

# WATER-WISE LANDSCAPING (XERISCAPING) IN NEEDHAM

In Needham we can generally expect adequate moisture most of the year, but there are some environments in which plants will be more vulnerable to periodic dry conditions, especially during the summer. These environments include full sun, especially south and west exposures; windy, open locations; slopes, where water drains off quickly; where paving reduces water penetration into the soil; and where the soil is relatively sandy (adding compost improves the water holding ability of fast-draining, sandy soils).

For the first 1-3 years, newly planted plants need extra water. This can be especially true of drought-tolerant plants which may have deep root systems that can be damaged when they are dug up or planted. For instance, for the first two to three weeks water a new tree or shrub slowly so that water penetrates about 6-12 inches deep every few days, depending on the weather. Then water deeply during dry periods (less than one inch of rainfall during a week) for the first 1-3 years. Mulching - no more than about 2 inches (less for perennials) of mulch that does not touch the stems - helps keep the soil moist.

Plants have evolved many mechanisms to prevent water loss, which occurs mostly through the leaves. They may have deep tap roots; have grey/silvery leaves, indicating a thick waxy coating covering the surface – think of lavender and some other herbs; have hairy, waxy, thick, small or narrow leaves to reduce water evaporation; go dormant in the summer like spring bulbs and many native spring wildflowers; or store water in their fleshy roots like daylilies. Some plants, such as crabgrass and succulents like sedums, even have a form of photosynthesis in which the chemical reactions require less water.

What follows is a selection of ornamental, noninvasive, drought-tolerant plants for our area that can be planted in the potentially dryer environments described in the first paragraph above. The common name is followed in parentheses by the more precise, scientific name (two parts, genus & species, but genus alone may be given). Plants marked with an asterisk (\*) are native to the U.S..

## TREES

Green Ash ( <i>Fraxinus pennsylvanica</i> )*	European Hornbeam ( <i>Carpinus betula</i>
Arborvitae ( <i>Thuja occidentalis</i> )*	‘Fastigiata’)
Crabapple ( <i>Malus</i> , with disease resistance)*	Japanese Tree Lilac ( <i>Syringa reticulata</i> )
Chinese/Lacebark Elm ( <i>Ulmus parvifolia</i> )	London Plane Tree ( <i>Platanus x acerifolia</i> )
Sawara Falsecypress ( <i>Chaemycyparis</i>	Littleleaf Linden ( <i>Tilia cordata</i> )
sawara)	Silver Linden ( <i>Tilia tomentosa</i> )
White Fir ( <i>Abies concolor</i> )*	Red (Swamp) Maple ( <i>Acer rubrum</i> )*
Ginkgo ( <i>Ginkgo biloba</i> )	Pin Oak ( <i>Quercus palustris</i> )*
Goldenraintree ( <i>Koelreuteria paniculata</i> )	Red Oak ( <i>Quercus rubra</i> )*
Washington Hawthorn ( <i>Crataegus</i>	White Oak ( <i>Quercus alba</i> )*
phaenopyrum)*	European white oak ( <i>Quercus robur</i>
Green Hawthorn ( <i>Crataegus viridis</i> ‘Winter	‘Fastigiata’)
King’)*	Callery Pear ( <i>Pyrus calleryana</i> cultivars)
Thornless Honeysuckle ( <i>Gleditsia</i>	Native Pines ( <i>Pinus strobus</i> , etc.)*
triancanthos var. <i>inermis</i> )*	Japanese White Pine ( <i>Pinus parviflora</i> )
American Hornbeam ( <i>Carpinus</i>	American Yellowwood ( <i>Cladrastis lutea</i> )*
caroliniana)*	Parrotia ( <i>Parrotia persica</i> )

## SHRUBS

Bayberry (*Myrica pennsylvanica*)\*  
Bluebeard (*Caryopteris X clandonensis*)  
Lowbush Blueberry (*Vaccinium angustifolium*)\*  
Bottlebrush Buckeye (*Aesculus parviflora*)\*  
Inkberry (*Ilex glabra*)\*  
Dwarf Junipers (*Juniperus* species, some\*)  
English Lavender (*Lavendula angustifolia*)  
Dwarf Korean Lilac (*Syringa meyeri* 'Palibin')  
Mockorange (*Philadelphus* cultivars)  
Mountain Laurel (*Kalmia latifolia*)\*  
Dwarf Pines (*Pinus* species, some\*)  
Potentilla (*Potentilla fruticosa* cultivars)\*  
Rugosa Rose (*Rosa rugosa* cultivars)  
St. Johnswort (*Hypericum kalmianum* & *H. prolificum*)\*  
Siberian Carpet Cypress (*Microbiota decussata*)  
Smoke Bush (*Cotinus coggygria*)  
Virginia Sweetspire (*Itea virginica*)\*  
Viburnum (*Viburnum plicatum* var. *tomentosum* cultivars, *V. trilobum*\*, *V. dentatum*\*, *V. sieboldii*)

## PERENNIALS

Adam's Needle (*Yucca*)\*  
Aster (*Aster spectabilis*, *A. laevis*, etc.)\*  
Balloon Flower (*Platycodon grandiflora*)  
Basket-of-Gold (*Aurina / Alyssum saxatile* 'Compactum')  
Beardtongue (*Penstemon digitalis*)\*  
Black-eyed Susan (*Rudbeckia fulgida*)\*  
Blazing Star (*Liatris* species)\*  
Blue False Indigo (*Baptisia australis*)\*  
Spring Bulbs: species tulips (*Tulipa greigii* & *T. kaufmanniana*, etc.) & hybrids;  
Crocus species (*Crocus chrysanthus* & *C. tommasinianus*) & Dutch hybrids; grape hyacinths (*Muscari* species); Daffodils, narcissus, jonquils (*Narcissus* species); Siberian Squill (*Scilla siberica*)  
Butterflyweed (*Asclepias tuberosa*)\*  
Carnation/Pink (*Dianthus* species)  
Catmint (*Nepeta x faassenii* cultivars)  
Coneflower (*Echinacea purpurea* & cultivars)\*  
Cranesbill (*Geranium sanguineum* & others)  
Day Lily (*Hemerocallis* cultivars)  
Evening Primrose (*Oenothera missouriensis*)\*  
Clump-forming Ornamental Grasses (*Andropogon*\*, *Festuca*, *Panicum virgatum*\*, *Sporobolus heterolepis*\*)  
Goldenrod (*Solidago rugosa* cultivars)\*  
Hens-and-Chickens (*Sempervivum* species)  
Herbs (*Artemisia* species; Chives & Garlic chives-*Allium* species); Winter Savory-*Satureia montana*; Caraway & Lemon Thymes; Feverfew-Tanacetum *parthenium*  
Lamb's-ear (*Stachys lanata*)  
True Lilies (some *Lilium* species)  
Moss Pink (*Phlox subulata* cultivars)\*  
Ornamental Onions (*Allium* species)  
Peony (*Paeonia lactiflora* cultivars)  
Poppy (*Papaver* species)  
Rock Cress (*Arabis*)  
Rose Campion (*Lychnis coronaria*)  
Russian Sage (*Perovskia atriplicifolia*)  
Salvia hybrids (*Salvia x sylvestris* 'May Night', *S. x superba* 'East Friesland')  
Snow-in-Summer (*Cerastium tomentosum*)  
Star Flower (*Amsonia* species)\*  
Stonecrop/Sedum (*Sedum spectabile* and other species)  
Tickseed (*Coreopsis verticillata*)\*  
Barren Strawberry (*Waldensteynia fragaroides*)\*  
Yarrow (*Achillea millefolium* hybrids)\*

**DRY SHADE UNDER DECIDUOUS TREES:** Spring bulbs and native, spring wildflowers (e.g. Bloodroot, Trillium, Virginia Bluebells, Dutchman's Breeches)\* that go dormant in summer; Plantainlily (*Hosta*); Christmas Fern\* & New York Fern\*; False Lily-of-the-Valley\*; Periwinkle/Myrtle (*Vinca minor*), Variegated Solomon's Seal\*; Wintergreen\*; *Geranium macrorrhizum*; *Viola labradorica*\*

**SOME ANNUALS THAT TOLERATE DRY SOIL AND USUALLY SELF-SOW:** sunflowers, Cosmos, Cleome, poppies, Portulaca, and Alyssum

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