

Supplementary material

1984–2010 trends in fire burn severity and area for the conterminous US

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Explanation of vegetation grouping process

To achieve meaningful results, the finer class LANDFIRE 2010 Environmental Site Potential (ESP) classes were grouped into broader thematic classes. Existing Vegetation Type (EVT) classes had been previously crosswalked to National Vegetation Classification System (NVCS) classes by NatureServe (D. Faber-Langendoen, pers. comm), which are grouped to varying levels of precision. ESP codes were then crosswalked to EVT codes to yield the NVCS classes per ESP code. A small number of ESP classes (< 4% of all) had to be crosswalked to NVCS groups, relying on expert opinion.

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Table S1: List of Environmental Site Potential (ESP) codes and related National Vegetation Classification (NVC) macrogroups, and NVC vegetation groups used in the recoding of ESP to NVC vegetation groups

ESP Code	NVC Macrogroup Code	NVC Vegetation
11	11	Water
31	31	Barren
1159	2159	Rocky Mountain Montane Riparian Shrubland/Forest/Woodland
1346	M007	Longleaf Pine Woodland
1347	M007	Longleaf Pine Woodland
1348	M007	Longleaf Pine Woodland
1349	M007	Longleaf Pine Woodland
1356	M007	Longleaf Pine Woodland
1323	M008	Southern Mesic Mixed Broadleaf Forest
1330	M008	Southern Mesic Mixed Broadleaf Forest
1338	M008	Southern Mesic Mixed Broadleaf Forest
1014	M009	California Forest & Woodland
1112	M009	California Forest & Woodland
1114	M009	California Forest & Woodland
1118	M009	California Forest & Woodland
1023	M010	Madrean Lowland Evergreen Woodland
1025	M010	Madrean Lowland Evergreen Woodland
1024	M011	Madrean Montane Forest & Woodland
1303	M012	Central Midwest Oak Forest
1304	M012	Central Midwest Oak Forest
1305	M012	Central Midwest Oak Forest
1307	M012	Central Midwest Oak Forest
1308	M012	Central Midwest Oak Forest

1311	M012	Central Midwest Oak Forest
1315	M012	Central Midwest Oak Forest
1317	M012	Central Midwest Oak Forest
1364	M012	Central Midwest Oak Forest
1369	M012	Central Midwest Oak Forest
1043	M014	Laurentian & Acadian Northern Hardwood – Conifer Mesic Forest
1302	M014	Laurentian & Acadian Northern Hardwood – Conifer Mesic Forest
1362	M014	Laurentian & Acadian Northern Hardwood – Conifer Mesic Forest
1370	M014	Laurentian & Acadian Northern Hardwood – Conifer Mesic Forest
1383	M015	Comanchian Forest & Woodland
1367	M016	Southern & South-Central Oak – Hickory – Pine Forest
1368	M016	Southern & South-Central Oak – Hickory – Pine Forest
1372	M016	Southern & South-Central Oak – Hickory – Pine Forest
1507	M016	Southern & South-Central Oak – Hickory – Pine Forest
1018	M017	Northern Rocky Mountain Foothill Conifer Wooded Steppe
1045	M017	Northern Rocky Mountain Foothill Conifer Wooded Steppe
1047	M017	Northern Rocky Mountain Foothill Conifer Wooded Steppe
1049	M017	Northern Rocky Mountain Foothill Conifer Wooded Steppe
1053	M017	Northern Rocky Mountain Foothill Conifer Wooded Steppe
1166	M017	Northern Rocky Mountain Foothill Conifer Wooded Steppe
1179	M017	Northern Rocky Mountain Foothill Conifer Wooded Steppe
1027	M019	East Cascades Oak – Ponderosa Pine Forest and Woodland
1028	M019	East Cascades Oak – Ponderosa Pine Forest and Woodland
1029	M019	East Cascades Oak – Ponderosa Pine Forest and Woodland
1011	M020	Rocky Mountain Subalpine-High Montane Conifer Forest
1046	M020	Rocky Mountain Subalpine-High Montane Conifer Forest
1050	M020	Rocky Mountain Subalpine-High Montane Conifer Forest

1055	M020	Rocky Mountain Subalpine-High Montane Conifer Forest
1056	M020	Rocky Mountain Subalpine-High Montane Conifer Forest
1160	M020	Rocky Mountain Subalpine-High Montane Conifer Forest
1051	M022	Southern Rocky Mountain Lower Montane Forest
1052	M022	Southern Rocky Mountain Lower Montane Forest
1054	M022	Southern Rocky Mountain Lower Montane Forest
1117	M022	Southern Rocky Mountain Lower Montane Forest
1031	M023	Southern Vancouverian Montane-Foothill Forest
1015	M024	Vancouverian Lowland & Montane Forest
1037	M024	Vancouverian Lowland & Montane Forest
1039	M024	Vancouverian Lowland & Montane Forest
1042	M024	Vancouverian Lowland & Montane Forest
1174	M024	Vancouverian Lowland & Montane Forest
1178	M024	Vancouverian Lowland & Montane Forest
1032	M025	Vancouverian Subalpine Forest
1033	M025	Vancouverian Subalpine Forest
1017	M026	Intermountain Singleleaf Pinyon – Utah Juniper – Western Juniper Woodland
1019	M026	Intermountain Singleleaf Pinyon – Utah Juniper – Western Juniper Woodland
1062	M026	Intermountain Singleleaf Pinyon – Utah Juniper – Western Juniper Woodland
1115	M026	Intermountain Singleleaf Pinyon – Utah Juniper – Western Juniper Woodland
1016	M027	Southern Rocky Mountain Two-needle Pinyon – One-seed Juniper Woodland
1059	M027	Southern Rocky Mountain Two-needle Pinyon – One-seed Juniper Woodland
1162	M028	Northern & Central Great Plains Floodplain Forest
1481	M030	North-Central Interior Wet Flatwoods
1468	M032	Southern Coastal Plain Evergreen Hardwood & Conifer Swamp
1473	M032	Southern Coastal Plain Evergreen Hardwood & Conifer Swamp
1474	M032	Southern Coastal Plain Evergreen Hardwood & Conifer Swamp

1480	M032	Southern Coastal Plain Evergreen Hardwood & Conifer Swamp
1455	M033	Southern Coastal Plain Basin Swamp & Flatwoods
1458	M033	Southern Coastal Plain Basin Swamp & Flatwoods
1154	M034	Rocky Mountain & Great Basin Montane Riparian Forest
1151	M036	Southwest Riparian Forest
1155	M036	Southwest Riparian Forest
1301	M037	Boreal Hardwood Forest
1344	M037	Boreal Hardwood Forest
1365	M037	Boreal Hardwood Forest
1483	M041	South Florida Everglades Sawgrass Marsh
1105	M043	California Chaparral
1110	M043	California Chaparral
1092	M044	California Coastal Scrub
1129	M045	California Annual & Perennial Grassland
1134	M048	Central Rocky Mountain Montane-Foothill Grassland & Shrubland
1142	M048	Central Rocky Mountain Montane-Foothill Grassland & Shrubland
1086	M049	Southern Rocky Mountain Montane Shrubland
1107	M049	Southern Rocky Mountain Montane Shrubland
1132	M051	Great Plains Mixedgrass & Fescue Prairie
1141	M051	Great Plains Mixedgrass & Fescue Prairie
1094	M052	Great Plains Sand Grassland & Shrubland
1148	M052	Great Plains Sand Grassland & Shrubland
1111	M053	Great Plains Shortgrass Prairie
1149	M053	Great Plains Shortgrass Prairie
1412	M054	Great Plains Tallgrass Prairie
1415	M054	Great Plains Tallgrass Prairie
1420	M054	Great Plains Tallgrass Prairie

1421	M054	Great Plains Tallgrass Prairie
1422	M054	Great Plains Tallgrass Prairie
1423	M054	Great Plains Tallgrass Prairie
1434	M054	Great Plains Tallgrass Prairie
1452	M065	Atlantic & Gulf Coastal Plain Bog & Fen
1489	M067	Atlantic & Gulf Coastal Plain Wet Prairie & Marsh
1493	M069	Eastern North American Wet Meadow & Marsh
1504	M076	Warm Desert Lowland Freshwater Shrubland
1373	M079	North American Atlantic & Gulf Coast Salt Marsh
1486	M079	North American Atlantic & Gulf Coast Salt Marsh
1490	M079	North American Atlantic & Gulf Coast Salt Marsh
1153	M082	Warm & Cool Desert Alkali-Saline Wetland
1074	M087	Chihuahuan Semi-Desert Grassland
1075	M087	Chihuahuan Semi-Desert Grassland
1076	M087	Chihuahuan Semi-Desert Grassland
1077	M087	Chihuahuan Semi-Desert Grassland
1095	M087	Chihuahuan Semi-Desert Grassland
1100	M087	Chihuahuan Semi-Desert Grassland
1116	M087	Chihuahuan Semi-Desert Grassland
1121	M087	Chihuahuan Semi-Desert Grassland
1503	M087	Chihuahuan Semi-Desert Grassland
1082	M088	Mojave-Sonoran Semi-Desert Scrub
1087	M088	Mojave-Sonoran Semi-Desert Scrub
1091	M088	Mojave-Sonoran Semi-Desert Scrub
1109	M088	Mojave-Sonoran Semi-Desert Scrub
1088	M090	Sonora-Mojave Mixed Salt Desert Scrub
1104	M091	Warm Interior Chaparral

1108	M091	Warm Interior Chaparral
1066	M093	Great Basin Saltbush Scrub
1081	M093	Great Basin Saltbush Scrub
1376	M124	Central Appalachian Alkaline Glade and Woodland
1401	M124	Central Appalachian Alkaline Glade and Woodland
1085	M151	Northern Great Plains Woodland
1331	M151	Northern Great Plains Woodland
1314	M153	East Gulf Coastal Plain Northern Loess Bluff Forest
1316	M153	East Gulf Coastal Plain Northern Loess Bluff Forest
1318	M153	East Gulf Coastal Plain Northern Loess Bluff Forest
1321	M153	East Gulf Coastal Plain Northern Loess Bluff Forest
1325	M153	East Gulf Coastal Plain Northern Loess Bluff Forest
1327	M153	East Gulf Coastal Plain Northern Loess Bluff Forest
1335	M153	East Gulf Coastal Plain Northern Loess Bluff Forest
1357	M153	East Gulf Coastal Plain Northern Loess Bluff Forest
1450	M153	East Gulf Coastal Plain Northern Loess Bluff Forest
1501	M153	East Gulf Coastal Plain Northern Loess Bluff Forest
1371	M157	East-Central Texas Plains Pine Forest and Woodland
1393	M158	Southern Plains Scrub Woodland
1355	M159	Laurentian & Acadian Pine – Oak Forest & Woodland
1407	M159	Laurentian & Acadian Pine – Oak Forest & Woodland
1446	M161	Pond-cypress Basin Swamp
1449	M161	Pond-cypress Basin Swamp
1451	M161	Pond-cypress Basin Swamp
1453	M161	Pond-cypress Basin Swamp
1454	M161	Pond-cypress Basin Swamp
1460	M161	Pond-cypress Basin Swamp

1387	M162	Florida Peninsula Scrub & Herb
1079	M169	Great Basin & Intermountain Tall Sagebrush Shrubland & Steppe
1080	M169	Great Basin & Intermountain Tall Sagebrush Shrubland & Steppe
1123	M169	Great Basin & Intermountain Tall Sagebrush Shrubland & Steppe
1125	M169	Great Basin & Intermountain Tall Sagebrush Shrubland & Steppe
1126	M169	Great Basin & Intermountain Tall Sagebrush Shrubland & Steppe
1072	M170	Great Basin & Intermountain Dwarf Sagebrush Shrubland & Steppe
1124	M170	Great Basin & Intermountain Dwarf Sagebrush Shrubland & Steppe
1078	M171	Great Basin & Intermountain Dry Shrubland & Grassland
1093	M171	Great Basin & Intermountain Dry Shrubland & Grassland
1127	M171	Great Basin & Intermountain Dry Shrubland & Grassland
1135	M171	Great Basin & Intermountain Dry Shrubland & Grassland
1477	M299	North American Boreal Flooded

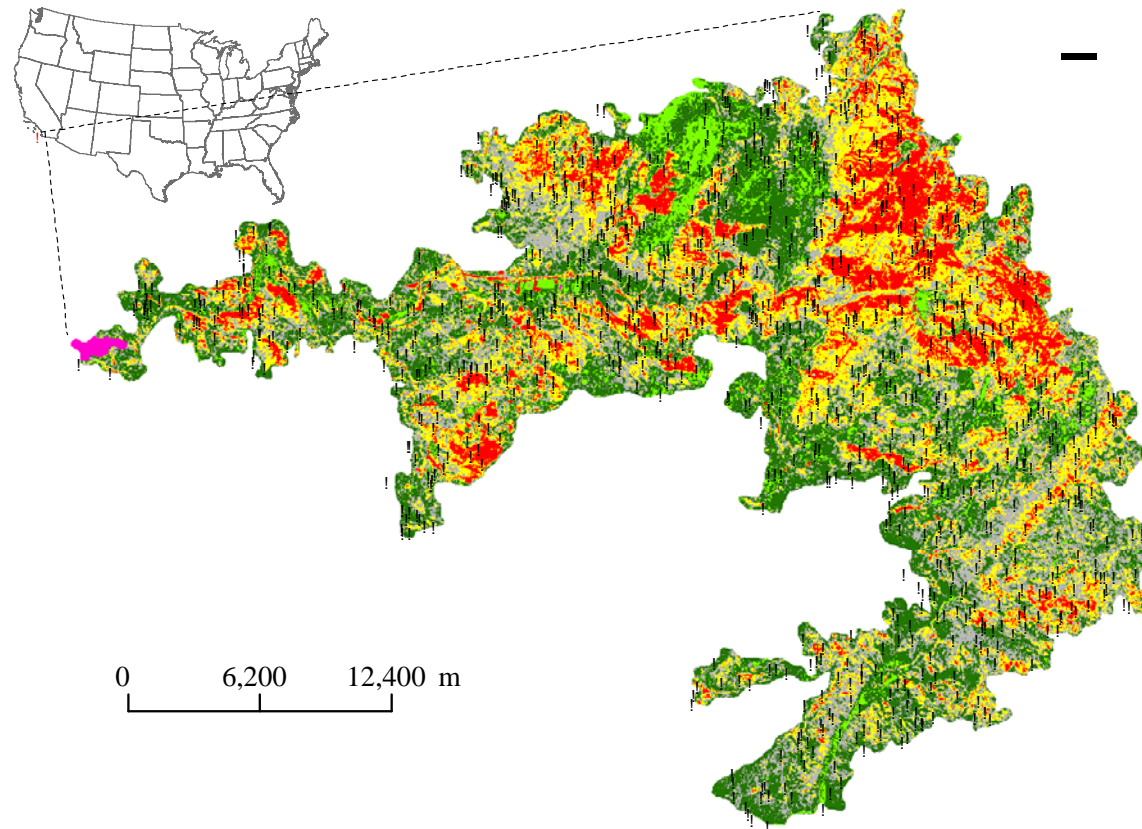


Fig. S1. Example of the stochastic sampling points (black dots) of categorical dNBR imagery by unburned (dark green), low (grey), moderate (yellow) and high (red) pixel values to extract continuous dNBR values to calculate the Severity Metric for the 67,805-ha Witch Fire (2007). Areas masked by clouds (magenta) and vegetation regrowth (light green) are also shown in the image.