

## 2020 Governor's Environmental Stewardship Award Winners

### **Winner: City of Knoxville**

County: Knox

Category: Energy and Renewable Resources

When the City of Knoxville launched its Energy & Sustainability Initiative in 2017, it quickly became obvious that converting the city's roughly 29,000 streetlights to LEDs would yield huge benefits for both the environment and the city's bottom line. The streetlights were the city's largest municipal use of electricity, and the bill to "keep the lights on" topped more than \$4 million annually. Started in 2017 and completed in 2019, the project reduces streetlight energy consumption by more than 65 percent. Additionally, since the lifespan of LEDs is far longer than the former high-pressure sodium streetlights, the project will also significantly reduce maintenance costs and outages in neighborhoods and other critical roadways. As a result of this project, utility bills for streetlighting will decrease by \$3 million per year and associated maintenance costs will decrease by \$2 million per year. The city will also reduce greenhouse gas emissions by more than 13,000 metric tons of carbon dioxide per year. The new LEDs provide a crisp, bright light and help limit light pollution which minimizes impacts on nocturnal wildlife, reduces glare and sky glow, and improves nightscapes.

### **Winner: Tennessee Department of Agriculture, Division of Forestry**

County: Cumberland

Category: Agriculture and Forestry

The Tennessee Department of Agriculture, Division of Forestry created a Strike Team over 18 years ago to solve the problem of the Hemlock Woolly adelgid (HWA), a non-native invasive insect causing extensive mortality and decline in the Eastern and Carolina Hemlock across Tennessee. Hemlock forests can be found in 39 counties throughout Tennessee, totaling approximately 150,000 acres both on public and private lands. Over the past six years, the HWA Strike Team has been staffed by three to six seasonal personnel. Due to the tremendous success of the Strike Team's approach, a full time Strike Team coordinator was hired in 2019 to oversee the continuity of operations and provide planning and administrative support to the seasonal team. The team has treated over 53,800 hemlocks over 4,500 acres and facilitated the release of over 10,000 predator beetles reared by the Lindsay Young Beneficial Insect Laboratory at the University of Tennessee as well as hosted dozens of workshops to private landowners about the importance of hemlocks.

## 2020 Governor's Environmental Stewardship Award Winners

### **Winner: FedExFamilyHouse**

County: Shelby

Category: Building Green

The FedExFamilyHouse project established a state-of-the-art multi-family housing facility for families with children receiving treatment at LeBonheur Children's Hospital. FedExFamilyHouse provides free, comfortable accommodations to out-of-town families of patients at Le Bonheur Children's Hospital. Accommodations at FedExFamilyHouse include 75 private suites, community kitchen and dining areas, play and lounge areas, laundry rooms, media and library rooms, and outdoor gathering spaces. The FedExFamilyHouse received LEED Gold certification in 2019 with exceptional achievements that include a 24 percent improvement on the baseline building performance rating and purchase of 35 percent of their energy from green power sources. For materials and resources, the facility was able to incorporate 10 percent recycled content building materials, 20 percent regionally extracted, harvested, recovered, or manufactured materials, and reached 50 percent diversion of construction and demolition debris. The facility reduces potable landscape water use by 50 percent, and indoor water use by 40 percent.

### **Winner: green | spaces**

County: Hamilton

Category: Environmental Education and Outreach

green | spaces of Chattanooga, in partnership with Build Me a World, launched a workforce development program, to prepare at-risk young adults for construction and energy services industry jobs. Two training programs – one in Baltimore and one in Chattanooga – aim to help generate pathways out of poverty for young adults through job readiness training, community organizing and outreach training, and technical training in the green building field. Affordability of utilities is one of the greatest challenges to low-income neighborhoods in Chattanooga. This program brings solutions to issues of energy efficiency in low-income areas as well as a pipeline for employment into the green economy.

Build it Green (BIG) is a 12-week program that will prepare young adults from low-income communities for entry level jobs in the energy services field, while equipping them to engage low-income residents in sustainability practices and programs, particularly best practices in residential energy efficiency and weatherization programs. The program consists of six weeks of community engagement, personal development, and job readiness training, and another six weeks of technical training in weatherization and community sustainability. Program participants also receive weekly job shadowing and off-site job training opportunities, paid job shadowing opportunities, and other benefits, such as OSHA 10 Certification and Lead Abatement Certification. Leading up to completion, trainees are

## 2020 Governor's Environmental Stewardship Award Winners

provided with job placement assistance with local companies. Since 2018 the program has graduated 38 individuals with 80 percent placement and retention in employment.

### **Winner: Johnson County**

County: Johnson

Category: Natural Resource

The Doe Mountain Recreation Authority (DMRA) was established by the Tennessee General Assembly via the Doe Mountain Recreation Authority Act of 2012 to conserve the land, waters and wildlife on Doe Mountain. Toward that end, a master plan was adopted to foster economic development for the Tennesseans by developing and operating a multi-use, family-oriented outdoor recreation area on 8,600 acres now commonly referred to as the Doe Mountain Recreation Area. With a total land area of 8,600 acres, Doe Mountain Recreation Area towers above Mountain City, the seat of Johnson County, and spans nearly 10 miles from town limits south to Watauga Lake. Research conducted by The Nature Conservancy has identified the region as a globally significant biodiversity hotspot, a major North American migration corridor for plants, animals, and birds, and home to a network of watersheds vital to both people and nature. As of today, the DMRA has achieved the following accomplishments: 1) successfully operates more than 60 miles of recreational trails; 2) has secured operational funding through a variety of private and government grants to further expand the trail system and guest amenities; 3) employs full-time and part-time local staff; 4) resulted in five local business start-ups and counting, and; 5) became a designated Adventure Tourism District in January 2020.

In 2019, Doe Mountain Recreation Area became a nationally registered Forest Carbon Project, with approximately 100 monitoring plots established across the mountain to measure the forest's current carbon storage levels. While commercial timber harvesting is now prohibited on Doe Mountain, the minimal removal of trees for trail construction, scenic overlooks, and the DMRA's usual daily operations are permitted within the carbon registry rules. The carbon project is providing the DMRA with an eight-year income stream for the recreation area's trail and infrastructure improvements while conserving Doe Mountain's visually stunning landscape for future generations. From June 2019 through January 2020, carbon credit sales revenue generated over \$300,000 for the DMRA. Doe Mountain is home to a network of former logging and mining roads that now serve as the recreation area's multi-use trail system. Inherent with any trail system, especially those which include an off-highway vehicle use component, comes a responsibility to properly manage trails to reduce soil erosion and subsequent impacts to water quality. The DMRA has raised multiple private and government grants to identify and address trail erosion areas, close and/or re-route problematic trails, and ensure adequate stream crossings are in place to protect the mountain's water resources.

## 2020 Governor's Environmental Stewardship Award Winners

### **Winner: Milcrofton Utility District**

County: Williamson

Category: Water Quality

Milcrofton Utility District was awarded the first United States pilot for the new Advanced Meter Infrastructure (AMI) system by Kamstrup Water Meters of Denmark. The Kamstrup water meter is an ultrasonic water meter that more accurately measures water movement across a wide spectrum of flows. Over the course of an eight-month period in 2019, all water meter and transmission tower infrastructure was replaced for the utility district's entire 94-square-mile service area to report the data back to a central hub.

Hourly data collection and monitoring allows for the district to more efficiently pinpoint specific issues, such as where a leak may be occurring. Each weekday, a customer location that has registered 24 hours of continuous usage is contacted either by direct phone, voicemail, or email, communicating that a potential water loss issue may be occurring.

During these interactions, Milcrofton customer service representatives have an opportunity to discuss the issue, including some "quick" steps to determine continuous usage source and ways to conserve water in general. Many customer calls reveal that water has been accidentally left running. In other circumstances, irrigation systems may be working improperly. Customers were not previously notified until they received the next monthly water bill. Real time notifications and early intervention have saved customers tens of thousands of gallons of valuable water that previously was wasted or lost along with a monetary savings.

### **Winner: Paint Oak, LLC.**

County: Hamblen

Category: Materials Management

A former electronics recycling tenant at the Paint Oak, LLC property in Hamblen County stockpiled millions of pounds of electronic and other wastes within a 130,000-square-foot warehouse in 2015. The owners of the Paint Oak facility remediated the stockpile of cathode ray tubes (CRT) as part of a redevelopment effort associated with the large industrial complex the building was a part of. The remediation effort was made more complicated and difficult by the presence of lead contaminated dust, which had been spread throughout the area due to improper material handling. Paint Oak disposed of over 8 million pounds of CRT waste, over 180 tons of special wastes, and recycled over 360,000 pounds of various electronic wastes. These efforts resulted in the safe and environmentally sound management of the stockpiled wastes as well as the transformation of the brownfield site into a potentially productive industrial facility with associated positive economic impacts. To date, Paint Oak has invested approximately \$2.4 million in remedial efforts, facility upgrades, and storm water improvements.

## 2020 Governor's Environmental Stewardship Award Winners

### **Winner: Shelby County Health Department**

County: Shelby

Category: Clean Air

The Memphis Area Rideshare program has made positive impacts in Shelby County by reducing car emissions and raising community awareness of alternative transportation. The program works with area employers to organize employees in carpools and vanpools, with a goal of improving air quality through the reduction of single occupancy vehicles on the road. In 2019 the program increased the number of vanpools at the Memphis VA Hospital and started new vanpools at a federal prison facility and Atara Biotherapeutics, Inc. The work of Memphis Area Rideshare has resulted in a grand total of 52 new vanpools in Shelby County. The vanpools have taken approximately 2,914 cars off the road which is a monthly fuel saving of \$30,180.00 and reduction in carbon monoxide of approximately 5.05 tons per month.

### **Winner: Stanley Black & Decker**

County: Madison

Category: Sustainable Performance

Stanley Black & Decker (SB&D) Jackson is on a journey to 'Create a More Sustainable World' and reduce their impact to the environment. The Jackson plant has pursued this commitment to sustainability by reducing energy consumption and water usage, adopting green energy sources, and becoming landfill free in 2019. Since 2019, SB&D has doubled the amount of recycling streams within the facility by diverting 10 million pounds of waste from landfilling and adding a process to reuse powdered paint which reused another 21,000 pounds of waste material.

The Jackson plant embraced the challenge to reduce water usage while growing production, implementing measures which reduced water usage by 12 percent. To accomplish this, SB&D installed low flow fixtures, automatic flushers on the toilets and automatic faucets, and reduced water usage in the shop paint line which resulted in a savings of 200,000 gallons since installation. The Jackson plant has also completed several energy and carbon reduction projects which include LED lighting, motion sensor fans, chiller replacements, and a chiller controls upgrade. Through these different measures and commitments, SB&D has reduced energy usage by a total of 3 percent, the facility's carbon footprint by 42 percent compared to a 2015 baseline, and still managed to grow the business.

Beyond SB&D's commitment to facility sustainability, it has also been a major partner in the community. In 2018 the facility donated over 250 pounds of food through its annual food drive. SB&D staff have planted trees on their property as well as distributed trees to

## **2020 Governor's Environmental Stewardship Award Winners**

employees and community members. One of the most remarkable programs has been the Local Options and Opportunities Program (LOOP). This program is a unique work-based learning opportunity where 40 students attend a modified school day for academic credit through an online learning lab model with teacher support and work in the manufacturing facility the remainder of the day. This experience takes place at the manufacturing site instead of the traditional high school. SB&D is one of four manufacturers in Jackson that participate in LOOP.

# **Pursuit of Excellence Winners**

## 2020 Governor's Environmental Stewardship Award Winners

### **Winner: The Nashville Food Project**

County: Davidson

Category: Pursuit of Excellence

The Nashville Food Project (TNFP) brings people together to grow, cook and share nourishing food, with the goals of cultivating community and alleviating hunger in Nashville through a sustainable food system. Since receiving the Governor's Environmental Stewardship Award for Materials Management in 2017, TNFP has continued to build and grow toward a vision of community food security using hands-on, innovative, community-driven solutions. TNFP created a partnership-based community meals program supported by urban agriculture and food recovery programs. This program shared 264,868 meals in collaboration with 58 nonprofit partners. Partners include afterschool programs, adult education, emergency shelters and services, senior services, grassroots and community led groups, and medical and health services.

TNFP also created a food recovery program that diverted 145,037 pounds of edible food from the landfill, in partnership with six grocers and food wholesalers, 27 farms, 37 restaurants and caterers, 57 schools and community organizations and 68 individuals; an urban gardening program that provided agricultural space, training and resources to 69 families, prioritizing families that face barriers to accessing fresh food; a market garden program that supported seven New American families from agrarian backgrounds in growing produce to sell for personal income totaling \$35,544. In 2019 TNFP composted 14,810 pounds of food scraps which was applied to their production gardens to achieve improved soil health and promote a closed-loop system. These gardens produced 16,266 servings of organic fruits and vegetables for their meals program.

TNFP continued to diversify the program and included locally sourced food into their kitchens through purchasing surplus food from local farms and ensuring meals contained as much locally grown food as possible. Lastly, they opened a new garden site, the Community Farm at Mill Ridge Park. TNFP uses one acre of park land within a 600-acre regional park. A quarter acre of this land was established as a TNFP production garden to grow food for TNFP's Community Meals Program while also functioning as an educational site for community volunteers to learn and practice sustainable agriculture.

## 2020 Governor's Environmental Stewardship Award Winners

### **Winner: Crosstown Concourse**

County: Shelby

Category: Pursuit of Excellence

Crosstown Concourse was the 2018 recipient of the Governor's Award in the Building Green Governor's award. This once abandoned Sears distribution center has transformed into a 1.3-million-square-foot "vertical urban village" integrated with arts, education, and wellness/health. They renovated \$200-million, mixed-use, vertical urban village includes 400-student charter high school, 20,000-squarefoot YMCA fitness center, 450-seat black box theater, refurbished free-of-charge public parking garage, radio station, farm-to-table organic grocery store, eight restaurants, free public art gallery, artist studios, maker lab, a pharmacy, the nation's largest private dental clinic, teaching kitchen, civic/ event spaces capable of serving up to 1,000 guests, 40 medical/office/retail tenants, 265 apartments, housing for arts, education, and medical residency programs and market-rate apartments.

Crosstown Concourse achieved LEED Platinum designation in late 2017. The project is seeing \$750,000 in energy cost savings per year. Aggressive performance tracking gives building management valuable information for how to continuously improve energy savings in the building. Crosstown has implemented a comprehensive metering/analytics system throughout the campus and can pinpoint tenant energy waste and opportunities for reduction as well as appropriately bill tenants based on individual energy usage to encourage responsible use. Crosstown Concourse has implemented chiller plant optimization programming and monitoring with a utility savings of \$10,600 per year which equates to 116 tons of CO2 emission reduction per year. They were also able to achieve an overall decrease in utility costs of 3.3% in 2019 compared to 2018 while also increasing occupancy.

Crosstown Concourse became the first project in Tennessee to be named a fitwel three-star certified community, the program's highest rating. The fitwel certification program recognized Crosstown for programming and amenities that increase access, equity, and wellness. The program has not only proven but also promoted the broader vision of Crosstown Concourse, which is community wellness. The project illustrates that even the most unlikely development challenges can be successful under the right circumstances. After sitting abandoned for more than two decades, the existing building was a quandary; while considered too large to successfully redevelop, projected costs for demolition of the building were also a deterrent.