

APPENDIX E

Plant Communities Tables

Representative Species Found in Dry Habitats in Western Massachusetts

Representative Species Found in Wet Habitats in Western Massachusetts

Wildlife Habitats: Representative Wildlife Species of Western Massachusetts

TABLE 4-3: PLANT COMMUNITIES: REPRESENTATIVE SPECIES FOUND IN DRY HABITATS IN WESTERN MASSACHUSETTS

	FOREST				FIELD		
	TYPE	SOFTWOOD	MIXED SOFTWOOD AND HARDWOOD	HARDWOOD			
	NAME	WHITE AND RED PINE	PITCH PINE	HEMLOCK -NORTHERN HARDWOODS	OAK-HICKORY	OLD FIELD	GRAZED FIELDS
LAYER (IF PRESENT)	DOMINANT OVERSTORY TREES	white pine (<i>Pinus stroba</i>) red pine (<i>Pinus resinosa</i>)	pitch pine (<i>Pinus rigida</i>) black oak (<i>Quercus velutina</i>)	sugar maple (<i>Acer saccharum</i>) beech (<i>Fagus grandifolia</i>) yellow birch (<i>Betula allegheniensis</i>) hemlock (<i>Tsuga canadensis</i>)	white oak (<i>Quercus alba</i>) red oak (<i>Quercus rubra</i>) hickory (<i>Carya spp.</i>)	gray birch (<i>Betula populifolia</i>) white pine (<i>Pinus stroba</i>) red spruce (<i>Picea rubens</i>) juniper	
	ASSOCIATED AND UNDER-STORY TREES	gray birch (<i>Betula populifolia</i>) aspen (<i>Populus sp.</i>) red maple (<i>Acer rubrum</i>) pin cherry (<i>Prunus pennsylvanica</i>) white oak (<i>Quercus alba</i>)	scarlet oak (<i>Quercus coccinea</i>) aspen (<i>Populus sp.</i>) pin cherry (<i>Prunus pennsylvanica</i>) white pine (<i>Pinus strobus</i>)	paper birch (<i>Betula papyrifera</i>) red maple (<i>Acer rubrum</i>) red oak (<i>Quercus borealis</i>) white ash (<i>Fraxinus americana</i>)	American Chestnut (<i>Castanea dentata</i>) red maple (<i>Acer rubrum</i>) beech (<i>Fagus grandifolia</i>) tulip tree (<i>Liriodendron tulipifera</i>) white pine (<i>Pinus strobus</i>) flowering dogwood (<i>Cornus florida</i>) hornbeam (<i>Carpinus caroliniana</i>) hop hornbeam (<i>Ostrya virginiana</i>)	balsam poplar (<i>Abies balsames</i>) sumac (<i>Rhus spp.</i>) alder (<i>Alnus rugosa</i>) fire cherry (<i>Prunus serotina</i>) trembling aspen (<i>Populus tremuloides</i>) striped maple (<i>Acer pennsylvanicum</i>) yew (<i>Taxus canadensis</i>) juniper	white pine (<i>Pinus stroba</i>) low juniper (<i>Juniperus spp.</i>)
	SHRUBS AND HERBS		broomsedge (<i>Andropogon scoparius</i>) ferns and wildflowers such as aster, wild strawberry, whorled loosestrife, Canada cinquefoil, gray golden-rod, and huckleberry.	mountain maple (<i>Acer spicatum</i>) alternate-leaved dogwood (<i>Cornus alternifolia</i>) mountain laurel (<i>Kalmia latifolia</i>) witch hazel (<i>Hamamelis virginiana</i>) hobble bush (<i>Viurburnum alnifolium</i>) partridgeberry (<i>Mitchella repens</i>) Many ferns , mosses and wildflowers such as jack in the pulpit, trout lily, solomon's seal, trillium, starflower, Dutchman's breeches, bloodroot and violets.	mountain laurel (<i>Kalmia latifolis</i>) witch hazel (<i>Hamamelis virginiana</i>) maple-leaved viburnum (<i>Virburnum acerifolium</i>) red-osier dogwood (<i>Cornus stolonifera</i>) blueberry (<i>Vaccinium spp.</i>) Many wildflowers including trout lily, hepatica, bloodroot, columbine, geranium, and lady's slipper.	grasses (<i>Anthoxanthum, etc.</i>) Robin's plantain (<i>Erigeron pulchellus</i>) wild daisy (<i>Chrysanthemum leucanthemum</i>) devil's paintbrush (<i>Hieracium aurantiacum</i>) black-eyed Susan (<i>Rudbeckia hirta</i>) goldenrod (<i>Solidago spp.</i>) asters (<i>Aster spp.</i>)	
HABITAT	Fresh, sandy loam, moist soil types, early succession.	Dry and hot sand on sand and gravel	Higher elevations, cooler, moister sites.	Warmer slopes	All sites, variations in use and microclimate vary composition.		
RARE OR ENDANGERED SPECIES DOCUMENTED IN WENDELL	none	none	none	none	none	none	

Source: Town of Wendell Open Space and Recreation Plan 1987

Commonwealth of Mass. Natural Heritage and Endangered Species Program 2000

TABLE 4-4: PLANT COMMUNITIES: REPRESENTATIVE SPECIES FOUND IN WET HABITATS IN WESTERN MASSACHUSETTS

TYPE		FOREST LAND		GRASSLAND	
		BOG	SWAMP AND FLOOD PLAIN	MARSH	WET MEADOW
LAYER (IF PRESENT)	DOMINANT OVERSTORY TREES	black spruce (<i>Picea mariana</i>) tamarack (<i>Larix laricina</i>) American white cedar (<i>Chamaecyparis thyoides</i>)	red maple (<i>Acer rubrum</i>)		
	ASSOCIATED AND UNDERSTORY TREES	red maple (<i>Acer rubrum</i>)	silver maple (<i>Acer saccharinum</i>) ash (<i>Frdaxinus</i> spp.) American elm (<i>Ulmus americana</i>) swamp white oak (<i>Quercus bicolor</i>)		
	SHRUBS AND HERBS	leatherleaf (<i>Chamaedaphne calyculata</i>) sheep laurel (<i>Kalmia angustifolia</i>) sweet gale (<i>Myrica gale</i>) pitcher plant (<i>Sarracenia purpurea</i>) sundew (<i>Drosera</i> spp.) buckbean (<i>Merryanthes trifoliata</i>) cottongrass (<i>Eriophorum</i> spp.) cranberries (<i>Vaccinium</i> spp.) sphagnum moss (<i>Sphagnum rotundifolia</i>) water willow (<i>Secodon verticillatus</i>)	spicebush (<i>Lindera benjoin</i>) blueberry (<i>Vaccinium</i> spp.) speckled alder (<i>Alnus rugosa</i>) viburnum (<i>Viburnum</i> spp.) winterberry (<i>Ilex verticillata</i>) cinnamon fern (<i>Osmunda cinnamonea</i>) royal fern (<i>Osmunda regalis</i>) sensitive fern (<i>Onoclea sensibilis</i>) spinulose shield fern (<i>Dropteris thelypteris</i>) skunk cabbage (<i>Symplocarpus foetidus</i>) azalea (<i>Rhododendron</i> spp.) false hellebore	hydrophytic grasses (<i>Gramineae</i> spp.) sedges (<i>Cyperaceae</i>) rushes (<i>Junaceae</i>) cattail (<i>Typha</i> spp.) pickerel weed (<i>Pontederia cordata</i>) water plantain (<i>Alisma triviale</i>) bur-reed (<i>Sparganium</i> spp.) pond weed (<i>Potamogeton</i> spp.) frog-bits (<i>Hydrocharitaceae</i>) arums (<i>Araceae</i>) duckweed (<i>Lemna</i> spp.) water lillies (<i>Nymphaea</i> spp.) buttonbush (<i>Cephalanthus occidentalis</i>) sweet gale (<i>Myrica gale</i>) water milfoils (<i>Myriophyllum</i> spp.) horsetails (<i>Equisetum fluviatile</i>) naiads (<i>Nayadaceae</i>) buckwheats (<i>Polygonacea</i>) arrowgrass (<i>Juncaginaceae</i>) bladderworts (<i>Utricularia</i> spp.) pipewort (<i>Eriocaulon</i> spp.)	rushes (<i>Junaceae</i>) sedges (<i>Cyperaceae</i>) hydrophytic grasses (<i>Grammineae</i>) cattail (<i>Typha</i> spp.) bur-reeds (<i>Sparganium</i> spp.) water plantain (<i>Alisma</i>) arums (<i>Araceae</i>) iris (<i>Iridaceae</i>) dock (<i>Rumex</i>) smartweed (<i>Polygonum</i> spp.) Joe-pye weed (<i>Eupatorium dubium</i>) false loosestrife (<i>Ludwigia</i>) purple loosestrife (<i>Lythrum</i>) loosestrife (<i>Lysimachia</i> spp.) blue verain (<i>Verbena</i>) boneset (<i>Eupatorium perfoliatum</i>)
	HABITAT	Standing or slowly running acid water. Upland or lowland sites have different species.	Groundwater near the surface or collected surface water. Seasonal flooding.	Standing or running water during growing season.	Surface water provides a significant part of the supporting substrate for plants.
	RARE OR ENDANGERED SPECIES DOCUMENTED IN WENDELL		pale green orchis (<i>Platanthera flava</i>)	Adder's-tongue fern (<i>Ophioglossum vulgatum</i> L.)	Adder's-tongue fern (<i>Ophioglossum vulgatum</i> L.)
	RARE OR ENDANGERED SPECIES ASSOCIATED IN WENDELL	three-leaved Solomon's seal (<i>Maianthemum Trifolium</i>)	mountain alder (<i>Alnus viridis</i> spp. <i>Crispa</i>) tradesant's aster (<i>Aster tradescantii</i>) shore sedge (<i>carex lenticularis</i>) tufted hairgrass (<i>Deschampsia cespitos</i> spp. <i>glauca</i>) sand bar cherry (<i>Prunus pumila</i> var. <i>depressa</i>) sand bar willow (<i>Salix exigua</i>) moonseed (<i>Menispermum canadense</i>)		

Source: Town of Wendell Open Space and Recreation Plan 1987
Commonwealth of Mass. Natural Heritage and Endangered Species Program 2000

TABLE 4-5: WILDLIFE HABITATS: REPRESENTATIVE WILDLIFE SPECIES OF WESTERN MASSACHUSETTS

TYPE	WOODLAND			OPENLAND			OPEN WATER			WETLAND	
INSECTS, ETC.	snails, slugs spiders harvestmen sawflies, wasps, bees ants flies moths, butterflies	crickets, roaches beetles leafhoppers aphids true bugs thrips psocids	lacewings insect larvae centipedes millipedes sowbug mosquitos gnats	spiders wasps, bees ants flies moths, butterflies beetles leafhoppers	aphids crickets grasshoppers cockroaches praying mantids stink bugs spittlebugs	dragonflies ladybugs fireflies gnats mosquitos	crustaceans, clams, hydroids planarians, amphipods mosquito larvae caddisfly larvae diving beetle damselfly nymph dragonfly nymph	diving spider moth horseflies	mosquito larvae earthworms amphipods red spiders (litter) centipedes crane-fly larvae beetles	snails (on weeds) flies (midges, crane)	
FISH							trout (stream and pond) bass (stream and pond) suckers (stream and pond)	pickerel (pond) bass (pond) perch (pond)	young fish blue gills bullhead catfish pickerel	perch centrarchids killfish	
REPTILES	spotted turtle wood turtle box turtle semi-box turtle	redbellied snake ringneck snake sekay's snake hognose snake	black racer kingsnake	garter snake ribbon snake green snake			snapping turtle painted turtle water turtle		snapping turtle painted turtle musk turtle	garter snake ribbon turtle water snake	
AMPHIBIANS	spotted salamander (underground) marbled salamander (underground) toads spring peeper gray tree frog						dusky salamander (streams) red-backed salamander (streams) two-lined salamander (streams) spotted newt (streams and ponds) mudpuppy (Ct. River drainage)	bullfrog greenfrog leopard frog pickerel frog	dusky salamander red-backed salamander spotted newt bullfrog greenfrog	leopard frog pickerel frog	
BIRDS	ruffed grouse thrushes (mountains also) vireos warblers (mountains also) bluejay chickadee hairy woodpecker downy woodpecker yellow-shafted flicker brown creeper scarlet tanager great-horned owl (mountains)	golden-crowned kinglet (softwood) Tennessee warbler sharp-shinned hawk broad-winged hawk yellow-bellied flycatcher (softwood) great crested flycatcher wood peewee pine siskin (softwood) ruby-throated hummingbird		cattle egret Cooper's hawk red-tailed hawk red-shouldered hawk bob-white ring-necked pheasant killdeer screech owl nighthawk chimney swift eastern kingbird barn swallow	house wren catbird brown thrasher robin cedar waxwing northern shrike starling vireos crows cardinal sparrow snow bunting (mountains also)	eastern meadowlark northern oriole red-winged blackbird common grackle indigo bunting slate-colored junco raven	green heron Canada goose common loon pre-billed grebe American coot more than seventeen species of duck	sandpiper gull belted kingfisher bank swallow	wood duck woodcock green heron common egret American bittern rails	common snipe yellowthroat red-winged blackbird sparrow marsh wren water thrushes	
MAMMALS	eight kinds of bats flying squirrel red squirrel (softwood) gray squirrel New England cottontail snowshoe hare (softwood) deer mouse white-footed mouse meadow-jumping mouse hairy-tail mole	pine vole boreal redback vole (softwood) chipmunk red fox gray fox raccoon porcupine skunk whitetail deer black bear		eastern cottontail meadow jumping mouse	meadow vole eastern mole		beaver muskrat		masked shrew smokey shrew longtail shrew northern bog lemming boreal redback vole star-nosed mole meadow mouse snowshoe hare cottontail rabbit mink	marten lynx bobcat black bear muskrat raccoon whitetail deer gray fox	
RARE & ENDANGERED SPECIES - DOCUMENTED	wood turtle (Clemmys unsculpta)			wood turtle (Clemmys unsculpta)			spotted turtle (Clemmys guttata) northern spring salamander (Gyromophilus Porphyriticus) four-toed salamander (Hemidactulium scutatum) triangle floater (Alasmidonta undulata) wood turtle (Clemmys unsculpta)		spotted turtle (Clemmys guttata) ringed boghaunter (Williamsonia lintneri) wood turtle (Clemmys unsculpta)		
RARE & ENDANGERED SPECIES - ASSOCIATED	elderberry long-horned beetle (Desmocerus palliatus) midland clubtail (Gomphus fraternus) cobra clubtail (Gomphus vastus) skillet clubtail (Gomphus ventricosus) umber shadowdragon (Neurocordulia obsoluta) brook snaketail (Ophiogomphus apersus) riffle snaketail (Ophiogomphus carolus) riverbank looping snail (Pomatiopsis Lapidaria) lake emerald (Somatochlora cingulata) ski-tailed emerald (Somatochlora elongata) coppery emerald (Somatochlora georgiana) Kennedy's emerald (Somatochlora kennedyi) mocha emerald (Somatochlora linearis) riverine clubtail (Stylurus amnicola) zebra clubtail (Stylurus scudderii) A clubtail dragonfly (Stylurus spiniceps)						twelve-spotted tiger beetle (Cicindela duodecimguttata) midland clubtail (Gomphus fraternus) cobra clubtail (Gomphus vastus) skillet clubtail (Gomphus ventricosus)		Jefferson salamander (Ambystoma Jeffersonianum) Blue-spotted salamander (Ambystoma laterale) pale green pinion moth (Lithophane viridipallens) pitcher plant borer moth (Papaipema appassionata)		

Source: Town of Wendell Open Space and Recreation Plan 1987
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