

LANDSCAPING/BUFFERYARD INFORMATION GUIDE AND PLANT SELECTION LIST

Value of Landscape and Buffer Plants.

The placement of landscape plants on a property can serve numerous purposes. One of the most obvious is to enhance the appearance of the property and increase the property's value. Other benefits of plants and vegetative buffers in the home and business property landscape are as follows:

1. Reduce air pollution by absorbing Carbon Dioxide and releasing Oxygen.
2. Reduce erosion by dispersing and absorbing rainfall.
3. Reduce storm water runoff and the potential for flooding.
4. As properties provide trees, plants and other landscape vegetation, not only is the appearance of individual properties improved, but Community Appearance is enhanced. This provides a substantial value to the community and other properties in the Community.
5. Buffer and Landscape trees and other plants also help reduce noise from auto traffic, glare from auto and other lights and help collect & reduce litter from reaching adjacent properties.

Carolina Beach Landscape and Bufferyard Requirements.

Article 8 of the Carolina Beach Zoning Ordinance contains requirements for landscaping and bufferyards for all lot uses excluding single-family residences and duplexes. All applicants submitting permits must show the required bufferyards and landscape areas on their site plans when applying for a permit. Plant type and spacing must be indicated before a final Permit is issued and the plantings must be installed before an occupancy permit is issued. Those who own or are involved the proposed development project should keep in mind that existing trees and vegetation on a property can be used to meet the buffer and landscape requirements. Care should be taken in clearing or grading the property particularly adjacent to the property lines and adjacent to parking areas.

Plant List Information Source.

The plant list included herein has been compiled primarily from Landscape Plants of the Southeast written by R. Gordon Halfacre and Anne R. Shawcroft. The "Ref. Bk Page #" column in the attached list refers to the page number in this book where additional information can be found on the plant listed. The book is available from most bookstores and can provide useful information to anyone involved in home or business property landscaping. Information and assistance has also been provided by NC State Agricultural Extension Service. A substantial amount of information on plant type and suitability is available from the Extension Service Web Site.

Plant List Purpose.

The list attached is to be used as a guide for the reader only. The list of plants and shrubs included (in the list attached) are not the only types of trees and shrubs that may be used to meet the requirements in the Carolina Beach Zoning Ordinance for landscaping and bufferyards. The list only provides examples of plants that may be suitable for the locations on sites, where landscaping and plantings are required by Article 8 of the Zoning Ordinance. Many other types, species and varieties of plants can be used and are available. Plants for non-residential sites should be chosen that are low maintenance and adaptable to the conditions peculiar to the site. Landscape Architects, local nurseries, plant suppliers, the NC Agricultural Extension Service or other available sources should be consulted when making a substantial investment in plant materials and installation. The wrong choice in plant type can result in considerable expense in replacement. Buffers and Landscaping required by the Zoning Ordinance must be maintained for the duration of the permit issued for the site and use. Preservation of existing trees and vegetation around the perimeter of the site and in other key locations on the site

can save substantial financial resources. *Advance planning prior to clearing of the site for development is suggested to save time and money. Early preparation of a site plan for any proposed development can preclude unnecessary expenditures for buffer and some landscape plantings by preserving existing vegetation on the site.*

Plant Selection List Explanation

The Plant List attached is divided into seven categories of plants that coincide with the requirements of the Zoning Ordinance. Those categories are as follows:

1. **Large Trees (Canopy Trees) Primarily for Bufferyards (F, R & S)** The Zoning Ordinance Buffer Description Section refers to Canopy Trees in bufferyard areas. The trees listed in the “Large Trees” category will meet the requirements for Canopy Trees. This list can be used for plantings in the required buffer areas for the front, rear and side buffers. Evergreens should be given preference along the side and rear property lines.
2. **Small Trees (Understory Trees) Primarily for Bufferyards (F, R & S)** The Ordinance Buffer Description also refers to Understory Trees. The trees listed in the “Small Trees” Category can be used to meet this requirement. The Understory requirement applies primarily to the perimeter area of the lot and evergreens should receive preference for the sides and rear.
3. **Shrubs (Side or Rear Perimeter Buffers)** The Ordinance Bufferyard Section also requires shrubs to be planted. The shrubs listed in this category of the table are those with medium to large height & spread. They would normally be used on the side or rear property lines.
4. **Shrubs Front (Except within 30’ of drive)** The shrubs listed in this category are those with low to moderate height & spread that will not block the view of activities or signs on the site. Evergreen or deciduous may be appropriate.
5. **Shrubs Within 30’ Of Driveway** Only low growing shrubs are permitted within 30’ of the intersection of a driveway and property line for safety purposes. Shrubs in this category in the table are primarily low height shrubs. If a higher growth shrub is chosen, it must be maintained at a height of no more than 30”. Trees planted within 30’ of the driveway must be maintained so that the limbs are trimmed to 6’ above the ground after they reach a spread of 5’.
6. **Parking Facilities Landscaping** Section 8.9 Parking Facilities Landscaping of the Zoning Ordinance requires 8% of the total area of the parking lot have landscaping *in* the parking lot. Interior landscaping is defined as landscaping surrounded on three sides by parking, access or building. This requirement is in addition to bufferyard requirements. This category in the plant list contains a group of relatively small trees and shrubs that can be used in confined spaces.

A detailed description of bufferyards,, spacing and required plant sizes are contained in the Carolina Beach Zoning Ordinance. Remember to choose a plant appropriate to the site conditions and location.

Plant Name	Height	Spread	Sun/Shade Tolerance	Pest Probs.	Moisture Requirement	Growth Rate	Scientific Name	Ref. Bk Page #
Large Trees (Canopy) Primarily for Perimeter Buffers (F, R & S)								
Evergreen (Preferred)								
Leyland Cypress	60-70'	15-30'	Sun	Yes	Med.	Rapid	Cupressocyparis leylandii	279*
Deodar Cedar	40-50'	30-40'	sun/pt shade	yes	med.	rapid	Cedrus deodara	268
Southern Magnolia	40-60'	25-30'	sun/pt shade	yes	high	mod/rapid	Magnolia grandiflora	269
Longleaf Pine	80-100'	30'40'	sun/pt shade	yes	med.	rapid	Pinus palustris	270
Scotch Pine	40-70'	15-30'	sun	yes	med	rapid	Pinus sylvestris	272
Loblolly Pine	70-90'	30-40'	Sun/pt. shade	Yes	Med	Rapid	Pinus taeda	273
Japanese Black Pine	50-70'	20-30'	Sun	Yes	Low	Mod/slow	Pinus thunbergii	274
Live Oak **	30-50'	30-50'	Sun/pt. Shade	Yes	Med	Slow	Quercus virginiana	276
Deciduous								
Red Maple	40-50'	25-35'	sun/shade	yes	med/high	rapid	Acer rubrum	281
Silver Maple	60-80'	50-75'	sun	yes	med/high	rapid	Acer saccharinum	282
Pecan	60-100'	30-40'	sun/pt shade	yes	high	mod.	Carya illinoensis	284
Southern Catalpa	30-50'	20-30'	sun	yes	high	rapid	Catalpa bignonioides	285
Honeylocust (thornless)	50-75'	25-40'	sun	yes	med/low	mod	Gleditsia triacanthos	290
Sweetgum (fruitless)	60-100'	50-75'	Sun/pt. Shade	None	Med./high	Slow/mod	Liquidambar styraciflua ('rotundiloba')	291
Tulip Tree	60-150'	30-40'	sun	yes	med	mod/rapid	Liriodendron tulipifera	292
Black Tupelo	40-60'	20-30'	sun/shade	none	high	mod	Nyssa sylvatica	293
Express Tree	30-50'	20-30'	sun	none	med	mod/rapid	Paulownia tomentosa	294
London Plane Tree	70-100'	50-70'	sun/pt. shade	yes	high	rapid	Platanus acerifolia	295
Sycamore	70-100'	60-80'	sun/pt shade	yes	high	rapid	Platanus occidentalis	296
Sargent Cherry	40-60'	30-40'	sun	none	med.	mod	Prunus sargentii	297
Scarlet Oak	60-80'	40-50'	sun	none	med.	rapid	Quercus coccinea	299
Water Oak	50-75'	30-40'	sun/pt shade	yes	med/high	mod/rapid	Quercus nigra	300
Pin Oak	60-80'	40-50'	sun/pt shade	none	med	rapid	Quercus palustris	301
Willow Oak	60-80'	30-40'	sun	none	high	rapid/mod	Quercus phellos	302
Eastern Red Oak	50-70'	40-60'	sun/pt shade	yes	med	rapid	Quercus rubra maxima	303
Weeping Willow	30-50'	20-40'	sun/pt shade	yes	high	rapid	Salix babylonica	305
American Linden	60-80'	50-60'	sun/pt shade	yes	med/high	rapid	Tilia americana	308
Japanese Zelkova	50-60'	40-50'	sun/pt shade	none	med	mod/rapid	Zelkova serrata	311

Plant Name	Height	Spread	Sun/Shade Tolerance	Pest Probs.	Moisture Requirement	Growth Rate	Scientific Name	Ref. Bk Page #
Small Trees (Understory) Primarily for Perimeter Buffers (F, R & S)								
Evergreen (Preferred along sides and rear)								
Loquat	10-20'	8-12'	sun/pt shade	none	med	rapid	Eriobotrya japonica	225
Dahoon	20-30'	10-15'	sun/pt shade	none	med/high	med	Ilex cassine	226
Foster Holly	20-30'	10-15'	Sun/pt.shade	None	Med/high	Med.	Ilex attenuata 'Fosteri'	226/411*
American Holly	15-30'	10-20'	Sun/pt.shade	Yes	Med/high	Slow	Ilex opaca	228
Carolina Cherry-Laurel	20-30'	15-20'	sun/shade	none	med.	rapid	Prunus caroliniana	230
Japanese Evergreen Oak	20-40'	8-16'	sun	none	med	mod	Quercus acuta	231
Deciduous								
Serviceberry	10-20'	8-15'	sun/pt shade	yes	med	mod	Amelanchier canadensis	237
Riverbirch	20-40'	16-20'	pt shade	none	high	mod	Betula nigra	238
Kousa Dogwood	10-15'	5-15'	Sun/pt. Shade	Yes	Med	Mod	Cornus kousa	243
Flowering Dogwood	15-30'	15-20'	pt shade	yes	med	mod	Cornus florida	242
Crape Myrtle	15-25'	5-15'	sun	yes	med-high	mod	Lagerstroemia indica	251
Flowering Crabapple	15-25'	10-20'	sun	yes	med	mod	Malus hybrida	253
Pissard Plum	15-20'	10-15'	sun	yes	med	mod/rapid	Prunus cerasifera	256
Sour Cherry	20-30'	15-20'	sun/pt shade	none	med	mod	Prunus cerasus	257
Japanese Cherry	15-25'	15-20'	sun/pt shade	yes	med	mod	Prunus serrulata	259
Callery Pear	20-40'	20-30'	sun/pt shade	yes	med	rapid	Pyrus calleryana	263
Pussy Willow	12-25'	8-15'	sun/pt shade	yes	med/high	rapid	Salix caprea	264
Shrubs (Side or Rear Perimeter Buffers)								
Evergreen (Preferred)								
Spreading Euonymus	4-6'	4-6'	sun/shade	yes	med	rapid	Euonymus kiautschovicus	110
Pfitzes Juniper	4-6'	6-9'	sun	yes	med/low	rapid	Juniperus chinensis pfitzeriana	118
Indian Azalea	6-12'	6-8'	sun/shade	yes	high	mod	Azalea indica	148
Camellia	7-12'	5-7'	shade	yes	med	rapid	Camellia japonica	152
Sasanqus Camellia	7-12'	5-7'	sun/pat shade	yes	med	rapid	Camellia sasanqua	153

Plant Name	Height	Spread	Sun/Shade Tolerance	Pest Probs.	Moisture Requirement	Growth Rate	Scientific Name	Ref. Bk Page #
Shrubs Side or Rear Cont.								
Thorny Elaeagnus	8-11'	6-10'	sun	yes	low	rapid	Elaeagnus pungens	155
Evergreen Euonymus	6-7'	3-5'	sun/shade	yes	med	rapid	Enonymus japonicus	156
Pineapple Gauva	10-18'	10'	sun	none	low	rapid	Feijoa sellowiana	157
Chinese Holly	8-10'	5-7'	sun/pt shade	yes	med	mod	Ilex cornuta	159
Burford Holly	8-15'	6-8'	sun/pt shade	none	med	rapid	Ilex cornuta Burfordii	160
Lusterleaf Holly	8-12'	7-11'	pt shade	none	med/high	mod	Ilex latifolia	163
Nellie R. Stevens Holly	15-25'	6-12'	Sun/pt.shade	None	Med.	Rapid	Ilex 'Nellie R. Stevens'	165/415*
Laurel	10-12'	8-10'	sun	none	high	mod	Laurus nobilis	167
Loropetalum	6-10'	8-9'	sun/pt shade	none	high	rapid	Loropetalum chinense	171
Wax-Myrtle	10-12'	4-6'	sun/pt shade	none	high	rapid	Myrica cerifera	174
Holly Osmanthus	6-10'	3-5'	sun/pt shade	none	med	mod	Osmanthus heterophyllus	179
Curlyleaf Tea Olive	6-10'	6'	sun/pt shade	none	med	mod/rapid	Osmanthus heterophyllus rotundifolius	180
English Laurel	10-12'	8-11'	sun/shade	yes	med	mod	Prunus laurocerasus	186
Formosa Firethorn	6-10'	6-10'	sun/pt shade	yes	med	rapid	Pyracantha koidzumi	187
Shrubs Front (Except within 30' of a Street/Driveway)								
Evergreen								
Evergreen Bittersweet	3-4'	Indeter	Sun/shade	Yes	Med/high	Mod	Euonymus fortunei 'Vegetus'	70
Dwarf Yaupon	2-4'	3-5'	Sun/shade	None	Med	Slow	Ilex vomitoria 'Nana'	80
English Lavender	2-3'	3-4'	sun	none	med/low	mod	Lavandula officinalis	81
David Viburnum	3'	3-5'	sun/pt shade	none	med	mod	Viburnum davidii	92
Glenn Dale Azalea	4-6'	3-4'	pt shade	yes	high	mod	Azalea hybrida	105
Kalmsberi Azalea	4-6'	4-6'	pt shade	yes	high	mod	Azalea obtusum kaempferi	106
Spreading Euonymus	4-6'	4-6'	sun/shade	yes	med	Rapid	Euonymus kiautschovicus	110
Roundleaf Japanese Holly	4-6'	4-6'	sun/shade	yes	med	mod	Ilex crenata 'Rotundifolia'	116
Flowering Jasmine	4-6'	5-7'	sun/pt shade	none	low/med	mod	Iasminum floridum	117
Pfizer Juniper	4-6'	6-9'	sun	yes	med/low	rapid	Juniperus chinensis pfizeriana	118
Northern Bayberry	3-6'	3-8'	sun/pt shade	none	med/low	mod	Myrica pensylvanica	122
Nandina	4-8'	2-3'	sun/pt shade	none	med	mod	Nandina domestica	123
Narrowleafed English Laurel	4-6'	5-6'	sun/shade	yes	med	mod	Prunus laurocerasus angustifolia	126
Scarlet Fuethorn	5-6'	6-8'	sun	yes	med	rapid	Pyracantha coccinea	127

Plant Name	Height	Spread	Sun/Shade Tolerance	Pest Probs.	Moisture Requirement	Growth Rate	Scientific Name	Ref. Bk Page #
Shrubs Front except within 30' of a Street/Driveway Cont.								
Deciduous								
Japanese Flowering Quince	2-3'	2-3'	sun/pt shade	yes	med	rapid	Chaenomeles japonica	95
Kalm St. John's Wort	3'	3'	sun	none	low	rapid	Hypericum kalmianum	98
Japanese Barberry	3-5'	3-5'	sun/pt shade	yes	med	mod	Berberis thenbergii	137
Flowering Quince	5-6'	5-6'	sun/pt shade	yes	med	rapid	Chaenomeles speciosa	138
Vernal Witch-Hazel	4-6'	2-3'	sun/pt shade	none	med/high	rapid	Hamamelis vernalis	139
Rugose Rose	4-6'	4-6'	sun	yes	med	rapid	Rosa rugosa	143
Reeves Spira	4-6'	3-5'	sun/pt shade	yes	med	rapid	Spiraea cantoniensis	144
Thunberg Spirea	3-5'	3-4'	sun/pt shade	yes	med	rapid	Spiraea thunbergii	145
Shrubs Within 30' of a Street/Driveway corner								
Evergreen								
Rockspray Cottoneaster	2-3'	5-8'	sun	yes	low	slow	Cotoneaster horizontalis	67
Alexandrian Laurel	3'	2-3'	shade	none	high	slow	Danae racemosa	68
Dwarf Japanese Euonymus	2-3'	18-24"	sun/shade	yes	med/high	mod	Euonymus japonicus	71
Dwarf Gardenia	1-2'	2-2/12'	sun/pt shade	yes	med	rapid	Gardenia jasminoides radicans	72
St. John's -Wart	3'	3'	sun	none	low	rapid	Hypericum patulum	73
Dwarf Horned Holly	2-3'	3-4'	sun/pt shade	yes	med	slow	Ilex cornuta 'Rotunda'	74
Kingsville Japanese Holly	3'	5-6'	sun/shade	yes	med	slow	Ilex crenata 'Kingsville'	77
Repanden Japanese Holly	1-3'	5-6'	sun/shade	yes	med	slow	Ilex crenata 'Repandens'	78
Stokes Japanese Holly	1-3'	3-4'	sun/shade	yes	med	slow	Ilex crenata 'Stokes'	79
Yunnan Honeysuckle	2-3'	3-4'	sun	none	med/slow	mod	Lonicers yunnanensis	85
Rosemary	2-4'	2'	sun	none	low	slow	Rosmarinus officinalis	89
Reeves Skimmia	1-2'	2-3'	pt shade	none	high	slow	Skimmia reevesiana	91
David Viburnum	3'	3-5'	sun/pt shade	none	med	mod	Viburnum davidii	92
Deciduous								
Japanese Flowering Quince	2-3'	2-3'	sun/pt shade	yes	low/med	rapid	Chaenomeles japonica	95
Snowhill Hydrangea	3'	3-5'	sun/pt shade	none	med	rapid	Hydrangea arborescens 'Grandiflora'	97
Kalm St. John's Wart	3'	3'	sun	none	low	rapid	Hypericum kalmianum	98

Plant Name	Height	Spread	Sun/Shade Tolerance	Pest Probs.	Moisture Requirement	Growth Rate	Scientific Name	Ref. Bk Page #
Parking Lot Buffers (Required Adjacent to side and rear property lines only) (Evergreen Only Permitted)								
Evergreen								
Indian Azalea	6-12'	6-8'	sun/shade	yes	high	mod	Azalea indica	148
Hedge Bamboo (use this species only - others spread rapidly)	10-12'	4-6'	sun/shade	none	high	rapid	Bambusa multiplex	149
Tree Boxwood	8-12'	8-10'	pt shade	yes	med	med	Buxus sempervirens arborescens	150
Bottlebrush	6-12'	8'	sun	none	low	mod	Callistemon lanceolatus	151
Camellia	7-12'	5-7'	pt shade	yes	med	rapid	Camellia japonica	152
Sasanqua Camellia	7-12'	5-7'	sun/shade	yes	med	rapid	Camellia sasanqua	153
Cleyera	8-10'	5-6'	pt shade	none	med/high	mod	Cleyera japonica	154
Thorny Elaeagnus	8-11'	6-10'	sun	yes	med-low	rapid	Elaeagnus pungens	155
Evergreen Euonymus	6-7'	3-5'	sun/shade	yes	med	rapid	Euonymus japonicus	156
Pineapple Guava	10-18'	10'	sun	none	low	rapid	Feijoa sellowiana	157
Chinese Holly	8-10'	5-7'	sun/pt shade	yes	med	mod	Ilex cornuta	159
Burford Holly	8-15'	6-8'	sun/pt shade	none	med	rapid	Ilex cornuta 'Burfordii'	160
Lusterleaf Holly	8-12'	7-11'	pt shade	none	med/high	mod	Ilex latifolia	163
Anisetree	8-12'	8-10'	sun/pt shade	none	med-high	mod	Illicium anisatum	166
Laurel	10-12'	8-10'	sun	none	high	mod	Laurus nobilis	167
Japanese Privet	6-10'	5-6'	sun/shade	yes	med	rapid	Ligustrum japonicum	168
Tall Glossy Privet	8-12'	5-10'	sun/shade	yes	med	very rapid	Ligustrum lucidum	169
Vicary Golden Privet	8-10'	6-9'	sun	none	med	mod	Ligustrum vicaryi	170
Loropetalum	6-10'	8-9'	sun/pt shade	none	high	rapid	Loropetalum chinense	171
Wax Myrtle	10-12'	4-6'	sun/pt shade	none	high	mod/rapid	Myrica cerifera	174
Oleander	7-10'	6-9'	sun	yes	med/low	rapid	Nerium oleander	176
Curlyleaf Tea Olive	6-10'	6'	sun/pt shade	none	med	mod/rapid	Osmanthus heterophyllus rotundifolius	180
Fraser Photinia	7-12'	5-8'	sun	none	med	rapid	Photinia fraseri	181
Pittosporum	8-10'	6-9'	sun	yes	med	mod/rapid	Pittosporum tobira	184

Plant Name	Height	Spread	Sun/Shade Tolerance	Pest Probs.	Moisture Requirement	Growth Rate	Scientific Name	Ref. Bk Page #
Parking Lot Islands and Planter Areas								
Trees								
Loquat	10-20'	8-12'	sun/pt shade	none	med	rapid	Eriobotrya japonica	225
Japanese Maple	15-20'	10-15'	pt shade	yes	med	slow	Acer palmatum	235
American Hornbeam	20-30'	15-20'	sun/shade	none	med	very slow	Carpinus caroliniana	240
Eastern Redbud	20-30'	12-25'	sun/shade	yes	med	slow/mod	Cercis canadensis	241
Kousa Dogwood	10-15'	5-15'	Sun/pt.shade	Yes	Med	Mod.	Cornus kousa	243
Crape-Myrtle	15-25'	5-15'	sun	yes	med/high	mod	Lagerstroemia indica	251
Sourwood	20-30'	10-15'	sun/shade	yes	med	slow	Oxydendrum arboreum	255
Callery Pear	20-40'	20-30'	sun/pt shade	yes	med	rapid	Pyrus calleryana	263
Shrubs								
Satsuki Hybrid Azalea	2-4'	2-4'	pt shade	yes	high	mod	Azalea hybrida	61
Dwarf Boxwood	2-3'	2-4'	pt shade	yes	med	ext slow	Buxus sempervirens 'Suffruticosa'	65
Evergreen Bittersweet	3-4'	Na	sun/shade	yes	med/high	mod	Euonymus fortunei 'Vegetus'	70
Dwarf Gardenia	1-2'	2-21/2	sun/pt shade	yes	med	mod/rapid	Gardenia jasminoides radicans	72
St. John's Wort	3'	3'	sun	none	low	rapid	Hypericum patulum	73
Dwarf Horned Holly	2-3'	3-4'	sun/pt shade	yes	med	slow	Ilex cornuta 'Rotunda'	74
Japanese Holly	3-4'	3-4'	sun/pt shade	none	med	slow	Ilex crenata 'Carefree'	75
Dwarf Yaupon	2-4'	3-5'	sun/shade	none	med	slow/mod	Ilex vomitoria 'Nana'	80
English Lavender	2-3'	3-4'	sun	none	med/low	mod	Lavandula officinalis	81
Yunnan Honeysuckle	2-3'	3-4'	sun	none	med/low	mod	Lonicera yunnanensis	85
India Hawthorn	3-4'	4-5'	sun	yes	med	slow	Raphiolepis indica	88
Japanese Skimmia	4'	3'	pt shade/shade	none	low/med	slow	Skimmia japonica	90
David Viburnum	3'	3-5'	sun/pt shade	none	med	mod	Viburnum davidii	92
Spreading Euonymus	4-6'	4-6'	sun/shade	yes	med	rapid	Euonymus kiautschovicus	110
Flowering Jasmine	4-6'	5-7'	sun/pt shade	none	low/med	mod	Jasminum floridum	117
Cluster Mahonia	4-6'	3'	sun/pt shade	none	med	slow/mod	Mahonia pinnata	121
Nandina	4-6'	2-3'	sun/pt shade	none	med	mod	Nandina domestica	123
Narrow-leaved English Laurel	4-6'	5-6'	sun/shade	yes	med	mod	Prunus laurocerasus angustifolia	126

* - reference page from Manual of Woody Landscapes by Michael Dirr
** - Live Oak should only be planted in areas providing very minimum clear 15' radius at base of tree.