Table 1.1. Major fires of Martha's Vineyard, 1855-1999 Modified from Foster and Motzkin (1999)

| Year | Date | Size (ac) | Location |
|---|---|---|---|
| 1855 | 4/7 | large | Willis Plain |
| 1864 | 4/27 | 4,000 | near Lagoon ( south central Martha's Vineyard) |
| 1875 | 7/2 | 7-10,000 | Quompacha Bottom |
| 1883 | 8/12 | | Vineyard Haven town fire |
| 1885 | 4/4 | small | Gay Head-Chilmark boundary |
| 1886 | 5/3 | 1,000s | near Vineyard Haven |
| 1889 | 3/25 | 4,000 | Quampeche Bottom |
| 1892 | 4/9 | 5-8,000 | near Middletown |
| 1894 | June | large | location unknown |
| 1900 | 4/27 | 5,000 | Scrubby Neck toward Edgartown |
| 1903 | 5/18 | | Inisfail Hotel |
| 1909 | 7/23 | 10,000 | on Plains |
| 1914 | 12/25 | 1,200 | western Great Plains to Katama (south eastern Martha's Vineyard) |
| 1916 | 5/19 | 12,000 | West Tisbury to Farm Neck, Ocean Heights, and Edgartown |
| 1920 | 8/6 | | large Vineyard Haven fire |
| 1926 | 5/14 | 6,400 | West Tisbury toward Ocean Heights |
| 1927 | 4/30 | 6,400 | from Dr. Fisher Road to Edgartown |
| 1927 | 5/24 | 6,400 | from Dr. Fisher Road towards Edgartown |
| 1928 | 4/28 | small | Indian Hill Road |
| 1929 | 4/6 | 2,500 | Watcha to Tiah's Cove, Waldron's Bottom, to Oyster Pond |
| 1929 | 5/4 | 2,560 | Waldron's Bottom |
| 1929 | 7/3 | small | Tashmoo/Herring Creek |
| 1930 | 5/10 | 200 | West Chop |
| 1930 | 5/17 | 5,000 | between Edgartown and Oak Bluffs |
| 1930 | 6/7 | 1,000 | north to northeast through State Forest |
| 1932 | | | two fires in State Forest |
| 1935 | 3/30 | 4,000 | Edgartown Great Pond to Katama |
| 1936 | | | 8 fires, none in State Forest |
| 1937 | | | Chappaquidick |
| 1939 | 4/1 | 4,000 | Quampacha Bottom on Dr. Fisher Road to Vineyard Haven Road |
| 1940 | 5/18 | 1,000 | State Forest near Edgartown - Vineyard Haven Road |
| 1942 | 5/27 | 350 | Job's Neck Pond to Jayne's Cove |
| 1942 | | 1,200 | near Edgartown Great Pond |
| 1944 | | 240 | in State Forest |
| 1946 | 4/20 | 5,120 | Head of Tisbury Great Pond towards Edgartown/Oak Bluffs |
| 1948 | 9/4 | 300 | south & west towards Clevelandtown/Edgartown Airport |
| 1951 | | | 10 fires on the Island |
| 1954 | 4/10 | 1,000 | between Barnes Road, Wing Road and Edgartown-Vineyard Haven Road |
| 1954 | 5/30 | 2,500 | Tiah's Cove, West Tisbury to Edgartown |
| 1954 | 7/17 | 100 | Chappaquidick near four corners |
| 1957 | 4/20 | 35 | near state highway at Deep Bottom |
| 1957 | 5/4 | 100 | North of Chilmark cemetery, toward Chilmark Pond |
| 1958 | 6/14 | | east and north from State Forest |
| 1959 | 4/25 | 25 | between Old Courthouse Road and state Highway |
| 1959 | 5/9 | 500 | West Tisbury Road near Deep Bottom |
| 1960 | 4/23 | 25 | Katama |
| 1963 | 10/26 | 300 | Quampache Bottom to West Tisbury Road |
| 1965 | 12/19 | 1,200 | Great Plains to Katama |
| 1971 | 5/15 | 20 | Oklahoma, Tisbury |
| 1975 | 4/26 | 50 | Northeast from Edgartown dump |
| 1976 | 1/1 | 85 | Edgartown: Herring Creek Road to Katama Airfield |
| 1987 | 8/1 | 20 | Oak Bluffs behind Crosslands Nursery |
| 1987 | July | ~8 | State Forest |
| 1999 | July | ~16 | State Forest, along Edgartown-West Tisbury Rd. |

Table 2.1. Data sets used to calculate inputs to BEHAVE

| Data Set | Sampling Technique | Rational |
|---|---|---|
| Litter load (tons/acre) | | |
| 1hr | DWF | larger data set than 40X40s |
| 10 hr | DWF | |
| 100 hr | DWF | |
| Litter depth (ft) | Relevé | larger data set than DWF |
| Percent litter cover (%) | Relevé | larger data set than DWF |
| Grass load (tons/acre) | 40X40s | only sampling technique used |
| Grass percent cover (%) | Relevé | only sampling technique used |
| Shrub load (tons/acre live) | | |
| 1hr | 40X40s + 1X1 | only sampling technique used |
| 10 hr | 40X40s + 1X1 | |
| 100 hr | 40X40s + 1X1 | |
| Shrub depth (ft) | Relevé (70%) | larger data set than DWF |
| Shrub percent cover (%) | Relevé | larger data set than DWF |
| Shrub load (tons/acre dead) | | |
| 1hr | 40X40s | only sampling technique used |
| 10 hr | 40X40s | |
| 100 hr | 40X40s | |
| Downed wood depth (ft) | DWF | only sampling technique used |

**Key**

| | |
|---|---|
| DWF | downed woody fuel inventory |
| 40X40s | 1600cm$^2$ biomass plots |
| 1X1 | 1m$^2$ scruboak plots |

Table 3.1. Summary data for vegetation types assigned using dendrogram analysis

| | Canopy cover (%) | Litter cover (5) | Grass and Forbs cover (%) | Grass and Forbs height (cm) | Low shrub cover (%) | Low shrub height (cm) | High shrub cover (%) | High shrub hieght (cm) | Canopy height (ft) | Height to base of live crown (ft) | Basal area $m^2$/ha |
|---|---|---|---|---|---|---|---|---|---|---|---|
| oak woodlands | 66.8 | 99.9 | 2.8 | 7.3 | 49.2 | 50.2 | 15.2 | 116.7 | 37.9 | 12.5 | 12.9 |
| pitch pine | 63.6 | 100.0 | 4.4 | 7.6 | 47.3 | 47.3 | 9.5 | 113.9 | 46.8 | 28.7 | 17.7 |
| young plantations | 49.5 | 100.0 | 1.1 | 6.5 | 41.2 | 44.9 | 27.8 | 163.0 | 38.9 | 9.0 | 9.2 |
| scrub oak | 8.7 | 95.6 | 4.4 | 6.7 | 62.9 | 57.4 | 24.2 | 122.3 | 23.1 | 6.3 | 2.6 |
| heath | 7.6 | 96.7 | 13.9 | 12.3 | 40.7 | 38.7 | 36.5 | 108.5 | 18.0 | 4.7 | 2.1 |
| old plantations | 59.6 | 99.7 | 5.5 | 7.1 | 32.0 | 36.2 | 14.1 | 112.8 | 51.2 | 27.5 | 18.3 |
| mixed woodland/ scrub oak | 44.9 | 99.9 | 1.0 | 3.2 | 51.5 | 54.4 | 19.9 | 127.2 | 32.0 | 10.1 | 10.1 |

Table 3.2. Higher plants identified in or near relevés in MFCSF

Species found in the relevés

| Latin Name | Abbreviation | Common Name |
|---|---|---|
| *Amelanchier arborea* | Ame arb | Serviceberry |
| *Amelanchier spp.* | Ame spp. | Shadbush |
| *Aralia nudicaulis* | Ara nud | Sarsaparilla |
| *Arctostaphylos uva-ursi* | Arc uva | Bearberry |
| *Aster* spp. | Aster | Asters |
| *Baptisia tinctoria* | Bap tin | Wild Indigo |
| *Betula populifolia* | Bet pop | Grey Birch |
| *Carex pennsylvanica* | Car pen | Pennsylvania Sedge |
| *Chimaphila maculata* | Chi mac | Striped Wintergreen |
| *Comptonia peregrina* | Com per | Sweet Fern |
| *Cypripedium acaule* | Cyp aca | Pink Lady's Slipper |
| *Rubus hispidus* | Dewberry | Bristly Dewberry |
| *Duchesnea indica* | Duc ind | Indian Strawberry |
| *Epigaea repens* | Epi rep | Mayflower |
| *Gaultheria procumbens* | Gau pro | Wintergreen |
| *Gaylussacia baccata* | Gay bac | Black Huckleberry |
| *Hamamelis virginiana* | Ham vir | Witch Hazel |
| *Helianthemum bicknellii* | Hel bic | Hoary Frostweed |
| *Hudsonia ericoides* | Hud eri | Golden Heather |
| *Kalmia angustifolia* | Kal ang | Sheep Laurel |
| *Cladina* spp. | Lichen | Lichens |
| *Lysimachia quadrifolia* | Lys qua | Whorled Losestrife |
| *Maianthemum canadense* | Mai can | Canada Mayflower |
| *Melampyrum lineare* | Mel lin | Cow Wheat |
| *Monotropa uniflora* | Mon uni | Indian Pipe |
| Moss spp. | Moss | Moss |
| *Myrica pensylvanica* | Myr pen | Bayberry |
| *Polytricum* spp. | Polytricum | Polytricum Moss |
| *Picea glauca* | Pic gla | White Spruce |
| *Pinus resinosa* | Pin res | Red Pine |
| *Pinus rigida* | Pin rig | Pitch Pine |
| *Pinus strobus* | Pin str | White Pine |
| *Pinus sylvestris* | Pin syl | Scotch Pine |
| *Prunus serotina* | Pru ser | Black Cherry |
| *Pteridium aquilinum* | Pte aqu | Braken Fern |
| *Pyrola rotundifolia* | Pyr rot | Round-leaf Pyrola |
| *Pyrus arbutifolia* | Pyr arb | Eronia |
| *Quercus alba* | Que alb | White Oak |
| *Quercus coccinea* | Que coc | Red Oak |
| *Quercus ilicifolia* | Que ili | Bear Oak |
| *Quercus prinoides* | Que pri | Dwarf Chinquapin Oak |
| *Quercus stellata* | Que ste | Post Oak |
| *Quercus velutina* | Que vel | Black Oak |
| *Rhus copillina* | Rhu cop | Shining Sumac |
| *Rubus hispidus* | Rub his | Dewberry |
| *Smilax* spp. | Smi spp. | Smilax spp. |
| *Solidago* spp. | Sol spp. | Solidagos |
| *Sorgastrum nutans* | Sor nut | Indian Grass |
| *Toxicodendron radicans* | Tox rad | Poison Ivy |
| *Vaccinium angustifolium* | Vac ang | Early Lowbush Blueberry |
| *Vaccinium corymbosum* | Vac cor | Highbush Blueberry |
| *Vaccinium vaccillans* | Vac vac | Late Lowbush Blueberry |
| *Viburnum* spp. | Vib spp | Viburnum spp. |

Table 3.2. Higher plants identified in or near relevés in MFSCF

Species only found outside the relevés

| Latin Name | Abbreviation | Common Name |
|---|---|---|
| *Acer rubrum* | Ace rub | Red Maple |
| *Apocynum androsaemifolium* | Apo and | Dogbane |
| *Aureolaria flava* | Aur fla | Downy False Foxglove |
| *Cirsium vulgare* | Cir vul | Bull Thistle |
| *Digitaria ischaemum* | Dig isc | Crabgrass |
| *Daucus carota* | Dau car | Wild Carrot |
| *Fagus grandifolia* | Fag gra | American Beech |
| *Helianthemum canadense* | Hel can | Hoary Frostweed |
| *Juniperus virginiana* | Jup vir | Eastern Red cedar |
| *Lysimachia punctata* | Lys pun | Garden Loosestrife |
| *Panax* spp. | Pan spp | Ginseng |
| *Phleum pratense* | Phe nov | Timothy |
| *Phytolacca americana* | Phy ame | Pokeweed |
| *Populus grandidentata* | Pop gra | Big Tooth Aspen |
| *Populus tremuloides* | Pop tre | Trembling Aspen |
| *Potentilla canadensis* | Pot can | Canadian Dwarf Cinquefoil |
| *Rosa multiflora* | Ros mul | Multiflora Rose |
| *Sassafras albidum* | Sas alb | Sassafras |
| *Tephrosia virginiana* | Tep vir | Goat's Rue |

able 3.3. Input parameters to BEHAVE, averaged by stand type developed from dendrogram analysis. Superscripts indicate source of the data (see belov

| | Vegetation type | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HW | | HW/SO | | SO | | YP | | OP | | PP | |
| Litter load | | | | | | | | | | | | |
| 1 hr (tons/acre) | 1.79[a] | 4.49[b] | 0.69[a] | 5.98[b] | 1.5[a] | 6.19[b] | 0.77[a] | 6.44[b] | 0.49[a] | 7.54[b] | 0.38[a] | 6.89[b] |
| 10 hr (tons/acre) | 1.25[a] | 0.25[b] | 1.55[a] | 0.42[b] | 1.97[a] | 0.34[b] | 1.59[a] | 0.67[b] | 1.85[a] | 1.31[b] | 1.32[a] | 1.23[b] |
| 100hr (tons/acre) | 0.72[a] | 0.12[b] | 1.04[a] | 0.00[b] | 0.52[a] | 0.00[b] | 0.34[a] | 0.00[b] | 0.48[a] | 0.26[b] | 3.31[a] | 0.00[b] |
| Litter depth (ft) | 0.28[a] | | 0.31[a] | | 0.32[a] | | 0.33[a] | | 0.16[a] | | 0.33[a] | |
| Litter cover (%) | 99.9[d] | | 99.9[d] | | 98.4[d] | | 100.0[d] | | 99.9[d] | | 100.0[d] | |
| Grass load (tons/acre) | 0.00[b] | | 0.00[b] | | 0.00[b] | | 0.00[b] | | 0.00[b] | | 0.00[b] | |
| Grass percent cover (%) | 2.91[d] | | 0.68[d] | | 4.83[d] | | 1.47[d] | | 5.32[d] | | 4.43[d] | |
| Live shrub load | | | | | | | | | | | | |
| 1 hr (tons/acre) | 1.84[b] | 0.11[c] | 1.27[b] | 0.11[c] | 1.47[b] | 0.53[c] | 1.38[b] | 0.37[c] | 0.10[b] | 0.00[c] | 1.61[b] | 0.13[c] |
| 10 hr (tons/acre) | 0.02[b] | 0.14[c] | 0.16[b] | 0.15[c] | 0.09[b] | 0.80[c] | 0.29[b] | 0.53[c] | 0.00[b] | 0.00[c] | 0.27[b] | 0.16[c] |
| 100 hr (tons/acre) | 0.00[b] | 0.00[c] | 0.00[b] | 0.00[c] | 0.00[b] | 0.00[c] | 0.00[b] | 0.05[c] | 0.00[b] | 0.00[c] | 0.00[b] | 0.00[c] |
| Shrub depth (ft) | 1.93[d] | 2.06[a] | 2.44[d] | 1.83[a] | 2.50[d] | 2.06[a] | 2.90[d] | 2.75[a] | 1.36[d] | 0.58[a] | 1.61[d] | 1.89[a] |
| Shrub percent cover (%) | 46.9[d] | | 55.5[d] | | 63.8[d] | | 51.2[d] | | 27.3[d] | | 42.6[d] | |
| Dead shrub load | | | | | | | | | | | | |
| 1 hr (tons/acre) | 0.62[b] | | 0.52[b] | | 1.32[b] | | 0.09[b] | | 0.00[b] | | 0.17b | |
| 10 hr (tons/acre) | 0.00[b] | | 0.03[b] | | 0.62[b] | | 0.00[b] | | 0.00[b] | | 0.00[b] | |
| 100 hr (tons/acre) | 0.00[b] | | 0.00[b] | | 0.00[b] | | 0.00[b] | | 0.00[b] | | 0.00[b] | |
| Fuel depth (ft) | 0.67[a] | | 0.66[a] | | 0.99[a] | | 0.77[a] | | 0.60[a] | | 0.79[a] | |
| Observed shrub heights (ft) | 2.76[d] | | 3.49[d] | | 3.57[d] | | 4.14[d] | | 1.94[d] | | 2.30[d] | |
| Litter depth (litter+fuel) (ft) | 0.49[a] | | 0.44[a] | | 0.72[a] | | 0.68[a] | | 0.48[a] | | 0.61[a] | |

Key

Data source

| | |
|---|---|
| DWF [a] | downed woody fuel inventory |
| 40X40s [b] | 1600 $cm^2$ biomass plots |
| 1X1 [c] | $1m^2$ biomass plots |
| Relevé [d] | |

Vegetation type

| | |
|---|---|
| HW | oak woodland |
| HW/SC | oak woodland/scrub oak |
| OP | old plantations |
| PP | pitch pine |
| SO | scrub oak |
| RP | young plantations |

Table 3.4. Comparison of custom fuel model parameters for MFCSF models generated by NEWMODEL routine of BEHAVE

| Fuel Model | 30 | 31 | 32 | 33 | 34 | 35 |
|---|---|---|---|---|---|---|
| Vegetation Type | oak woodland | oak woodland/ scrub oak | scrub oak | young plantations | old plantations | pitch pine |
| 1 hr fuel load (tons/acre) | 4.78 | 6.27 | 7.03 | 6.49 | 7.54 | 6.96 |
| 10 hr fuel load (tons/acre) | 1.25 | 1.57 | 2.37 | 1.59 | 1.85 | 1.32 |
| 100 hr fuel load (tons/acr | 0.72 | 1.04 | 0.52 | 0.34 | 0.48 | 3.31 |
| Live herb (tons/acre) | 0 | 0 | 0 | 0 | 0 | 0 |
| Live woody (tons/acre) | 0.91 | 0.77 | 1.28 | 0.9 | 0.03 | 0.74 |
| S/V ratio 1 hr fuels | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| S/V ratio live woody | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| sigma | 1911 | 1931 | 1909 | 1930 | 1972 | 1933 |
| Fuel depth (ft) | 0.56 | 0.54 | 0.92 | 0.76 | 0.48 | 0.62 |
| Heat content (BTU/lb) | 8125 | 8084 | 8120 | 8094 | 8003 | 8074 |
| Extinction moisture (%) | 23 | 26 | 24 | 22 | 26 | 26 |
| Packing ratio: optimum | 0.01963 | 0.02564 | 0.01747 | 0.0176 | 0.2959 | 0.2853 |

Table 3.5. Fire behavior results generated from TESTMODEL routine of BEHAVE using custom and standard fuel models

| INPUT Environmental Variabl | | Fire Behavior Paramet | HW (FM 30) | FM6 | HW/SO (FM 31 | FM 6 | SO (FM32) | FM 4 |
|---|---|---|---|---|---|---|---|---|
| 1 hr FM | 6% | ROS (ft/min) | 17 | 47 | 17 | 47 | 30 | 93 |
| 10 hr FM | 7% | FL (ft) | 7 | 7 | 7 | 7 | 11 | 20 |
| 100 hr FM | 8% | IR (BTU/ft$^2$/m) | 6234 | 1915 | 6378 | 1915 | 9818 | 11671 |
| Live herb FM | 120% | H/A (BTU/ft$^2$) | 1253 | 470 | 1268 | 470 | 1975 | 2577 |
| Live woody FM | 120% | FLI (BTU/ft$^2$/sec) | 359 | 368 | 365 | 368 | 987 | 4002 |
| Slope | 0% | | | | | | | |

| | OP (FM33) | FM 10 | YP (FM 34) | FM4 | PP (FM 35) | FM 10 |
|---|---|---|---|---|---|---|
| ROS (ft/min) | 19 | 10 | 28 | 93 | 16 | 10 |
| FL (ft) | 7 | 5 | 10 | 20 | 7 | 5 |
| IR (BTU/ft$^2$/m) | 5596 | 5735 | 8451 | 11671 | 6242 | 5735 |
| H/A (BTU/ft$^2$) | 1090 | 1248 | 1682 | 2577 | 1240 | 1248 |
| FLI (BTU/ft$^2$/sec) | 340 | 218 | 781 | 4002 | 334 | 218 |

Key

| | | | |
|---|---|---|---|
| HW | oak woodland | ROS | rate of spread |
| HW/SO | oak woodland/scrub oak | FL | flame length |
| SO | scrub oak | IR | irradiance |
| OP | old plantations | H/A | heat/area |
| YP | young plantations | FLI | fire line intensity |
| PP | pitch pine | FM% | fuel moisture |
| FM# | fuel model | | |

Table 3.6. Acreage by landcover type from photo interpretation for Manuel F. Correllus State Forest, Martha's Vineyard

| **Landcover Type** | 1938 | 1952 | 1995 |
|---|---|---|---|
| Grassland | 199.9 | 150.5 | 97.1 |
| **Total Grassland** | 199.9 | 150.5 | 97.1 |
| Heath | 21.0 | 37.4 | 55.9 |
| Immature Hardwoods | 1,605.1 | 291.3 | 15.6 |
| Scrub Oak | 2,979.0 | 2,815.3 | 1,484.5 |
| **Total Scrub Oak** | 4,605.1 | 3,144.0 | 1,556.0 |
| Hardwood/Scrub Oak Forest | 0.0 | 533.0 | 630.2 |
| **Total Hardwood/Scrub Oak** | 0.0 | 533.0 | 630.2 |
| Hardwood Forest | 89.9 | 750.5 | 1,368.8 |
| **Total Oak Woodland** | 89.9 | 750.5 | 1,368.8 |
| Pitch Pine Forest | 0.0 | 0.0 | 78.8 |
| Pitch Pine/Hardwood Forest | 11.7 | 0.0 | 80.9 |
| Pitch Pine/Scrub Oak Forest | 87.0 | 95.9 | 61.1 |
| Pitch Pine/Scrub Oak Thicket | 39.8 | 10.6 | 11.0 |
| **Total Pitch Pine** | 138.5 | 106.5 | 231.8 |
| Mixed Woods <20ft | 30.5 | 0.0 | 31.4 |
| Mixed Woods 20ft-40ft | 0.0 | 30.2 | 229.0 |
| Softwoods <20ft | 17.9 | 159.1 | 142.8 |
| Softwoods 20ft-40ft | 34.9 | 256.3 | 417.8 |
| **Total Young Plantations** | 83.3 | 445.6 | 821.0 |
| Mixed Woods >40ft | 0.0 | 0.0 | 26.8 |
| Softwoods >40ft | 0.0 | 15.8 | 338.0 |
| **Total Old Plantations** | 0.0 | 15.8 | 364.8 |
| Wetlands | 1.5 | 0.9 | 1.7 |
| **Total Wetlands** | 1.5 | 0.9 | 1.7 |
| No Photo | 45.3 | 0.0 | 0.0 |
| Out of the area | 0.9 | 7.5 | 0.3 |
| Sand | 0.0 | 2.0 | 1.1 |
| Clear Cut | 0.0 | 0.0 | 17.8 |
| Developed Land | 18.2 | 32.0 | 99.9 |
| **Total bare ground (not vegetated** | 64.4 | 41.5 | 119.1 |
| Totals | 5,150.4 | 5,167.6 | 5,131.0 |

Table 3.7. Annual rates of change (acres/year) for landcover types, 1938-1995

| | acres/year | | |
|---|---|---|---|
| Landcover Type | 1938-1952 | 1952-1995 | 1938-1995 |
| Grassland | -3.5 | -1.2 | -1.8 |
| **Total Grassland** | -3.5 | -1.2 | -1.8 |
| Heath | 1.2 | 0.4 | 0.6 |
| Immature hardwoods | -93.8 | -6.3 | -27.9 |
| Scrub oak | -11.7 | -30.2 | -26.2 |
| **Total Scrub Oak** | -104.4 | -36.1 | -53.5 |
| Hardwood/scrub oak forest | 38.1 | 2.2 | 11.1 |
| **Total Hardwood/Scrub Oak** | 38.1 | 2.2 | 11.1 |
| Hardwood forest | 47.2 | 14.1 | 22.4 |
| **Total Oak Woodland** | 47.2 | 14.1 | 22.4 |
| Pitch pine forest | 0.0 | 1.8 | 1.4 |
| Pitch pine/hardwood forest | -0.8 | 1.8 | 1.2 |
| Pitch pine/scrub oak forest | 0.6 | -0.8 | -0.5 |
| Pitch pine/scrub oak thicket | -2.1 | 0.0 | -0.5 |
| **Total Pitch Pine** | -2.3 | 2.8 | 1.6 |
| Mixed woods <20ft | -2.2 | 0.7 | 0.0 |
| Mixed woods 20ft-40ft | 2.2 | 4.5 | 4.0 |
| Softwoods <20ft | 10.1 | -0.4 | 2.2 |
| Softwoods 20ft-40ft | 15.8 | 3.7 | 6.7 |
| **Total Young Plantations** | 25.9 | 8.5 | 12.9 |
| Mixed woods >40ft | 0.0 | 0.6 | 0.5 |
| Softwoods >40ft | 1.1 | 7.3 | 5.9 |
| **Total Old Plantations** | 1.1 | 7.9 | 6.4 |
| Wetlands | 0.0 | 0.0 | 0.0 |
| **Total Wetlands** | 0.0 | 0.0 | 0.0 |
| No photo | -3.2 | 0.0 | -0.8 |
| Out of the area | 0.5 | -0.2 | 0.0 |
| Sand | 0.1 | 0.0 | 0.0 |
| Clear cut | 0.0 | 0.4 | 0.3 |
| Developed land | 1.0 | 1.5 | 1.4 |
| **Total bare ground (not vegetate** | -1.6 | 1.8 | 1.0 |

Table 3.8. Days with potential high fire behavior based on selected fire weather data for April, 1994 and March-April, 1995

| | | Weather conditions selected for FARSITE simulations | | | | | |
|---|---|---|---|---|---|---|---|
| Date | Wind Dir | Windspeed (mph) | Max temp (°C) | Min Temp (°C) | Max Hum | Min Hum | Days w/o precip |
| 4/25/1998 | SW | 24 | 55 | 44 | 74 | 47 | 3 |
| 3/12/1999 | E | 10 | 35 | 23 | 42 | 41 | 1 |
| 4/5/1999 | SW | 25 | 49 | 39 | 76 | 34 | 11 |
| 4/6/1999 | W | 27 | 50 | 24 | 78 | 21 | 12 |
| 4/27/1999 | SW | 10 | 60 | 49 | 80 | 19 | 4 |

Table 3.9. Results of FARSITE simulations[1] for 1938, 1952, and 1995 fuels, showing area burnt, fire perimeter and the probability of spotting across MFCSF northern or eastern boundary (see figure 3.7 for site locations)

| | Site 1 | | | Site 2 | | | Site 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | 1938 | 1952 | 1995 | 1938 | 1952 | 1995 | 1938 | 1952 | 1995 |
| Area burnt (acres)[2] | 919.2 | 621.5 | 568.8 | 729.0 | 494.7 | 459.4 | 204.1 | 205.6 | 140.9 |
| Perimeter (miles)[2] | 5.5 | 5.6 | 9.4 | 5.2 | 5.2 | 8.6 | 2.3 | 2.3 | 2.1 |
| % Crossed N boundary | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

| | Site 4 | | | Site 5 | | |
|---|---|---|---|---|---|---|
| Year | 1938 | 1952 | 1995 | 1938 | 1952 | 1995 |
| Area burnt (acres)[2] | 708.2 | 477.4 | 251.3 | 173.5 | 22.7 | 21.3 |
| Perimeter (miles)[2] | 4.7 | 4.3 | 4.7 | 2.1 | 0.7 | 0.6 |
| % Crossed E boundary | 100% | 100% | 0% | 0% | 0% | 0% |

[1] all simulations were run for three hours starting at 1300. Weather and wind data for April 4, 1995

[2] each value represents the average of ten simulated fires

Table 3.10. Comparison of input values for custom and standard fuel models and compiled fire data for FARSITE simulations in old plantations

| | Custom Fuel Model 34* | NFFL model 9** | NFFL model 10** | NFFL model 11** | NFFL model 12** |
|---|---|---|---|---|---|
| 1hr fuel load (tons/acre) | 7.54 | 2.92 | 3.01 | 1.5 | 4.01 |
| 10 hr fuel load (tons/acre | 1.85 | 0.41 | 2 | 4.51 | 14.03 |
| 100 hr fuel load (tons/acr | 0.48 | 0.15 | 5.01 | 5.51 | 16.53 |
| Live herb (tons/acre)*** | 0 | 0 | 0 | 0 | 0 |
| Live woody (tons/acre) | 0.03 | 0 | 0 | 0 | 0 |
| Fuel depth ft. | 0.8 | 0.2 | 1 | 1 | 2.3 |
| Heat content BTU/lb | 8003 | 8000 | 8000 | 8000 | 8000 |
| Ext moisture % | 26 | 25 | 25 | 15 | 20 |

* values in this column are the product of field sampling

** values in these columns were taken from Anderson, 1982

custom fuel model are static and are only intended to model early spring fire behavior, prior to leaf out

Results[#] of FARSITE simulations modeling future fire behavior in failing plantations[##]

| | Custom Fuel Model 34 | NFFL model 9 | NFFL model 10 | NFFL model 11 | NFFL model 12 |
|---|---|---|---|---|---|
| Area burnt (ha) | 7.4 | 1.8 | 5.8 | 2.5 | 12.2 |
| Perimeter (km) | 0.9 | 0.4 | 0.8 | 0.5 | 1.2 |

all simulations were run for three hours starting at 1300 and using weather and wind data from April 4, 1995

[#]each data point is the average of ten simulations

[##]areas currently represented by the mature plantation fuel model

Table 3.11. Results[#] of FARSITE simulations modeling future fire behavior in failing plantations[##]

| | Custom Fuel Model 34 | NFFL model 9 | NFFL model 10 | NFFL model 11 | NFFL model 12 |
|---|---|---|---|---|---|
| Area burnt (ha) | 7.4 | 1.8 | 5.8 | 2.5 | 12.2 |
| Perimeter (km) | 0.9 | 0.4 | 0.8 | 0.5 | 1.2 |

all simulations were run for three hours starting at 1300 and using weather and wind data from April 4, 1995

[#]each data point is the average of ten simulations

[##]areas currently represented by the mature plantation fuel model

Table 4.1 Comparison of Fire Regimes for Central Martha's Vineyard

| Fire Regime Characteristic | Definition/Example | Late Historic (~1850-1955) | Modern (1955-present) |
|---|---|---|---|
| Fire Type | Crown vs. surface fire | Generally shrub fires (few areas of canopy present on the landscape) | Surface fires in areas with well-developed canopies |
| Rate of Spread | Flamming front advance in ft/min | High rate of spread | Low rate of spread |
| Fire Intensity | Amount of heat generated per unit time - BTU/ft(of | Fast moving, high intensity fires | Moderate to low intensity fires |
| Fire Severity | Degree to which the soil organic matter is consumed | High fire severity. Generally killed above-ground stems and most 1-, 10- and 100- hr fuels consumed. Likely some consumption of organic layer, especailly during | Low to moderate severity fires, 10- and 100-hr fuels not entirely consumed, little consumption of organic layer. |
| Fire Size | Average size of a individual fire on the landscape | Large fires, (>1,000 acres) | Small fires (less than 10acres) |
| Return Interval | Average number of years needed to burn an area equivalent to the Forest's size | Less than 10-20 years | Greater than 100 years |
| Fire Frequency | Number of fires per | 40 fires in 100 years | 14 fires in 44 years |

Table 4.2. Species found primarily in plantations and disturbed areas.

| Latin Name | Abbreviation | Common Name |
|---|---|---|
| *Crisium vulgare* # | Cir vul | Bull Thistle |
| *Danucus carota* # | Dau car | Wild Carrot |
| *Digitaria ischaemum* # | Dig isc | Crabgrass |
| *Duchesnea indica* # | Duc ind | Indian Strawberry |
| *Lysmachia punctata* # | Lys pun | Garden Loosestrife |
| *Lysimachia quadrifolia* ^ | Lys qua | Whorled Loosestrife |
| *Phytolacca americana* ^ | Phy ame | Pokeweed |
| *Picea glauca* * | Pic gla | White Spruce |
| *Pinus resinosa* * | Pin res | Red Pine |
| *Pinus sylvestris* # | Pin syl | Scotch Pine |
| *Rosa multiflora* # | Ros mul | Multiflora Rose |
| *Sorghastrum nutans* ^ | Sor nut | Indian Grass |
| *Toxicodendron radicans* | Tox rad | Poison Ivy |

^ Species native to Martha's Vineyard

* Species not native to Martha's Vineyard

# Species not native to North America

Table 5.1. Exterior Fire Break Simulations, FARSITE

| Site 1 | No Break | BSO | BOW | MSO2 | MSO3 | BW3 | BS3 | NF |
|---|---|---|---|---|---|---|---|---|
| Percentage cross | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Time to cross | 3:20 | 3:40 | 3:30 | 3:50 | 3:20 | 3:40 | 3:40 | 4:30 |

| Site 2 | No Break | BSO | BOW | MSO2 | MSO3 | BW3 | BS3 | NF |
|---|---|---|---|---|---|---|---|---|
| Percentage cross | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Time to cross | 3:20 | 3:30 | 3:50 | 3:40 | 3:20 | 3:50 | 3:40 | 3:50 |

| Site 3 | No Break | BSO | BOW | MSO2 | MSO3 | BW3 | BS3 | NF |
|---|---|---|---|---|---|---|---|---|
| Percentage cross | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Time to cross | 1:10 | 1:20 | 1:20 | 1:10 | 1:10 | 1:10 | 1:10 | 1:10 |

| In Buffer | No Break | BSO | BOW | MSO2 | MSO3 | BW3 | BS3 | NF |
|---|---|---|---|---|---|---|---|---|
| 13:00-14:00 | | | | | | | | |
| Area (ha) | N/A | 3.90 | 0.10 | 2.00 | 1.50 | 2.80 | 0.10 | 0.00 |
| Perimeter (km) | N/A | 0.80 | 0.10 | 0.50 | 0.40 | 0.60 | 0.10 | 0.00 |

Key

| | |
|---|---|
| BSO | Scrub Oak barren, burnt 1996 (sampled 1998) |
| BOW | Oak Woodland burnt May, 1998 (sampled 1998) |
| MSO2 | Scrub Oak barren mowed every two years (2yrs. since last treatment) |
| MSO3 | Scrub Oak barren mowed every three years (3yrs. since last treatment) |
| BW3 | Oak Woodland burnt every third winter (3yrs. since last treatment) |
| BS3 | Oak Woodland burnt every third summer (3yrs. since last treatment) |
| NF | No fuel, tilled (1yr. since last treatment) |

Table 5.2. Interior Fire Break Simulations, FARSITE

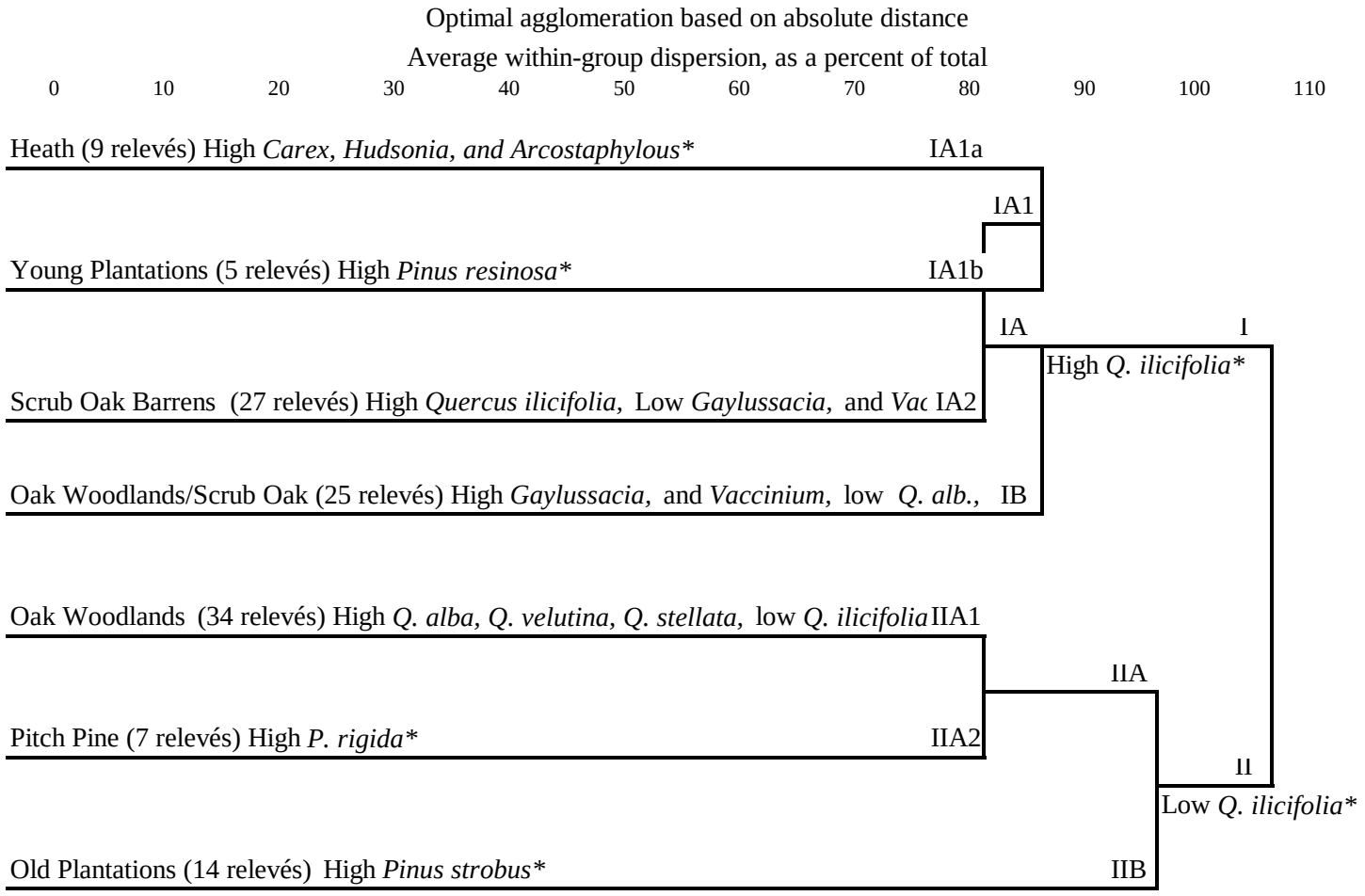
Starting at 1300 hours

Avg. Area burnt in two hours (acres)

| | Distance from Break | |
|---|---|---|
| Break | 0.25 mile | 0.5 mile |
| 0 ft | 267 | 277 |
| 50 ft | 255 | 257 |
| 100 ft | 257 | 297 |
| 150 ft | 247 | 284 |
| 200 ft | 250 | 277 |
| 400 ft | 240 | 255 |

| | Avg. Time to Cross hrs:mi | |
|---|---|---|
| Break | 0.25 miles | 0.5 miles |
| 0 ft | 0:45 | 1:00 |
| 50 ft | 0:45 | 1:00 |
| 100 ft | 0:45 | 1:00 |
| 150 ft | 1:00 | 1:00 |
| 200 ft | 1:00 | 1:10 |
| 400 ft | 1:00 | 1:15 |

Figure 3.1. Dendrogram used to classify extensively sampled stands into preliminary vegetation classes.




Note: High/Low refers to a species' importance value relative to other species

Figure 3.2. Distribution of oak-dominated stands (n=86) by their percent canopy cover. Stands were placed in cover types according to cluster analysis interpretations.

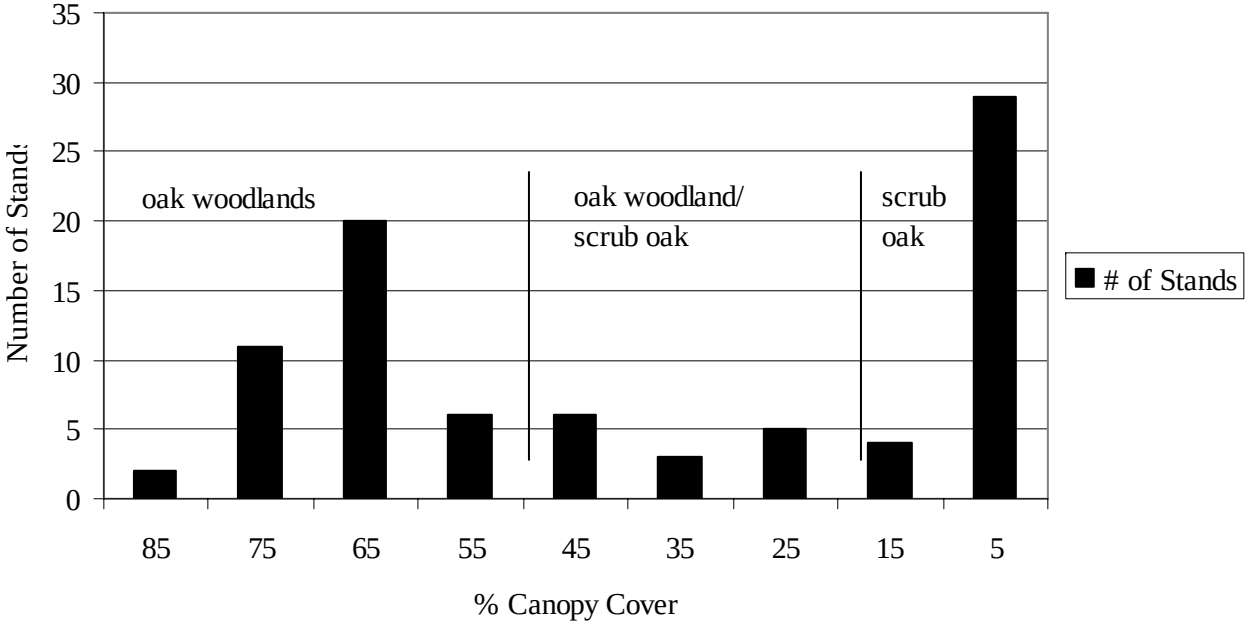
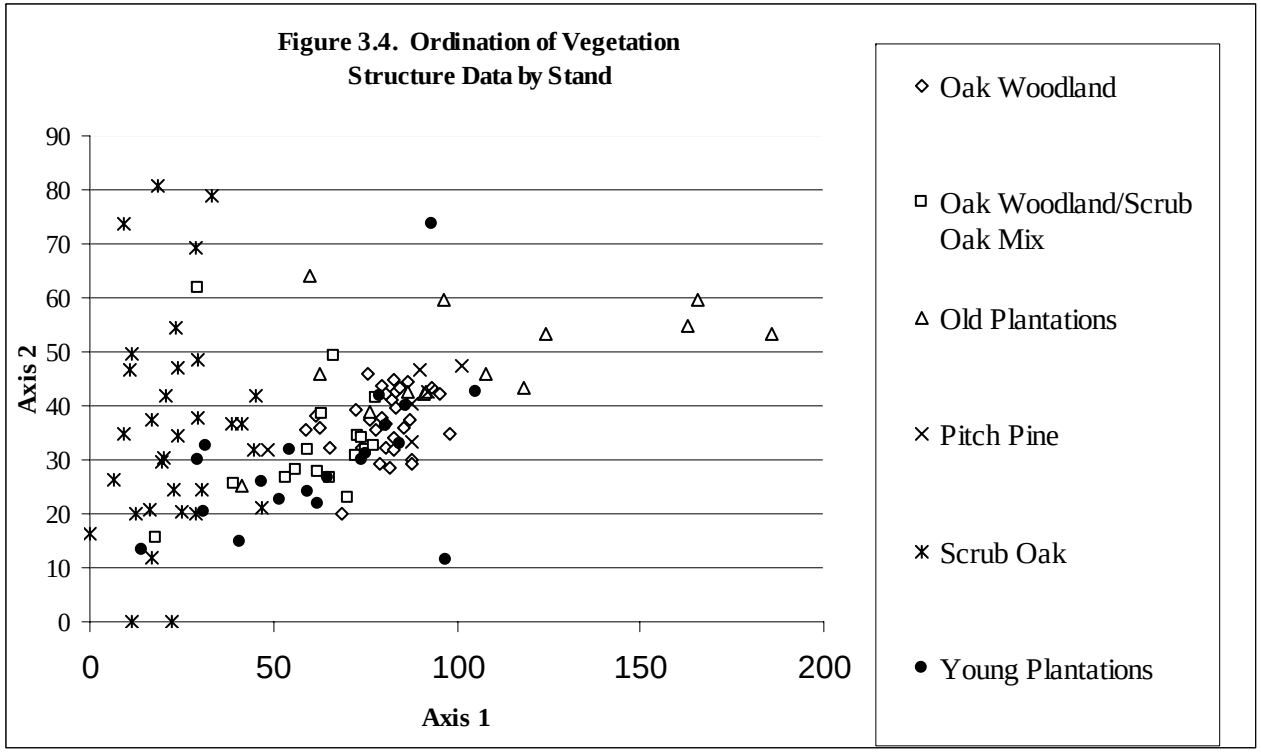


**Figure 3.4. Ordination of Vegetation Structure Data by Stand**



APPENDIX A

Planting Records for Manuel F. Correllus State Forest, 1926-1965
(modified from Foster and Motzkin, 1999)

| Area (acres) | Area (hectacres) | Year(s) Planted | Species |
|---|---|---|---|
| 27.3 | 11.0 | 1926, 1929 | red pine, Scots pine |
| 6.9 | 2.8 | 1928, 1938 | white pine, red pine |
| 1.3 | 0.5 | 1929 | white pine |
| 2.4 | 1.0 | 1929 | red pine |
| 2.9 | 1.2 | 1929 | red pine |
| 14.6 | 5.9 | 1929 | white pine |
| 18.0 | 7.3 | 1929 | red pine |
| 43.8 | 17.7 | 1929 | white pine |
| 86.5 | 35.0 | 1929 or 1930 | red pine |
| 43.7 | 17.7 | 1930 | red pine |
| 37.0 | 15.0 | 1931 | white pine, Scots pine |
| 123.7 | 50.1 | 1931 | white pine, Scots pine |
| 0.3 | 0.1 | 1931, 1932 | white spruce, red pine |
| 0.4 | 0.2 | 1931, 1932 | white pine, white spruce, red pi |
| 0.9 | 0.4 | 1931, 1932 | white spruce, red pine |
| 1.1 | 0.4 | 1931, 1932 | white spruce, red pine |
| 2.0 | 0.8 | 1931, 1932 | white spruce, red pine |
| 3.2 | 1.3 | 1931, 1932 | white pine, white spruce, red pi |
| 8.0 | 3.2 | 1931, 1932 | white spruce, red pine |
| 9.4 | 3.8 | 1931, 1932 | white spruce red pine |
| 14.4 | 5.8 | 1931, 1932 | white spruce |
| 7.1 | 2.9 | 1931, 1933 | white pine, red pine, Scots pine |
| 18.4 | 7.4 | 1932 | Scots pine |
| 20.4 | 8.3 | 1932 | white spruce |
| 26.4 | 10.7 | 1932 | Scots pine |
| 19.9 | 8.1 | 1933 | red pine |
| 28.7 | 11.6 | 1933 | white pine |
| 17.9 | 7.2 | 1933, 1965 | white pine |
| 5.9 | 2.4 | 1934 | red pine |
| 7.6 | 3.1 | 1934 | red pine |
| 12.2 | 4.9 | 1934 | red pine |
| 21.0 | 8.5 | 1934 | red pine |
| 189.0 | 76.5 | 1934 | red pine |
| 2.1 | 0.8 | 1934, 1964 | white pine, red pine |
| 38.9 | 15.7 | 1935 | red pine |
| 19.7 | 8.0 | 1939 | red pine |
| 0.9 | 0.4 | 1940 | red pine |
| 2.1 | 0.8 | 1940 | red pine |
| 5.6 | 2.3 | 1940 | red pine |
| 8.2 | 3.3 | 1940 | red pine |
| 4.3 | 1.7 | 1941 | red pine |
| 28.1 | 11.4 | 1961 | red pine |
| 123.5 | 50.0 | 1963 | not listed |
| 155.3 | 62.8 | 1963 | red pine |
| 7.1 | 2.9 | 1964 | white pine |
| 12.3 | 5.0 | 1964 | red pine |
| 16.9 | 6.8 | 1964 | white pine |
| 20.9 | 8.5 | 1964 | white spruce |
| 21.5 | 8.7 | 1964 | white pine |
| 8.0 | 3.2 | 1965 | larch |
| 19.4 | 7.9 | 1965 | Norway spruce |
| 33.8 | 13.7 | 1965 | white spruce |
| 39.8 | 16.1 | 1965 | white spruce |

APPENDIX E

Aerial Photo Vegetation Classification Key. By Janice Stone.

| | | | | |
|---|---|---|---|---|
| CC | HW2/DRP2B | PP1B/SO1A | RP2/HW2A | SP3B |
| DL | HW2/RP2A | PP1C/G1 | RP2/HW2B/SO1B | SP3C |
| DRP2B | HW2/RP2B | PP1C/G2 | RP2A | SW1A |
| DRP2B/SO1B | HW2A | PP1C/SO1A | RP2B | SW1B |
| DRP2C/MW1A | HW2A/SO1A | PP1C/SO1A-FR | RP2B/HE | SW1B/SO1A |
| DRP2C/SO1A | HW2B | PP1C/SO1B | RP2B/SO1B | SW2A |
| DRP2C/SO1B | HW2B/SO1A | PP1C/SO1C | RP2C | SW2B |
| DRP2C/WP1C | HW2B/SO1B | PP2/HW1Ba | RP2C/HW1A | SW2B/G2 |
| DRP3/HW2B | HW2B/SO1C | PP2/HW2A | RP2C/SO1A | SW2B/SO1B |
| DRP3B/WP1B | HW2B/WP1C | PP2/HW2Ba | RP2C/WP1A | SW2C |
| DRP3C | HW2C/SO1A | PP2/HW2Bb | RP2C/WS1B | SW2C/HW1B |
| DRP3C/WP1A | HW2C/SO1A-FR | PP2A | RP3/HW3A | SW2C/HW1C |
| DRP3C/WP2C | HW2C/SO1B | PP2A/SO1A | RP3/WP3A | SW2C/SO1A |
| G1 | HW2C/SO1B-FB | PP2A-FR | RP3A | SW3A |
| G2 | HW2C/SO1C | PP2Ba | RP3B | SW3B |
| G2-FB | HW2C/SO1C-FB | PP2Ba/SO1A | RP3C | W |
| HE | HW2C/WS1B | PP2Ba/SO1B | RP3C/G2 | WP1B |
| HE-FB | HW3A | PP2Bb | RP3C/HW1B | WP2A |
| HW1A | HWIB | PP2Bb/G1 | RP3C/WP2B | WP2B |
| HW1A/SO1A | MW1A | PP2Bb/SO1A | S | WP2C/SO1B |
| HW1B | MW1B | PP2C/SO1A | S-FB | WP3A |
| HW1B/G2 | MW2A | PP2C/SO1A-FR | SO1A | WP3B |
| HW1B/SO1A | MW2B | PP2C/SO1B | SO1A-FB | WP3C |
| HW1B/SO1B | MW2B | PP3/HW2A | SO1A-FR | WS1A/SO1A |
| HW1B/SO1C | MW2C | PP3/HW2Bb | SO1B | WS1B/SO1A |
| HW1C/G2 | MW3A | PP3A | SO1B-FB | WS1B/SO1B |
| HW1C/SO1A | MW3B | PP3Ba | SO1B-FR | WS1C/SO1A |
| HW1C/SO1A-FR | MW3C | PP3Bb | SO1C | WS3A |
| HW1C/SO1B | NO PHOTO | RP1/HW1A | SO1C-FB | WS3B |
| HW1C/SO1C | Out of area | RP1C/SO1A | SO1C-FR | WS3C |

Key

Cover Types

| | | | |
|---|---|---|---|
| CC | Clearcut | W | Water/wetlands |
| DRP | Dead Red Pine | WS | White Spruce |
| G1 | Grassland | NO PHOTO | Area not photographed |
| G2 | Grassland | Out of Area | Area not evaluated |
| FB | Frostbottom | | Canopy Height |
| FR | Fire Road | 1 | 0-20 ft |
| HE | Heath | 2 | 20-40 ft |
| HW | Hardwoods | 3 | 40-60 ft |
| RP | Red Pine | | Percent Cover |
| SO | Scrub Oak | A | 0-20 percent cover |
| WP | White Pine | B | 20-60 percent cover |
| PP | Pitch Pine | C | 60-100 percent cover |
| S | Sand (bare ground) | a | 0-20 percent cover (second canopy species) |
| SP | Scotch Pine | | |
| SW | Softwoods | b | 20-60 percent cover (second canopy species) |

APPENDIX G

Weather Data collected at 1300hrs. at MFCSF Headquarters for April 1994 and March-April, 1995.

| date | S.O. weath. | RH% | Wind Dir | Windspd mph | Max temp | Min Temp | Max Hun | Min Hum % | Precip | Kind 24hr amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| 4/12/1998 | 0 | 55 | 7 | 10 | 57 | 40 | 78 | 55 | 6 | 0.5 |
| 4/13/1998 | 3 | 57 | 2 | 6 | 57 | 29 | 88 | 55 | | |
| 4/14/1998 | 4 | 81 | 2 | 6 | 51 | 43 | 81 | 55 | 5 | 0.18 |
| 4/15/1998 | 0 | 58 | 5 | 10 | 58 | 46 | 81 | 58 | 6 | 0.7 |
| 4/16/1998 | 0 | 68 | 4 | 6 | 60 | 39 | 83 | 58 | | |
| 4/17/1998 | 6 | 84 | 6 | 21 | 61 | 43 | 84 | 64 | 6 | 0.4 |
| 4/18/1998 | 1 | 62 | 7 | 17 | 53 | 42 | 84 | 62 | | |
| 4/19/1998 | 1 | 45 | 5 | 14 | 55 | 33 | 86 | 45 | | |
| 4/20/1998 | 1 | 62 | 4 | 28 | 59 | 35 | 88 | 45 | | |
| 4/21/1998 | 0 | 46 | 5 | 15 | 60 | 46 | 78 | 46 | 8 | 0.09 |
| 4/22/1998 | 0 | 54 | 5 | 18 | 58 | 28 | 78 | 46 | | |
| 4/23/1998 | 0 | 48 | 7 | 10 | 53 | 30 | 87 | 48 | | |
| 4/24/1998 | 0 | 47 | 5 | 15 | 52 | 27 | 89 | 47 | | |
| 4/25/1998 | 0 | 65 | 5 | 24 | 55 | 44 | 74 | 47 | | |
| 4/26/1998 | 3 | 89 | 2 | 12 | 59 | 44 | 90 | 56 | 5 | 0.01 |
| 4/27/1998 | 3 | 88 | 2 | 15 | 49 | 44 | 89 | 88 | 5 | 0.02 |
| 4/28/1998 | 0 | 70 | 5 | 18 | 63 | 46 | 87 | 70 | | |
| 4/29/1998 | 0 | 66 | 1 | 15 | 64 | 50 | 78 | 58 | | |
| 4/30/1998 | 3 | 59 | 1 | 10 | 59 | 31 | 87 | 57 | | |
| 5/1/1998 | 1 | 77 | 4 | 8 | 67 | 47 | 79 | 55 | | |
| 3/2/1999 | 3 | 79 | 1 | 12 | 47 | 34 | 81 | 79 | 6 | 0.67 |
| 3/3/1999 | 2 | 77 | 8 | 12 | 35 | 30 | 79 | 77 | | |
| 3/4/1999 | 0 | 76 | 1 | 10 | 35 | 29 | 78 | 76 | | |
| 3/5/1999 | 1 | 70 | 2 | 14 | 35 | 20 | 87 | 70 | | |
| 3/6/1999 | 3 | 75 | 2 | 19 | 37 | 34 | 75 | 70 | | |
| 3/7/1999 | 3 | 84 | 7 | 10 | 42 | 37 | 84 | 76 | 6 | 0.46 |
| 3/8/1999 | 3 | 79 | 2 | 12 | 44 | 29 | 84 | 74 | | |
| 3/9/1999 | 3 | 74 | 4 | 20 | 55 | 40 | 79 | 74 | | |
| 3/10/1999 | 3 | 75 | 7 | 15 | 55 | 33 | 76 | 74 | 6 | 0.53 |
| 3/11/1999 | 0 | 41 | 6 | 18 | 35 | 22 | 75 | 41 | | |
| 3/12/1999 | 3 | 41 | 2 | 10 | 35 | 23 | 42 | 41 | | |
| 3/13/1999 | 0 | 65 | 3 | 14 | 39 | 29 | 73 | 41 | | |
| 3/14/1999 | 1 | 74 | 4 | 10 | 49 | 36 | 74 | 66 | | |
| 3/15/1999 | 3 | 82 | 2 | 8 | 50 | 35 | 87 | 74 | | |
| 3/16/1999 | 3 | 70 | 5 | 4 | 43 | 38 | 80 | 70 | | |
| 3/17/1999 | 3 | 60 | 4 | 4 | 42 | 30 | 86 | 60 | | |
| 3/18/1999 | 3 | 79 | 1 | 10 | 44 | 38 | 79 | 59 | 8 | 0.15 |
| 3/19/1999 | 1 | 77 | 1 | 12 | 43 | 37 | 79 | 77 | | |
| 3/20/1999 | 1 | 68 | 1 | 14 | 44 | 32 | 77 | 68 | | |
| 3/21/1999 | 0 | 65 | 4 | 8 | 45 | 21 | 84 | 65 | | |
| 3/22/1999 | 1 | 68 | 5 | 18 | 54 | 41 | 78 | 65 | | |
| 3/23/1999 | 2 | 50 | 6 | 10 | 55 | 38 | 78 | 50 | 8 | 0.15 |
| 3/24/1999 | 3 | 44 | 6 | 10 | 50 | 34 | 76 | 44 | | |

APPENDIX G (continued)

Weather Data collected at 1300hrs. at MFCSF Headquarters for April 1994 and March-April, 1995.

| date | S.O. | weat | RH% | Wind Dir | Windspd | Max temp | Min Temp | Max Hum | Min Hum | Precip | Kin 24hr amou |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/25/1999 | 0 | 72 | 8 | 15 | 50 | 36 | 72 | 44 | | | |
| 3/26/1999 | 0 | 53 | 1 | 12 | 39 | 33 | 76 | 53 | | | |
| 3/27/1999 | 0 | 58 | 7 | 17 | 45 | 30 | 73 | 52 | | | |
| 3/28/1999 | 0 | 55 | 7 | 18 | 46 | 23 | 87 | 55 | | | |
| 3/29/1999 | 0 | 40 | 1 | 13 | 44 | 22 | 88 | 40 | | | |
| 3/30/1999 | 0 | 31 | 2 | 12 | 47 | 29 | 86 | 31 | | | |
| 3/31/1999 | 0 | 41 | 4 | 16 | 49 | 23 | 89 | 31 | | | |
| 4/1/1999 | 1 | 41 | 7 | 10 | 50 | 39 | 85 | 41 | | | |
| 4/2/1999 | 1 | 42 | 2 | 9 | 50 | 33 | 69 | 41 | | | |
| 4/3/1999 | 1 | 55 | 1 | 12 | 47 | 30 | 87 | 42 | | | |
| 4/4/1999 | 0 | 35 | 1 | 12 | 47 | 22 | 87 | 35 | | | |
| 4/5/1999 | 3 | 76 | 5 | 25 | 49 | 39 | 76 | 34 | | | |
| 4/6/1999 | 1 | 21 | 6 | 27 | 50 | 24 | 78 | 21 | | | |
| 4/7/1999 | 0 | 21 | 5 | 12 | 38 | 27 | 21 | 21 | | | |
| 4/8/1999 | 3 | 65 | 1 | 8 | 46 | 38 | 87 | 21 | | | |
| 4/9/1999 | 5 | 58 | 1 | 12 | 43 | 21 | 90 | 58 | 7 | 0.2 | |
| 4/10/1999 | 2 | 70 | 6 | 8 | 52 | 36 | 90 | 58 | | | |
| 4/11/1999 | 0 | 50 | 1 | 14 | 55 | 34 | 77 | 50 | 6 | 0.5 | |
| 4/12/1999 | 0 | 45 | 3 | 10 | 52 | 25 | 87 | 45 | | | |
| 4/13/1999 | 3 | 73 | 3 | 14 | 52 | 27 | 85 | 45 | | | |
| 4/14/1999 | 0 | 77 | 5 | 14 | 54 | 46 | 78 | 73 | 6 | 0.2 | |
| 4/15/1999 | 3 | 72 | 7 | 6 | 58 | 41 | 78 | 69 | 6 | 0.15 | |
| 4/16/1999 | 0 | 57 | 7 | 17 | 49 | 41 | 72 | 57 | | | |
| 4/17/1999 | 0 | 57 | 7 | 8 | 49 | 37 | 58 | 57 | | | |
| 4/18/1999 | 0 | 63 | 4 | 10 | 50 | 31 | 74 | 57 | | | |
| 4/19/1999 | 0 | 47 | 5 | 10 | 55 | 33 | 89 | 47 | | | |
| 4/20/1999 | 8 | 86 | 5 | 15 | 56 | 39 | 88 | 47 | 6 | 0.35 | |
| 4/21/1999 | 0 | 57 | 7 | 14 | 59 | 48 | 86 | 57 | 8 | 0.15 | |
| 4/22/1999 | 3 | 45 | 4 | 10 | 62 | 37 | 86 | 45 | | | |
| 4/23/1999 | 3 | 78 | 6 | 11 | 54 | 45 | 78 | 45 | 6 | 0.15 | |
| 4/24/1999 | 2 | 60 | 7 | 14 | 57 | 41 | 78 | 60 | | | |
| 4/25/1999 | 1 | 20 | 4 | 8 | 52 | 37 | 75 | 20 | | | |
| 4/26/1999 | 0 | 19 | 1 | 6 | 55 | 33 | 89 | 19 | | | |
| 4/27/1999 | 0 | 39 | 5 | 10 | 60 | 49 | 80 | 19 | | | |
| 4/28/1999 | 1 | 40 | 1 | 11 | 60 | 39 | 88 | 39 | | | |
| 4/29/1999 | 3 | 87 | 0 | 0 | 60 | 38 | 88 | 40 | 5 | 0.01 | |
| 4/30/1999 | 0 | 81 | 7 | 12 | 55 | 43 | 87 | 81 | | | |
| 5/1/1999 | 3 | 81 | 3 | 14 | 54 | 43 | 82 | 80 | | | |
| **averages** | | **61.5** | **4.1** | **12.7** | **51.4** | **35.5** | **81.3** | **54.2** | | | |

APPENDIX H

Table 1. Transition matrix for vegetation development, derived from 1938 and 1995 aerial photos. Data represent changes (in acres) of vegetation classification between 1938 and 1995 aerial photo

| | 1995 | IMHW | HW | SO | HE | G2 | HW/SO-F | PP/SO-F | PP1B/SO-T | PP-F | PP/HW-F | SW1 | SW2 | SW3 | MW1 | MW2 | MW3 | DL | CC | WT | Out of area | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1938 | | | | | | | | | | | | | | | | | | | | | | |
| IMHW | | 10.76 | 940.38 | 119.05 | 10.33 | 18.07 | 139.66 | 1.51 | | 6.02 | 2.63 | 42.25 | 65.57 | 89.39 | 18.30 | 126.58 | 8.62 | 4.01 | 1.94 | | | 1605.07 |
| HW2A | | | 77.72 | 5.57 | | | 4.20 | | | | | | | 0.97 | | 1.39 | | | | | | 89.85 |
| SO | | 4.41 | 319.95 | 1305.41 | 23.03 | 10.88 | 475.69 | 39.61 | 10.98 | 36.73 | 34.42 | 95.95 | 315.79 | 213.71 | 5.61 | 81.28 | 1.30 | 1.62 | 1.15 | | 0.27 | 2977.79 |
| HE | | | 0.34 | 9.69 | 2.73 | 2.47 | 3.41 | 0.71 | | 0.60 | | 0.12 | 1.56 | 0.34 | | 0.06 | | 0.17 | | | | 22.20 |
| G2 | | 0.40 | 4.17 | 10.89 | 19.82 | 51.99 | 5.27 | 0.02 | | 1.21 | | | 17.13 | 6.86 | 0.21 | 2.74 | | 78.76 | | 0.46 | | 199.93 |
| PP/SO-F | | | 4.92 | 1.30 | | | 0.49 | 17.14 | | 25.48 | 34.05 | 0.53 | | 3.10 | | | | | | | | 87.01 |
| PP/SO-T | | | | 6.82 | | | 1.51 | 2.10 | | 8.64 | 4.59 | 0.48 | 1.24 | 5.14 | | 10.14 | | 0.37 | | | | 41.03 |
| PP/HW-F | | | 6.45 | | | | | | | | 5.22 | | | | | | | | | | | 11.67 |
| SW1 | | | 1.76 | | | 0.71 | | | | | | 0.59 | 0.57 | 5.53 | 1.93 | 3.90 | 0.58 | 0.34 | 1.93 | | | 17.84 |
| SW2 | | | 3.26 | 1.21 | | | | | | | | 2.14 | 0.44 | 2.72 | | 1.13 | 10.64 | 0.60 | 12.82 | | | 34.96 |
| MW1A | | | | | | 1.24 | | | | | | 0.74 | 15.49 | 3.43 | 5.32 | 1.73 | 2.59 | | | | | 30.54 |
| DL | | | 1.05 | | | 1.17 | | | | | | | 0.01 | 1.51 | | 0.05 | 0.46 | 13.98 | | | | 18.23 |
| W | | | 0.05 | | | 0.17 | | | | | | | | | | | | 0.04 | | 1.19 | | 1.45 |
| NO PHOTO | | | 8.73 | 25.64 | | 10.42 | | | | 0.10 | | | | | | | 0.43 | | | | | 45.32 |
| Out of area | | | | | | | | | | | | | | 5.32 | | | 2.21 | 0.00 | | | | 7.53 |
| 938 TOTALS | | 15.57 | 1368.78 | 1485.58 | 55.91 | 97.12 | 630.23 | 61.09 | 10.98 | 78.78 | 80.91 | 142.80 | 417.80 | 338.02 | 31.37 | 229.00 | 26.83 | 99.89 | 17.84 | 1.65 | 0.27 | 5190.42 |

Key:

| | | | |
|---|---|---|---|
| IMHW | immature hardwoods | SW1 | softwoods >20ft in height |
| HW | mature hardwood forest | SW2 | softwoods between 20-40 ft in height |
| SO | scrub oak | SW3 | softwoods >40ft in height |
| HW/SO-F | hardwood/scrub oak forest | MW1 | mixed woods >20ft in height |
| HE | heathland | MW2 | mixed woods between 20-40 ft in height |
| G2 | grassland | MW3 | mixed woods >40ft in height |
| PP/SO-F | pitch pine/scrub oak forest | DL | developed land |
| PP/SO-T | pitch pine/scrub oak thicket | W | water/wetland |
| PP/HW-F | pitch pine/hardwood forest | NO PHOTO | photo not available |
| PPF | pitch pine forest | Out of area | not photographed |
| PP1B/SO-T | immature pitch pine/scrub oak thicke | CC | clear cut |

APPENDIX H

Table 2. Transition matrix for vegetation development, derived from 1938 and 1952 aerial photos. Data represent changes (in acres) of vegetation classification between 1938 and 1952 aerial photo interpretation

| | 1952 | IMHW | HW | SO | HE | G2 | HW/SO-F | PP/SO-F | PP/SO-T | SW1 | SW2 | SW3 | MW2B | DL | W | S | Out of area | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1938 | | | | | | | | | | | | | | | | | | |
| IMHW | | 190.77 | 543.84 | 334.26 | 1.66 | 0.94 | 364.86 | 1.40 | | 36.14 | 103.15 | 0.75 | 23.68 | 2.20 | | 1.40 | | 1605.05 |
| HW2A | | | 65.64 | 19.16 | | | 2.69 | | | | 0.42 | | 1.94 | | | | | 89.85 |
| SO | | 97.83 | 100.61 | 2351.99 | 9.95 | 5.56 | 156.29 | 20.80 | 9.48 | 99.17 | 121.15 | 0.05 | 4.53 | 0.78 | | 0.56 | 0.27 | 2979.02 |
| HE | | 0.57 | | 9.49 | 8.51 | 0.86 | 0.51 | | | 0.82 | 0.21 | | | | | | | 20.97 |
| G2 | | 1.91 | 0.36 | 20.53 | 13.97 | 139.87 | 1.79 | 0.30 | 0.03 | 7.73 | 0.15 | | | 13.29 | 0.02 | | | 199.95 |
| PP/SO-F | | 0.01 | 7.98 | 17.33 | 0.64 | | 2.74 | 57.28 | 1.06 | | | | | | | | | 87.04 |
| PP/SO-T | | | 1.58 | 25.48 | | | | 12.67 | | | 1..25 | | | 0.06 | | | | 39.79 |
| PP/HW-F | | | 6.87 | 0.32 | | | 1.07 | 3.40 | | | | | | | | | | 11.66 |
| SW1 | | 0.08 | 1.19 | 0.60 | | | | | | 1.08 | 13.79 | 0.39 | | 0.74 | | | | 17.87 |
| SW2 | | | 0.36 | 2.29 | | 1.64 | 0.92 | | | 1.13 | 13.91 | 14.57 | | 0.12 | | | | 34.94 |
| MW1A | | | 17.55 | | | | | | | 11.51 | 1.47 | | | | | | | 30.53 |
| DL | | 0.09 | 0.79 | 0.15 | | 1.01 | | | | 1.47 | 0.77 | | | 13.93 | | | | 18.21 |
| W | | | | | | 0.57 | | | | | | | | 0.04 | 0.84 | | | 1.45 |
| NO PHOTO | | | 3.80 | 36.72 | 2.62 | | 2.17 | | | | | | | | | | | 45.31 |
| Out of area | | | | | | | | | | | | | | 0.86 | | | | 0.86 |
| 1952 TOTALS | | 291.26 | 750.58 | 2818.32 | 37.35 | 150.45 | 533.04 | 95.85 | 10.57 | 159.05 | 256.27 | 15.76 | 30.15 | 32.03 | 0.86 | 1.96 | 0.27 | 5183.77 |

Key:

| | | | |
|---|---|---|---|
| IMHW | immature hardwoods | SW1 | softwoods >20ft in height |
| HW2A | mature hardwood forest | SW2 | softwoods between 20-40 ft in height |
| SO | scrub oak | MW1A | mixed woods >20ft in height |
| HE | heathland | DL | developed land |
| G2 | grassland | W | water/wetland |
| PP/SO-F | pitch pine/scrub oak forest | NO PHOTO | photo not available |
| PP/SO-T | pitch pine/scrub oak thicket | Out of area | not photographed |
| PP/HW-F | pitch pine/hardwood forest | | |

APPENDIX H

Table 3. Transition matrix for vegetation development, derived from 1952 and 1995 aerial photos. Data represent changes (in acres) of vegetation classification between 1952 and 1995 aerial photo

| | 1995 | IMHW | HW | SO | HE | G2 | HW/SO-F | PP/SO-F | PP1B/SO1A | PP-F | PP/HW-F | SW1 | SW2 | SW3 | MW1 | MW2 | MW3 | DL | CC | WT | Out of area | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | | | | | | | | | | | | | | | | | | | | | | |
| IMHW | | 8.61 | 123.96 | 23.26 | 0.45 | 0.23 | 60.42 | 0.38 | | 3.08 | 0.06 | 8.43 | 37.33 | 13.11 | 10.82 | 1.04 | | 0.07 | | | | 291.25 |
| HW | | | 554.55 | 11.29 | 1.25 | 10.69 | 18.15 | | | 0.86 | 8.51 | 5.28 | 12.67 | 75.13 | 0.06 | 41.97 | 8.87 | 1.26 | | | | 750.54 |
| SO | | 3.73 | 304.65 | 1338.52 | 23.73 | 24.56 | 433.69 | 51.24 | 10.92 | 29.32 | 19.41 | 112.20 | 300.88 | 53.36 | 7.03 | 93.92 | 1.42 | 5.88 | 0.80 | | | 2815.26 |
| HE | | | 1.38 | 9.35 | 6.10 | 12.23 | 0.08 | 0.53 | | 4.65 | | 0.36 | 0.56 | | | 0.46 | | 1.67 | | | | 37.37 |
| G2 | | | 2.72 | 9.91 | 16.68 | 35.72 | 0.96 | | 0.07 | 0.50 | | | 17.49 | 0.97 | 0.59 | 2.84 | 0.77 | 60.57 | | 0.70 | | 150.49 |
| HW/SO-F | | 0.14 | 352.51 | 63.04 | 1.17 | 7.08 | 89.58 | | | 5.20 | 6.13 | 1.39 | 2.63 | 0.19 | 0.98 | 0.08 | 1.81 | | 1.11 | | | 533.04 |
| PP/SO-F | | | 6.69 | 3.99 | | 0.30 | 1.77 | 8.38 | | 31.32 | 42.81 | | | 0.59 | | | | | | | | 95.85 |
| PP/SO-T | | | 3.04 | 1.43 | | | 1.34 | 0.55 | | 2.98 | | | | 1.21 | | | | | | | | 10.55 |
| SW1 | | | 7.03 | 16.97 | 1.44 | 4.94 | 24.23 | | | | 3.98 | 11.64 | 14.06 | 28.86 | 10.44 | 34.28 | | 0.82 | 0.28 | 0.10 | | 159.07 |
| SW2 | | | 6.88 | 7.37 | 5.08 | 0.74 | | | | | | 1.60 | 31.38 | 157.56 | 1.45 | 28.46 | 11.70 | 1.50 | 2.53 | | | 256.25 |
| SW3 | | | 0.08 | | | | | | | | | 1.90 | | 0.64 | | 0.03 | | | 13.11 | | | 15.76 |
| MW2B | | | 3.83 | | | | | | | | | | 0.79 | 0.03 | | 25.50 | | | | | | 30.15 |
| DL | | | 0.92 | | 0.01 | 0.64 | | | | | | | | 1.04 | | 0.45 | | 28.11 | | | 0.87 | 32.03 |
| W | | | | | | | | | | | | | | | | | | | | 0.86 | | 0.86 |
| S | | | 0.55 | 0.53 | | | | | | 0.89 | | | | | | | | | | | | 1.97 |
| Out of area | | | | | | | | | | | | | | 5.32 | | | 2.21 | 0.00 | | | | 7.53 |
| 1995 Totals | | 3.87 | 1244.83 | 1462.40 | 55.46 | 96.90 | 569.80 | 60.70 | 10.99 | 75.72 | 80.84 | 134.37 | 380.46 | 324.90 | 20.55 | 227.99 | 26.78 | 99.81 | 17.83 | 1.66 | 0.87 | 5187.97 |

Key:

| | | | |
|---|---|---|---|
| IMHW | immature hardwoods | SW1 | softwoods >20ft in height |
| HW | mature hardwood forest | SW2 | softwoods between 20-40 ft in height |
| SO | scrub oak | SW3 | softwoods >40ft in height |
| HW/SO-F | hardwood/scrub oak forest | MW1 | mixed woods >20ft in height |
| HE | heathland | MW2 | mixed woods between 20-40 ft in height |
| G2 | grassland | MW3 | mixed woods >40ft in height |
| PP/SO-F | pitch pine/scrub oak forest | DL | developed land |
| PP/SO-T | pitch pine/scrub oak thicket | W | water/wetland |
| PP/HW-F | pitch pine/hardwood forest | NO PHOTO | photo not available |
| PPF | pitch pine forest | Out of area | not photographed |
| PP1B/SO-T | immature pitch pine/scrub oak thic | CC | clear cut |
| S | sand (bare ground) | | |

| Vegetation Type | PLOTS | MOSS | LICHEN | MELLIN | GAUPRO | CYPACA | ARCUVA | EPIREP | CARPEN | PYRARB | RUBHIS | QUEPRI | KALANG | VACVAC | VACANG | COMPER | PTEAQU | QUEILI | SMISPP | PINRIG | GAYBAC | QUEVEL | QUEALB | QUESTE | PINSTR | PICGLA | PINRES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heath | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 4 | 0 | 1 | 4 | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 83 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 78 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 3 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | |
| | 5 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 2 | 1 | 0 | 4 | 5 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | |
| | 19 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 1 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 88 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 2 | 0 | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 54 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 2 | 2 | 0 | 3 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 56 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 1 | 2 | 0 | 3 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 33 | 1 | 2 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 4 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | |
| Young Pine | 50 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 3 | 2 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 3 | |
| | 51 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 3 | 0 | 2 | 3 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 5 | |
| | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 3 | 1 | 2 | 6 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 4 | |
| | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 5 | |
| | 84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | |
| Scrub Oak | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 2 | 6 | 0 | 0 | 3 | 0 | 2 | 1 | 0 | 0 | 0 | |
| | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 1 | 1 | 6 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | |
| | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 2 | 0 | 3 | 6 | 0 | 0 | 3 | 0 | 2 | 1 | 0 | 0 | 0 | |
| | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 6 | 0 | 2 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | |
| | 70 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 1 | 3 | 6 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | |
| | 37 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 5 | 0 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 3 | |
| | 47 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 1 | 2 | 5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | |
| | 48 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 2 | 6 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 2 | |
| | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 5 | 0 | 0 | 6 | 0 | 0 | 0 | 1 | 0 | 1 | |
| | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 1 | 0 | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 115 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 | 0 | 0 | 6 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | |
| | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 2 | 0 | 7 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 6 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | |
| | 52 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 3 | 0 | 3 | 1 | 1 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 102 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 2 | 3 | 0 | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 11 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 4 | 2 | 2 | 2 | 1 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | |
| | 101 | 0 | 1 | 0 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 0 | 3 | 3 | 1 | 0 | 5 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | |
| | 110 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 2 | 0 | 0 | 6 | 0 | 0 | 2 | 0 | 1 | 2 | 2 | 0 | 0 | |
| | 23 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 1 | 0 | 0 | 5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | 25 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 2 | 3 | 1 | 0 | 1 | 0 | 5 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | |
| | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 2 | 2 | 1 | 2 | 5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 107 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 3 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | |
| | 49 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 1 | 3 | 1 | 1 | 6 | 0 | 1 | 2 | 0 | 2 | 2 | 0 | 0 | 2 | |
| | 28 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 1 | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 3 | 0 | |
| | 40 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 6 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 3 | 0 | |
| | 39 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 3 | 0 | 0 | 1 | 0 | 3 | 0 | |
| Oak Woodlands /Scrub Oak | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 2 | 0 | 1 | 2 | 0 | 0 | 3 | 4 | 0 | 3 | 0 | 0 | 0 | |
| | 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 2 | 2 | 0 | 0 | 3 | 3 | 0 | 3 | 0 | 0 | 0 | |
| | 72 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | 4 | 3 | 0 | 3 | 0 | 0 | 3 | |
| | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 5 | 3 | 2 | 1 | 0 | 0 | 2 | |
| | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 3 | 2 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 0 | |
| | 68 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 3 | 1 | 0 | 2 | 2 | 0 | 0 | 4 | 1 | 2 | 4 | 0 | 0 | 0 | |
| | 82 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 2 | 2 | 0 | 0 | 6 | 2 | 0 | 5 | 0 | 0 | 0 | |
| | 85 | 1 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 | 2 | 2 | 0 | 0 | |
| | 87 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 3 | 2 | 1 | 3 | 5 | 0 | 0 | 3 | 3 | 0 | 0 | 2 | 0 | 0 | |
| | 14 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 5 | 0 | 0 | 0 | |
| | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 3 | 1 | 0 | 5 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | |
| | 120 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 1 | 5 | 0 | 0 | 6 | 0 | 0 | 4 | 1 | 0 | 0 | |
| | 121 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 2 | 3 | 0 | 0 | 4 | 0 | 0 | 4 | 3 | 2 | 6 | 0 | 0 | 0 | |
| | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 1 | 5 | 1 | 0 | 4 | 2 | 0 | 3 | 0 | 0 | 0 | |
| | 42 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 2 | 0 | 2 | 6 | 0 | 0 | 3 | 3 | 0 | 3 | 0 | 0 | 0 | |
| | 75 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 3 | 1 | 1 | 3 | 4 | 0 | 0 | 4 | 3 | 0 | 3 | 0 | 0 | 0 | |
| | 45 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 1 | 2 | 4 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 0 | 2 | |
| | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 2 | 6 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 0 | |
| | 43 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 1 | 0 | 3 | 6 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 0 | |
| | 119 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 2 | 0 | 1 | 5 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 0 | |
| | 94 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 3 | 5 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | |
| | 35 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 2 | 6 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 3 | 0 | |
| | 117 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 3 | 5 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 3 | 0 | |
| | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | 3 | 6 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 3 | 0 | |
| | 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 2 | 1 | 0 | 2 | 3 | 1 | 0 | 4 | 0 | 0 | 4 | 0 | 4 | 0 | |

| Vegetation Type | PLOTS | MOSS | LICHEN | MELLIN | GAUPRO | CYPACA | ARCUVA | EPIREP | CARPEN | PYRARB | RUBHIS | QUEPRI | KALANG | VACVAC | VACANG | COMPER | PTEAQU | QUEILI | SMISPP | PINRIG | GAYBAC | QUEVEL | QUEALB | QUESTE | PINSTR | PICGLA | PINRES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oak | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 2 | 1 | 0 | 4 | 2 | 4 | 2 | 0 | 0 | 0 |
| Woodlands | 62 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 1 | 3 | 1 | 0 | 3 | 2 | 4 | 1 | 0 | 0 | 0 |
| | 57 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 2 | 0 | 0 | 3 | 1 | 4 | 0 | 1 | 0 | 0 |
| | 114 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 3 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 0 |
| | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 4 | 2 | 0 | 0 | 0 |
| | 58 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 3 | 3 | 0 | 2 | 2 | 0 | 0 | 4 | 2 | 6 | 0 | 0 | 0 | 0 |
| | 71 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 2 | 0 | 2 | 2 | 0 | 0 | 4 | 1 | 5 | 0 | 0 | 0 | 0 |
| | 63 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 4 | 0 | 0 | 0 | 0 |
| | 61 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 2 | 1 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 100 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 3 | 3 | 0 | 1 | 2 | 2 | 0 | 3 | 3 | 4 | 0 | 0 | 0 | 0 |
| | 30 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 2 | 1 | 0 | 0 | 3 | 3 | 3 | 0 | 0 | 0 | 0 |
| | 41 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 3 | 1 | 1 | 0 | 3 | 3 | 3 | 0 | 0 | 0 | 0 |
| | 67 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 2 | 3 | 0 | 2 | 0 | 0 | 0 | 4 | 3 | 4 | 0 | 1 | 0 | 0 |
| | 112 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 0 | 1 | 1 | 0 | 0 | 4 | 3 | 4 | 0 | 1 | 0 | 2 |
| | 113 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 1 | 3 | 0 | 0 | 4 | 4 | 4 | 0 | 1 | 0 | 2 |
| | 46 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 0 | 0 | 3 | 2 | 4 | 3 | 0 | 0 | 0 |
| | 89 | 1 | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 2 | 3 | 0 | 1 | 3 | 2 | 5 | 0 | 0 | 0 | 0 |
| | 103 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 6 | 3 | 4 | 0 | 0 | 0 | 0 |
| | 104 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 2 | 0 | 0 | 4 | 4 | 4 | 0 | 0 | 0 | 0 |
| | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 0 | 0 | 3 | 2 | 0 | 4 | 4 | 4 | 2 | 0 | 0 | 0 |
| | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 2 | 0 | 0 | 5 | 0 | 0 | 3 | 2 | 3 | 2 | 0 | 0 | 0 |
| | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 2 | 0 | 2 | 4 | 0 | 0 | 4 | 4 | 3 | 3 | 0 | 0 | 0 |
| | 59 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 1 | 5 | 0 | 0 | 3 | 3 | 4 | 2 | 0 | 0 | 0 |
| | 116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 3 | 3 | 0 | 2 | 4 | 1 | 0 | 3 | 3 | 5 | 0 | 1 | 0 | 0 |
| | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 2 | 0 | 2 | 4 | 0 | 0 | 3 | 1 | 3 | 3 | 0 | 0 | 0 |
| | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 2 | 1 | 2 | 4 | 0 | 0 | 3 | 1 | 3 | 4 | 0 | 0 | 0 |
| | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 3 | 3 | 0 | 0 | 3 | 0 | 4 | 3 | 0 | 0 | 0 |
| | 55 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 4 | 0 | 5 | 2 | 0 | 0 | 0 |
| | 66 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 1 | 0 | 3 | 4 | 0 | 0 | 4 | 0 | 4 | 2 | 0 | 0 | 0 |
| | 105 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 4 | 0 | 0 | 6 | 0 | 4 | 0 | 0 | 0 | 0 |
| | 69 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 3 | 2 | 0 | 2 | 5 | 0 | 0 | 4 | 1 | 5 | 1 | 0 | 0 | 0 |
| | 13 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 0 | 0 | 4 | 0 | 1 | 3 | 0 | 4 | 1 | 0 | 0 | 0 |
| | 36 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 0 |
| | 106 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 2 | 2 | 5 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 0 |
| Pitch Pine | 15 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 4 | 0 | 4 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 2 | 3 | 3 | 5 | 0 | 0 | 1 | 0 | 0 | 0 |
| | 27 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 1 | 0 | 0 | 4 | 0 | 4 | 3 | 0 | 0 | 2 | 0 | 0 | 0 |
| | 38 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 1 | 2 | 4 | 0 | 4 | 4 | 0 | 1 | 1 | 0 | 0 | 0 |
| | 26 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 4 | 5 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 91 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 1 | 0 | 4 | 6 | 0 | 4 | 0 | 1 | 0 | 0 |
| | 92 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 3 | 2 | 0 | 2 | 2 | 0 | 4 | 5 | 2 | 3 | 0 | 0 | 0 | 0 |
| Old | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 0 |
| Plantations | 79 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 5 | 0 | 0 |
| | 64 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 5 | 0 | 3 |
| | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 5 | 0 | 3 |
| | 93 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 |
| | 86 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 0 | 5 | 0 | 0 |
| | 97 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 4 | 0 | 1 | 0 | 4 | 0 | 0 |
| | 96 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 3 | 0 | 0 |
| | 98 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 4 | 0 | 2 | 0 | 1 |
| | 108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 2 | 3 | 0 | 0 | 4 | 1 | 3 | 0 | 2 | 0 | 1 |
| | 118 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 3 | 0 | 4 | 0 | 1 |
| | 111 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 3 | 2 | 0 | 4 | 0 | 2 |
| | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 1 | 4 | 2 | 3 | 1 | 0 | 1 | 3 | 1 | 0 | 1 | 3 | 0 | 0 |
| | 109 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 0 |

Appendix I. Reorderd AGGLOM Data