Schoolyard LTER Database

Tree Biomass Equations
13-Nov-2013

Units: biomass = kilograms, dbh = centimeters
Biomass (metric tons) = biomass (kilograms)/1000
Carbon biomass = 0.5 * biomass
Default = red maple if biomass equation not available

Acer pensylvanicum (ST)	biomass = (exp(7.227+1.6478*log(dbh/2.54)))/1000
Acer rubrum (RM)	biomass = 0.1262*(dbh^2.3804)
Acer saccharum (SM)	biomass = 0.1008*(dbh^2.5735)
Betula alleghaniensis (YB)	biomass = 0.1684*(dbh^2.4150)
Betula lenta (BB)	biomass = 0.0629*(dbh^2.6606)
Betula papyrifera (WB)	biomass = 0.0612*(dbh^1.6287)
Betula populifolia (GB)	biomass = 0.1564*(dbh^2.3146)
Betula spp. (RB)	biomass = 0.0629*(dbh^2.6606)
Castanea dentate (CH)	biomass = 2.204*(exp(0.95595+2.4264*log(dbh/2.54)))
Fagus grandifolia (BE)	biomass = 0.1967*(dbh^2.3916)
Fraxinus Americana (WA)	biomass = (exp(7.1148+1.3707*log(dbh/2.54)))/1000
Nyssa sylvatica (BG)	biomass = (10^(1.1468+1.4806*log10(dbh^2)))/1000
Pinus resinosa (RP)	biomass = 0.1003*(dbh^2.3865)
Picea rubens (RS)	biomass = (10^(2.1735+2.1936*log10(dbh)))/1000
Picea spp. (BS, NS, WS)	biomass = (10^(2.1735+2.1936*log10(dbh)))/1000
Pinus strobus (WP)	biomass = 0.0696*(dbh^2.4490)
Populus grandidentata (LA)	biomass = 0.0785*(dbh^2.4981)
Populus tremuloides (TA)	biomass = 0.0637*(dbh^2.6087)
Populus spp. (CW)	biomass = 0.0785*(dbh^2.4981)
Prunus pensylvanica (PC)	biomass = 0.1556*(dbh^2.1948)
Prumus serotina (BC)	biomass = 0.0716*(dbh^2.6174)
Quercus alba (WO)	biomass = 0.0579*(dbh^2.6887)
Quercus rubrum (RO)	biomass = 0.1130*(dbh^2.4572)
Tsuga Canadensis (TS)	biomass = 0.0991*(dbh^2.3617)