

## **SOUTHERN ILLINOIS UNIVERSITY CAMPUS TREE CARE PLAN**



I. The purpose of the SIU campus tree care plan is to identify the policies, procedures, and practices that are used in establishing, protecting, maintaining, and removing trees on the SIU campus. The overall goal of the plan is to ensure a safe, attractive, and sustainable campus urban forest. The specific objectives of the plan are:

- Ensure proper species selection, high-quality nursery stock acquisition, and industry-consensus planting procedures.
- Promote species diversity and proper age structure in the tree population.
- Protect high-value campus trees during construction and renovation projects.
- Promote tree health and safety utilizing International Society of Arboriculture (ISA) best management practices when maintaining campus trees, and the American National Standards Institute's (ANSI) safety standards.
- Ensure that trees are reasonably replaced when there is mortality due to weather, pest infestations, injury, or construction displacement.
- Encourage campus community members to respect and value the campus urban forest.
- Public outreach that promotes urban forestry; awareness, sustainability, and serves as a model urban forest for communities in the Southern Illinois region.

II. The responsibility of the Campus Tree Care Plan rests with Southern Illinois University Physical Plant under the direction of the Superintendent of Grounds and/or the University Certified Arborist.

III. The Campus Tree Advisory Committee is currently composed of:

Committee Members	Groups They Represent	E-mail Addresses
<b>Bieri, Raymond</b>	Research Assistant, Forestry	raymond.bieri@siu.edu
<b>Bieri, Taryn</b>	Teaching/Research/Grad Assistant, Forestry	taryn.bieri@siu.edu
<b>Cheek, Elizabeth</b>	Administrative Assistant, SIUC Undergraduate Admissions	echeek@siu.edu
<b>Groninger, John</b>	Professor School of Agricultural Sciences	groninge@siu.edu
<b>McDaniel, Mark</b>	City of Carbondale Arborist	mmcdaniel@ci.carbondale.il.us
<b>Nowak, Owen</b>	Forestry Student	owen.nowak@siu.edu
<b>Sawrasewicz, Agnieszka</b>	Forestry Student	agnieszka.sawrasewicz@siu.edu
<b>Schauwecker, Karen</b>	Program Coordinator	karens@siu.edu
<b>Tippy, Dave (Chair)</b>	SIUC Superintendent of Grounds	dtippy@siu.edu

**Roles of Representatives**

The committee members will accept to serve for a period of one calendar year with a renewal option. Members shall appoint officials who will conduct the day-to-day business of the committee. Committee members are expected to actively participate and contribute in policy/guideline review as well as research/information gathering that would aid the campus urban forest.



**IV. SIU Care Policies**

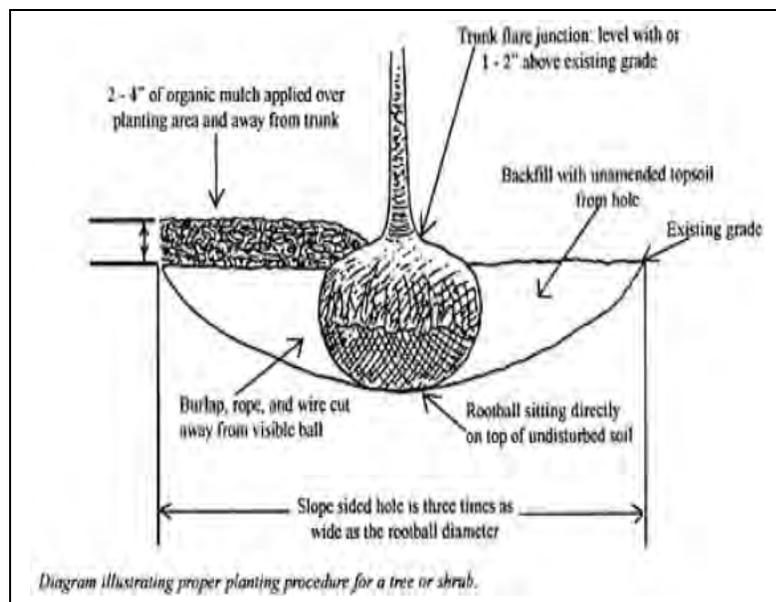
**Plant Selection**

Plant species used on SIU campus may be both native and non-native species that have been screened for their adaptability to the region, climate, soil type, location, and planting needs. The campus is used as a teaching lab, increasing the diversity of tree species is extremely important. Trees to be used on campus will be preselected at the nurseries for good quality and tagged.

**Planting Procedures**

A planting hole no deeper than the root ball and 2-3 times the diameter with sloping sides shall be dug. The root ball should be set so that the trunk flare of the tree is 1-2" above the existing grade. Once the plant is properly placed, all visible ropes and burlaps should be removed. The upper portions of the wire basket should be removed once the root ball is stabilized in the planting hole. Backfill soil can be amended as recommended by soil analysis. The backfill soil should be tamped firm to remove large air pockets and reduce settling. Complete the backfill by making sure that the trunk flare is completely exposed, spread mulch at 2-4" depth but not touching the trunk, water the root ball and planting area thoroughly. The American Nursery &

Landscape Association standards (ANSI Z60.1 *American Standard for Nursery Stock*) is referenced when planting and transplanting trees on campus.



Newly planted trees must receive adequate water weekly during the entire first growing season up until dormancy in the fall.

### Wrapping

Unless specified by the Superintendent of Grounds or staff representative, the trunks of deciduous trees shall not be wrapped.

### Staking

In general, trees are not staked if their soil ball is firm. The moving of the stem in the wind makes for a stronger tree. If guying is necessary, non-abrasive strapping is used, so as not to constrict the stem. Guying remains on the tree for no longer than 12 months and any wires are flagged for safety.

### Insect and Disease Control

All campus trees will be monitored for insect and disease problems, and appropriate control methods will be implemented. Integrated Pest Management practices will be used to treat and/or prevent infestations of harmful insects, fungi, and bacteria.

### Pruning

Campus tree maintenance will be overseen by the certified arborist and/or the Superintendent of Grounds. The pruning techniques employed include natural target pruning, and structural pruning. Trees are generally pruned on a three to four-year cycle with damaged or high risk

trees taking priority. The International Society of Arboriculture (ISA) standards, as described in the *“Best Management Practices: Tree Pruning”* ISA publication, will be followed for tree pruning on campus. Pruning shall conform to ANSI A300 standards.

### **Storm Management and High-Risk Assessment**

In the event of a storm or condition that results in fallen trees and tree damage, the first line of defense are the public safety personnel who patrol the campus twenty-four hours/day, seven days/week. When damaged trees are discovered, the Public Safety Department contacts the Facilities Operations Center who in turn assess the situation and decide what Grounds Maintenance personnel and equipment are required. The SIU staff arborist and/or the Superintendent of Grounds are responsible for assessing the safety of the situation and removal of the trees to alleviate hazards and clear roads and walks. The Grounds Maintenance Department’s certified arborist and/or the Superintendent of Grounds are responsible for assessing campus trees for risk potential, utilizing tree risk assessment standards to determine the trees risk.

### **Transplanting**

When necessary, due to construction, trees may be transplanted to a new location. The SIU Grounds Maintenance Department certified arborist and/or the Superintendent of Grounds are responsible for site selection and method of transplanting. Transplanting can be done using a tree spade or ball and burlap.



### **Fertilizing**

Newly planted trees receive an application of slow-release complete fertilizer to aid in their establishment. Individual nutrients can be added to trees in poor condition by soil injection, if shown by soil test to be deficient. Routine tree fertilization is not recommended: campus trees receive adequate nutrients from turf fertilization and breakdown of leaf mulching.

---

## **New Building or Facilities Construction**

When possible, all construction work shall be reviewed to note the impact on existing trees. Protection zones will then be established to ensure the protection of any trees Grounds Maintenance determines can or should be saved. This zone will equal one foot for every one inch of DBH. When existing trees are impacted, the contractor shall be required to financially compensate the university. Those funds will then be placed into an account for future tree planting.

## **V. Tree Protection Policies**

Guidelines from the AISWCD Urban Manual have been adopted to protect our urban forest and accommodate the work of the University. The SIU Superintendent of Grounds shall be notified and consulted prior to any contracted or in house construction in addition to maintenance work that might impact trees, shrubs, landscaped areas, or lawn space. After assessing the needs of the project, the Superintendent of Grounds will determine any appropriate protection needs that may be required.

Mature, high-value trees of desirable species that demonstrate good form and vigor, with a diameter at breast height (dbh) of 10-24 inches will be prioritized. The tree advisory committee should be consulted regarding any tree with unique value being considered for protection. Fencing will be installed with a six-foot minimum radius around smaller trees, with a dbh of less than five inches. Larger trees will have fencing installed at a ratio of one foot per radius inch of dbh. Pouring or disposal of construction-related substances, storage of equipment or construction materials, and vehicle parking will be prohibited within tree protection fencing.

Damage to SIU-owned trees or landscaping shall be repaired only by SIU Grounds Maintenance staff, or their designated contractor. Grounds Maintenance shall remove and replace any trees, shrubs and other plant material determined to be excessively damaged due to prohibited practices. The costs of all such repairs, removals, replacements, and an amount of value lost will be the liability of the contractor and billed accordingly.

The following specific responsibilities are required of the contractor when marked:

- To protect the immediate portion of tree root zones, NO construction equipment or materials; sand, soil, gravel, or any other materials shall be placed, parked, or stored on the surface of any unpaved areas within the radius of one and a half times the drip line (outermost reach of branches referred to as protected zone) of trees. NO chemicals, rinsates, or petroleum products shall be deposited within the protected zones of trees.
- Tree protection barricades shall be erected to define the protected zones. All unpaved area within the zones of each tree in the construction site shall be fenced. The fencing

shall be installed by Landscape Services or contractor as specified prior to set-up for construction.

- It is understood that the proximity of a tree to a worksite may require temporary access to a protected zone. A temporary path may be constructed in these cases using ¾ inch plywood or similar material as a protective barrier with approval from the SIU certified arborist and/or the Superintendent of Grounds.
- To preserve viable root systems and maintain structural stability, it is required that the contractor bore or tunnel beneath the root systems of trees.
- Open-cut excavating must be kept at a distance equal to 1 foot per every 1-inch tree diameter. This distance will be measured from the face of the tree trunk in a straight line the direction toward the area to be excavated.

A pre-construction site walk-thru will be scheduled with the SIU Superintendent of Grounds and contractor prior to any construction being done. This meeting will include the site construction superintendent.

- Care shall be taken not to damage tree trunks and branches. SIU Grounds Maintenance shall be contacted at least three (3) business days prior to the set-up for any construction to discuss problems of overhanging branches which may be damaged.
- All excavation in the protected zone shall be backfilled only with clean, viable soil. If possible, native soil from the site should be returned, and if not possible, soil returned should match existing soil profile. NO concrete, slurry, gravel, stone, sand, or other such materials shall be used for backfilling. Flush backfilled excavations to settle material. Restoration shall be to original grade, unless otherwise specified.
- Contractor shall immediately contact Superintendent of Grounds or Grounds Maintenance representative should protected plants be compromised in violation of agreed upon fencing and limits.

## **VI. Goals and Targets**

- Promote Arbor Day thru organized tree planting and other educational events.
- Education and integration with public awareness of sustainability.
- Create a model urban forest environment for education and research.
- Maintain and update the campus tree inventory that highlights over 7,000 trees on campus.
- Communicate our tree care plan to the community.
- Maintain and balance tree biodiversity.

---

## **VII. Tree Damage Assessment**

The Grounds Maintenance arborist and/or the Superintendent of Grounds are charged with the responsibility of assessing tree damage. Tree value is determined by current market value per 1" DBH. Where applicable, large trees are valued using the 9th Edition for Plant Appraisal, developed by The Council of Tree and Landscape Appraisers.

## **VIII. Prohibited Practices**

Our guidelines were developed by the Tree Advisory Committee and are part of the landscape specifications sent out to landscape contractors bidding on University projects.

**"Prohibited Practices"** by contractor shall include;

- Breaking of branches, scraping of bark, or unauthorized cutting.
- Nailing or bolting into plants; use of plants as temporary support (i.e. cables).
- Chaining, bolting, or cabling equipment to trees.
- Unauthorized filling, excavating, trenching, or augering within protected zones.
- Cutting of roots.
- Compaction/driving over the protected zones.
- Not following standards, and working unsafely with trees.
- Storage of any materials or parking in the protected zones.
- Dumping of ANY construction waste or material (including liquids) in protected zones.
- Unauthorized relocation of any woody plants.
- Execution or pre-emption of "Grounds Department Responsibilities".
- Removal of tree protection barricades or construction fencing prior to completion of project.
- Improper pruning or topping techniques.

### **"Grounds Maintenance Responsibilities"**

- Supervision of campus urban forest care and maintenance
- Tie-back of existing trees and shrubs
- Pruning/thinning
- Root pruning and root protection of exposed roots
- Watering of existing trees under stress
- Removal or relocation *not* specified within construction documents

These measures shall be done *only* by Landscape Services arborists, unless otherwise arranged, as needed to provide either preventative or remedial care to plants on a construction site.

---

## **IX. Definitions of Terminology Related to Campus Trees.**

### **“Aerial Lift”**

Hydraulically operated aerial tower used for ascent and tree entry, usually mounted on a large truck. Line crew use some short as 35 feet for clearing cables and streetlights. Most forestry departments use towers of 45-50 feet for trimming and removal operations.

### **“Arborist”**

A position that provides expertise in the field of tree maintenance practice, including but not limited to pruning, planting, pest and disease diagnosis, and fertilization. Typically, this position functions as a working lead or supervisor of a tree crew or as the tree specialist for an organization. This position generally requires a moderate to extensive education, experience, and certification in the field of arboriculture.

### **“Caliper”**

The diameter or thickness of the main stem of a young tree or sapling as measured at six inches above ground level.

### **“Chipper”**

A specialized piece of equipment designed for shredding brush and limbs into small chips.

### **“Complete Fertilizer”**

A fertilizer that contains all three of the primary elements, nitrogen, phosphorus, and potassium, not necessarily in a balanced ratio.

### **“Construction Fencing”**

NO construction work, parking of vehicles, storage of materials, or related activities shall occur beyond this boundary fencing. Construction fencing shall be chain link, unless otherwise agreed upon.

### **“Deciduous”**

Plants that lose their leaves at the end of the growing season.

### **“Diameter Breast Height (DBH)”**

The diameter of the tree trunk measured at the breast height, or 4 feet, 6 inches (54 inches) from the ground. The measurement is taken this high to avoid the flaring effect of the buttress roots on the methods used for estimating the amount of lumber in a tree. The diameter can be measured with calipers or a diameter tape.

### **“Fertilization”**

The application of required nutrients, such as nitrogen, phosphorus, and potassium, by a variety of means, including but not limited to:

- (1) Liquid injection: fertilizer introduced into the soil by means of a probe
- (2) Granular broadcast: fertilizer applied typically by means of a mechanical spreader
- (3) Trunk injections: fertilizer injected directly into the trunk of a tree
- (4) Balanced fertilizer: a balanced-ratio fertilizer that contains equal amounts of the primary element’s nitrogen, phosphorus, and potassium
- (5) Complete fertilizer: a fertilizer that contains all three of the primary element’s nitrogen, phosphorus, and potassium, not necessarily in a balanced ratio

- (6) Controlled-release fertilizer: a fertilizer that is composed of elements that have been treated to release all or part of the nutrients over a controlled or long period of time. The process may be chemical or physical in nature and varies in length of time.

**“Hazardous Tree”**

A tree that has been identified as a potential risk for failure that would cause injury to a person or damage property.

**“Indigenous”**

Native or belonging to a region or area. The opposite of exotic.

**“Invasive Tree”**

Tree species able to survive, reproduce, and spread, unaided, sometimes at alarming rates.

**“Maintain”**

Support, keep, and continue in an original state or condition without decline.

**“Mulch”**

A layer of organic or inorganic material put on the soil for one or more of the following reasons: to reduce the evaporative loss of water from the soil, reduce runoff, reduce compaction, help to control weeds, add organic matter to the soil, protect plants from mowers or equipment, moderate soil temperature fluctuations, or for ornamental purposes.

**“Non-Native Tree”**

Tree species introduced from another country or geographic region outside its natural range.

**“Prune”**

To remove dead, diseased, unnecessary, or unwanted twigs, branches, shape plants for ornamental purposes.

**“Sustainability”**

This term refers to a system, program, or condition that meets the needs of the present without compromising the ability of future generations to meet their own needs. It requires a reconciliation or balance of environmental, economic, and social demands. Used in reference to a program or site that is in ecological balance.

**“Tree”**

A woody plant of considerable stature at maturity with one or a few main trunks.

**“Tree Protection Barricade”**

Wood, plastic or chain link fencing to be used at the discretion of the grounds maintenance department to protect trees in a construction work zone.

**“Tree Specialist”**

A position that provides considerable expertise in the field of tree maintenance practices, including but not limited to pruning, planting, pest and disease diagnosis, and fertilization. Typically, this position functions as the arborist for an organization. This position generally requires an expertise education, experience, and certification in the field or arboriculture.

---

**“Temporary Path”**

If required, a temporary path shall be defined as a zone *within* the specified protected zone of a tree to enable temporary movement of equipment. It shall be eight to ten inches (8-10”) of wood chips as located by the Grounds Department arborist or designated representative. Wood chips shall be removed immediately upon completion of work in an area; soil aeration may be required during site restoration.

**“Native Tree”**

A tree species that occurs naturally and is indigenous to the region.

**“Ornamental Tree”**

Tree species planted in a garden or landscape setting, as opposed to a natural area, for its flowering habit or other desirable aspect of appearance; it may or may not be exotic.

**“Staking”**

Supporting plants with stakes to protect against wind-rocking and promote straight growth.

**“Urban Forestry”**

The care and management of single trees and tree populations in urban settings for the purpose of improving the urban environment.

**X. Communication Strategy.**

Upon adoption of the Tree Care Plan by the Committee, and with SIU Administration approval, communication strategies can include but are not limited to:

- Recognition on the University website.
- Communication of campus tree plan with contractors thru the bid process.
- Announcement on social media.
- Recognition on advertised campus events.
- Acknowledgement thru educational presentations.
- Recognition in campus newsletters.
- Articles placed in the campus newspaper “The Daily Egyptian” emphasizing Southern Illinois University’s participation in the Tree Campus Higher Education.
- The Campus Tree Care Plan incorporated into new student enrollment correspondence.
- A press release shall be made to the local media through the office of University Communications and Marketing.

**Dedicated Annual Expenditures for Campus Urban Forestry Program**

**Equipment and Staff**

Southern Illinois University has two dedicated employees working approximately 60 percent of the time on tree trimming, planting, and removal projects totaling \$48,750.00 for the tree program, which is reduced from the prior year due to the 3-month COVID-19 campus closure. On average, Southern Illinois University spends \$20,000.00 to purchase new trees annually.

The following equipment is used in the maintenance and care of our trees:

<b><u>Equipment</u></b>	
<b>Large Equipment (10-year life expectancy)</b>	
Aerial lift	\$ 7,000.00
Bandit Chipper	\$ 2,500.00
Bobcat T76 skid steer	\$ 5,700.00
Case backhoe	\$ 7,000.00
Stump Grinder for skid steer	\$ 800.00
Ford 550 dump truck	\$ 4,500.00
Ford 250 pickup truck	\$ 3,200.00
<b>Small Equipment (5-year life expectancy)</b>	
8 - Stihl chainsaws	\$ 640.00
1 - Pole saws	\$ 160.00
<b>Grand total on equipment</b>	<b>\$ 31,500.00</b>
<b><u>Annual Fuel and Maintenance Costs</u></b>	
Fuel	\$ 7,045.00
Maintenance and repair	\$ 4,139.00
<b>Grand total on maintenance</b>	<b>\$ 11,184.00</b>
<b><u>Materials and Tools</u></b>	
Plant Material (\$175.00 average cost)	\$ 17,154.00
Mulch, Fertilizer, and Hand Tools	\$ 2,332.00
<b>Total Materials</b>	<b>\$ 19,486.00</b>



**Labor and Contractual Costs**

**SIU Grounds Staff** \$ 75,371.00

**Outside Contractors**

Tree Keeper \$ 2,600.00

Tub Grinding and Removal \$ 0

Large Technical Tree Removal \$ 0

ISA Arborist Training and Testing \$ 1,905.00

**Total Labor Costs** \$ **79,876.00**

Grand Total Tree Related Costs \$ 142,046.00  
(Not Including Volunteer Time)



**Arbor Day Observance**

Southern Illinois University Carbondale hosts a tree-planting event annually in April. In 2022, this event was held on April 19<sup>th</sup>. Organizers encourage students, faculty, and staff to participate in this event. The event, in celebration of Arbor Day, which falls on the last Friday in April, and in conjunction with Tree Campus Higher Education initiative, the volunteers plant trees on campus in designated areas. Facilities and Energy Management and Southern Illinois University



are sponsors of the tree-planting operation.





*"The goal of early childhood education should be to activate the child's own natural desire to learn."*

*Maria Montessori*

## Service Learning Projects

### Campus Tree Walk and Forestry Club Demonstration

The SIUC Campus Tree Walk and Forestry Club Demonstration was an event first introduced to our campus on October 26, 2016. In 2022, the Tree Campus Higher Education Advisory Committee was unable to invite one hundred and twenty-six fourth grade students from Carruthers School in Murphysboro, Illinois to attend the fifth annual Tree Walk and Forestry Club Demonstration due to COVID-19. When the event takes place, classes of students are taken on separate



tree walks where they were introduced to our campus QR coding and learned the identifying factors of approximately 30 trees. Afterwards, the Forestry Club prepared a demonstration for their entertainment featuring crosscut, underhand chopping, ax throw, and other lumberjack sports.



“Tell me  
and I forget.  
Teach me  
and I remember.  
Involve me  
and I learn.”

BENJAMIN FRANKLIN



### **Memorial Tree Project**

The SIU Carbondale Memorial Tree Project is an ongoing effort started by the Geography and Environmental Resources Department’s ‘Field Methods’ class in Spring 2009. The project goal was to locate and assess trees (and other objects) dedicated as memorials to individuals and events important to the SIUC community. Grounds Maintenance of SIUC Facilities and Energy Management manages the Tree Memorial Program. Students located memorial trees using old hard copy maps showing the general area of the memorial tree locations. They then collected GPS co-ordinates, photographed and verified species type and other relevant information for each tree.

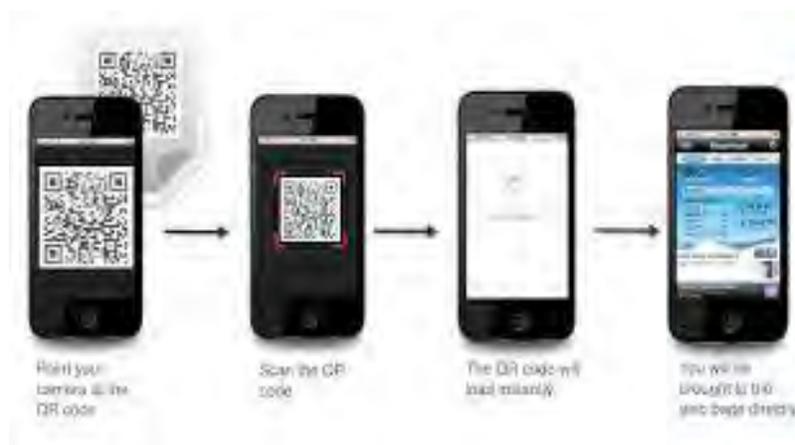


A database of tree location co-ordinates was developed and used to create a “Google Earth” map showing the exact location for each tree across the SIU Carbondale campus.

A memorial tree is a living legacy, an investment that appreciates in size and beauty. A gift of a memorial tree is profoundly thoughtful and enduring way of honoring and commemorating a graduate, alum, parent, retiring member of the university's faculty or staff, an organization or special event. Your gift also provides for the tree's continued care and enriches the Southern Illinois University's educational resources. Many different species are needed for different locations on campus. Our Superintendent of Grounds gladly assists the donor in their selection.

If you would like to make a donation towards a memorial tree visit Support the Arboretum at <https://arboretum.siu.edu/support.php>.

With today's technology, it is our goal to eventually attach QR tags to the memorial trees that can be scanned by a smartphone or mobile device with internet access that will direct you to a personalized legacy web page with a photo gallery to provide you with a lasting memorial.



### **SIU Forestry Program QR Coding Project**

Forestry students in a tree identification course at SIU are being tutored by trees themselves. Jon Schoonover, professor of forestry, and a team of graduate students placed QR codes on trees, and near shrubs and vines, in Thompson Woods and around Campus Lake. The team affixed QR codes on white rectangles at about four and a half feet high on the side of the tree most visible to the nearest walkway, using aluminum nails that do not injure the tree. The QR codes, when scanned by a smart phone with a code scanning application, link to a dedicated website that tells the user about the tree, shrub or vine. The website identifies the tree by both common and Latin scientific names, and shows students identification markers such as leaves, twigs and buds, bark, and fruit. Schoonover identifies examples from each of the 135 species of tree, shrub, and vine taught in the tree identification course. Ultimately, he hopes to have three examples per species to help students recognize normal variations in life stages of the plants and trees. The program provides hands on experience students cannot get from a



classroom or textbook. The Center for Teaching Excellence provided technological assistance with this project. The tree identification program is available to the public, as the QR codes can be scanned by anyone with a smartphone or tablet. The



program is the only one like it in the state, and one of very few at colleges and universities nationwide.

### **SIU Forestry Students Assist Grounds Department with Tree Inventory Verifications**



#### **New Software Map**

In 2018, Ground's Maintenance welcomed forestry students Patrick Monaco and Zachary Telford to our student staff. Patrick was a senior in forestry from Oak Park, Illinois, and Zachary was a sophomore from Damiansville, Illinois. Patrick and Zachary were out on campus verifying that our tree map was accurate in real-time with an iPad. Our new tree inventory software gives us the ability to collect, manage, analyze, report, and share data in real-time, even between systems. Usable on any mobile device, we can design planting plans, automate work record updates, draw text and graphics, print with rich base maps, and customize reports and dashboards. The latest in



web, mobile, and GIS technologies means this software is far more than a tree inventory software. This is done with unlimited users and no additional software or hardware. Because of our updated technology and mapping, we were able to update trees within the map area of the Saluki Way Project. We are also verified that our map was accurate, as this is the first overall review since the May 8<sup>th</sup>, 2009 derecho. In

addition, Chris Gaertner imported Memorial Tree data into the same system. Our goal is to verify the data we have on Memorial Tree's is correct, and eventually make the Memorial Tree's interactive on our website so campus visitors can look at the map and locate the Memorial Tree.

### **SIU Arboretum Accreditation**



Media Contact: Dave Tippy, Southern Illinois University Arboretum  
(618)453-8185, arboretum@siu.edu



### **SIU CARBONDALE AWARDED LEVEL II ACCREDITATION BY ARBNET ACCREDITATION PROGRAM**

The ArbNet Arboretum Accreditation Program and The Morton Arboretum are pleased to announce that Southern Illinois University Carbondale has been awarded a Level II Accreditation, which is renewable every 5 years. By achieving particular standards of professional practices deemed important for arboreta and botanic gardens, the Southern Illinois University Arboretum is now recognized as an accredited arboretum in The [Morton Register of Arboreta](#). The ArbNet Arboretum Accreditation Program is the only global initiative to officially



recognize arboreta at various levels of development, capacity, and professionalism.

In May 2019, an Arboretum Advisory Committee was formed to begin the process of acquiring an arboretum accreditation. This accreditation allows SIU Carbondale to stand among our peers as a leader in educating individuals and groups about trees. “As a state institution of Higher Education, one of our roles and responsibilities is to provide learning opportunities for our communities and region, as well as our students and staff. This arboretum accreditation establishment fulfills that opportunity. The Southern Illinois University Arboretum is a testament to the dedication of the Arboretum Advisory Committee and the Grounds Maintenance staff who make it a place where students and visitors can enjoy, learn, and study,” says Dave Tippy, Superintendent of Grounds and Chair of the Arboretum Advisory Committee.

The Southern Illinois University Carbondale campus engages the strengths of the academic mission of the university by providing a living learning laboratory for students, visitors and the local community to study in a natural and aesthetically pleasing environment. The university arboretum strives to provide a welcome connection with the natural world, offering opportunities for teaching, research, conservation, public education and recreation.

The Southern Illinois University Carbondale Arboretum is located in one of the most diverse regions for natural hardwood forests in the United States. Visitors are urged to explore our 1,200-acre campus landscape which contains 5,187 living trees in our inventory including 72 genera and 155 species. Six tree identification tours have been designed to promote the Arboretum, and to protect it for future generations by building a diverse and engaged community of students, donors, volunteers and advocates. Visit our designated [tree selection](#) tours to learn more.

One hundred and fifty trees were initially included in the arboretum as selections of self-guided tours to coincide with the campus’ 150<sup>th</sup> anniversary celebration.



“This has been an exciting project from start to finish for the entire Arboretum Advisory Committee. Southern Illinois University Carbondale is the first university in Illinois to receive a Level II accreditation, and that is something we are very proud of.” says Elizabeth Cheek, Administrative Aide. To be accredited, an arboretum needs to have a strategic plan, a governing board, public programming, and an inventory of every tree and woody plant on the grounds. Southern Illinois University Carbondale was named a Level II arboretum, which means that it met this criterion, in addition to having more than 100 different species of trees, a policy

that documents how the trees are maintained and acquired, and educational programming for the public. Southern Illinois University Carbondale has also been designated [Tree Campus Higher Education](#) by the Arbor Day Foundation since 2015, as one of 11 university campuses in the State of Illinois that meet the five core standards of tree care and community engagement.

The Arboretum Advisory Committee expanded on a tree tagging effort initially established for a tree identification course, where QR codes were affixed to select trees at about four and a half feet high on the side of the tree most visible to the nearest walkway. The QR codes, when scanned by a smartphone with a code scanning application, link to a dedicated website that tells the user about the tree. The website identifies the tree by both common and scientific names, and shows identification markers such as leaves, twigs and buds, bark, and



fruit. Grounds Maintenance and IT staff of Facilities and Energy Management provided technological assistance with this project, while Printing & Duplicating provided the design and the School of Art and Design provided the etching of the QR tags. The tree identification program is available to the public, as the QR codes can be scanned by anyone with a smartphone or tablet. The program is the only one like it in the state, and one of very few at colleges and universities nationwide. Tree tags are in the process of being printed and will be installed on arboretum trees in the coming weeks. “Our forestry students will benefit tremendously from the tree identification aspect, particularly by being able to test their tree identification skills and confirm their answers by scanning the tree QR tag,” says Tippy. “We are in hopes our students, visitors, and the local community will be able to enjoy this newly created living learning laboratory for many years to come.”

The inaugural Arboretum Advisory Committee is a collaboration of campus departments including Facilities and Energy Management, College of Agricultural Sciences, Department of Forestry, Sustainability, as well as corporate partners, city, and community members:

- Dave Tippy (Chair), Superintendent of Grounds, Facilities and Energy Mgmt.
- Tom Beshoar, Corporate Partner, Davey Tree
- Brian Borkowicz, Corporate Partner, Davey Tree
- Elizabeth Cheek, Administrative Aide, Facilities and Energy Management
- Chris Gaertner, Associate Director, Facilities and Energy Management
- John Groninger, Acting Associate Dean, College of Agricultural Sciences
- Sarah Heyer, Executive Director, Keep Carbondale Beautiful
- Geory Kurtzhals, Sustainability Director

- Mark McDaniel, Arborist, City of Carbondale
- Meredith Perkins, Corporate Partner, Davey Tree
- Karen Schauwecker, Program Coordinator, Sustainability
- Jon Schoonover, Professor, Forestry
- Jason Tabor, Corporate Partner, Tabor Wholesale Nursery/Anna Evergreen
- Chris Wallace, Community Member, City of Carbondale

Arboretum development is overseen by the Arboretum Advisory Committee, and implemented by Facilities and Energy Management, under the direction of Director Brad Dillard. “SIU Carbondale is widely regarded as one of the most beautiful campuses in the entire country with an incredible diversity of arboreta and this designation officially acknowledges that. It was a real team effort by the Arboretum Advisory Committee to pull together all the information needed and guide the University’s application through the accreditation process. We are extremely proud that we are now the only Illinois University with a Level II accredited arboretum”, says Brad Dillard, Director of Facilities and Energy Management.



As a part of this effort, we established a unique URL for the arboretum. Visit <https://arboretum.siu.edu/> to read about our [mission, goals, and objectives](#), view our campus [tree selections](#), explore our [tree inventory map](#) or [contact us](#) for more information. You can also follow us Twitter [@siuarboretum](#).



[ArbNet](#) is an interactive, collaborative, international community of arboreta. ArbNet facilitates the sharing of knowledge, experience, and other resources to help arboreta meet their institutional goals and works to raise professional standards through the ArbNet Arboretum Accreditation Program. The accreditation program, sponsored and coordinated by [The Morton Arboretum](#) in Lisle, Illinois in cooperation with [American Public Gardens Association](#) and [Botanic Gardens Conservation International](#), is the only global initiative to officially recognize arboreta based on a set of professional standards. The program offers four levels of accreditation, recognizing arboreta of various degrees of development, capacity and professionalism. Standards include planning, governance, public access, programming and tree science, planting and conservation. More information is available at [www.arbnet.org](http://www.arbnet.org).

### Virtual Tree Tour



In Fall 2020, due to COVID-19, like all universities, SIU Carbondale was faced with the dilemma of needing to accomplish a service-learning project, however we were unable to bring fourth grade students to campus as we normally did for the Campus Tree Walk and Forestry Club Demonstration. As a result, a virtual



tree tour promotional idea was brought to life at the recommendation of the Tree Campus Higher Education Advisory Committee. Logistical details became a group effort between Dave Tippy, Elizabeth Cheek, and Chris Gaertner of Facilities and Energy Management, Tamarah Cook and Todd Duermeyer of Media & Communications, and forestry graduate students Raymond and Taryn Bieri. Promotional information regarding the Old Main Tree Tour was shared on social media platforms on behalf of the university, as well as local media outlets. Here is a link to the promotional piece: [https://youtu.be/Q8\\_RaKx33t0](https://youtu.be/Q8_RaKx33t0). We also created a 360 version and the link to it is <https://youtu.be/ZV7WDBqALlw>.

### How to Plant a Tree Video



In Spring 2021, due to continued Covid-19 restrictions, the Tree Campus Higher Education committee elected to create this educational video in lieu of our annual in-person tree planting event.

University Communications and Marketing assisted in creating this online tutorial including considerations, instructions, and benefits of planting trees. Featured in this video are SIU student Pearl Deku, student Matt Tomlinson, and Facilities



and Energy Management Maintenance Laborer, Stephanie Wells. Here is the link to the promotional piece:



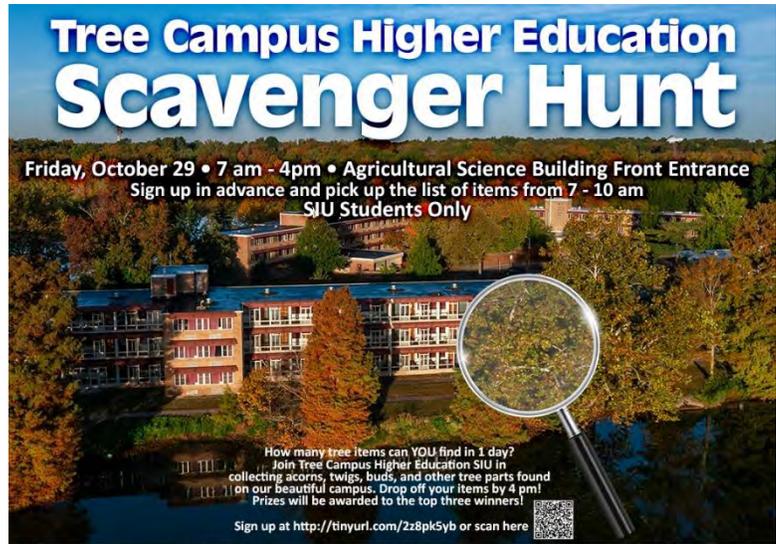
<https://youtu.be/vRuQja6K9rw>

**Tree Campus Higher Education Scavenger Hunt**

In Fall 2021, still faced with COVID-19 mitigations, the Tree Campus Higher Education committee opted for a Scavenger Hunt in lieu of transporting 4<sup>th</sup> grade students to campus for a Tree Walk and Forestry Club Demonstration. In light of the rainy weather, we still had twenty-four SIU students participate at this event. SIU students Ethan McDaniel (Freshman in Forestry) placed first, Brendan Higginson (Sophomore in Forestry)

placed second, and Chase Bunyard

(Senior in Forestry) placed third. The students enjoyed this event, and we hope to host it again in the future.



Ethan McDaniel



Brendan Higginson



Chase Bunyard

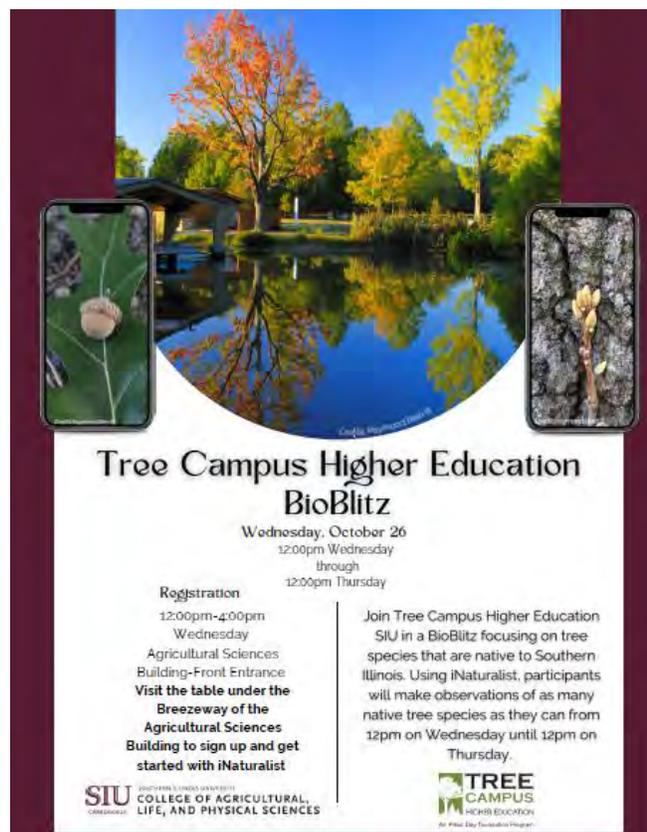


(Above) Taryn and Raymond Bieri of the Tree Campus Higher Education Committee. (Below) Some of the students who participated in the Scavenger Hunt.



## Tree Campus Higher Education BioBlitz

In Fall 2022, the Tree Campus Higher Education committee opted for a Tree Campus Higher Education BioBlitz in lieu of transporting 4<sup>th</sup> grade students to campus for a Tree Walk and Forestry Club Demonstration. Students focused on tree species that were native to Southern Illinois. Participants used iNaturalist to make observations of as many native tree species as they could within a 24-hour time frame.



In summary, we have met and exceeded all our goals and targets in 2022 by coming up with new ways to share our information. We were able to educate and integrate with public awareness of sustainability by engaging the campus community in the Spring Tree Planting Event. We added a service-learning Tree Campus Higher Education BioBlitz for our Fall event. We continue to create a model tree care environment for education and research thru our SIU Forestry Program QR coding Project. The QR codes, when scanned by a smart phone with a code scanning application, link to a dedicated website that tells the user about the tree. In 2022, we continued to improve on the 2019 Arboretum initiative where we initially formed an Arboretum Advisory Committee and earned our campus the first Level II ArbNet Arboretum accreditation becoming the highest accredited University in Illinois. This addition is educational for our students as well as members of our community. In 2019, we created an interactive website for the arboretum: <https://arboretum.siu.edu/> that continues to be maintained and updated. The 2020 expansion included working with the Foundation at the University to create a year-round website donation page for donors to contribute to the expansion of our Tree Campus Higher Education and Arboretum growth initiatives. We have been a part of the Annual Day of Giving since 2021, raising funds for improvements to the Arboretum. We maintain and update the campus tree inventory, as trees are planted and removed, that highlights approximately 5,300 trees on campus. We utilize Tree Keeper, which is an internal

proprietary management tool as we communicate our Tree Care Plan to the community through our Arbor Day tree planting and Service-Learning Projects. In addition, we promote our events on our Sustainability website:

<https://sustainability.siu.edu/about/history/treecampushighereducation.php> a page we added to our website in 2017. Furthermore, we maintain and balance tree biodiversity by consulting with faculty and staff from our Forestry and Plant Biology Departments.