	ETM+	40/27
583	2	LE70400272011209	2011	ETM+	40/27
584	3	LE70400272011225	2011	ETM+	40/27
585	4	LT50400272011185	2011	TM	40/27
586	5	LT50400272011233	2011	TM	40/27
587	6	LE70410262011200	2011	ETM+	41/26
588	7	LE70410262011216	2011	ETM+	41/26
589	8	LE70410262011232	2011	ETM+	41/26
590	9	LT50410262011192	2011	TM	41/26
591	10	LT50410262011224	2011	TM	41/26

592	11	LT50410262011240	2011	TM	41/26
593	12	LE70410272011184	2011	ETM+	41/27
594	13	LE70410272011200	2011	ETM+	41/27
595	14	LE70410272011216	2011	ETM+	41/27
596	15	LE70410272011232	2011	ETM+	41/27
597	16	LT50410272011192	2011	TM	41/27
598	17	LT50410272011224	2011	TM	41/27
599	18	LT50410272011240	2011	TM	41/27
600	19	LE70420262011191	2011	ETM+	42/26
601	20	LE70420262011223	2011	ETM+	42/26
602	21	LE70420262011239	2011	ETM+	42/26
603	22	LT50420262011183	2011	TM	42/26
604	23	LT50420262011199	2011	TM	42/26
605	24	LT50420262011215	2011	TM	42/26
606	25	LT50420262011231	2011	TM	42/26
607	1	LE70400272012212	2012	ETM+	40/27
608	2	LE70400272012244	2012	ETM+	40/27
609	3	LE70410262012187	2012	ETM+	41/26
610	4	LE70410262012203	2012	ETM+	41/26
611	5	LE70410262012219	2012	ETM+	41/26
612	6	LE70410262012235	2012	ETM+	41/26
613	7	LE70410272012203	2012	ETM+	41/27
614	8	LE70410272012235	2012	ETM+	41/27
615	9	LE70420262012194	2012	ETM+	42/26
616	10	LE70420262012210	2012	ETM+	42/26
617	11	LE70420262012226	2012	ETM+	42/26
618	12	LE70420262012242	2012	ETM+	42/26
619	1	LC80400272013190	2013	OLI	40/27
620	2	LC80400272013206	2013	OLI	40/27
621	3	LC80400272013222	2013	OLI	40/27
622	4	LC80400272013238	2013	OLI	40/27
623	5	LC80410262013197	2013	OLI	41/26
624	6	LC80410262013229	2013	OLI	41/26
625	7	LC80410272013197	2013	OLI	41/27
626	8	LC80410272013229	2013	OLI	41/27
627	9	LC80420262013188	2013	OLI	42/26
628	10	LC80420262013204	2013	OLI	42/26
629	11	LC80420262013220	2013	OLI	42/26
630	12	LC80420262013236	2013	OLI	42/26
631	13	LE70400272013182	2013	ETM+	40/27
632	14	LE70400272013198	2013	ETM+	40/27
633	15	LE70400272013230	2013	ETM+	40/27
634	16	LE70410262013205	2013	ETM+	41/26

635	17	LE70410262013221	2013	ETM+	41/26
636	18	LE70410262013237	2013	ETM+	41/26
637	19	LE70410272013205	2013	ETM+	41/27
638	20	LE70410272013221	2013	ETM+	41/27
639	21	LE70410272013237	2013	ETM+	41/27
640	22	LE70420262013196	2013	ETM+	42/26
641	23	LE70420262013212	2013	ETM+	42/26
642	24	LE70420262013228	2013	ETM+	42/26
643	1	LC80400272014193	2014	OLI	40/27
644	2	LC80400272014209	2014	OLI	40/27
645	3	LC80400272014225	2014	OLI	40/27
646	4	LC80400272014241	2014	OLI	40/27
647	5	LC80410262014184	2014	OLI	41/26
648	6	LC80410262014216	2014	OLI	41/26
649	7	LC80410272014184	2014	OLI	41/27
650	8	LC80410272014216	2014	OLI	41/27
651	9	LC80420262014191	2014	OLI	42/26
652	10	LC80420262014207	2014	OLI	42/26
653	11	LC80420262014223	2014	OLI	42/26
654	12	LC80420262014239	2014	OLI	42/26
655	13	LE70400272014217	2014	ETM+	40/27
656	14	LE70410262014192	2014	ETM+	41/26
657	15	LE70410262014208	2014	ETM+	41/26
658	16	LE70410262014240	2014	ETM+	41/26
659	17	LE70410272014192	2014	ETM+	41/27
660	18	LE70410272014208	2014	ETM+	41/27
661	19	LE70410272014240	2014	ETM+	41/27
662	20	LE70420262014183	2014	ETM+	42/26
663	21	LE70420262014231	2014	ETM+	42/26
664	1	LC80400272015164	2015	OLI	40/27
665	2	LC80400272015212	2015	OLI	40/27
666	3	LC80410262015171	2015	OLI	41/26
667	4	LC80410262015187	2015	OLI	41/26
668	5	LC80410262015203	2015	OLI	41/26
669	6	LC80410262015219	2015	OLI	41/26
670	7	LC80410262015235	2015	OLI	41/26
671	8	LC80410272015187	2015	OLI	41/27
672	9	LC80410272015219	2015	OLI	41/27
673	10	LC80410272015235	2015	OLI	41/27
674	11	LC80410272015267	2015	OLI	41/27
675	12	LC80420262015162	2015	OLI	42/26
676	13	LC80420262015178	2015	OLI	42/26
677	14	LC80420262015210	2015	OLI	42/26

678	15	LE70400272015268	2015	ETM+	40/27
679	16	LE70410262015179	2015	ETM+	41/26
680	17	LE70410262015211	2015	ETM+	41/26
681	18	LE70410272015179	2015	ETM+	41/27
682	19	LE70410272015211	2015	ETM+	41/27
683	20	LE70420262015202	2015	ETM+	42/26
684	21	LE70420262015266	2015	ETM+	42/26

Dictionary S1: Definitions of Forest Structure Classes

- **Alpine (A):** high elevation areas generally composed of sparse trees and abundant rock and snow cover.
- **Open (O):** areas supporting trees, but generally exhibiting very low canopy cover. Examples of this include meadows or sparsely vegetated ridges experiencing high heat loads.
- **Stand Initiation (S):** areas exhibiting evidence of post-stand-replacing-disturbance (e.g., hard edges, logging roads, many standing or windblown dead trees, etc.) with very low canopy cover of live trees (e.g., seed trees, heterogeneous fire, etc.).
- **Thin (T):** areas supporting a higher density of trees and canopy cover than the Open class but observers could still see forest floor. Trees in this class were generally large. Examples of this could include stands that received mechanical thinning or stands that naturally grow at intermediate stem densities.
- **Advanced Regeneration (R):** areas exhibiting essentially closed canopies, densely distributed and large trees (could not see forest floor), but exhibited a lighter green and smoother texture to the canopy (relative to the Mature class) indicative of a stand replacing disturbance in the past.
- **Mature (M):** essentially the same characteristics as Advanced Regeneration, with the exception that the trees were larger and the canopy exhibited a coarser texture and more shadowing.

Table S2: Full error matrix of estimated area proportions for the **INITIAL** 6-class classification for 2013. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth. A = Alpine, O = Open, S = Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature
Created by combining the following binary classifications:

A vs. OSTRM

M vs. OSTR

R vs. OST

T vs. OS

O vs. S

A vs. O vs. S vs. T vs. R vs. M (6-class)

2013		Reference						Map Pixels	Total	User's Accuracy
		A	O	S	T	R	M			
Map	A	0.06	0.01	0.00	0.01	0.00	0.00	54	0.07	0.76
	O	0.00	0.03	0.02	0.00	0.00	0.00	19	0.05	0.67
	S	0.00	0.05	0.11	0.06	0.00	0.00	75	0.23	0.50
	T	0.00	0.00	0.00	0.12	0.00	0.00	26	0.12	0.98
	R	0.00	0.00	0.00	0.01	0.11	0.02	33	0.14	0.80
	M	0.00	0.00	0.00	0.05	0.09	0.25	80	0.39	0.63
Sample Pixels		50	36	50	51	50	50			
Total		0.06	0.09	0.14	0.24	0.21	0.26			
Producer's Accuracy		0.98	0.36	0.82	0.49	0.54	0.94			
Overall Accuracy		0.68								
Standard Error		0.03								

Table S3: Full error matrix of estimated area proportions for the **INITIAL** 5-class classification for 2013 (Open and Stand Initiation combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth.

A = Alpine, OS = Open/Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

Created by combining the following binary classifications:

A vs. **OSTRM**

M vs. **OSTR**

R vs. **OST**

T vs. **OS**

A vs. OS vs. T vs. R vs. M (5-class)

2013		Reference					User's Accuracy
		A	OS	T	R	M	
Map							
A	A	0.06	0.01	0.01	0.00	0.00	0.08 0.76
	OS	0.00	0.21	0.06	0.00	0.00	0.28 0.75
	T	0.00	0.00	0.11	0.00	0.00	0.11 0.98
	R	0.00	0.00	0.01	0.11	0.02	0.14 0.80
	M	0.00	0.00	0.06	0.09	0.24	0.39 0.61
Total		0.06	0.23	0.25	0.21	0.25	
Producer's Accuracy		0.96	0.93	0.43	0.54	0.94	
Overall Accuracy		0.73					
Standard Error		0.02					

Table S4: Full error matrix of estimated area proportions for the **INITIAL** 5-class classification for 2013 (Advanced Regeneration and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth.

A = Alpine, O = Open, S = Stand Initiation, T = Thin, RM = Advanced Regeneration/Mature

Created by combining the following binary classifications:

A vs. OSTRM

RM vs. T

T vs. OS

O vs. S

A vs. O vs. S vs. T vs. RM (5-class)

2013		Reference					User's Total	Accuracy
		A	O	S	T	RM		
Map	A	0.06	0.01	0.00	0.01	0.00	0.07	0.77
	O	0.00	0.03	0.01	0.00	0.00	0.05	0.70
	S	0.00	0.05	0.11	0.05	0.00	0.21	0.54
	T	0.00	0.00	0.00	0.08	0.00	0.09	0.97
	RM	0.00	0.00	0.00	0.10	0.49	0.59	0.83
Total		0.06	0.09	0.13	0.23	0.49		
Producer's Accuracy		0.98	0.36	0.86	0.35	1.00		
Overall Accuracy		0.78						
Standard Error		0.02						

Table S5: Full error matrix of estimated area proportions for the **INITIAL** 4-class classification for 2013. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth. A = Alpine, OS = Open/Stand Initiation, T = Thin, RM = Advanced Regeneration/Mature
Created by combining the following binary classifications:

A vs. OSTRM

OS vs. TRM

RM vs. **T**

A vs. OS vs. T vs. RM (4-class)

2013		Reference				User's Accuracy	
		A	OS	T	RM		
Map	A	0.06	0.01	0.01	0.00	0.07	0.77
	OS	0.00	0.21	0.06	0.00	0.27	0.78
	T	0.00	0.01	0.07	0.00	0.08	0.86
	RM	0.00	0.00	0.10	0.48	0.58	0.83
Total		0.06	0.23	0.23	0.48		
Producer's Accuracy		0.96	0.91	0.30	1.00		
Overall Accuracy		0.82					
Standard Error		0.02					

Table S6: Full error matrix of estimated area proportions for the **INITIAL** 3-class classification for 2013. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth. A = Alpine, OS = Open/Stand Initiation, TRM = Thin/Advanced Regeneration/Mature

Created by combining the following binary classifications:

A vs. OSTRM

OS vs. TRM

A vs. OS vs. TRM (3-class)

2013		Reference			User's Accuracy
		A	OS	TRM	
Map	A	0.06	0.01	0.01	0.07
	OS	0.00	0.21	0.05	0.26
	TRM	0.00	0.01	0.65	0.66
		Total	0.06	0.23	0.71
		Producer's Accuracy	0.96	0.91	0.91
Overall Accuracy		0.91			
Standard Error		0.01			

Table S7: Full error matrix of estimated area proportions for the **INITIAL** 2-class classification for 2013. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth. A = Alpine, OSTRM = Open/Stand Initiation/ Thin/Advanced Regeneration/Mature

A vs. OSTRM (2-class)

2013		Reference			
		A	OSTRM	Total	User's Accuracy
Map	A	0.06	0.02	0.08	0.75
	OSTRM	0.00	0.92	0.92	1.00
		0.06	0.94		
		0.96	0.98		
Overall Accuracy		0.98			
Standard Error		0.01			

Table S8: Full error matrix of estimated area proportions for the **INITIAL** 5-class classification for 2005 (Open and Stand Initiation combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OS = Open/Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. OS vs. T vs. R vs. M (5-class)

2005		Reference					Map Pixels	Total	User's Accuracy
		A	OS	T	R	M			
Map	A	0.06	0.02	0.00	0.00	0.00	55	0.08	0.78
	OS	0.00	0.21	0.09	0.00	0.01	108	0.31	0.67
	T	0.00	0.03	0.06	0.01	0.02	32	0.12	0.54
	R	0.00	0.00	0.03	0.07	0.07	38	0.17	0.42
	M	0.00	0.00	0.02	0.16	0.14	67	0.32	0.45
Sample Pixels		50	100	50	50	50			
Total Producer's Accuracy		0.06	0.25	0.20	0.24	0.24			
Overall Accuracy		0.96	0.82	0.32	0.30	0.60			
Standard Error		0.55							
		0.03							

Table S9: Full error matrix of estimated area proportions for the **INITIAL** 4-class classification for 2005. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OS = Open/Stand Initiation, T = Thin, RM = Advanced Regeneration/ Mature

A vs. OS vs. T vs. RM (4-class)

2005		Reference				User's Accuracy	
		A	OS	T	RM		
Map	A	0.06	0.02	0.00	0.00	0.08	0.78
	OS	0.00	0.21	0.09	0.01	0.31	0.67
	T	0.00	0.03	0.06	0.03	0.12	0.54
	RM	0.00	0.00	0.05	0.44	0.49	0.90
Total		0.06	0.25	0.20	0.48		
Producer's Accuracy		0.96	0.82	0.32	0.92		
Overall Accuracy		0.78					
Standard Error		0.02					

Table S10: Full error matrix of estimated area proportions for the **INITIAL** 3-class classification for 2005 (Open, Stand Initiation, and Thin combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OST = Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

A vs. OST vs. RM (3-class)

2005		Reference				
		A	OST	RM	Total	
Map	A	0.06	0.02	0.00	0.09	0.75
	OST	0.00	0.40	0.04	0.44	0.91
	RM	0.00	0.04	0.43	0.47	0.91
Total		0.07	0.47	0.47		
Producer's Accuracy		0.96	0.87	0.92		
Overall Accuracy		0.90				
Standard Error		0.02				

Table S11: Full error matrix of estimated area proportions for the **INITIAL** 3-class classification for 2005 (Thin, Advanced Regeneration, and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
A = Alpine, OS = Open/Stand Initiation, TRM = Thin/Advanced Regeneration/ Mature

A vs. OS vs. TRM (3-class)

2005		Reference			User's Accuracy
		A	OS	TRM	
Map	A	0.06	0.02	0.00	0.08
	OS	0.00	0.20	0.11	0.31
	TRM	0.00	0.03	0.58	0.61
Total		0.06	0.24	0.69	
Producer's Accuracy		0.96	0.82	0.84	
Overall Accuracy		0.84			
Standard Error		0.02			

Table S12: Full error matrix of estimated area proportions for the **INITIAL** 2-class classification for 2005 (Advanced Regeneration and Mature combined as one class versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
AOST = Alpine/Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

AOST vs. RM (2-class)

2005		Reference			User's Accuracy
		AOST	RM	Total	
Map	AOST	0.50	0.04	0.54	0.93
	RM	0.03	0.43	0.46	0.92
Total		0.54	0.46		
Producer's Accuracy		0.94	0.92		
Overall Accuracy		0.93			
Standard Error		0.02			

Table S13: Full error matrix of estimated area proportions for the **INITIAL** 2-class classification for 2005 (Alpine versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OSTRM = Open/Stand Initiation/Thin/Advanced Regeneration/ Mature

A vs. OSTRM (2-class)

2005		Reference			
		A	OSTRM	Total	User's Accuracy
Map	A	0.07	0.03	0.09	0.71
	OSTRM	0.00	0.91	0.91	1.00
Total		0.07	0.93		
Producer's Accuracy		0.96	0.97		
Overall Accuracy		0.97			
Standard Error		0.01			

Table S14: Full error matrix of estimated area proportions for the **INITIAL** 5-class classification for 1995. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OS = Open/Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. OS vs. T vs. R vs. M (5-class)

1995		Reference					Map Pixels	Total	User's Accuracy
		A	OS	T	R	M			
Map	A	0.05	0.02	0.01	0.00	0.00	56	0.08	0.63
	OS	0.00	0.31	0.03	0.01	0.00	91	0.35	0.88
	T	0.00	0.03	0.09	0.03	0.02	43	0.17	0.53
	R	0.00	0.02	0.02	0.05	0.06	40	0.15	0.35
	M	0.00	0.01	0.04	0.09	0.10	70	0.25	0.40
Sample Pixels		50	100	50	50	50			
Total Producer's Accuracy		0.06	0.38	0.20	0.18	0.18			
Overall Accuracy		0.96	0.80	0.44	0.28	0.58			
Standard Error		0.60							
		0.03							

Table S15: Full error matrix of estimated area proportions for the **INITIAL** 4-class classification for 1995. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OS = Open/Stand Initiation, T = Thin, RM = Advanced Regeneration/ Mature

A vs. OS vs. T vs. RM (4-class)

1995		Reference				User's Accuracy	
		A	OS	T	RM		
Map	A	0.05	0.02	0.01	0.00	0.09	0.63
	OS	0.00	0.30	0.03	0.01	0.35	0.88
	T	0.00	0.03	0.09	0.05	0.17	0.54
	RM	0.00	0.03	0.07	0.31	0.40	0.76
Total		0.06	0.38	0.20	0.36		
Producer's Accuracy		0.96	0.80	0.44	0.85		
Overall Accuracy		0.75					
Standard Error		0.02					

Table S16: Full error matrix of estimated area proportions for the **INITIAL** 3-class classification for 1995 (Open, Stand Initiation, and Thin combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OST = Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

A vs. OST vs. RM (3-class)

1995		Reference			User's Accuracy	
		A	OST	RM		
Map	A	0.05	0.03	0.00	0.09	0.63
	OST	0.00	0.47	0.05	0.52	0.90
	RM	0.00	0.09	0.30	0.39	0.76
Total		0.06	0.59	0.35		
Producer's Accuracy		0.96	0.79	0.85		
Overall Accuracy		0.82				
Standard Error		0.02				

Table S17: Full error matrix of estimated area proportions for the INITIAL 3-class classification for 1995 (Thin, Advanced Regeneration, and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
A = Alpine, OS = Open/Stand Initiation, TRM = Thin/Advanced Regeneration/ Mature

A vs. OS vs. TRM (3-class)

1995		Reference				User's Accuracy
		A	OS	TRM	Total	
Map	A	0.05	0.02	0.01	0.08	0.64
	OS	0.00	0.30	0.04	0.34	0.88
	TRM	0.00	0.06	0.52	0.58	0.90
Total		0.06	0.37	0.57		
Producer's Accuracy		0.96	0.80	0.91		
Overall Accuracy		0.87				
Standard Error		0.02				

Table S18: Full error matrix of estimated area proportions for the **INITIAL** 2-class classification for 1995 (Advanced Regeneration and Mature combined as one class versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
AOST = Alpine/Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

AOST vs. RM (2-class)

1995		Reference			User's Accuracy
		AOST	RM	Total	
Map	AOST	0.58	0.05	0.63	0.92
	RM	0.08	0.29	0.37	0.78
Total		0.66	0.34		
Producer's Accuracy		0.88	0.85		
Overall Accuracy		0.87			
Standard Error		0.02			

Table S19: Full error matrix of estimated area proportions for the **INITIAL** 2-class classification for 1995 (Alpine versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OSTRM = Open/Stand Initiation/Thin/Advanced Regeneration/ Mature

A vs. OSTRM (2-class)

1995		Reference			
		A	OSTRM	Total	User's Accuracy
Map	A	0.05	0.03	0.08	0.64
	OSTRM	0.00	0.91	0.92	1.00
Total		0.06	0.94		
Producer's Accuracy		0.96	0.97		
Overall Accuracy		0.97			
Standard Error		0.0049			

Table S20: Full error matrix of estimated area proportions for the INITIAL 5-class classification for 1975. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.

A = Alpine, OS = Open/Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. OS vs. T vs. R vs. M (5-class)

1975		Reference					Map Pixels	Total	User's Accuracy
		A	OS	T	R	M			
Map	A	0.07	0.00	0.00	0.00	0.00	50	0.08	0.94
	OS	0.00	0.35	0.05	0.01	0.01	100	0.41	0.84
	T	0.00	0.07	0.04	0.00	0.01	32	0.13	0.33
	R	0.00	0.01	0.04	0.01	0.02	21	0.07	0.12
	M	0.00	0.03	0.08	0.09	0.10	108	0.31	0.33
Sample Pixels		50	107	51	50	53			
Total Producer's Accuracy		0.08	0.46	0.21	0.11	0.14			
Overall Accuracy		0.96	0.75	0.20	0.08	0.74			
Standard Error		0.57							
		0.02							

Table S21: Full error matrix of estimated area proportions for the **INITIAL** 4-class classification for 1975. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.

A = Alpine, OS = Open/Stand Initiation, T = Thin, RM = Advanced Regeneration/ Mature

A vs. OS vs. T vs. RM (4-class)

1975		Reference				User's Accuracy	
		A	OS	T	RM		
Map	A	0.07	0.00	0.00	0.01	0.08	0.93
	OS	0.00	0.34	0.04	0.02	0.41	0.85
	T	0.00	0.07	0.04	0.01	0.12	0.30
	RM	0.00	0.04	0.11	0.24	0.39	0.62
Total		0.08	0.46	0.19	0.28		
Producer's Accuracy		0.96	0.75	0.20	0.87		
Overall Accuracy		0.70					
Standard Error		0.02					

Table S22: Full error matrix of estimated area proportions for the **INITIAL** 3-class classification for 1975 (Open, Stand Initiation, and Thin combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.

A = Alpine, OST = Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

A vs. OST vs. RM (3-class)

1975		Reference				
		A	OST	RM	Total	
Map	A	0.08	0.00	0.01	0.08	0.94
	OST	0.00	0.49	0.03	0.52	0.94
	RM	0.00	0.16	0.24	0.40	0.59
Total		0.08	0.65	0.27		
Producer's Accuracy		0.96	0.75	0.87		
Overall Accuracy		0.80				
Standard Error		0.02				

Table S23: Full error matrix of estimated area proportions for the **INITIAL** 3-class classification for 1975 (Thin, Advanced Regeneration, and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.
A = Alpine, OS = Open/Stand Initiation, TRM = Thin/Advanced Regeneration/ Mature

A vs. OS vs. TRM (3-class)

1975		Reference			User's Accuracy
		A	OS	TRM	
Map	A	0.07	0.00	0.01	0.08
	OS	0.00	0.31	0.06	0.37
	TRM	0.00	0.10	0.45	0.55
Total		0.08	0.41	0.51	
Producer's Accuracy		0.96	0.75	0.87	
Overall Accuracy		0.83			
Standard Error		0.02			

Table S24: Full error matrix of estimated area proportions for the **INITIAL** 2-class classification for 1975 (Advanced Regeneration and Mature combined as one class versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.
 AOST = Alpine/Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

AOST vs. RM (2-class)

1975		Reference				
		AOST	RM	Total	User's Accuracy	
Map	AOST	0.60	0.03	0.63	0.95	
	RM	0.14	0.23	0.37	0.63	
		0.74	0.26			
Producer's Accuracy		0.81	0.87			
Overall Accuracy		0.83				
Standard Error		0.02				

Table S25: Full error matrix of estimated area proportions for the **INITIAL** 2-class classification for 1975 (Alpine versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.

A = Alpine, OSTRM = Open/Stand Initiation/Thin/Advanced Regeneration/ Mature

A vs. OSTRM (2-class)

1975		Reference				
		A	OSTRM	Total	User's Accuracy	
Map	A	0.07	0.01	0.08	0.91	
	OSTRM	0.00	0.92	0.92	1.00	
		0.08	0.92			
		0.96	0.99			
Overall Accuracy		0.99				
Standard Error		0.0045				

Table S26: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 6-class classification for 2013. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth.

A = Alpine, O = Open, S = Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. O vs. S vs. T vs. R vs. M (6-class)

2013		Reference						Map Pixels	Total	User's Accuracy
		A	O	S	T	R	M			
Map	A	0.06	0.01	0.00	0.01	0.00	0.00	56	0.09	0.71
	O	0.00	0.11	0.03	0.06	0.00	0.00	58	0.19	0.56
	S	0.00	0.00	0.08	0.01	0.00	0.00	40	0.10	0.82
	T	0.00	0.00	0.00	0.10	0.00	0.00	22	0.10	1.00
	R	0.00	0.00	0.00	0.02	0.12	0.01	34	0.15	0.80
	M	0.00	0.00	0.00	0.03	0.09	0.24	77	0.37	0.66
Sample Pixels		50	36	50	51	50	50			
Total		0.06	0.11	0.12	0.24	0.21	0.25			
Producer's Accuracy		0.98	0.94	0.72	0.43	0.56	0.96			
Overall Accuracy		0.72								
Standard Error		0.02								

Table S27: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 5-class classification for 2013 (Open and Stand Initiation combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth.

A = Alpine, OS = Open/Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. OS vs. T vs. R vs. M (5-class)

2013		Reference					User's Accuracy	
		A	OS	T	R	M		
Map	A	0.06	0.01	0.01	0.00	0.00	0.08	0.71
	OS	0.00	0.22	0.07	0.00	0.00	0.30	0.75
	T	0.00	0.00	0.10	0.00	0.00	0.10	1.00
	R	0.00	0.00	0.02	0.12	0.01	0.15	0.81
	M	0.00	0.00	0.03	0.09	0.24	0.37	0.66
Total		0.06	0.23	0.24	0.21	0.25		
Producer's Accuracy		0.98	0.94	0.43	0.56	0.96		
Overall Accuracy		0.75						
Standard Error		0.02						

Table S28: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 5-class classification for 2013 (Advanced Regeneration and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth.

A = Alpine, O = Open, S = Stand Initiation, T = Thin, RM = Advanced Regeneration/Mature

A vs. O vs. S vs. T vs. RM (5-class)

2013		Reference					User's Accuracy	
		A	O	S	T	RM		
Map	A	0.06	0.01	0.00	0.01	0.00	0.09	0.71
	O	0.00	0.11	0.03	0.06	0.00	0.19	0.56
	S	0.00	0.00	0.08	0.01	0.00	0.10	0.82
	T	0.00	0.00	0.00	0.10	0.00	0.10	1.00
	RM	0.00	0.00	0.00	0.05	0.46	0.52	0.89
Total		0.06	0.11	0.12	0.24	0.47		
Producer's Accuracy		0.98	0.94	0.72	0.43	0.99		
Overall Accuracy		0.82						
Standard Error		0.02						

Table S29: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 4-class classification for 2013. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth.

A = Alpine, OS = Open/Stand Initiation, T = Thin, RM = Advanced Regeneration/ Mature

A vs. OS vs. T vs. RM (4-class)

2013		Reference				User's Accuracy	
		A	OS	T	RM		
Map	A	0.06	0.01	0.01	0.00	0.08	0.71
	OS	0.00	0.22	0.07	0.00	0.30	0.74
	T	0.00	0.00	0.10	0.00	0.10	1.00
	RM	0.00	0.00	0.05	0.46	0.52	0.90
Total		0.06	0.23	0.24	0.47		
Producer's Accuracy		0.98	0.94	0.43	0.99		
Overall Accuracy		0.85					
Standard Error		0.02					

Table S30: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 3-class classification for 2013 (Open, Stand Initiation, and Thin combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth.
A = Alpine, OST = Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

A vs. OST vs. RM (3-class)

2013		Reference				
		A	OST	RM	Total	User's Accuracy
Map	A	0.06	0.02	0.00	0.08	0.72
	OST	0.00	0.40	0.00	0.41	0.99
	RM	0.00	0.04	0.46	0.50	0.92
Total		0.06	0.47	0.47		
Producer's Accuracy		0.98	0.86	0.99		
Overall Accuracy		0.93				
Standard Error		0.01				

Table S31: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 3-class classification for 2013 (Thin, Advanced Regeneration, and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth.

A = Alpine, OS = Open/Stand Initiation, TRM = Thin/Advanced Regeneration/ Mature

A vs. OS vs. TRM (3-class)

2013		Reference			User's Accuracy	
		A	OS	TRM		
Map	A	0.06	0.01	0.01	0.08	0.71
	OS	0.00	0.22	0.07	0.30	0.74
	TRM	0.00	0.00	0.62	0.62	1.00
Total		0.06	0.23	0.70		
Producer's Accuracy		0.98	0.94	0.87		
Overall Accuracy		0.90				
Standard Error		0.01				

Table S32: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 2-class classification for 2013 (Advanced Regeneration and Mature combined as one class versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth.
AOST = Alpine/Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

AOST vs. RM (2-class)

2013		Reference			User's Accuracy
		AOST	RM	Total	
Map	AOST	0.50	0.00	0.50	0.99
	RM	0.03	0.46	0.50	0.93
Total		0.53	0.47		
Producer's Accuracy		0.94	0.99		
Overall Accuracy		0.96			
Standard Error		0.01			

Table S33: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 2-class classification for 2013 (Alpine versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 1-m NAIP imagery through GoogleEarth.

A = Alpine, OSTRM = Open/Stand Initiation/Thin/Advanced Regeneration/ Mature

A vs. OSTRM (2-class)

2013		Reference				
		A	OSTRM	Total	User's Accuracy	
Map	A	0.06	0.03	0.09	0.69	
	OSTRM	0.00	0.91	0.91	1.00	
		0.06	0.94			
		0.98	0.97			
Overall Accuracy		0.97				
Standard Error		0.0047				

Table S34: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 6-class classification for 2005. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, O = Open, S = Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. O vs. S vs. T vs. R vs. M (6-class)

2005		Reference						Map Pixels	Total	User's Accuracy
		A	O	S	T	R	M			
Map	A	0.06	0.01	0.00	0.00	0.00	0.00	54	0.08	0.79
	O	0.00	0.12	0.02	0.08	0.00	0.00	73	0.23	0.52
	S	0.00	0.00	0.08	0.02	0.00	0.00	41	0.10	0.80
	T	0.00	0.01	0.00	0.07	0.01	0.01	27	0.11	0.66
	R	0.00	0.00	0.00	0.02	0.07	0.05	29	0.14	0.50
	M	0.00	0.01	0.00	0.02	0.16	0.17	76	0.36	0.48
Sample Pixels		50	50	50	50	50	50			
Total		0.07	0.14	0.11	0.21	0.24	0.24			
Producer's Accuracy		0.96	0.82	0.72	0.34	0.28	0.72			
Overall Accuracy		0.57								
Standard Error		0.03								

Table S35: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 5-class classification for 2005 (Open and Stand Initiation combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
A = Alpine, OS = Open/Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. OS vs. T vs. R vs. M (5-class)

2005		Reference					User's Accuracy
		A	OS	T	R	M	
Map	A	0.06	0.01	0.00	0.00	0.00	0.08 0.79
	OS	0.00	0.22	0.09	0.00	0.00	0.33 0.69
	T	0.00	0.01	0.07	0.01	0.01	0.11 0.66
	R	0.00	0.00	0.02	0.07	0.05	0.13 0.50
	M	0.00	0.01	0.02	0.16	0.17	0.35 0.48
Total		0.07	0.25	0.21	0.24	0.24	
Producer's Accuracy		0.96	0.88	0.34	0.28	0.72	
Overall Accuracy		0.59					
Standard Error		0.03					

Table S36: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 5-class classification for 2005 (Advanced Regeneration and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
A = Alpine, O = Open, S = Stand Initiation, T = Thin, RM = Advanced Regeneration/Mature

A vs. O vs. S vs. T vs. RM (5-class)

2005		Reference					User's Accuracy
		A	O	S	T	RM	
Map	A	0.06	0.01	0.00	0.00	0.00	0.08 0.79
	O	0.00	0.12	0.02	0.07	0.01	0.23 0.52
	S	0.00	0.00	0.08	0.02	0.00	0.10 0.80
	T	0.00	0.01	0.00	0.07	0.02	0.11 0.66
	RM	0.00	0.01	0.00	0.04	0.44	0.49 0.90
Total		0.07	0.14	0.11	0.21	0.48	
Producer's Accuracy		0.96	0.82	0.72	0.34	0.93	
Overall Accuracy		0.77					
Standard Error		0.02					

Table S37: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 4-class classification for 2005. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OS = Open/Stand Initiation, T = Thin, RM = Advanced Regeneration/ Mature

A vs. OS vs. T vs. RM (4-class)

2005		Reference				User's Accuracy
		A	OS	T	RM	
Map	A	0.06	0.01	0.00	0.00	0.08
	OS	0.00	0.22	0.09	0.01	0.33
	T	0.00	0.01	0.07	0.02	0.11
	RM	0.00	0.01	0.04	0.44	0.49
Total		0.07	0.25	0.20	0.48	
Producer's Accuracy		0.96	0.88	0.34	0.93	
Overall Accuracy		0.80				
Standard Error		0.02				

Table S38: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 3-class classification for 2005 (Open, Stand Initiation, and Thin combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
A = Alpine, OST = Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

A vs. OST vs. RM (3-class)

2005		Reference					
		A	OST	RM	Total	User's Accuracy	
Map	A	0.06	0.02	0.00	0.08	0.77	
	OST	0.00	0.41	0.03	0.45	0.92	
	RM	0.00	0.04	0.43	0.47	0.92	
Total		0.07	0.47	0.46			
Producer's Accuracy		0.96	0.88	0.93			
Overall Accuracy		0.91					
Standard Error		0.02					

Table S39: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 3-class classification for 2005 (Thin, Advanced Regeneration, and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
A = Alpine, OS = Open/Stand Initiation, TRM = Thin/Advanced Regeneration/ Mature

A vs. OS vs. TRM (3-class)

2005		Reference				User's Accuracy
		A	OS	TRM	Total	
Map	A	0.06	0.01	0.00	0.08	0.79
	OS	0.00	0.22	0.11	0.33	0.66
	TRM	0.00	0.02	0.57	0.59	0.97
Total		0.07	0.25	0.68		
Producer's Accuracy		0.96	0.88	0.83		
Overall Accuracy		0.85				
Standard Error		0.02				

Table S40: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 2-class classification for 2005 (Advanced Regeneration and Mature combined as one class versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
AOST = Alpine/Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

AOST vs. RM (2-class)

2005		Reference			User's Accuracy
		AOST	RM	Total	
Map	AOST	0.51	0.03	0.54	0.94
	RM	0.03	0.43	0.46	0.93
Total		0.54	0.46		
Producer's Accuracy		0.94	0.93		
Overall Accuracy		0.94			
Standard Error		0.01			

Table S41: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 2-class classification for 2005 (Alpine versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OSTRM = Open/Stand Initiation/Thin/Advanced Regeneration/ Mature

A vs. OSTRM (2-class)

2005		Reference			
		A	OSTRM	Total	User's Accuracy
Map	A	0.07	0.02	0.09	0.75
	OSTRM	0.00	0.91	0.91	1.00
Total		0.07	0.93		
Producer's Accuracy		0.96	0.98		
Overall Accuracy		0.97			
Standard Error		0.01			

Table S42: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 6-class classification for 1995. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, O = Open, S = Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. O vs. S vs. T vs. R vs. M (6-class)

1995		Reference						Map Pixels	Total	User's Accuracy
		A	O	S	T	R	M			
Map	A	0.07	0.01	0.00	0.00	0.00	0.00	53	0.80	0.81
	O	0.00	0.12	0.02	0.05	0.00	0.00	65	0.20	0.61
	S	0.00	0.00	0.07	0.00	0.00	0.00	38	0.09	0.80
	T	0.00	0.01	0.00	0.10	0.02	0.01	36	0.15	0.65
	R	0.00	0.00	0.00	0.02	0.04	0.02	20	0.09	0.50
	M	0.00	0.00	0.01	0.04	0.16	0.19	88	0.40	0.47
Sample Pixels		50	50	50	50	50	50			
Total		0.07	0.16	0.10	0.21	0.24	0.23			
Producer's Accuracy		0.96	0.80	0.68	0.46	0.18	0.82			
Overall Accuracy		0.58								
Standard Error		0.03								

Table S43: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 5-class classification for 1995 (Open and Stand Initiation combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
A = Alpine, OS = Open/Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. OS vs. T vs. R vs. M (5-class)

1995		Reference					User's Accuracy	
		A	OS	T	R	M		
Map	A	0.06	0.01	0.00	0.00	0.00	0.08	0.82
	OS	0.00	0.22	0.05	0.01	0.01	0.29	0.76
	T	0.00	0.01	0.09	0.02	0.01	0.14	0.65
	R	0.00	0.01	0.02	0.04	0.02	0.09	0.50
	M	0.00	0.01	0.04	0.16	0.19	0.40	0.47
Total		0.07	0.26	0.20	0.24	0.23		
Producer's Accuracy		0.96	0.85	0.46	0.18	0.82		
Overall Accuracy		0.61						
Standard Error		0.03						

Table S44: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 5-class classification for 1995 (Advanced Regeneration and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, O = Open, S = Stand Initiation, T = Thin, RM = Advanced Regeneration/Mature

A vs. O vs. S vs. T vs. RM (5-class)

1995		Reference					User's Accuracy
		A	O	S	T	RM	
Map	A	0.07	0.01	0.00	0.00	0.00	0.08 0.81
	O	0.00	0.12	0.02	0.04	0.01	0.20 0.62
	S	0.00	0.00	0.07	0.00	0.01	0.08 0.80
	T	0.00	0.01	0.00	0.09	0.04	0.15 0.64
	RM	0.00	0.01	0.01	0.06	0.42	0.49 0.86
Total		0.07	0.15	0.10	0.20	0.48	
Producer's Accuracy		0.96	0.80	0.68	0.46	0.88	
Overall Accuracy		0.77					
Standard Error		0.03					

Table S45: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 4-class classification for 1995. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OS = Open/Stand Initiation, T = Thin, RM = Advanced Regeneration/ Mature

A vs. OS vs. T vs. RM (4-class)

1995		Reference				User's Accuracy
		A	OS	T	RM	
Map	A	0.06	0.01	0.00	0.00	0.08
	OS	0.00	0.22	0.05	0.02	0.29
	T	0.00	0.01	0.09	0.04	0.14
	RM	0.00	0.02	0.06	0.42	0.49
Total		0.07	0.26	0.20	0.48	
Producer's Accuracy		0.96	0.85	0.46	0.88	
Overall Accuracy		0.80				
Standard Error		0.02				

Table S46: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 3-class classification for 1995 (Open, Stand Initiation, and Thin combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
A = Alpine, OST = Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

A vs. OST vs. RM (3-class)

1995		Reference			User's Accuracy
		A	OST	RM	
Map	A	0.07	0.02	0.00	0.08
	OST	0.00	0.39	0.06	0.45
	RM	0.00	0.06	0.41	0.47
Total		0.07	0.46	0.47	
Producer's Accuracy		0.96	0.83	0.88	
Overall Accuracy		0.86			
Standard Error		0.02			

Table S47: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 3-class classification for 1995 (Thin, Advanced Regeneration, and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
A = Alpine, OS = Open/Stand Initiation, TRM = Thin/Advanced Regeneration/ Mature

A vs. OS vs. TRM (3-class)

1995		Reference				User's Accuracy
		A	OS	TRM	Total	
Map	A	0.06	0.01	0.00	0.08	0.81
	OS	0.00	0.22	0.07	0.30	0.75
	TRM	0.00	0.03	0.60	0.62	0.95
Total		0.07	0.26	0.67		
Producer's Accuracy		0.96	0.85	0.89		
Overall Accuracy		0.88				
Standard Error		0.02				

Table S48: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 2-class classification for 1995 (Advanced Regeneration and Mature combined as one class versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.
 AOST = Alpine/Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

AOST vs. RM (2-class)

1995		Reference			User's Accuracy
		AOST	RM	Total	
Map	AOST	0.48	0.06	0.54	0.90
	RM	0.05	0.41	0.46	0.88
Total		0.54	0.46		
Producer's Accuracy		0.90	0.88		
Overall Accuracy		0.89			
Standard Error		0.02			

Table S49: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 2-class classification for 1995 (Alpine versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from 30-m Landsat imagery through GoogleEarth.

A = Alpine, OSTRM = Open/Stand Initiation/Thin/Advanced Regeneration/ Mature

A vs. OSTRM (2-class)

1995		Reference			
		A	OSTRM	Total	User's Accuracy
Map	A	0.07	0.02	0.09	0.78
	OSTRM	0.00	0.91	0.91	1.00
Total		0.07	0.93		
Producer's Accuracy		0.96	0.98		
Overall Accuracy		0.98			
Standard Error		0.01			

Table S50: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 6-class classification for 1975. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.
A = Alpine, O = Open, S = Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. O vs. S vs. T vs. R vs. M (6-class)

1975		Reference						Map Pixels	Total	User's Accuracy
		A	O	S	T	R	M			
Map	A	0.08	0.00	0.00	0.00	0.00	0.00	48	0.08	1.00
	O	0.00	0.11	0.12	0.03	0.01	0.00	100	0.28	0.39
	S	0.00	0.00	0.00	0.03	0.00	0.00	9	0.04	0.00
	T	0.00	0.00	0.03	0.04	0.01	0.01	25	0.09	0.47
	R	0.00	0.00	0.00	0.01	0.01	0.01	9	0.04	0.34
	M	0.00	0.01	0.00	0.10	0.17	0.19	119	0.48	0.40
Sample Pixels		50	54	52	51	50	53			
Total		0.08	0.13	0.16	0.22	0.20	0.21			
Producer's Accuracy		0.96	0.87	0.00	0.20	0.06	0.91			
Overall Accuracy		0.43								
Standard Error		0.03								

Table S51: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 5-class classification for 1975 (Open and Stand Initiation combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.
A = Alpine, OS = Open/Stand Initiation, T = Thin, R = Advanced Regeneration, M = Mature

A vs. OS vs. T vs. R vs. M (5-class)

1975		Reference					User's Accuracy
		A	OS	T	R	M	
Map	A	0.08	0.00	0.00	0.00	0.00	0.08 1.00
	OS	0.00	0.25	0.06	0.01	0.00	0.33 0.77
	T	0.00	0.03	0.04	0.01	0.01	0.09 0.46
	R	0.00	0.00	0.01	0.01	0.01	0.04 0.35
	M	0.00	0.01	0.09	0.18	0.19	0.47 0.40
Total		0.08	0.30	0.21	0.20	0.21	
Producer's Accuracy		0.96	0.84	0.20	0.06	0.91	
Overall Accuracy		0.57					
Standard Error		0.03					

Table S52: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 5-class classification for 1975 (Advanced Regeneration and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.
A = Alpine, O = Open, S = Stand Initiation, T = Thin, RM = Advanced Regeneration/Mature

A vs. O vs. S vs. T vs. RM (5-class)

1975		Reference					User's Accuracy
		A	O	S	T	RM	
Map	A	0.08	0.00	0.00	0.00	0.00	0.08 1.00
	O	0.00	0.11	0.12	0.03	0.01	0.28 0.40
	S	0.00	0.00	0.00	0.03	0.00	0.03 0.00
	T	0.00	0.00	0.03	0.04	0.02	0.09 0.46
	RM	0.00	0.01	0.00	0.11	0.40	0.52 0.76
Total		0.08	0.13	0.15	0.21	0.42	
Producer's Accuracy		0.96	0.87	0.00	0.20	0.93	
Overall Accuracy		0.63					
Standard Error		0.02					

Table S53: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 4-class classification for 1975. Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.
A = Alpine, OS = Open/Stand Initiation, T = Thin, RM = Advanced Regeneration/ Mature

A vs. OS vs. T vs. RM (4-class)

1975		Reference				User's Accuracy	
		A	OS	T	RM		
Map	A	0.08	0.00	0.00	0.00	0.08	1.00
	OS	0.00	0.25	0.06	0.01	0.32	0.77
	T	0.00	0.03	0.04	0.02	0.09	0.45
	RM	0.00	0.02	0.10	0.40	0.51	0.77
Total		0.08	0.29	0.20	0.43		
Producer's Accuracy		0.96	0.84	0.20	0.93		
Overall Accuracy		0.76					
Standard Error		0.03					

Table S54: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 3-class classification for 1975 (Open, Stand Initiation, and Thin combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.
A = Alpine, OST = Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

A vs. OST vs. RM (3-class)

1975		Reference			User's Accuracy	
		A	OST	RM		
Map	A	0.08	0.00	0.00	0.08	1.00
	OST	0.00	0.40	0.03	0.43	0.93
	RM	0.00	0.10	0.39	0.49	0.79
Total		0.09	0.50	0.42		
Producer's Accuracy		0.96	0.80	0.93		
Overall Accuracy		0.87				
Standard Error		0.02				

Table S55: Full error matrix of estimated area proportions for the FINAL (time-series-informed) 3-class classification for 1975 (Thin, Advanced Regeneration, and Mature combined as one class). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.
A = Alpine, OS = Open/Stand Initiation, TRM = Thin/Advanced Regeneration/ Mature

A vs. OS vs. TRM (3-class)

1975		Reference			User's Accuracy	
		A	OS	TRM		
Map	A	0.08	0.00	0.00	0.08	1.00
	OS	0.00	0.23	0.07	0.31	0.75
	TRM	0.00	0.04	0.56	0.61	0.93
Total		0.08	0.28	0.64		
Producer's Accuracy		0.96	0.84	0.88		
Overall Accuracy		0.88				
Standard Error		0.02				

Table S56: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 2-class classification for 1975 (Advanced Regeneration and Mature combined as one class versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000. AOST = Alpine/Open/Stand Initiation/Thin, RM = Advanced Regeneration/ Mature

AOST vs. RM (2-class)

1975		Reference				
		AOST	RM	Total	User's Accuracy	
Map	AOST	0.50	0.03	0.52	0.95	
	RM	0.09	0.39	0.48	0.81	
		0.59	0.41			
Producer's Accuracy		0.85	0.93			
Overall Accuracy		0.88				
Standard Error		0.02				

Table S57: Full error matrix of estimated area proportions for the **FINAL** (time-series-informed) 2-class classification for 1975 (Alpine versus everything else). Includes overall accuracy, standard error, user's accuracies, and producer's accuracies. Validation data collected from historic aerial photographs with scales of 1:16,000 to 1:40:000.
A = Alpine, OSTRM = Open/Stand Initiation/Thin/Advanced Regeneration/ Mature

A vs. OSTRM (2-class)

1975		Reference						
		A	OSTRM	Total	User's Accuracy			
Map	A	0.08	0.00	0.08	1.00			
	OSTRM	0.00	0.91	0.92	1.00			
		0.09	0.91					
		0.96	1.00					
Overall Accuracy		1.00						
Standard Error		0.0035						

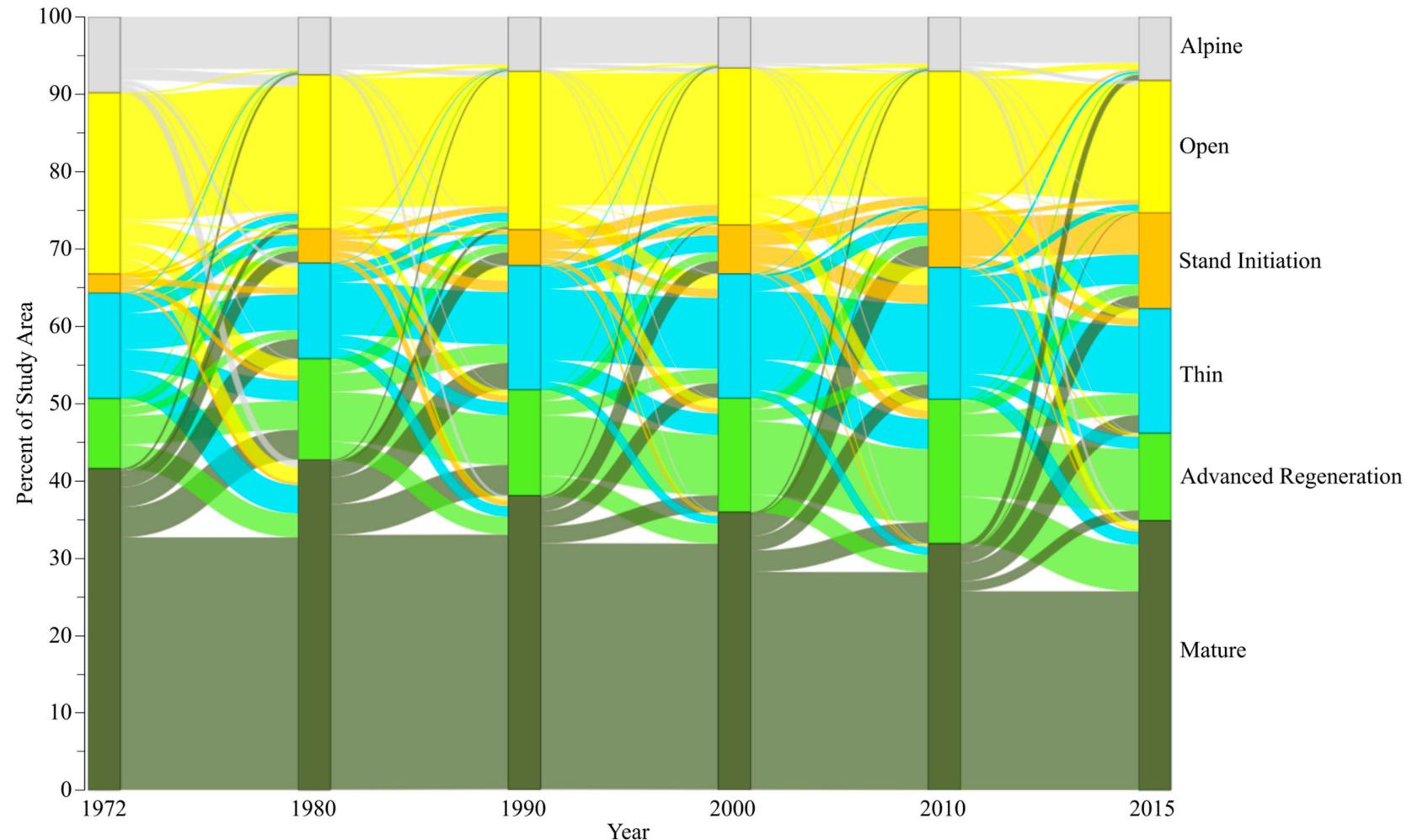


Figure S1: Decadal Sankey diagram of the state transition from one class to another of the six forest structure classes from 1972 to 1980, 1980 to 1990, 1990 to 2000, 2000 to 2010, and 2010 to 2015.

Logic S1: Logic Used for Time-Series-Informed Rules

These processes were performed within the Spatial Modeler in ERDAS Imagine 2014.

LEGEND

A = Alpine
OS = Open/Stand Initiation
O = Open
S = Stand Initiation
T = Thin
R = Advanced Regeneration
M = Mature
U = Unknown

1. Gap fill #1

Where no data existed in a year – due to clouds, scan line gaps, and/or missing scenes for that year: Utilized data from surrounding years by filling with the class of the previous year if it was not Unknown, or with the following year if the class of the previous year was Unknown; remained Unknown if the classes of the surrounding years were Unknown.

INPUT: **INITIAL** = the initial classification time series stack

1972

EITHER **INITIAL(1973)**
IF (**INITIAL(1973) != U** AND **INITIAL(1972) == U**)
OR **INITIAL(1972)**
OTHERWISE

1973

EITHER **INITIAL(1973)**
IF (**INITIAL(1973) != U**)
OR
CONDITIONAL {
(INITIAL(1972) != U) INITIAL(1972),
(INITIAL(1972) == U AND INITIAL(1974) == U) INITIAL(1973),
(INITIAL(1972) == U AND INITIAL(1974) != U) INITIAL(1974)
} OTHERWISE

2014

EITHER **INITIAL(2014)**
IF (**INITIAL(2014) != U**)
OR
CONDITIONAL {

(INITIAL(2013) != U) INITIAL(2013),
(INITIAL(2013) == U AND INITIAL(2015) == U) INITIAL(2014),
(INITIAL(2013) == U AND INITIAL(2015) != U) INITIAL(2015)
} OTHERWISE

2015

EITHER **INITIAL(2014)**
IF **(INITIAL(2014) != U AND INITIAL(2015) == U)**
OR **INITIAL(2015)**
OTHERWISE

OUTPUT: **GAP1**

2. Continuity fill

Looked for consistent Alpine, Mature, and Open/Stand Initiation (i.e., 1972 = A, 2015 = A, and the majority of the time series at this pixel = A, then fill this pixel with A).

INPUT: **GAP1**

INPUT: **majority** = the most commonly occurring value for that pixel within the time series

1972

EITHER **GAP1(1972)** IF **first year != last year**) OR
CONDITIONAL {
(GAP1(1973) == majority AND majority == A) A,
(GAP1(1973) == majority AND majority == M) M,
(GAP1(1973) == majority AND majority == OS) OS,
(GAP1(1973) == majority AND majority > OS) GAP1(1972),
(GAP1(1973) != majority) GAP1(1972)
}
OTHERWISE

1973

EITHER **GAP1(1973)** IF **first year != last year**) OR
CONDITIONAL {
first year == majority AND majority == A) A ,
first year == majority AND majority == M) M ,
first year == majority AND majority == OS) OS ,
first year == majority AND majority > OS) GAP1(1973),
first year != majority) GAP1(1973)
}
OTHERWISE

.

.

.

2014

EITHER **GAP1(2014)** IF **first year != last year**) OR
CONDITIONAL {
first year == majority AND majority == A) A ,
first year == majority AND majority == M) M ,
first year == majority AND majority == OS) OS ,
first year == majority AND majority > OS) GAP1(2014),
first year != majority) GAP1(2014)
}
OTHERWISE

2015

EITHER **GAP1(2015)** IF **first year != last year**) OR
CONDITIONAL {

```
(GAP1(2014) == majority AND majority == A) A,  
(GAP1(2014) == majority AND majority == M) M,  
(GAP1(2014) == majority AND majority == OS) OS,  
(GAP1(2014) == majority AND majority > OS) GAP1(2015),  
(GAP1(2014) != majority) GAP1(2015)  
}  
OTHERWISE
```

OUTPUT: **CONTINUITY**

3. Smoothing

Looked for single occurrences within the time series (i.e., if 1973 = Thin, 1974 = Open/Stand Initiation, and 1975 = Thin, fill the 1974 pixel with Thin).

INPUT: CONTINUITY

1972

EITHER **CONTINUITY(1973)** IF (**CONTINUITY(1972) == U**
AND **CONTINUITY(1973) != U**)

OR

CONTINUITY(1972)

OTHERWISE

1973

EITHER **CONTINUITY(1972)** IF (**CONTINUITY(1972) == CONTINUITY(1974)**
AND **CONTINUITY(1972) != U**)

OR

CONTINUITY(1973)

OTHERWISE

.

2014

EITHER **CONTINUITY(2013)** IF (**CONTINUITY(2013) == CONTINUITY(2015)**
AND **CONTINUITY(2013) != U**)

OR

CONTINUITY(2014)

OTHERWISE

2015

EITHER **CONTINUITY(2014)** IF (**CONTINUITY(2015) == U**
AND **CONTINUITY(2014) != U**)

OR

CONTINUITY(2015)

OTHERWISE

OUTPUT: SMOOTH

4. OS Separation

Separate Open from Stand Initiation: based on whether previous years were Mature, Advanced Regeneration, or Thin (we expect that Open would not follow Mature, Advanced Regeneration, or Thin directly, while Stand Initiation can follow them directly); does not include any changes to 1972.

INPUT: SMOOTH

INPUT: majority = the most commonly occurring value for that pixel within the time series

1973

EITHER **SMOOTH(1973)** IF (**SMOOTH(1973)** != OS) OR
EITHER S IF (**SMOOTH(1972)** == T,R, or M) OR

O OTHERWISE
OTHERWISE

1974

EITHER **SMOOTH(1974)** IF (**SMOOTH(1974)** != OS) OR
EITHER S IF (**SMOOTH(1972-1974)** contains T, R, or M
AND **majority(1972-1974)** == T, R, or M) OR
O OTHERWISE
OTHERWISE

2014

EITHER **SMOOTH(2014)** IF (**SMOOTH(2014)** != 3) OR
EITHER S IF (**SMOOTH(1972-2014)** contains T, R, or M
AND **majority(1972-2014)** == T, R, or M) OR
O OTHERWISE
OTHERWISE

2015

EITHER **SMOOTH(2015)** IF (**SMOOTH(2015)** != 3) OR
EITHER S IF (**SMOOTH(1972-2015)** contains T, R, or M
AND **majority(1972-2015)** == T, R, or M) OR
O OTHERWISE
OTHERWISE

OUTPUT: OSSEP

5. Gap fill #2

Utilized data from surrounding years by filling with the class of the previous year if it was not Unknown, or with the following year if the class of the previous year was Unknown; remained Unknown if the classes of the surrounding years were Unknown.

INPUT: **OSSEP**

INPUT: **majority** = the most commonly occurring value for that pixel within the time series

INPUT: **diversity** = the number of different values for that pixel within the time series

INPUT: **minority** = the least commonly occurring value for that pixel within the time series

1972

EITHER **OSSEP(1972)** IF (**OSSEP(1972) != U**) OR

CONDITIONAL {

(**majority == U AND diversity == 2**) **minority**,
(**majority == U AND diversity != 2**) **U**,
(**majority == M AND diversity == 2**) **M**,
(**majority == A AND diversity == 2**) **A**,
(**majority == O AND diversity == 2**) **O**,
(**majority == OS AND diversity == 2**) **OS**,
(**majority == M AND diversity != 2**) **U**,
(**majority == A AND diversity != 2**) **U**,
(**majority == O AND diversity != 2**) **U**,
(**majority == OS AND diversity != 2**) **U**,
(**majority == T OR majority == R OR majority == S**) **U**

}

OTHERWISE

1973

EITHER **OSSEP(1973)** IF (**OSSEP(1973) != 9**) OR

CONDITIONAL {

(**majority == U AND diversity == 2**) **minority**,
(**majority == U AND diversity != 2**) **U**,
(**majority == M AND diversity == 2**) **M**,
(**majority == A AND diversity == 2**) **A**,
(**majority == O AND diversity == 2**) **O**,
(**majority == OS AND diversity == 2**) **OS**,
(**majority == M AND diversity != 2**) **U**,
(**majority == A AND diversity != 2**) **U**,
(**majority == O AND diversity != 2**) **U**,
(**majority == OS AND diversity != 2**) **U**,
(**majority == T OR majority == R OR majority == S**) **U**

}

OTHERWISE

2014

EITHER **OSSEP**(2014) IF (**OSSEP**(2014) != 9) OR
CONDITIONAL {
(majority == U AND diversity == 2) minority,
(majority == U AND diversity != 2) U,
(majority == M AND diversity == 2) M,
(majority == A AND diversity == 2) A,
(majority == O AND diversity == 2) O,
(majority == OS AND diversity == 2) OS,
(majority == M AND diversity != 2) U,
(majority == A AND diversity != 2) U,
(majority == O AND diversity != 2) U,
(majority == OS AND diversity != 2) U,
(majority == T OR majority == R OR majority == S) U
}
OTHERWISE

2015

EITHER **OSSEP**(2015) IF (**OSSEP**(2015) != 9) OR
CONDITIONAL {
(majority == U AND diversity == 2) minority,
(majority == U AND diversity != 2) U,
(majority == M AND diversity == 2) M,
(majority == A AND diversity == 2) A,
(majority == O AND diversity == 2) O,
(majority == OS AND diversity == 2) OS,
(majority == M AND diversity != 2) U,
(majority == A AND diversity != 2) U,
(majority == O AND diversity != 2) U,
(majority == OS AND diversity != 2) U,
(majority == T OR majority == R OR majority == S) U
}
OTHERWISE

OUTPUT: **GAP2**

6. OS separation year 1 (applied only to 1972 in this time series)

Separate Open from Stand Initiation for the 1972 classification: based on 1973 values.

INPUT: **GAP2**

EITHER **GAP2(1972)** IF (**GAP2(1972) !=OS**) OR
CONDITIONAL {
(GAP2(1973) == S) S,
(GAP2(1973) == O) O,
(GAP2(1973) == A) A,
(GAP2(1973) == M) M,
(GAP2(1973) == T) S,
(GAP2(1973) == R) S,
(GAP2(1973) == U) OS
}
OTHERWISE

OUTPUT: **OSSEP2**

7. Alpine by elevation

Any Open pixel ≥ 2500 m was labeled as Alpine

INPUT: OSSEP2

INPUT: elevation = digital elevation model (DEM)

1972

EITHER A IF (**elevation** ≥ 2500 AND **OSSEP2(1972)** == O)

OR

OSSEP2(1972)

OTHERWISE

1973

EITHER A IF (**elevation** ≥ 2500 AND **OSSEP2(1973)** == O)

OR

OSSEP2(1973)

OTHERWISE

.

.

.

2014

EITHER A IF (**elevation** ≥ 2500 AND **OSSEP2(2014)** == O)

OR

OSSEP2(2014)

OTHERWISE

2015

EITHER A IF (**elevation** ≥ 2500 AND **OSSEP2(2015)** == O)

OR

OSSEP2(2015)

OTHERWISE

OUTPUT: AMASK

8. Mask low elevation to exclude areas of non-forest

Mask low elevation to exclude areas of non-forest (exclude all pixels < 500 m).

INPUT: **AMASK**

INPUT: **elevation** = digital elevation model (DEM)

EITHER 0 IF (**elevation** < 500) OR **AMASK** OTHERWISE

OUTPUT: **FINAL**