



Tree Tribute Newsletter



Oklahoma State University is Named an Arboretum

As of September 2022, OSU has been officially named a Level II Arboretum through the ArbNet organization. ArbNet, the interactive community of arboreta, is a global network for tree-focused professionals that facilitates the sharing of knowledge, experience, and resources to help arboreta meet their institutional goals and strengthen the overall arboretum community. There are four levels of accrediting offered by the organization, one being the entry level. Because of our previously demonstrated dedication to excellence in growing a healthy campus forest and arboretum, our university was able to surpass level one and apply for level two right away. The application process was rigorous and required our campus forest to: have a published Arboretum Plan including a collections policy, show proof of an organizational/governance group, have over 100 different tree species, have a tree-dedicated and paid management staff, and provide public access to events and educational programs. The accreditation is in effect for a five-year period through September 2027,

at which point we will reapply. Currently, our limiting factor in achieving a Level III recognition is the number of species required. We currently have 122 tree species on campus, and Level III arboreta require at least 500 distinct species. For more information see:

www.arbnet.org

To see OSU's bio on the ArbNet website see:

arbnet.org/morton-register/oklahoma-state-university-arboretum



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Campus Trees at a Glance

Number of Trees: 4,042

Number of Species: 164

Structural Value: \$15.7 million

Canopy Cover: 8.4%

Trees Planted: 240

Trees Removed: 117

Trees Pruned: 163

Oxygen Production: 187.5 tons/year

Carbon Sequestration: 70.32 tons, \$12 thousand/year

Carbon Storage: 2.376 thousand tons, \$405 thousand/year

Avoided Run off: 132.1 thousand cubic feet, \$8.83 thousand/year



Most Dominant Species

Species	Percent Population
Crepe Myrtle	9.0
Shumard Oak	7.9
Holly sp.	7.6
Baldcypress	7.0
Chinese Pistache	5.0
Bur Oak	4.4
Southern Magnolia	4.1
Chinese Elm	4.0
Easter Red Cedar	4.0
Pin Oak	1.8

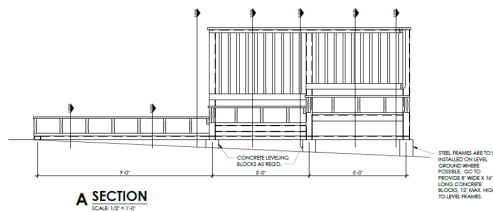
Special Points of Interest

- Review Campus Tree Inventory Updates
- Meet Members of Your Tree Leadership Board
- Get Insider Knowledge About Campus Landscape Projects
- Learn How Students Interact With Our Campus Arboretum



Protecting Our Trees: An Unprecedented Approach

Cowgirl Softball fans have undoubtedly noticed the new outfield corrals, a mostly wooden construction bleacher system. But few know just how much work and forward thinking went into protecting our trees through this project. OSU FMLS, OSU Athletics, and McKee Construction collaborated very closely to complete a design which would meet all of Athletics' needs while not damaging the root system of a nearby mature Pecan tree. At first, it was proposed that tens of piers be drilled and set into the ground underneath the tree canopy. This tree is still recovering from 2019-2020 renovations to the area and several preceding weather events. Considering those factors, drilling and setting piers would have almost certainly caused irreversible damage to this tree. The solution that McKee Construction proposed was setting concrete blocks at grade level, thus preventing all ground excavation save some surface leveling under the blocks. The



design is sound and meets all safety requirements while preserving the integrity of the tree's root system. Increased foot traffic in this area will likely increase soil compaction over time, and FMLS will combat these effects as the need is presented.

See actual construction plan to the left.

“When teamwork found a creative ideal, we received an above-grade solution that ensured a below grade success. “

–Director of Landscape Services John Lee,
on the Softball Corral Project

Interactive Map Updates

As mentioned last year, GIS major Samuel Harris has been hard at work collecting and inputting field data into our ArcMap software and GIS mapping system. It took him one whole year to visit, collect, input, and organize data for all of our 4,000+ trees, and we're so incredibly thankful for his efforts. Having accurate tree data is important when calculating things like environmental impacts and the structural value of our campus Arboretum. Thanks to him, our Interactive Arboretum Map is more accurate than it has been in years. Please visit the map here: <https://fm-gis-portal.okstate.edu/portal/apps/interactivemap/>

As the arborist intern/student worker, Samuel also spent time learning how to plant trees, airspade, prune deadwood, winterize trees, and completing many other tasks.

Campus Tree Report 2022

240 trees planted; representing **66 species** across **23 genera**, finding homes at **41 sites**.

Tree Removal Breakdown: 117. 38 Natural Decline, 28 Drought, 16 Residual Feb Freeze 2022, 12 Irrigation Issues, 6 Residual Ice Storm 2021, 3 Fungus, 2 Dutch Elm Disease, 1 Scale, 1 Vandalism, 1 Wind, 1 Abiotic Factors.

Goals: One of our accomplished 2021 goals was updating the tree inventory. Trees are added and removed regularly as the landscape changes, but every ten years we conduct a large scale survey updating tree growth and biometrics. As stated before, it's incredibly important to have accurate data for tree assessment and reporting. For example, our inventory last year was valued at \$9.81 million, but most of the reported data was 10 years old. With the updated data, the campus forest and arboretum's value increased to \$15.7 million. A similar trend can be seen when comparing this year's percent canopy coverage with last year's, 8.4 and 5.1 respectively. For reference to last years data, read the 2021 Tree Tribute Newsletter:

https://fm.okstate.edu/about-us/landscape/landscape_site_files/documents/ous_tree_tribute_newsletter_2021.pdf

In 2022 we'll continue to focus on increasing the university's overall tree canopy. This is an ongoing and evolving goal that will be reached by planting more trees and maintaining the health of our existing forest.

We will continue to celebrate trees and offer the OSU community opportunities to learn about our campus Arboretum via Service Learning Projects, tree plantings, use of the Interactive Campus Map Tree Layer, and potentially through future virtual and/or in person tree tours.

A complete list of goals and arboretum care standards can be found on our website:

https://fm.okstate.edu/about-us/landscape/osu_tree_care_standards.html

Please remember to not feed the squirrels. For more information please read the 2021 Newsletter linked above.



Above: Society of American Foresters 2022-2023 President (SAF) Renee Schuette speaks at OSU Arbor Day 2022. Also pictured from left to right: Caitlin Gipson—University Arborist, Darren Shrum—First Cowboy, and Joseph Shrum—son of Kayse and Darren Shrum.

Arbor Day 2022

Oklahoma State University celebrated Arbor Day a little later than usual this year. We usually celebrate it during Oklahoma Arbor Week, the last full week in March. This year, we decided to celebrate on April 29 along with the nation on the 150th annual National Arbor Day.

Darren and Joseph Shrum, our new First Cowboy and Son, were in attendance as guests of honor. Darren shared very kind words of encouragement and praise for our beautiful campus landscape, thanking its caretakers for the hard work and dedication it takes to keep campus so well maintained. Then he shared a story detailing how students often chose to enroll at OSU because the people are friendly, the campus is so beautiful, and because it feels like home. It was acknowledged by the First Cowboy that students chose OSU partially because of its gorgeous landscape.

Renee Schuette, SAF secretary, also spoke at the event. She gave a detailed description of the planted tree, a Swamp White Oak (pictured to the right). She shared how the tree was selected for this location because it will grow to be a lovey shade tree, it's resistant to compaction, and will withstand the fluctuating local climate conditions.

The event was livestreamed via Inside OSU and is archived on their website at this link: https://insideosu.com/new?video=1_aym3lobc



Tree Campus Higher Education

OSU has been awarded this recognition for the 11th consecutive year!

In celebration, OSU FMLS University Arborist Caitlin Gipson and Horticulturalist Craig Barnes attended the annual State Arbor Day Luncheon on March 10, 2022. This year, the event was hosted by OCCC. Pictured below are OSU graduates and luncheon hosts/attendees: Riley Coy—Service Forester, Craig Barnes—OSU, Caitlin Gipson—OSU, Mark Goeller—State Forester and Director of Forestry Services, and Mark Bayes—Urban Forestry Coordinator.

Tree Campus Higher Education is an award presented by the Arbor Day Foundation to campuses that demonstrate that they meet five criteria highlighting their devotion to a healthy campus forest and community/education outreach.

The five criteria include: having an active Campus Tree Advisory Committee, creating and following a Campus Tree Care Plan, having a campus tree program with dedicated annual expenditures, observing Arbor Day, and facilitating a Service Learning Project.



An Arbor Day Foundation Program

Tree Leadership Board Members 2021-2022

Dr. Bryan Murray: *Prof. NREM*

Dr. Tom Kuzmic: *Prof. Emeritus NREM*

Dr. Tom Hennessey: *Prof. Emeritus NREM*

Dr. Mike Schnelle: *Prof. and Extension,
Horticulture and Landscape Architecture*

Craig Spencer: *Director, Energy Services
Facilities Management*

Jana Phillips: *University Architect,
Long Range Facilities Planning*

David Hillock: *Consumer Horticulture
Extension, Horticulture and Landscape
Architecture*

John Lee: *Director, Landscape Services
Facilities Management*

Caitlin Gipson: *OSU Univ. Arborist
Landscape Services*

Josh Everett: *Pres. OSU SAF Chapter*

Phoebe Austerman: *Pres. OSU Hort. Club*



Dr. Bryan Murray

Welcome Dr. Murray to the Tree Leadership Board! Dr. Murray is an assistant professor in the Department of Natural Resource Ecology and Management where he splits his time between research and teaching. He's originally from Chillicothe, Ohio and earned his B.S. in biology and M.S. in biological sciences not far from home at Ohio Northern University and Wright State University, respectively. He has also previously lived in Indiana, Iowa, and Michigan. Part of his time in Michigan was spent earning his Ph.D. in forest science from Michigan Technological University.

Dr. Murray has always had an innate interest and curiosity for the out-of-doors. Fortunately, he has tailored those interests into a career where he gets to work outside while helping people and the environment. As an assistant professor, he has the incredible opportunity to share this passion with students as he teaches several labs and outdoor courses. He also manages research in the forest, rangeland, and wildlife ecology fields. Dr. Murray has two children, who are 6 and 3 year old, and enjoys spending time in nature as an avid long-distance runner and cyclist, although he also enjoys hiking, camping, and backpacking. Again, welcome Dr. Murray!



What excites you most about being an OSU Cowboy?

"Being part of a talented and supportive community."

-Dr. Bryan Murray

Phoebe Austerman

Horticulture Club President and Tree Leadership Board Member

Phoebe is a senior horticulture major from Oklahoma City, Oklahoma, with a special interest in tropical plants. Her love for horticulture began when she was about five years old and grew a *mammoth* sunflower from seed. When she was a senior in high school, the realization hit that she could follow her passion and make a career in horticulture. When asked what her dream job in horticulture would be, Phoebe answered: *"I envision my dream job involving research and development of tropical foliage plants, while incorporating sustainable practices and cutting-edge technology. No matter where I end up in my career, I never want to lose the hands-on aspect of what I love most about the horticulture industry; getting to work directly with plants!"* In her time on the Tree Leadership Board, Phoebe especially enjoyed participating in campus tree plantings. Tied for her favorite tree are the Redbud and Catalpa. Both for their lovely blooms, Redbuds for their nitrogen-fixing ability*, and Catalpas for their beautiful tropical look. *post publication note, Redbuds do not fix nitrogen. [Redbud\(uada.edu\)](http://Redbud(uada.edu))

Campus Trees and EarthFest

OSU FMLS University Arborist attends SGA Sustainability Board Earth Fest

Pictured left are University Arborist, Caitlin Gipson, and Assistant Director of OSU SGA Sustainability Board, Gabby Barber.

EarthFest is an annual expo-type event which corresponds with National Earth Day and is hosted by OSU SGA Sustainability Board. At the event, several university entities educate students on how they can get involved with campus sustainability. OSU FMLS's booth focused on the opportunities that our Tree Campus Higher Education award and its related activities (Arbor Day observance and Service Learning Projects) presents to students. Other OSU organizations present included Net Impact, Horticulture Club, Wildlife Society, Botanical Society, Society of Am. Foresters, Am. Society of Landscape Architects, Environmental Science Club, and Green Geeks.

EarthFest was fulfilling both to run and attend because it's like a student club fair just for sustainability-related organizations. Because of its location, students could come and go as they wish, having fun and learning about really important topics and opportunities. -Gabby Barber

Theta Pond Bridge

Some may remember the Greek Walk Theta Pond bridge project completed in 2019. OSU FMLS is beginning a new phase of this project, replacing the three small wooden bridges. Ultimately this project will give Theta Pond a more uniform and formal look. Tree protection efforts through this project will include, but won't be limited to: boring excavation, airspading/root pruning, mulching pathways for large equipment, and installing tree protection fences. Boring protects the root zones by sending utilities directly underneath the tree roots, greatly minimizing disruption to the tree. Where boring is not feasible, roughly 100 feet of soil will be airspaded near four mature Bald Cypress (*T. distichum*) trees. Airspading and root pruning prevent roots from tearing and ripping during ground excavation. It's much healthier for the roots to be hand-pruned than be ripped by a backhoe or other large equipment. As we know, compaction is the silent killer of trees, especially on a busy college campus. To prevent soil compaction in the construction area, pathways of 4-6 inch thick mulch will be laid for large equipment to drive on. Last but not least, roughly 300 feet of tree protection fence will be installed and maintained through the project. Tree protection fence has a many benefits. In short, it protects above-ground portions of the trees from mechanical injury and protects the underground portions from soil compaction as well as physical injury. To learn more about tree protection during construction, please visit this web page: https://fm.okstate.edu/about-us/landscape/tree_protection_standards.html

Construction is expected to begin in January 2023 and be complete before spring commencement.



"I love the idea of our club's members coming back to campus over the years and showing their friends and families the trees they helped plant. It's a wonderful way for students to create a living tie to the campus that they can return to and see how it has grown and progressed, much like the students themselves will do... there's something very poetic about it!" - Phoebe Austerman, on Service Learning Projects

Service Learning Projects

For the first time, the FMLS department hosted two Service-Learning Projects (SLP) in one year! SLPs give the student body the opportunity to interact with and care for the Campus Arboretum in direct, hands-on ways.

The first SLP, pictured on the right, was held on March 30 on the east side of our Campus Fire Station. Twenty students volunteered time, braved the cold, and planted two trees. The one pictured is a Paperbark Maple (*A. griseum*), which will grow to approximately 20" tall and will provide visual interest as the bark exfoliates and curls. The second tree was planted several feet to the north. It's a Painted Maple (*A. pictum* subsp. mono) and will show brilliant yellow to orange fall color.

The second SLP, pictured right, was held at Centennial Grove on Oct. 13, 2022. This site lost six trees to the Oct. 2020 ice storm and three to disease in the same year. Thanks to the students, replanting efforts in this area have begun! Forty-one students helped to plant four trees, a Bald Cypress (*T. distichum*), a Swamp White Oak (*Q. bicolor*), a Cedar Elm (*U. crassifolia*), and a Western Soapberry (*S. drumundii*), all of which will contribute to forest restoration.



Photo Credit: Gabby Barber



Photo Credit: Gabby Barber

Oklahoma State University

Facilities Management

Landscape Services

The Facilities Management Landscape Services Department is responsible for the overall design, installation, and maintenance of 870-plus acres. We serve the University by providing skilled landscape services to help the OSU community achieve educational success. By doing this, we help our organization develop a dynamic outdoor learning environment through campus beautification.

How to Donate

Please visit <https://osugiving.com/your-passion/campus-tributes>

Under "Areas of Impact", select "Campus Tree Planting and Maintenance Fund 20-98240."

From here you may donate any amount.

For a donation of \$1,800 or more, a metal plate in the shape of bark will be placed on the tree statues adjacent to the Cowboy Family Tree art piece located at Theta Pond. See statue below.

To fill out information for the plaque, scroll down to the bottom of the same web page listed above and select "Download our Campus Tributes order form here."

Please direct any donation questions to:

Courtney Wolf MacNelly, Assistant Director of Development for University Programs
cmacnelly@osugiving.com | 405-332-1469

Thanks to Our 2022 Donors!

Mrs. Jo Alice Dobbs and Mr. Steven Dobbs

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FACILITIES MANAGEMENT