

# Plants For: Poor Soil, Wet Soil, Dry Soil

## Top 4 Urban Soil Problems:

1. **ALKALINITY** of the soil, reflected by a high pH, affects nutrient availability. Iron, manganese, copper, and zinc are less available as soils become alkaline. These imbalances are often seen as a yellowing of leaf tissue between veins called chlorosis.
2. **HIGH SALT LEVELS** are caused by deicing salt and fertilizers. Using alternative deicers without sodium or chloride and refraining from over fertilization will help significantly. Watering plants, in addition to normal rainfall, will help flush the salts below the root zone and alleviate salt build-up. Gypsum can also be effective in amending soils high in sodium.
3. **COMPACTION & POOR DRAINAGE** are very common in urban areas. Compacted soil reduces pore space within soil. Pore space allows for better water and oxygen movement as well as root development. During wet periods, poor drainage will cause water to sit on top of compacted soil rather than percolate into the soil. Soils with high clay content are more prone to compaction.
3. To remedy compacted soils in a lawn, core aeration with the addition of organic matter is necessary. In a garden bed location, organic mulch can be added. As organic matter decomposes, it promotes the formation of soil aggregates. These aggregates create pore space in the soil.
4. **LACK OF ORGANIC MATTER** is the result of intensive farming, soil erosion, and removal of existing topsoil from a site during development. It is best to incorporate topsoil and compost during bed preparation.

## Perennials

<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
Achillea	Yarrow
Asclepias tuberosa	Butterfly Weed
Baptisia australis	Blue False Indigo
Centaurea	Bachelor's Button
Coreopsis	Tickseed
Echinacea purpurea	Purple Coneflower
Echinops	Globe Thistle
Euphorbia	Euphorbia
Gaillardia grandiflora	Blanketflower
Hemerocallis	Daylily
Liatris	Gayfeather
Nepeta	Catmint
Penstemon	Beard's Tongue
Rudbeckia	Black-eyed Susan
Salvia	Sage
Sempervivum	Hens-and-Chicks
Stachys byzantina	Lamb's Ear
Thymus	Thyme

## Shrubs

<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
Berberis	Barberry
Cotinus coggygria	Smokebush
Cotoneaster	Cotoneaster
Deutzia	Deutzia
Ligustrum	Privet
Physocarpus	Ninebark
Potentilla fruticosa	Potentilla
Rhus	Sumac
Symphoricarpos	Snowberry
Syringa meyeri	Dwarf Korean Lilac
Viburnum dentatum	Arrowwood Viburnum
Weigela	Weigela

## Trees

<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
Acer x freemanii	Autumn Blaze Maple
Catalpa speciosa	Northern Catalpa
Pyrus calleryana	Flowering Pear
Tilia cordata	Littleleaf Linden

## Plants for Wet or Moist Soils

There are wet soils, but also wet soils that have poor drainage; because drainage does not pertain to the flow of surface water, rather to the movement of water through the soil. Even the toughest plants will have difficulty in heavy clay soils that do not drain. Plant survival will improve when existing soil is improved. You can improve heavy clay soils by adding soil amendment.

### Perennials

<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
Aruncus dioicus	Goatsbeard
Asclepias incarnata	Swamp Milkweed
Aster novae-angliae	New England Aster
Astilbe	Astilbe
Chelone	Turtlehead
Actaea racemosa	Black Snakeroot
Eupatorium purpurium	Joe-Pye Weed
Geranium	Hardy Geranium
Hosta	Hosta
Iris ensata	Japanese Iris
Iris sibirica	Siberian Iris
Ligularia	Leopard Plant
Lobelia cardinalis	Cardinal Flower
Lobelia siphilitica	Great Blue Lobelia
Mertensia virginica	Virginia Bluebells
Monarda didyma	Beebalm
Myosotis scorpioides	Forget-me-not

### Trees

<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
Acer rubrum	Red Maple
Acer x freemanii	Autumn Blaze Maple
Betula nigra	River Birch
Salix alba	Weeping Willow
Taxodium distichum	Baldcypress
Liriodendron tulipifera	Tuliptree
Metasequoia	Dawn Redwood
Quercus bicolor	Swamp White Oak

### Shrubs

<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
Aronia	Chokeberry
Calycanthus floridus	Carolina Allspice
Clethra alnifolia	Summersweet
Cornus sericea	Redtwig Dogwood
Ilex verticillata	Winterberry
Itea virginica	Sweetspire
Salix discolor	Pussywillow
Vaccinium corymbosum	Blueberry
Viburnum dentatum	Arrowwood Viburnum
Viburnum trilobum	American Cranberry