

MAY 2021 CREATION CARE GREEN TIPS

1. Just one year after Minnesota launched its **Lawns to Legumes** program, which pays residents small amounts of money to **plant pollinator-friendly flowers, shrubs and trees in their yards**, about 750 residents have received \$58,000 to plant nearly **eight football fields worth of pollinator gardens, meadows and flowering trees** in cities and suburbs around the state. Funded by the state's **Environmental and Natural Resources Trust Fund**, the program receives help from the **Metro Blooms** organization and the **Board of Water and Soil Resources(BWSR)**, both of which can be contacted by those interested in **converting some of their lawns or gardens into bee and butterfly habitats**. Most recipients spent even more of their own money on the projects, while the more than **7,000 people** who applied for money but did not receive any still reported **planting another 190,000 square feet of pollinator habitat on their own**. Although Minnesotans have displayed overwhelming commitment to this program, **state lawmakers have not agreed on how to spend the trust fund money in 2021 (the request is for \$1 million to pay for up to 1,600 more grants over the next three years)**. URGE YOUR LAWMAKERS to support spending trust fund money on programs like Lawns to Legumes that it was designed to fund.

2. During the last glacial age, retreating glaciers left the area between New Jersey across the Upper Midwest to the Pacific Ocean an **earthworm-free zone**, which changed when European colonists introduced **nightcrawlers, red wigglers and other European worm species** in their ships' ballast. According to Lee Frelich, director of the University of Minnesota Center for Forest Ecology, these **earthworms have become an invasive disaster in northern hardwood forests** by eating moisture-rich leaf litter, and seeds and seedlings of trees and native plants that supply food for birds, insects and other woodland creatures. **Spread by oil and gas development, fishing, logging and other human activities**, the worms thrive as soils warm due to climate change, **invading the northern boreal forests and even the far-northern tundra, threatening to expose permafrost and accelerate its thawing and release of carbon**. U of M researchers have found areas in Alaska's Kenai Wildlife Refuge where the **biomass of earthworms is hundreds of times higher than that of moose, a keystone species**. WHAT YOU CAN DO: support leaders who are addressing climate change, and be an advocate for the Minnesota DNR's warning to fishermen to **dispose of bait in the trash, never on the ground**.

3. Addressing the dilemma of high maintenance lawns that require frequent mowing and heavy irrigation, landscape architect Sarah Sutton, author of *The New American Front Yard: Kiss Your Grass Goodbye*, recommends for those who are required to have a lawn because of homeowners' associations requirements, to use **low-growing fescues (often sold as a "no-mow lawn seed mix")**, **buffalo grass**, or the **ground cover kurapia (*Lippia nodiflora*)**. Go to stepables.com to see photos and find the best lawn substitutes for your hardiness zone. Trees substantially increase your yard's **carbon-capturing capability**, so plant younger seedlings rather than full-grown trees (they adapt better to your yard). A landscape of native plants, which are hard to find at big-box stores, is a key feature of a healthy yard, and you can receive advice from a native-plant society by going to plantnative.org for a **nationwide directory of nurseries**. Most fertilizers contain **synthetic nitrogen, which requires a lot of energy to produce and is released as a potent greenhouse gas when more is applied than the plant uses**. Researchers at Michigan State University find that in most cases, sparing amounts of an **organic slow-release**

fertilizer like compost can keep plants healthy and boost yield. If you are shopping for a commercial product, look for products that have **OMRI certification to ensure compliance with organic standards**.

4. Mounting interest in growing your own food and cultivating wildlife-friendly native plants is good news for **the environment, biodiversity and people**, according to the National Wildlife Federation. Around one in three households (**109 million people**) grow at least some of their own food in home or community gardens, providing additional environmental benefits that include **1) increasing water-holding capacity and preventing soil erosion** by converting bare or "hardscape" surfaces; **2) reducing greenhouse gas emissions** due to less waste in producing and transporting food, and diverting food and yard waste away from landfills; **3) meeting the unmet food needs of people in cities** by creating urban farms and gardens that a 2018 study published in the journal *Earth's Future* show could produce **100 to 180 million tons of food annually (up to a tenth of the world's current production of beans and produce)**. Avoiding **chemical pesticides** is a key part of these benefits, according to German researchers' published data in 2020's *Organic Agriculture*, in which they found that the **number of plant species was, on average, 95% higher on organic versus conventional farms**. **Birds and insects, respectively, were 35% and 22% more diverse**. Home food gardens also provide us with the **universal human need, both physical and psychological, for outdoor time and connection with nature**.

5. Four questions regarding **climate change** sum up the findings of the most accurate and widely agreed upon scientific information: **1) climate change isn't only about computer models**, but also rests on what scientists have understood **for over a century** about the basic physics of greenhouse gases causing warming. Temperature measurements taken since the mid-1800s reveal the changes that began during the Industrial Revolution, and are corroborated by studying geological records and by satellites tracking surface temperatures; **2) Numerous studies, endorsed by NASA**, have found that **more than 90% of scientists who study Earth's climate** agree that the planet is warming, largely due to human actions. The views of the few scientists who remain opposed have not held up under the weight of evidence; **3) Although the planet warming 2 degrees F since the 1800s** may not seem like much, the confusion is due to **the difference between weather and climate**. **Weather** is the day-to-day meteorological conditions outside, while **climate** is the long-term average of those conditions. A 2 degree F difference from one day to the next is not a big change, whereas it represents **a huge change in climate - enough to melt ice and raise sea levels, shift rainfall patterns and alter ecosystems, killing millions of trees**; **4) estimated costs of keeping warming from increasing** would require a total investment of \$4 trillion to \$60 trillion (the world economy was about \$88 trillion in 2019). Moody's Analytics estimates that **doing nothing would also be costly, costing \$69 trillion by 2100, with increasing tolls as temperatures rise**.