

## Reclaimed Water Quality

Tampa's reclaimed water is highly treated, continually monitored and thoroughly tested to ensure it meets the stringent requirements of the Florida Department of Environmental Protection. Unlike most reclaimed water that is treated only twice, the reclaimed water produced at Tampa's Howard F. Curren Advanced Wastewater Treatment Plant goes through three major treatment processes before being delivered to the customer. For detailed information regarding the quality of reclaimed water, log on to [www.TampaGov.net/ReclaimedWater](http://www.TampaGov.net/ReclaimedWater).

## Reclaimed Water and Fertilizer Use

Another benefit of reclaimed water is that it already contains nitrogen, a key ingredient in commercial fertilizer that is necessary for plants to thrive.

*Applying too much fertilizer, especially during the summer rainy season, can result in excess nitrogen polluting area waterways, causing unsightly algae blooms that can turn the water green or brown, reduce oxygen levels and kill fish and other aquatic creatures.*

Using reclaimed water, combined with proper irrigation, can help keep your lawn and plants healthy, while reducing or even eliminating the amount of commercial fertilizer you need to apply. Each time a lawn is watered with reclaimed water, it receives some nitrogen. Therefore, a green, healthy lawn may not need regular doses of nitrogen fertilizer.

Just remember, overwatering can be just as damaging to your lawn as not watering enough, leading to weeds, fungus and disease. Overwatering and overfertilizing also make your grass grow faster, meaning you may need to spend more time and money on lawn care.

## Reclaimed Water Availability

Reclaimed water is only available in portions of Tampa's service area. If your home or business is located: south of Spruce Street, north of Barcelona Street, east of Tampa Bay and west of Downtown, reclaimed water may be available. Contact a Consumer Services Representative at (813) 282-7827 to learn the exact locations of existing and planned reclaimed water lines.

*To learn more about Tampa's reclaimed water, call (813) 274-8811 or log on to [www.TampaGov.net/ReclaimedWater](http://www.TampaGov.net/ReclaimedWater).*



# Reclaimed Water

## Managing Healthy Landscapes Using Reclaimed Water

### Reclaimed Water and Conservation Initiatives

With an ever-growing population and a finite supply of available drinking water, finding new water supply sources is critical. One way to conserve Tampa's drinking water supply is to use reclaimed water for irrigation. In fact, water conservation and the use of reclaimed water are statewide initiatives. Studies show that more than 50 percent of residential water use in Florida is for watering lawns and landscapes. Using reclaimed water clearly offers a proven method for conserving our drinking water supplies.



## Learn How to Effectively Manage Your Landscape Using Tampa's Reclaimed Water.

### Using reclaimed water for irrigation helps maximize Tampa's drinking water supply.

Tampa's primary drinking water source is the Hillsborough River reservoir. During the annual dry season, typically March through June, rainfall decreases and irrigation demand increases cause the reservoir water level to drop. Irrigating with reclaimed water helps to ensure a sufficient quantity of quality drinking water for future generations.

### Monitoring Landscapes

Landscapes irrigated with reclaimed water should be monitored to determine what, if any, modifications to fertilizer and irrigation practices may be needed.

While the reclaimed water treatment process retains usable levels of nitrogen and phosphorus that work as fertilizer, micro-nutrient corrections may be necessary for some acid-loving plants. Reclaimed water also contains higher levels of chloride salts than potable (drinking) water. These salt levels vary due to the time of year, time of day and other factors.

### Watering Schedules

Reclaimed water does not have the same watering restrictions as potable (drinking) water. To maximize the efficiency of the reclaimed water delivery system, it is important not all users irrigate on the same day. The following suggested watering schedule will help ensure the daily supply of reclaimed water corresponds with daily demands.



### Suggested Watering Schedule

#### Addresses Ending in Odd Numbers

Tuesday, Wednesday,  
Friday and Saturday

#### Addresses Ending in Even Numbers

Monday, Wednesday,  
Thursday and Sunday

While reclaimed water use is not restricted, overwatering is a common cause of decline in landscapes managed with reclaimed water. Most lawn and landscape plants require no more than 3/4- to 1-inch of water per week. Overwatering not only leads to root rot by forcing oxygen out of soil spaces, it also encourages damaging fungus growth.

### Reclaimed Water May Be Used For:

- irrigating your lawn and landscape.
- filling decorative ponds and fountains.
- irrigating fruit trees and gardens containing edible foods that will be peeled or cooked before serving.
- supplying a commercial water-cooled conditioning system.
- indirectly irrigating fruit trees and gardens containing edible foods that will not be peeled or cooked (reclaimed water should not come in direct contact with the edible part of a plant).

### Reclaimed Water May Not Be Used For:

- drinking.
- filling swimming pools or hot tubs.
- connecting to a dwelling for toilet flushing or other household use.
- interconnecting with your drinking water pipeline.
- water play or recreation involving contact with reclaimed water.



**Water  
Department**

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## Chloride Salts

Chloride salt concentrations for Tampa's reclaimed water range from 150 to 300 parts per million (ppm). Most landscape plants will tolerate chloride salt concentrations of up to 400 ppm, while others such as Dwarf azalea and Chinese privet are totally intolerant. Some other common species, such as Camellia and Gardenia will tolerate chloride salt levels greater than 100 ppm, although may show leaf burn (yellowing) if the foliage is exposed to overhead irrigation.

If leaf yellowing occurs, sprinkler heads may need to be adjusted so the spray pattern avoids direct contact with plant foliage. If leaf yellowing persists, it may be necessary to use drip irrigation to water the more sensitive plant varieties.

## Effects of Overwatering

Leaf burn and wilting, commonly mistaken for leaf damage associated with chloride salts in reclaimed water, are also well-known indications of overwatering. Allowing water to pool on foliage in direct sunlight, regardless of the water source (rain water, potable water or reclaimed water), may also cause foliage to yellow.



## Salt Accumulation and Drainage

Poor drainage and pooling water may also allow accumulation of salts in the soil. Adjust slopes, eliminate compacted soil and amend soil structure to help improve landscape drainage problems.

## Plant Selection

To help reclaimed water customers manage their landscape, a listing of common landscape plants grouped by their chloride salt tolerance level is provided inside this brochure. When referring to the plant list, please note the list is intended as a general guide and the chloride salt tolerance level for many landscape plants has not been documented.

For information about selecting the right plants for your landscape, contact a Master Gardener at the Hillsborough County Cooperative Extension Service at (813) 744-5519 or a professional horticulturalist.

# CHLORIDE SALT TOLERANCE OF FLORIDA PLANTS

The chloride salt tolerance levels of these plants was established through Project Greenleaf, a research study performed by the City of St. Petersburg, and may only represent a small sampling of plants tolerant of reclaimed water. For specific information on landscape plants adapted to our region, contact a Master Gardener at the Hillsborough County Cooperative Extension Service at (813) 744-5519 ext. 7, or to learn more about drip-irrigation, dial ext. 110, to register for a free Water Wise Workshop.

## HIGH TOLERANCE

Plants which are highly tolerant of chloride salt levels up to and greater than 400 parts per million (ppm). Good tolerance of reclaimed water. Chloride salt concentrations for Tampa's reclaimed water range from 150 to 300 ppm.

### Ground Covers

Aloe (*Aloe vera*)  
Boston fern (*Nephrolepis exaltata*)  
Coontie (*Zamia floridana*)  
Creeping fig (*Ficus pumila*)  
Creeping juniper (*Juniperus horizontalis*)  
Dwarf carissa boxwood (*Carissa macrocarpa*)  
Dwarf pittosporum (*Pittosporum tobira* "Wheeleri")  
Hottentot fig (*Carpobrotus edulis*)  
Mondo grass (*Ophiopogon japonicus*)  
Purple queen (*Setcreasea pallida*)

### Palms

Cabbage palm (*Sabal palmetto*)  
Chinese fan palm (*Livistonia chinensis*)  
European fan palm (*Chamaerops humilis*)  
Pindo palm (*Butia capitata*)  
Saw palmetto (*Serenoa repens*)  
Washingtonia palm (*Washingtonia robusta*)

### Shrubs

African bush daisy (*Gamolepis chrysanthemoides*)  
Chinese holly (*Llex cornuta* "Burford")  
Carissa boxwood [Natal plum] (*Carissa grandiflora*)  
Century plant (*Agave americana*)  
Crown-of-thorns (*Euphorbia milii*)  
Dwarf yaupon holly (*Llex vomitoria* "nana")  
Hibiscus (*Hibiscus rosa-sinensis*)  
Indian hawthorn (*Raphiolepis indica*)  
Lantana (*Lantana sp.*)  
Oleander (*Nerium oleander*)  
Pittosporum (*Pittosporum tobira*)  
Plumbago (*Plumbago auriculata*)  
Silver thorn (*Elaeagnus pungens*)  
Spanish bayonet (*Yucca aloifolia*)  
Sweet viburnum (*Viburnum odoratissimum*)  
Yaupon holly (*Llex vomitoria*)

### Trees

Dahoon holly (*Llex cassine*)  
Live oak (*Quercus virginiana*)  
Norfolk Island pine (*Araucaria heterophylla*)  
Sand pine (*Pinus clausa*)  
Southern Red cedar (*Uniperus silicicola*)  
Sea grape (*Coccoloba uvifera*)  
Silk oak (*Grevillea robusta*)  
Wax myrtle (*Myrica cerifera*)

### Turf Grass

St. Augustine (*Stenotaphrum secundatum*)

### Vines

Algerian ivy (*Hedera canariensis*)  
Bougainvillea (*Bougainvillea sp.*)  
Cape honeysuckle (*Tecomaria capensis*)  
Confederate jasmine (*Trachelospermum jasminoides*)  
Creeping fig (*Ficus pumila*)  
Railroad vine (*Lpomea pes-caprae*)

## GOOD TOLERANCE

Plants which have demonstrated a tolerance to chloride salt concentrations of less than 400 parts per million (ppm). Monitor plants for signs of leaf yellowing. If yellowing or wilting persists, consider using drip irrigation. Chloride salt concentrations for Tampa's reclaimed water range from 150 to 300 ppm.

### Ground Covers

African iris (*Dietes sp.*)  
Bromeliad (*Bromeliaceae sp.*)  
Daylily (*Heemerocallis sp.*)  
Gerbera daisy (*Berbera jamesonii*)  
Heather (*Cuphea hyssopifolia*)  
Iris (*Moraea hexasona*)  
Japanese boxwood (*Buxux microphylla*)  
Joseph's coat (*Alternanthera ficoidea*)



Chinese juniper (*Juniperus chinensis*)  
Juniper (*Juniperus procumbens nana*)  
Kalanchoe (*Kalanchoe sp.*)  
Lirope [Lilyturf] (*Liriope muscari*)  
Maidenhair fern (*Adiantum sp.*)  
Pampas grass (*Cortaderia selloana*)  
Periwinkle (*Catharanthus roseus*)  
Purslane [Moss rose] (*Portulaca grandiflora*)  
Rosemary (*Rosmarinus officinalis*)  
Sedge (*Cyperus alternifolius*)  
Society garlic (*Tulbagnia violacea*)  
Spider plant (*Chlorophytum comosum*)

### Palms

Areca palm (*Chrysalidocarpus lutescens*)  
Canary Island date palm (*Phoenix canariensis*)  
Fishtail palm (*Caryota mitis*)  
Lady palm (*Rhapsis excelsa*)  
Paurotis palm (*Acoelorrhaphie wrightii*)  
Ponytail palm (*Nolina recurvata*)  
Pygmy date palm (*Phoenix roebelinii*)  
Queen palm (*Syagrus romanzoffianum*)  
Senegal date palm (*Phoenix reclinata*)

### Shrubs

Bamboo (*Bambusa sp.*)  
Bird of paradise (*Stelitzia reginae*)  
Bottlebrush (*Callistemonrigidus*)  
Canna lilies (*Canna generalis*)  
Copper leaf (*Acalypha wilkesiana*)  
Coral plant (*Jatropha multifida*)  
Crape jasmine (*Gardenia augusta*)  
Croton (*Codiaeum variegatum*)  
Dracena (*Dracena deremensis*)

Dwarf schefflera (*Schefflera arboricola*)  
Firecracker plant (*Russelia equisetiformis*)  
Heliconia (*Heliconia sp.*)  
Red firethorn (*Pyracantha coccinea*)  
Sandankwa viburnum (*Viburnum suspensum*)

### Trees

Banana (*Musa acuminata*)  
Black sapote (*Diospyros dignya*)  
Carambola (*Averrhoa carambola*)  
Chinese elm (*Ulmus parvifolia*)  
Drake elm (*Ulmus parvifolia* "Drake")  
Edible fig (*Ficus carica*)  
Florida slash pine (*Pinus elliottii*)  
Frangipani (*Plumari spp.*)  
Grapefruit (*Citrus paradisi*)  
Guava (*Psidium guajava*)  
Italian cypress (*Cupressus sempervirens*)  
Citrus bottlebrush (*Callistermon citrinus*)  
Japanese privet (*Ligustrum japonicum*)  
Loquat (*Eriobotrya japonica*)  
Oriental arbor vitae (*Platyclusus orientalis*)  
Peach (*Prunus persica*)  
Pecan (*Carya illinoensis*)  
Pomegranate (*Punica granatum*)  
Sapodilla (*Manilkara zapota*)  
Schefflera (*Scheffera actinophylla*)  
Southern magnolia (*Magnolia grandiflora*)  
Sweet gum (*Liquidambar styraciflua*)

### Turf Grass

Bahia (*Paspalum notatum*)

### Vines

Allamanda (*Allamanda sp.*)  
Coral vine (*Antigonon leptopus*)  
English ivy (*Hedera helix*)  
Monstera (*Monstera deliciosa*)  
Night blooming cereus (*Hylocereus undatus*)  
Philodendron (*Philodendron williamsii*)  
Pothos (*Epipremnum aureum*)  
Purple allamanda (*Allamanda violacea*)  
Trumpet vine (*Campsis radicans*)

## NOT RECOMMENDED

Plants which have not demonstrated tolerance of chloride salt levels greater than 100 parts per million (ppm). Chloride salt concentrations for Tampa's reclaimed water range from 150 to 300 ppm.

### Shrubs

Chinese privet\* (*Ligustrum sinense*)  
\*Japanese privet is more commonly used in Florida landscapes than Chinese privet.  
Dwarf azalea (*Rhododendron sp.*)

### Vines

Bleeding heart (*Clerodendrum thomsoniae*)  
Passion flower (*Passiflora incarnata*)

## ADDITIONAL MAINTENANCE

Plants which may require extra maintenance if chloride salt concentrations exceed 200 parts per million (ppm). Avoid reclaimed water contact with plant leaves. Drip-irrigation may prevent leaf burn. Chloride salt concentrations for Tampa's reclaimed water range from 150 to 300 ppm.

### Ground Covers

Blue sage (*Salvia farinacea*)  
Bugle weed (*Ajuga reptans*)  
Caladium (*Caladium sp.*)  
Peperomia (*Peperomia obtusifolia*)  
Verbena (*Verbena sp.*)

### Trees

Avocado (*Persea americana*)  
Crape myrtle (*Lagerstoemia indica*)  
Jacaranda (*Jacaranda mimosifolia*)  
Laurel oak (*Quercus laurifolia*)  
Lychee (*Litchi chinensis*)  
Mango (*Mangifera indica*)  
Orchid tree (*Bauhinia purpurea*)  
Oriental persimmon (*Diospyros virginiana*)  
Red maple (*Acer rubrum*)

