EXTREME GARDENING

By Theresa Badurek

Our climate is changing. If you've been gardening for a while, you have probably already noticed this. Seasons and storms swing in with more wildness and strength than before. Long, hot droughts, drenching tropical rains, tidal flooding, exotic pest invasions, heavy winds, and more. How can you nurture a more resilient garden in the face of increasingly extreme conditions? Prepare now for a more successful future garden.

Know your Zone. USDA Plant Hardiness Zones changed in 2012, shifting noticeably north to accommodate warming climate trends. This means that plants that previously thrived in your area may no longer flourish there. It also means that some invasive exotics that enjoy warmer weather will be creeping northward. Fruiting trees that require chilling hours may not receive the lower

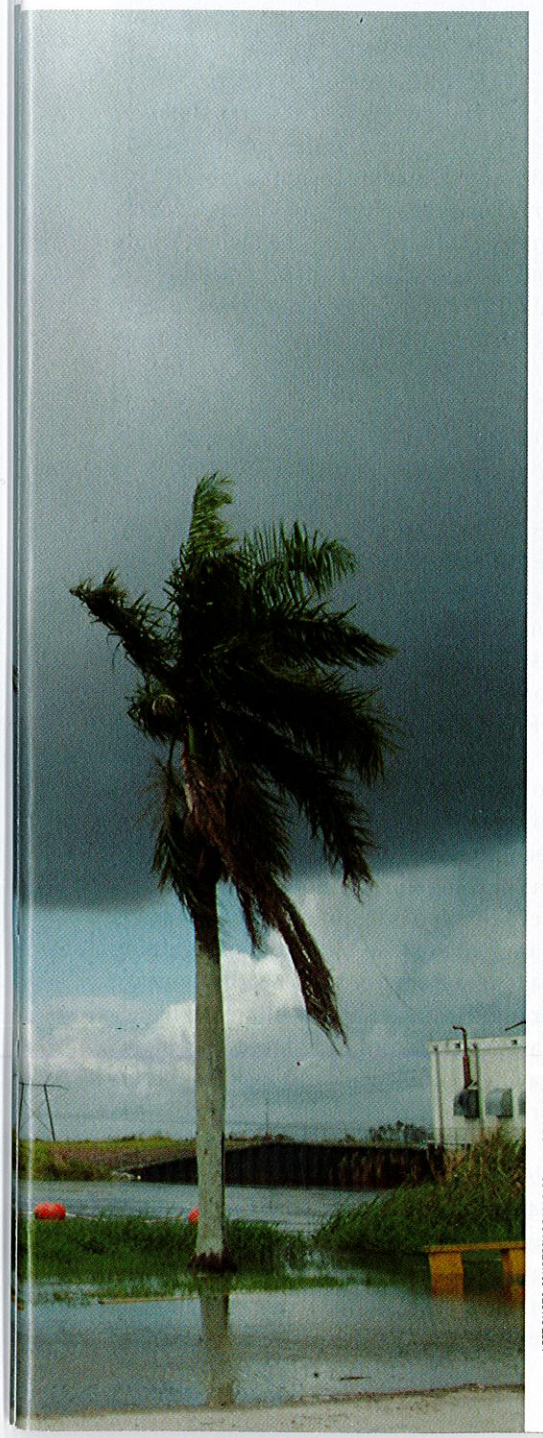
Flooding from a severe storm.

temperatures they need to produce. You can search your hardiness zone by zip code here: planthardiness.ars.usda.gov/PHZMWeb.

Combat drought and water shortages by creating a more drought-tolerant landscape today. At the current rate, Florida may face outdoor watering bans sooner than you think. We can help by conserving now. One free thing you can do is evaluate your irrigation system or schedule. Less frequent applications of sufficient water will encourage deeper roots. Deeper roots protect plants during drought, allowing them to tap into deeper soil moisture when water near the surface has been used, run off, or evaporated. Your turfgrass needs approximately ½-¾ inch of water per week in the growing season (less in winter), applied once a week. Many municipalities already restrict watering to once a week; check yours seasonally.

Measure your water sprinkler output using flat-bottomed, straight-sided cans, such as tuna cans. Place eight or 10 of these in an irrigation zone or along the sprinkler pattern for a manual sprinkler. Turn on the water for 15 minutes and then measure the water in the cans. If the average depth of water in the cans is ¼ inch after 15 minutes, running that sprinkler for 30-45 minutes would apply the correct amount of water. You'll save money and protect your plants. Less watering will also reduce fungal disease, which means healthier plants and more savings!

The right trees and shrubs in the right places should not need irrigation after establishment. Separate their irrigation zones from those for turf so you can turn those off and still water turfgrass during periods of drought. There may soon come a day that we can't irrigate at all, so prepare now. When plants die, replace them with drought-tolerant plants. Do not anything that requires a lot of water unless the site is naturally wet. Replace



LEFT PHOTO COURTESY OF MARISOL AMADOR, UF/IFAS.; RIGHT PHOTO COURTESY OF THERESA BADUREK.

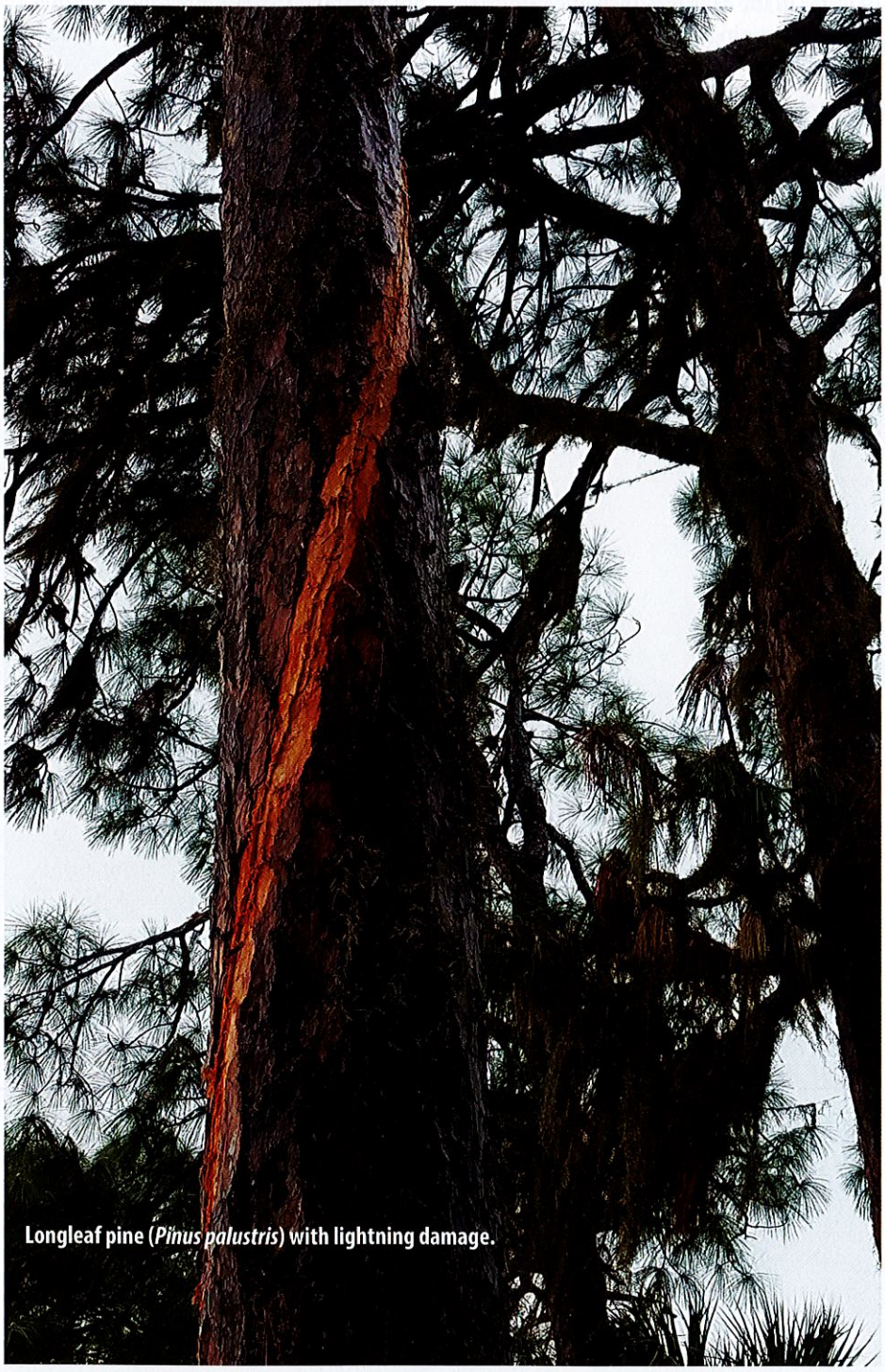
Beautiful drought-tolerant Florida garden.

unnecessary turf with drought-tolerant ground cover.

Good maintenance helps conserve water in the garden. Mulch your landscape beds with 2-3 inches of mulch and replenish as needed. Mulch retains soil moisture so precious rain or irrigation water stays in the ground rather than evaporating. Bonus: Mulch suppresses weed growth without using chemicals.

Fertilizer encourages plant growth, but growing plants need more water. So, to limit excess growth and thirsty plants, don't fertilize ornamental plants. This tip comes with two bonuses – saving time and money as well as protecting our beautiful lakes, rivers, and beaches from pollution.

Too much water can also be a problem – from storms to rising sea levels – receiving too much water occasionally challenges much of Florida. Hurricanes bring floods that cannot be predicted. In many locations, flooding is already happening at certain high tides (king tides). They can happen along bodies of salt or brackish water or even farther inland as tidal flooding backs up into low-lying storm drains and into neighborhoods. In areas where coastal saltwater flooding is regular, replant with salt-tolerant species as existing plants die. Your local extension office can help you select salt-tolerant plants.



Longleaf pine (*Pinus palustris*) with lightning damage.

With increasingly stronger and more frequent windstorms, planting wind-resistant trees is important. Trees are the most critical plants to worry about during high winds, as they are the tallest and largest, making them the most likely to fall and cause injury or damage. Small trees usually stay below the highest winds and are better choices in urban and suburban landscapes. Native trees usually perform better than non-native species.

Avoid trees with brittle wood that easily breaks apart in high wind. Trees that grow very quickly usually have brittle wood. Slow and steady wins this race! Trees with very shallow (or damaged) roots are prone to blow over. Don't cut the roots of a tree for sidewalks, driveways, or patios – work around them! The University of Florida has researched the most- and least wind-resistant tree species for Florida. (edis.ifas.ufl.edu/pdffiles/FR/FR17300.pdf)

If mature trees are damaged, rotting, or dying, hire a certified arborist to recommend preventive pruning techniques or removal/replacement before the next big storm. Another hazard to keep in mind is lightning. Tall trees can be damaged or killed by lightning. Lightning can jump from trees into nearby homes or utilities. If you have a tall tree of high value or close to your home, consider having a certified arborist install lightning protection.

Pest- and disease-resistant plants also affect garden resilience. Storms and people introduce and move pests around and often there is no treatment or cure (or the cure is toxic to other species). Plants that tolerate insects and diseases allow your garden to survive invasions and

Shallow rooted *Ficus* spp. with insufficient root space blown over during Hurricane Irma.

PHOTOS COURTESY OF THERESA BADUREK.

Tree Wind Resistance

(Selected Species)

Wind Resistant:
Gumbo limbo (*Bursera simaruba*), buttonwood (*Conocarpus erectus*), geiger tree (*Cordia sebestena*), flowering dogwood (*Cornus florida*), lignum vitae (*Guaiacum sanctum*), dahoon holly (*Ilex cassine*), yaupon holly (*I. vomitoria*), black ironwood (*Krugiodendron ferreum*), southern magnolia (*M. grandiflora*), sand live oak (*Quercus geminata*), turkey oak (*Q. laevis*), live oak (*Q. virginiana*), baldcypres (*Taxodium distichum*)

NOT Wind Resistant:
Earleaf acacia (*Acacia auriculiformis*), pecan (*Carya illinoensis*), Australian pine (*Casuarina* spp.), ear tree (*Enterolobium cyclocarpum*), *Eucalyptus* spp., silk oak (*Grevillea robusta*), avocado (*Persea americana*), Bradford pear (*Pyrus calleryana*), laurel oak (*Quercus laurifolia*), Chinese tallow (*Sapium sebiferum*), Chinese elm (*Ulmus parvifolia*), Washington fan palm (*Washingtonia robusta*)

infestations. A diverse garden with many species also helps prevent mass die-offs in your garden. Mix it up and plant a wide variety of native plants suited for Florida's challenges.

Plants that tolerate a wide range of conditions are more likely to survive. There is no need to re-design your entire yard in one project, simply begin replacing the dying or troubled plants as needed. When you plan a new garden area, keep these guidelines in mind. You will thank me when water restrictions no longer allow outside watering and you still have beautiful gardens! Tell your friends and neighbors now.

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