

*“To sit by a clear river on a warm day in early July
with the smell of cut grass in the air.”*

OSCAR-WINNING ACTRESS Helen Mirren describes her idea of perfect happiness in a *Vanity Fair* article last September.

The smell of freshly cut grass also made Neil Pasricha’s bestselling *Book of Awesome*, listing the top 1,000 awesome things. Pasricha depicts this scent as “heavenly” and “one of the quintessential summertime memories” that reminds one of “twilight in the countryside, a football game about to start or a sunny Saturday morning.”

And this is just its smell. Don’t get people started on describing walking barefoot in its cool stand as each blade tickles the toes.

Turf. Lawn. Grass. Green space. It’s called

many things, but it usually brings about the same hopeful, nostalgic feelings. “In the gallery of national icons, lawn care is as all-American as baseball,” says Evan Ratliff in a *ReadyMade* article.

That could be the reason 71% of all U.S. households participate in some form of lawn care or gardening, the most popular being lawn care (48% of households), per the National Gardening Association. And 30% of all U.S. households hire at least one type of lawn and landscape service, spending \$53 billion annually. A Gallup Survey says 62% of all U.S. homeowners feel this investment in lawns and landscaping is as good as or better than other home improve-

Is turf MISUNDERST

The industry struggles to prove turf’s true potential in the landscape.

BY **NICOLE WISNIEWSKI** EDITOR-IN-CHIEF

ments with a recovery rate of 100% to 200%.

There are 80 million home lawns in the U.S., according to Scotts. And total U.S. turf is estimated at 46.5 million acres, The Lawn Institute reveals.

Turf is adored; cared for; played, walked and jumped on; and is used to stabilize and green landscapes. “Many people’s favorite childhood memories happened on turfgrass,” points out T. Kirk Hunter, executive director of Turfgrass Producers International, East Dundee, IL, “whether it was a family picnic, playing ball with friends at the park or scoring the winning point in a competitive sport.”

All these statistics leave many landscape

professionals wondering when turf started to become such a bull’s eye for hate. When did people start to view lawns as something to be removed in favor of “environmentally friendly landscaping,” as an article in the *Long Beach Gazette* described it? When did green space become environmentally *unfriendly*? When did 73% of Americans want to begin exploring reduced lawn environments, per the 2011 American Society of Landscape Architects Residential Trends Survey? When did sports fields become battlefields over green space that is synthetic vs. natural? Nearly every week, a new headline touts a “lawn-less landscape” or programs that reward homeowners for removing grass.

The problem, landscape professionals say, is “turfgrass is definitely misunderstood, unappreciated and under-valued,” Hunter says. “It’s the Rodney Dangerfield of landscape plants — it gets ‘no respect.’”

“In my mind, turf has never been understood,” adds Andy Smith, national accounts manager with Reinke Manufacturing Co., Deshler, NE, and former external affairs director for the Irrigation Association.

Why? “Because there is so much misinformation regarding natural turfgrass and because of the sometimes misleading media coverage on turfgrass-related issues,” Hunter says.

Therefore, turf’s benefits get forgotten. As Smith says, “we are lacking some serious metrics that show the true potential of turf as a useful tool in the environmental toolbox.” And, as Vic Gibeault, horticulturist and delegate to the University of California Riverside Turfgrass Research Advisory Committee, points out, “turf has a multifaceted story that we need to tell.”

Where it all began

Turf has a long history as a “natural surface that covered the plains long before people populated the Earth,” Hunter says.

Andrew Jackson Downing published one of the first U.S. landscaping books in 1841. As *The New Yorker* pointed out in “Turf War,” Downing’s *Treatise on the Theory and Practice of Landscape Gardening* urged readers to improve themselves by improving their front yards.

To achieve this feat, Downing told readers to group trees in clusters, mix forms and colors with enough variety to “keep alive the interest of the spectator and awaken further curiosity,” and essential to any perfect garden, he said, was an expanse of “grass mown into a softness like velvet. No expenditure in ornamental gardening is productive of so much beauty as that incurred in producing a well-kept lawn.”

Downing’s suggestions inspired others, who continued spreading his message. Calvert Vaux, Downing’s protégé,





“There’s a realization that incorporating nature into the places where we live, work and play has a profound impact on our well-being”

— WILLIAM SULLIVAN, PH.D., who studies how regular exposure to green spaces helps people function better.

and Frederick Law Olmsted designed New York’s Central Park with broad lawns, and this continued to influence countless suburbs, *The New Yorker* explained. According to Ted Steinberg, author of the book *American Green: The Obsessive Quest for the Perfect Lawn*, “with the start of suburban development in the late 1800s, the idea of surrounding a house with turf began to make real headway,” he said in a 2005 *New York Times* article. “But it was not until after World War II that the suburban lawn rose to dominance.”

It was Abraham Levitt, whose family pioneered the idea of the affordable, cookie-cutter housing found in today’s suburbs, who had “the foresight to realize that by intelligent landscaping the normal depreciation of our houses could be offset,” as said in a 1952 *Fortune* magazine article.

As lawns spread, well-manicured ones were seen as reflections of their owners. “A fine carpet of green grass stamps the inhabitants as good neighbors, as desirable citizens,” Levitt wrote in the late 1800s — even then Levittowners agreed to mow their lawns once a week between April 15th and November 15th. And still today, people tend to equate unkempt lawns with what Ratliff described as “laziness, indolence or domestic discord.” He quoted Lee Coltman, an anthropologist at the University of California at Los Angeles who studies suburban lawn attitudes, as saying, “There is a sense that not only should neighbors care for their lawns, but if a neighbor isn’t

caring for his lawn, there’s something wrong with him.”

So a lush lawn became an American ideal.

Back in its earlier days in 17th century Europe, turf was also recognized as a sign of wealth, but today it is a low cost, low maintenance option. “Turf isn’t a luxury item,” Smith says. “It’s just a basic element of any functional landscape.”

The inputs

Some say the American lawn started making enemies when some people became obsessed with its care. In a May 2010 *Men’s Health* article “Could Your Lawn Be Lethal?” Steinberg says, “there’s nothing wrong with a lawn. I have a lawn. But there is something wrong with the ‘perfect’ lawn.”

This obsession is described in the form of inputs. Like any plant or living thing, turf requires water and care. But industry professionals say the level of care required does not need to reach obsessive levels and is not environmentally threatening, especially considering turf’s many benefits.

The problem then centers on misinformation and assumption, industry veterans say.

“The visible drawbacks associated with lawns, such as images of over-watering lawns on hot summer days in arid climates or obvious exces-

continued on page 22

Is turf the
**“Right plant,
wrong place?”**
Find out on
page 20.



continued from page 18

sive fertilizer use, often drive knee-jerk, generalized, negative reactions to all lawns as being nothing more than ‘water-wasting, pesticide-addicted, fertilizer-dependent, landfill-clogging, energy-consuming insults to mankind and the environment,’” says Ranajit Sahu in his report *Think Before You Remove Your Lawn — The Benefits of Turfgrass*. “The push to remove grass areas can be short-sighted since this action often relies on erroneously based data, preconceived perceptions and emotion, which have no place in thoughtful policy making.”

Hunter agrees. “There is a disconnect between science and the world we live in today,” he says. “Environmental extremists who only look at one piece of the puzzle think getting rid of turfgrass will save water and save the planet. So mulch, pavement or some other impervious surface must be better because you don’t have to water it. If that were true, how do we recharge our aquifers and reduce water runoff from heavy rain?”

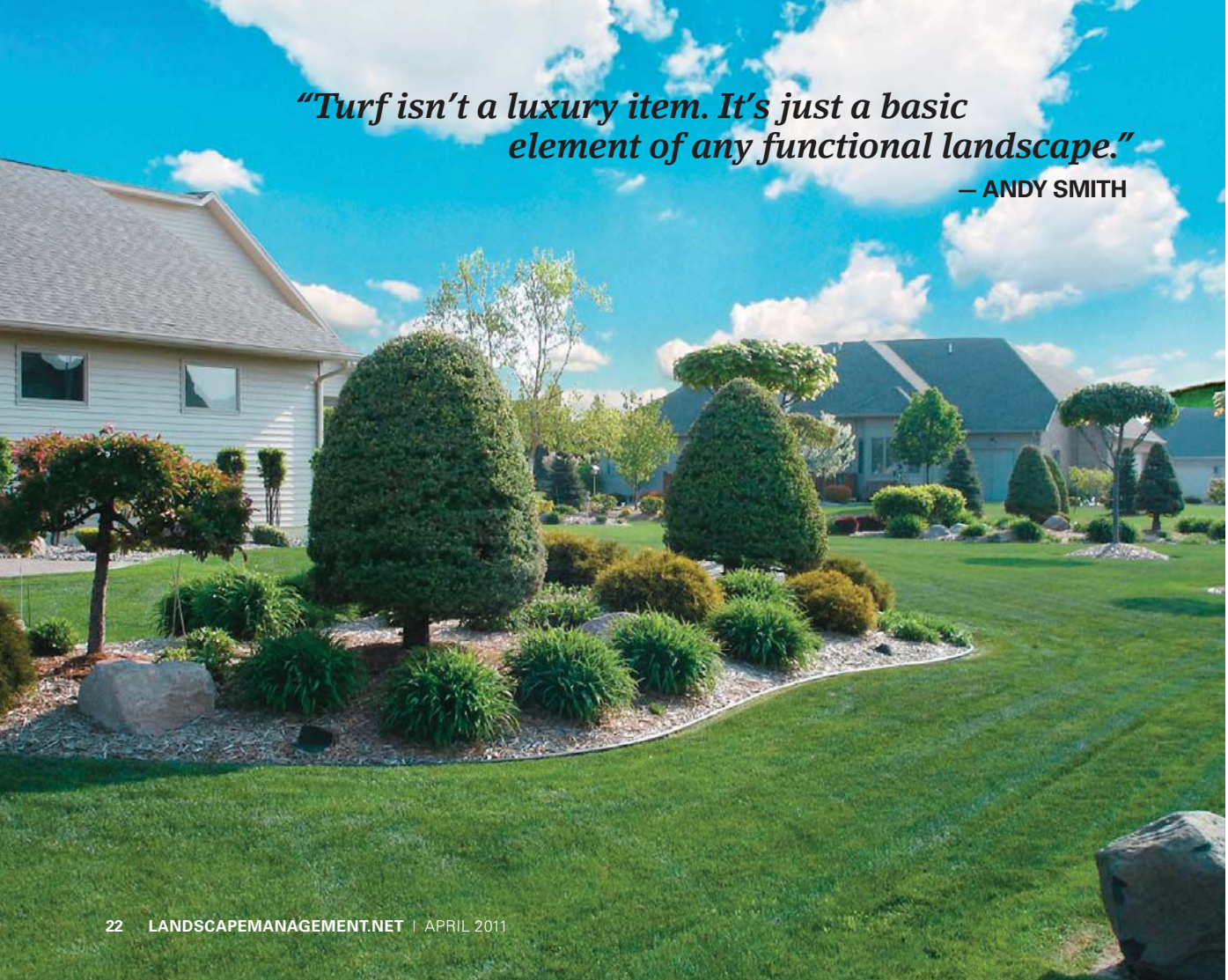
In fact, water is a good place to start. The EPA estimates the average family of four can use 400 gallons of water every day,

and approximately 30% of that water is used outdoors. More than half of that 30% is used to water lawns and gardens, and of that, The Saving Water Partnership says half is defined as effective landscape watering while the other half is wasted as a result of overwatering, improper irrigation system design, evaporation and wind. Nationwide, landscape irrigation is estimated to account for almost one-third of all residential water use, totaling more than 7 billion gallons per day.

The question many people cannot answer is: How much water does a specific landscape need? As referenced in a July 2010 *Landscape Management* article, Larry Cammarata, green management consultant for Brickman, a 687 million company with headquarters in Gaithersburg, MD, says outdoor overwatering can be controlled by looking at the relationship between plants, soil and water. “By fixing the plant location and soil, you can reduce the supplement water that plant needs considerably.” Proper plant placement, based on that plant’s needs, is the key. “I’m seeing the right plants being used, but not always in the right place or right soil.”

Today, “people begin with the assumption that everyone

continued on page 24



“Turf isn’t a luxury item. It’s just a basic element of any functional landscape.”

— ANDY SMITH



continued from page 22

overwaters,” Smith says. And since turf is very visible, it gets targeted. But if people eliminate turf, there’s no proof they’ll save water, he explains. “People treat watering turf like a linear relationship where we use it at the top end and then it dumps at the bottom,” he says. “But water on turf doesn’t work that way. It’s cyclical. If I apply water to my grass, it transpires into the atmosphere and comes back down in the form of rainfall, as long as I don’t overapply it or create runoff or leaching. And plants purify this water as it transpires and turns into pure, clean vapor. If I apply water to concrete, however, it just runs off. We should be looking at turf as a tool instead of painting an ugly picture of it.”

The solution industry professionals suggest is better educating their crews and consumers on proper plant and water use, discouraging overapplication and alerting people to areas that need renovated to use water more efficiently, and even capture and hold that water for extended and future use. Since landscapes don’t require drinking water, there are also possibilities when it comes to using gray or recycled water.

Other inputs that are regularly criticized with regard to turf are pesticides and fertilizers.

For instance, “Could Your Lawn Be Lethal?” quotes the EPA, stating “Americans apply 100 million pounds of fungicides, herbicides and insecticides a year to their lawns.” The information that is missing from this figure, says Gina Zirkle, a scientist and environmental stewardship expert with The Scotts Miracle-Gro Co., Marysville, OH, is it includes both the home and garden category, which covers pesticides used on lawns, gardens, landscape beds, indoors and on pets. So, is the lawn really using 100 million pounds? Home and garden totals only 11% of the amount of pesticides used in the U.S., according to the EPA’s Pesticide Industry Sales and Usage Report. Approximately 76% — or 722 million lbs. — is used in agriculture and 13% — or 114 million lbs. — is used in industry/government.

“I’m in a hotel sleeping on sheet that may have been treated with a chemical to kill bedbugs,” Smith points out, “yet grass is the easy and visible target.”

And, “turfgrass is not the only plant in the landscape that needs inputs,” Hunter says, pointing out this is a big reason removing turf from the landscape is not the best solution for reducing overall inputs.

One lawn care professional in Smith’s region started customizing his service to limit inputs. Instead of offering the same five-application lawn care program to each property, he studies each specific site, conducts a soil test and recommends a program to fit that property. “And my place looks fabulous and the contractor is making more margins

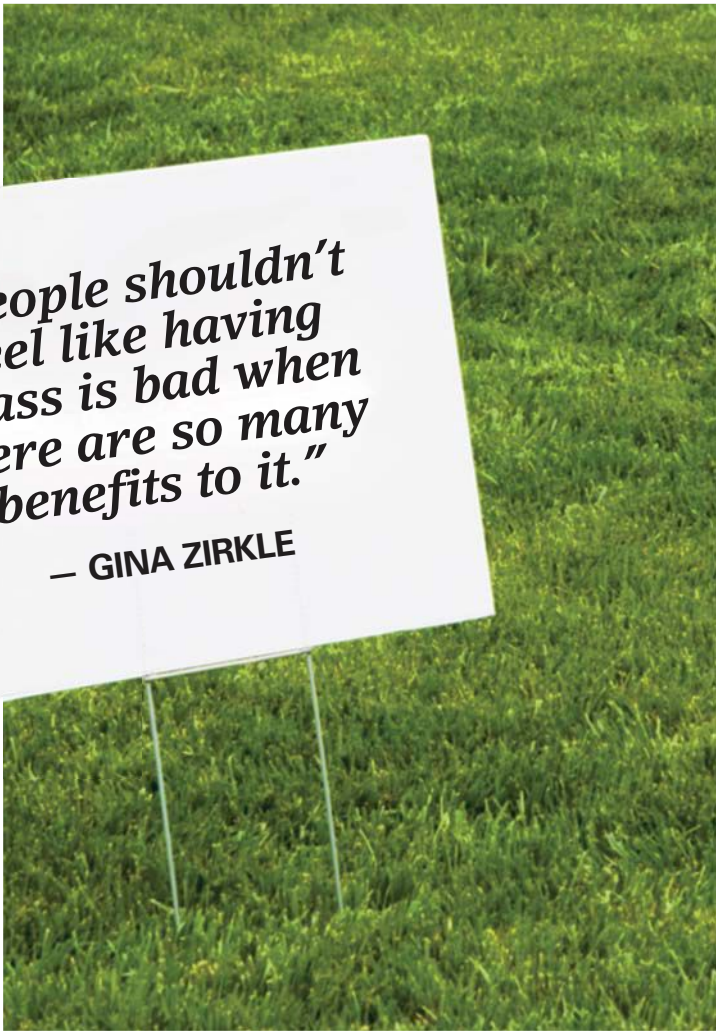
“Turfgrass is definitely and under-valued. It’s the Rodney — it gets ‘no respect.’”

and doing a better job for his customers,” Smith says.

Similar to challenges with water, industry professionals say education and proper use solves the problem. With fertilizer, this means ensuring the application stays on target, placing any misplaced granules back on the target, knowing the correct square footage to apply the correct amount, and properly calibrating spreaders for different sites, says Tom Delaney, PLANET’s government affairs director.

Ultimately, saying we should eliminate turf is like saying “because a 757 flies into the World Trade Center, we should ban all 757s,” Smith says. “It’s not the plane’s fault. It’s the same with turf. It’s not the plant’s fault, but the people who are misusing it and using the incorrect amount of inputs.”

Sahu feels the same way, saying: “Just as no one would suggest the proper response to a headache is removal of one’s head, the proper strategy in minimizing drawbacks due to turfgrass is optimization, not elimination.”



“People shouldn’t feel like having grass is bad when there are so many benefits to it.”

— GINA ZIRKLE

misunderstood, unappreciated Dangerfield of landscape plants

— T. KIRK HUNTER

The benefits – seen & unseen

Before judging turf on just its inputs, many industry professionals say one must factor in its benefits because, in some cases, they warrant and then cancel out any related threats.

Turf has many benefits that are very visible.

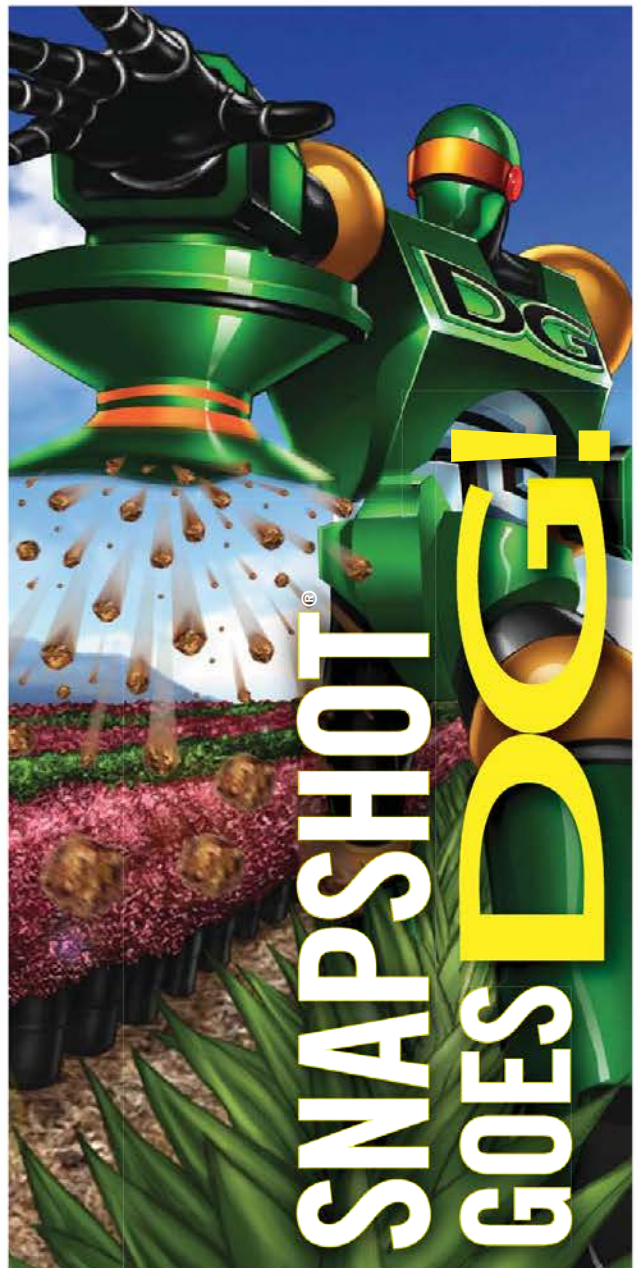
First, “turfgrass is one of the softest, safest playing surfaces for family fun and relaxation ... in backyards, as well as in parks, sports fields, etc.,” Hunter points out. In a study of football injuries at 12 Pennsylvania high schools, researchers determined one-fifth were field-related. “Fields with good quality turfgrass cover have higher traction, cushioning and resiliency, and lower surface hardness, reducing the probability of injury,” a UCR turf report explains.

Turf also stabilizes the landscape — reducing runoff and soil erosion and minimizing dust. “You can’t find a plant that grows such a dense groundcover per square inch than grass,” Zirkle says. Mowed turfgrasses are estimated to have shoot densities ranging from 75 million to more than 20 billion shoots per hectare, UCR turf says.

Turf’s cooling effects are also easy to feel. The EPA says the annual mean air temperature of a city with more than 1 million people can be 1.8 to 5.4 degrees F warmer than its surroundings, and in the evening the difference can be as high as 22 degrees F. This phenomenon, also known as the “heat island” effect, can increase summertime peak energy demand, air conditioning costs, air pollution, greenhouse gas emissions, heat-related illness and mortality, and water quality, the EPA says. The EPA points to green spaces as appropriate ways to lessen these effects because their leaf evapotranspiration, or loss of water via transpiration and subsequent evaporation, causes this cool down.

“How much extra energy would be used to cool a home if it weren’t for turf?” Smith asks. Lawns are 30 degrees cooler than asphalt and 14 degrees cooler than bare soil in

WEB EXTRA
For four vital turf maintenance pointers, visit www.landscapemanagement.net/turf.



One advanced technology **SNAPSHOT DG Granule** + **Water Rapidly Dissolves** Into thousands of micro particles forming a potent, long lasting control treatment that's effective on over 100 Grassy And Broadleaf Weeds.



Contact 800-253-5296 or visit www.AndersonsTurf.com

SnapShot DG™

The Andersons

©2011 All rights reserved.
®™ The Andersons and DG are trademarks of The Andersons, Inc.
© SnapShot is a registered trademark of Dow AgroSciences LLC.
Always read and follow label directions.

PHOTO BY: ISTOCK INTERNATIONAL INC.



continued from page 25

summer, Project EverGreen reports. And, more importantly, if a portion of the water used in a lawn evapotranspires, providing this cooling benefit, “is this water really being wasted?” Sahu asks.

The heat island effect also increases water evaporation from nearby reservoirs. Turf functions as a sponge that traps water and increases groundwater recharge. “Turfgrass areas can even be designed with contours to temporarily hold water (i.e. swales), further decreasing storm water runoff,” Zirkle explains.

As water availability continues as an issue, particularly as the population is expected to grow 50% by 2050, “whatever resource stretch we feel now will be exacerbated,” Smith says.

Better capturing rainfall may help future water reserves. “We should be using our yards to filter the rain where it fall,” Zirkle says. “We should be soaking up water like a sponge, capturing and retaining as much as we can,” Smith agrees.

“While turfgrass is aesthetically appealing, it also provides functional benefits beyond what the eye can see,” Hunter adds.

One invisible concern to many Americans today is carbon dioxide. Once released into the atmosphere, scientists say it lingers for 100 to 200 years, building in concentration and raising the Earth’s average temperature, otherwise known as global warming.

Zirkle worked on a thesis called “Modeling Carbon Sequestration in the U.S. Residential Landscape” at The Ohio State University under Dr. Rattan Lal in

March 2010 looking at how because of its permanent cover, turf naturally sequesters carbon in the soil. Even after factoring in the energy associated with turf maintenance, lawns are net carbon sinks, she found.

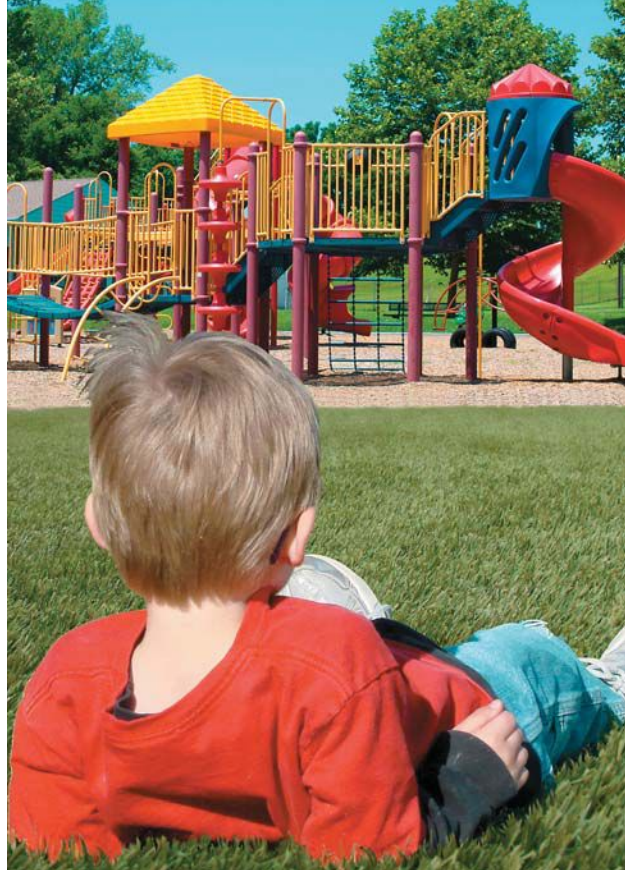
Eliminating turfgrass would result in a reversal of this benefit, adding to the atmospheric burden, Sahu points out. “This benefit alone should cause a reassessment of any policy that encourages reduction in turfgrass areas,” he says.

Another invisible turf benefit people feel rather than see is oxygen generation via photosynthesis. “Thirty acres of grass provides enough oxygen for 2,000 people to breathe,” Smith says.

Stress reduction is also a hidden green space perk. A recent *Men’s Health* article “Recapture Your Wild Side” says one in four U.S. workers describe themselves as chronically angry. Over the past 20 years, outdoor playtime has decreased by 50% as adolescent obesity rates have tripled.

The article says “the 21st-century man spends 90% of his time sealed off from nature. The ultimate cost of this separation is impossible to calculate. But in recent years, scientists have measured enough specific benefits of exposure to the outdoors — less anger, more productivity, quicker thinking, faster healing, longer lives — that the lesson seems obvious.”

“Imagine a therapy that had no known side effects, was



“Imagine a therapy that had no known side effects, was readily available, and could improve your cognitive functioning at zero cost.”

This from a *Psychological Science* study.

The therapy: interacting with nature, as T. Kirk Hunter’s son, Talon, does here.

readily available, and could improve your cognitive functioning at zero cost,” *Psychological Science* asks readers. The therapy: interacting with nature. In a University of Michigan study, a short nature hike sharpened memory and attention by 20%.

“There’s a realization that incorporating nature into the places where we live, work and play has a profound impact on our well-being,” says William Sullivan, Ph.D., in *Men’s Health*. He studies how regular exposure to green spaces helps people function better. “Find a home in a green neighborhood, one with street trees and sidewalks that encourage walking.”

For these reasons, “green space has been and will continue to be a coveted commodity,” says Evin Ellis, marketing communications manager for Husqvarna, Charlotte, NC.

And, “of course, to advocate a single replacement for the lawn is to risk reproducing the problem” because research will need to be done to factor in the inputs and benefits relating to those substitutes, The New Yorker says.

In the end, “people shouldn’t feel like having grass is bad,” Zirkle urges, especially “when there are so many benefits to it.” **LM**

WEB EXTRA

To share the positive attributes of turf with your local legislators and regulators, go to landcarenetwork.com for a sample letter or contact PLANET’s Government Affairs Director Tom Delaney at tomdelaney@landcarenetwork.org or 800-395-2522.