

# THE BOTANIC GARDEN

OKLAHOMA STATE UNIVERSITY

**E**stablished as an arboretum in 1935, The Botanic Garden is a shining example of the land grant mission integrating research, Extension and teaching. The facility houses research in herbaceous and woody plants, nursery production and includes a world renowned turf program.

Results of this research are extended to the public through educational workshops, demonstrations, field days and “Oklahoma Gardening” television. In addition to supporting horticulture and landscape architecture programs, the facilities are utilized by numerous university departments including biosystems and agricultural engineering, entomology and plant pathology, natural resources, ecology and management, plant and soil sciences, and botany.

Visitors to the garden can enjoy walking trails through an arboretum with a vast collection of unique trees and shrubs, visit the Horticulture Resource Center for home gardening information and stroll through the beautiful Studio Gardens of the “Oklahoma Gardening” television show. The Sensory Garden engages the five senses through exploration of plants and hardscapes, and visitors can see how well up-and-coming plant cultivars perform in the trial gardens.

One of The Botanic Garden’s educational and research emphasis areas is sustainability and the environment. Numerous demonstrations and research programs are in place addressing resource conservation, sustainable design and environmental stewardship.

The Botanic Garden serves as an educational and recreational resource to the greater community. Our mission is to serve as a living laboratory for research, teaching and Extension education in the scientific principles and practices of horticulture, environmental sustainability, and landscape design and construction.

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# Learn

**T**he Botanic Garden serves as an outdoor classroom and living laboratory for students from primary school to the post-graduate level. Numerous faculty throughout Oklahoma State University (OSU) use The Botanic Garden as an extension of the classroom. The Botanic Garden provides a space for landscape architecture and landscape contracting students to gain hands-on experience through installation of construction projects. Plant materials classes frequently visit the grounds to learn about turfgrasses and woody and herbaceous ornamental plants used in the landscape. Arboriculture students come to practice skills such as tree climbing and transplanting trees.

Younger students visit The Botanic Garden for educational programs throughout the year. School groups and organizations such as 4-H, FFA and Junior Master Gardeners use the gardens for hands-on learning. Summer camps offer horticultural programs to high school students and middle school students. Adults continuing their education also use The Botanic Garden as an outdoor classroom. The garden acts as a training site not only for our own volunteers, The Botanic Garden Ambassadors, but also for Master Gardener groups from around the state. An education building provides indoor space for workshops and classes.

Educational and interpretive signage offers all visitors an opportunity for independent learning. Located along the walking trail and at demonstration sites throughout the garden, the signs engage visitors to interact with the surrounding natural and built environment. Educational signage helps serve the garden's goal of creating a sense of stewardship and environmental responsibility among visitors to The Botanic Garden.



Junior Master Gardener Program



Student Hands-on Construction



Family Day in the Garden

# Explore

**E**xtension and outreach programs make up a large component of the activities at The Botanic Garden. Numerous workshops and seminars serve professional and amateur audiences on a wide range of horticulture-related topics. Annual events include a Tree Care Workshop, Integrated Pest Management Conference and GardenFest, to name a few. Specialty workshops are introduced yearly and cover a diversity of topics from Native American horticulture to Gardening with Disabilities. The Annual Turfgrass and Nursery Field Day draws producers and managers from across the state to learn about the newest research taking place.

The Botanic Garden at OSU proudly serves as home to the production studio for “Oklahoma Gardening,” an award winning weekly television program produced by the Oklahoma Cooperative Extension Service (OCES) through the Department of Horticulture and Landscape Architecture and Agricultural Communications Services at OSU. As a component of the OCES, “Oklahoma Gardening” transfers university-based research and technology to homeowners and brings viewers up-to-date plant disease and insect pest information. Each season, the show strives to provide balanced programming addressing all areas of consumer horticulture.

The many recent additions to The Botanic Garden have offered new opportunities for Extension education in the area of sustainability. The Water Conservation and Irrigation Training Center serves homeowners, students and industry professionals in advancing the understanding and adoption of water-saving irrigation applications.

The GREEN Cottage, resembling a residential home, employs a variety of alternative energy and resource conservation techniques applicable to the home landscape. The pervious paving and bioretention demonstration at the new entrance compares the efficacy of two different landscape approaches for regulating and filtering stormwater runoff.

The studio gardens and surrounding arboretum also provide a space to showcase the Oklahoma Proven plant selections. These are plants that demonstrate the ability to thrive in Oklahoma’s harsh environment. The program is designed to guide gardeners in selecting hearty plants for Oklahoma gardens.



GardenFest Presentation



Field Day Tour



Gardening with Disabilities Workshop

# Discover



Ornamental Research Field



Plant Variety Trials



Turfgrass Research Plots

While the “Oklahoma Gardening” studio is the aesthetic focal point of The Botanic Garden, the nexus of research lies in the Turfgrass Research Center. The Botanic Garden houses one of the premier turfgrass research facilities in the nation. The turfgrass team includes scientists from several departments and involves research in disease and insect management, as well as traditional breeding programs. Turfgrass research in nutrient runoff management and water efficiency align with the overarching environmental mission of The Botanic Garden.

Research on nursery crops includes traditional plant breeding and evaluation programs to develop new drought-tolerant native and non-native herbaceous cultivars for the horticulture trade. Additional research addresses pest management using traditional and alternative technologies, plant nutrition and innovative environmentally friendly plant production techniques. New plant cultivars from commercial producers are grown and evaluated in the trial gardens to assess their performance under Oklahoma’s challenging growing conditions. The trials are accessible to visitors and provide a wonderful resource for garden enthusiasts.

Numerous faculty members from across the university conduct research within The Botanic Garden’s diverse environments. Much of this work is multidisciplinary, bringing together the unique skills and knowledge of contributing researchers. These collaborations are poising The Botanic Garden to step forward as a leader in development of environmentally sound and sustainable production and landscape applications. A major area of study involves stormwater management systems addressing erosion control; groundwater recharge; and rainwater capture, redistribution and reuse. Additional research focuses on pollution mitigation, sustainable design and alternative energy.

Two creeks bounding the property are utilized to study erosion, streambank failure and stream stabilization methods. Natural areas on site are used for entomological, zoological and wildlife studies. The diverse geography of The Botanic Garden offers endless opportunities for research. Enthusiastic faculty have embraced this potential to tackle current and emerging environmental concerns through integrated research.

# A Plan For Growth

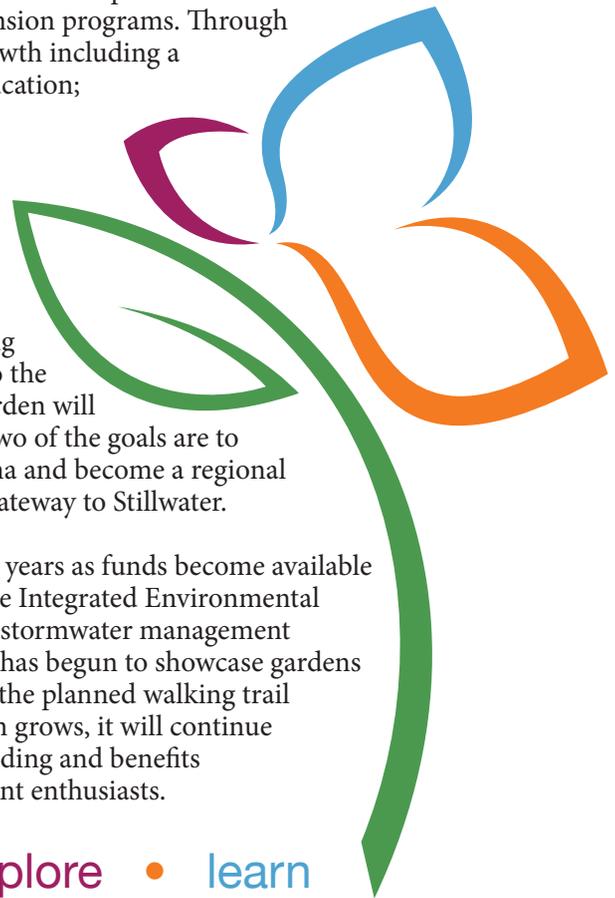
**F**rom its humble roots as an arboretum, The Botanic Garden has undergone extensive growth and development through its formative years. In 2003, the Department of Horticulture and Landscape Architecture initiated a comprehensive long-term master plan for The Botanic Garden at OSU to advance the teaching, research and Extension programs. Through this process, the department identified critical areas for growth including a commitment to advancing environmental research and education; strengthening the horticulture, landscape architecture and landscape contracting programs; and developing new multidisciplinary partnerships.

The master plan is a 25-year plan aimed at integrating the arboretum complex to create a facility that can meet the growing demands of educators and researchers, as well as the horticulture and landscape industries, and the gardening public. Not only is there a strong educational component to the master plan, but also the economic impact The Botanic Garden will have on the state of Oklahoma as a whole is tremendous. Two of the goals are to serve the horticulture and landscape industries of Oklahoma and become a regional tourist attraction. The Botanic Garden will provide a new gateway to Stillwater.

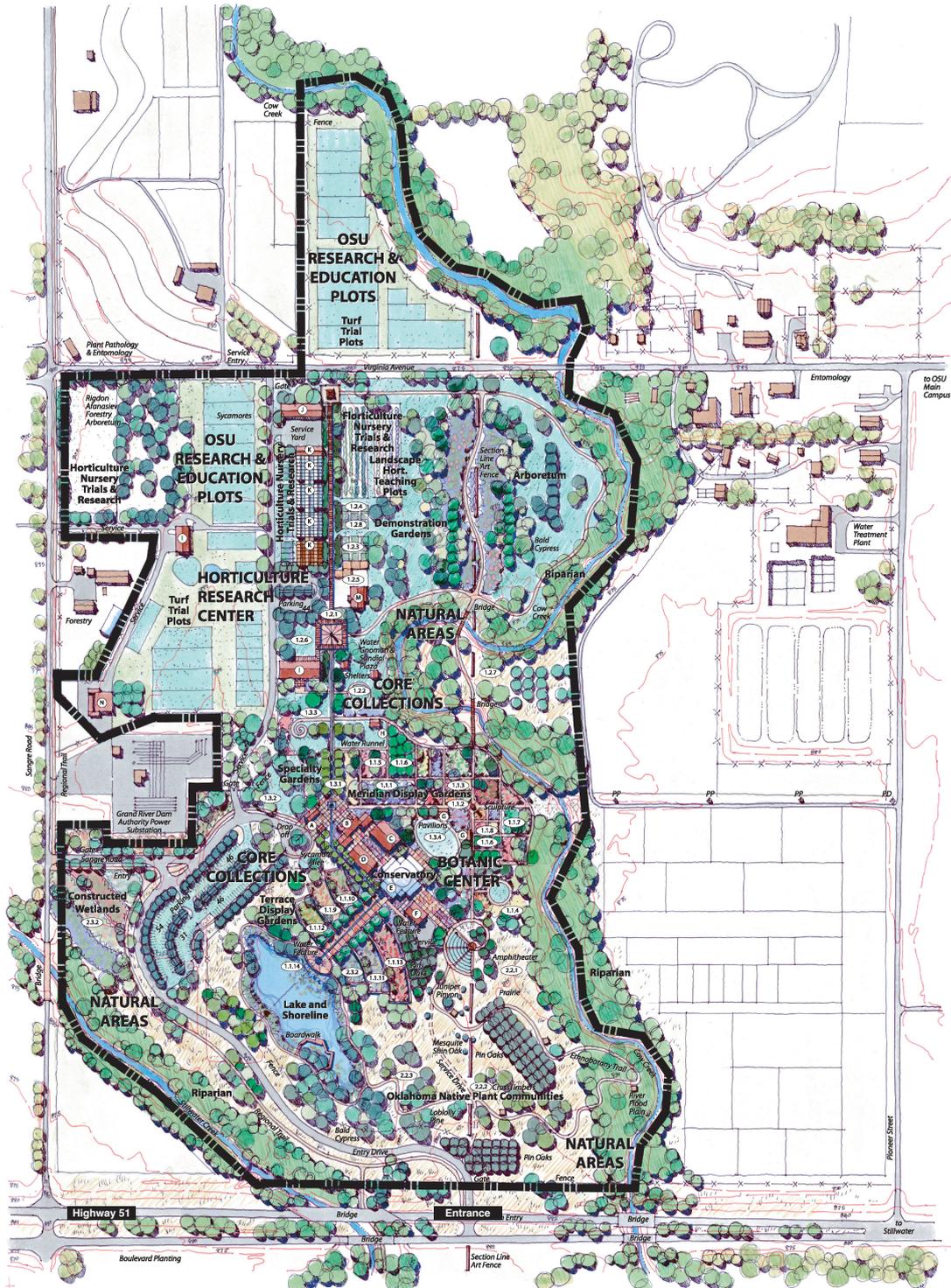
The master plan will be brought to life in phases over many years as funds become available for various projects. Ground has already been broken on the Integrated Environmental Research and Education Site through the development of a stormwater management research and demonstration program. Likewise, expansion has begun to showcase gardens with the installation of the Sensory Garden. The first leg of the planned walking trail network is already enjoying visitors. As The Botanic Garden grows, it will continue to serve as a community resource to increase the understanding and benefits of plants to society and to serve educators, students and plant enthusiasts.

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# Master Plan



## LEGEND

### PLANT COLLECTIONS & GARDENS

#### 1.0 Core Collections

##### 1.1 Display Gardens

- Meridian Display Gardens
  - 1.1.1 Shade Perennial Garden
  - 1.1.2 Rock Garden
  - 1.1.3 Kameoka - Japanese Sister City
  - 1.1.4 Garden of Contemplation
  - 1.1.5 Vegetable / Victory Gardens
  - 1.1.6 Urban Orchard
  - 1.1.7 Poisonous Plant Display
  - 1.1.8 Perennial Border
- Terrace Display Gardens
  - 1.1.9 Heritage Garden
  - 1.1.10 Sensory Garden
  - 1.1.11 Rose Garden
  - 1.1.12 Seasonal Display
  - 1.1.13 Herb Garden
  - 1.1.14 Water Gardens

##### 1.2 Demonstration Gardens

- 1.2.1 Vine & Hanging Plant Garden
- 1.2.2 Therapeutic Garden
- 1.2.3 Sustainable Garden
- 1.2.4 Horticultural Trials
- 1.2.5 Landscape Construction Yard
- 1.2.6 Outdoor Classroom
- 1.2.7 Oxbow Pecan Orchard
- 1.2.8 Turf Display Plots

##### 1.3 Specialty Gardens

- 1.3.1 Court of Oklahoma
- 1.3.2 Picnic Grounds
- 1.3.3 Children's Adventure Garden
- 1.3.4 Botanic Center Events Garden

##### 1.4 Conservatory

##### 1.5 Arboretum

#### 2.0 Natural Areas

##### 2.1 Riparian

- 2.1.1 Cow Creek
- 2.1.2 Stillwater Creek

##### 2.2 Oklahoma Native Plant Communities

- 2.2.1 Grasslands
- 2.2.2 Savanna & Woodlands
- 2.2.3 Forests

##### 2.3 Constructed Wetland

- 2.3.1 Stormwater Wetland
- 2.3.2 Wastewater Wetland

##### 2.4 Lake & Shoreline

#### 3.0 O.S.U. Research & Education Plots

- 3.1 Turf Trial Plots
- 3.2 Landscape Horticulture Teaching Plots
- 3.3 Horticultural Nursery Trials & Research
- 3.4 Floriculture Trials & Research

## FACILITIES

### Botanic Center at Sycamore Ridge

- (A) Horticulture Information Center
- (B) Visitor Center
  - B1 - Orientation Gallery
  - B2 - Gift Shop
  - B3 - Floriculture Laboratory
  - B4 - Administration

- (C) Meeting Hall
- (D) Education Center
- (E) Conservatory
- (F) Cafe
- (G) Cultural and Educational Pavilions
- (H) Oklahoma Gardening Barn

### Horticulture Research Station

- (I) Research Center
- (J) Shop & Maintenance
- (K) Headhouse & Propagation Facility
- (L) Researcher / Caretaker Residence
- (M) Landscape Construction Barn
- (N) Pesticide Storage

# Grow With Us

**A**s we work toward realizing our master plan, we need the support of our community, our leaders and our industries. Through recent projects, we have developed partnerships with community organizations, state and federal agencies, corporations and scientists in diverse fields. Their involvement has demonstrated great excitement and support generated by The Botanic Garden programs.

We are now poised to build upon our achievements and launch a comprehensive fundraising campaign to cultivate The Botanic Garden vision. Concurrent with these efforts, The Botanic Garden has been identified by the OSU Division of Agricultural Sciences and Natural Resources as one of their top priorities for OSU's Branding Success, the campuswide capital campaign.

Contributions to The Botanic Garden will support new garden and facility development, as well as day-to-day operations and maintenance of The Botanic Garden. Donations of any amount are accepted and several contribution opportunities are available. For those looking to make a lasting impact on The Botanic Garden, endowments with naming rights can be made to support individual gardens and projects, building development or general operations. Annual recurring pledges are another wonderful way to express a commitment to the garden and support its mission. You also can become a garden member or make a tribute gift to The Botanic Garden.

Join us in promoting a sustainable relationship among plants, nature and people as we embark on this journey to **discover • explore • learn.**



Future Great Lawn & Event Pavilion

# Toward Sustainability

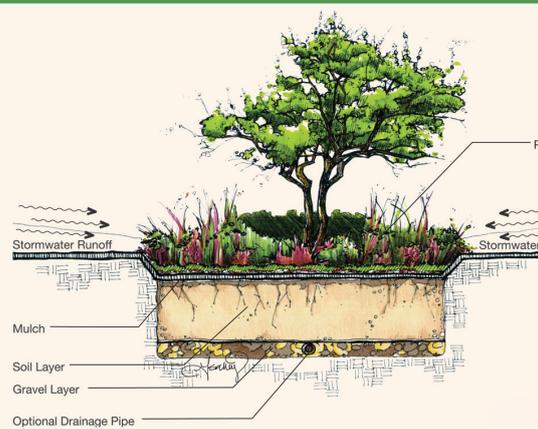
An Integrated Environmental Research and Education Site (IERES pronounced “iris”) was developed to support The Botanic Garden’s commitment to sustainability and the environment. The mission of IERES is to be one of the most comprehensive collections of environmentally sensitive and energy efficient practices in Oklahoma and the Great Plains, providing programs for academic and public education as well as multidisciplinary research. This one-stop facility will serve a multistate area by illustrating comprehensive landscape applications for a variety of best management practices (BMPs) that enhance and protect natural resources.

Many IERES research and demonstration projects are already underway. Our goal is to fully integrate the many-faceted programs housed at The Botanic Garden. Environmental and specific landscape applications at the site are regularly featured on “Oklahoma Gardening” television, thus uniting research with education. Through this programming, viewers are encouraged to be good stewards of the land, demonstrating environmentally sound gardening practices and water conservation techniques.

As we continue to expand the IERES initiative, an energy efficient and environmentally friendly green building will be developed as our visitor center. This facility will serve as a prototype for area commercial and residential developers trying to gain a competitive edge in today’s soaring energy market, while playing an important role in landscape management, environmental planning and water reuse. The site will accommodate plant, landscape and sustainability research efforts. A hub for academic, municipal and public education programs, the green building will demonstrate and promote successful integration of required energy infrastructure, conservation and landscape planning within a community.

While educating city leaders, industry employees, students and citizens, the IERES will offer excellent opportunities to enjoy the natural landscape of Oklahoma. A trail system built along an enhanced riparian corridor will connect to Stillwater’s existing trail system, linking the public to natural areas, cultivated ornamental display gardens and learning stations that explain environmental components of the IERES system. We are committed to serving as an environmental learning center for OSU, the public, as well as industry leaders.

## Bioretention Cell



## The GREEN Cottage

