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Estimating the Economic Impact of Garvan Woodland Gardens

Katherin A. Deck

Viktorija Riiman

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Center for Business and Economic Research



Estimating the Economic Impact of Garvan Woodland Gardens

Prepared for Garvan Woodland Gardens

Center for Business and Economic Research

Willard J. Walker Hall 545

1 University of Arkansas

Fayetteville, Arkansas 72701-1201

(479) 575-4151

Contact: Kathy Deck, Director

Viktoria Riiman, Research Associate

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Executive Summary

The city of Hot Springs, Arkansas has been a destination for visitors since the 19th century. The city features numerous tourist attractions from Bathhouse Row and the Hot Springs National Park to Oaklawn Racing and Gaming to Magic Springs Water and Theme Park. An important component of the portfolio of Hot Springs tourism amenities is Garvan Woodland Gardens, a department of the Fay Jones School of Architecture at the University of Arkansas.

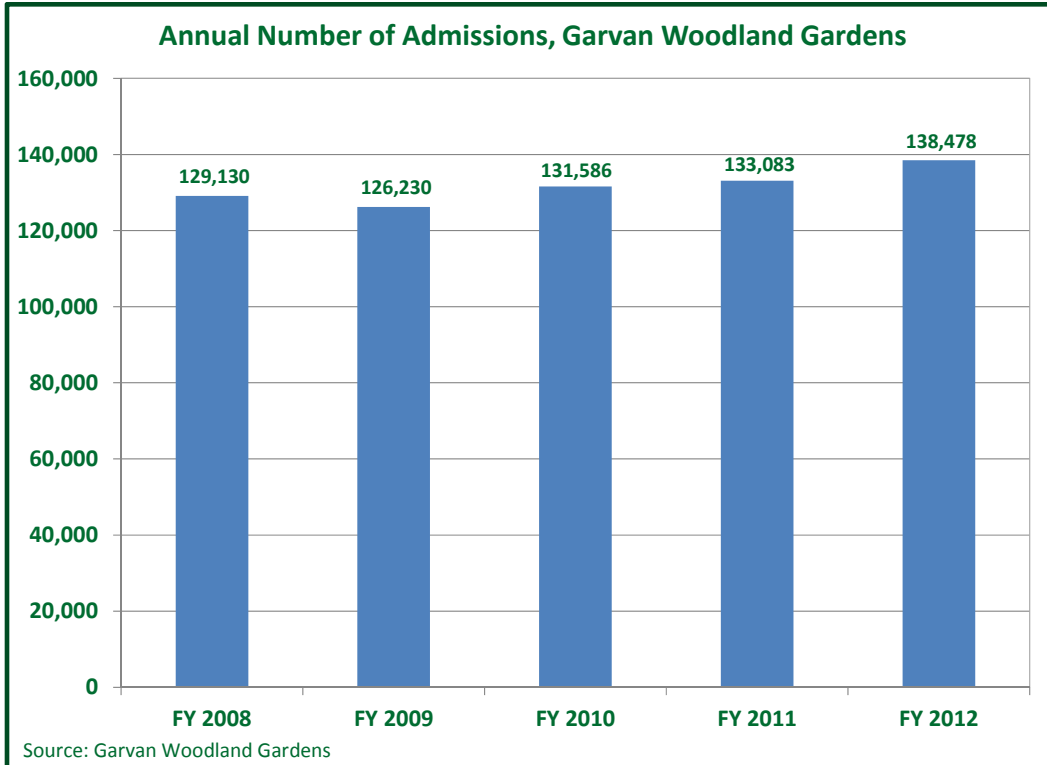
Garvan Woodland Gardens (the Gardens) is a 210-acre botanical garden that includes various facilities such as the Anthony Chapel Complex, Asian Garden, bonsai garden, and the garden for children, 389 feet of model train track layout, as well as numerous trails along botanical landscapes. The Center for Business and Economic Research (the Center) has conducted an economic impact analysis of the activities associated with the Gardens and the results are presented in this summary.

The facilities at Garvan Woodland Gardens are **perceived as world-class by local community and state tourism leaders** and host a variety of educational and recreational programs for children and adults. The Bottom Line Personal publication listed the Gardens as **one of five most spectacular gardens in the United States** in May 2012.

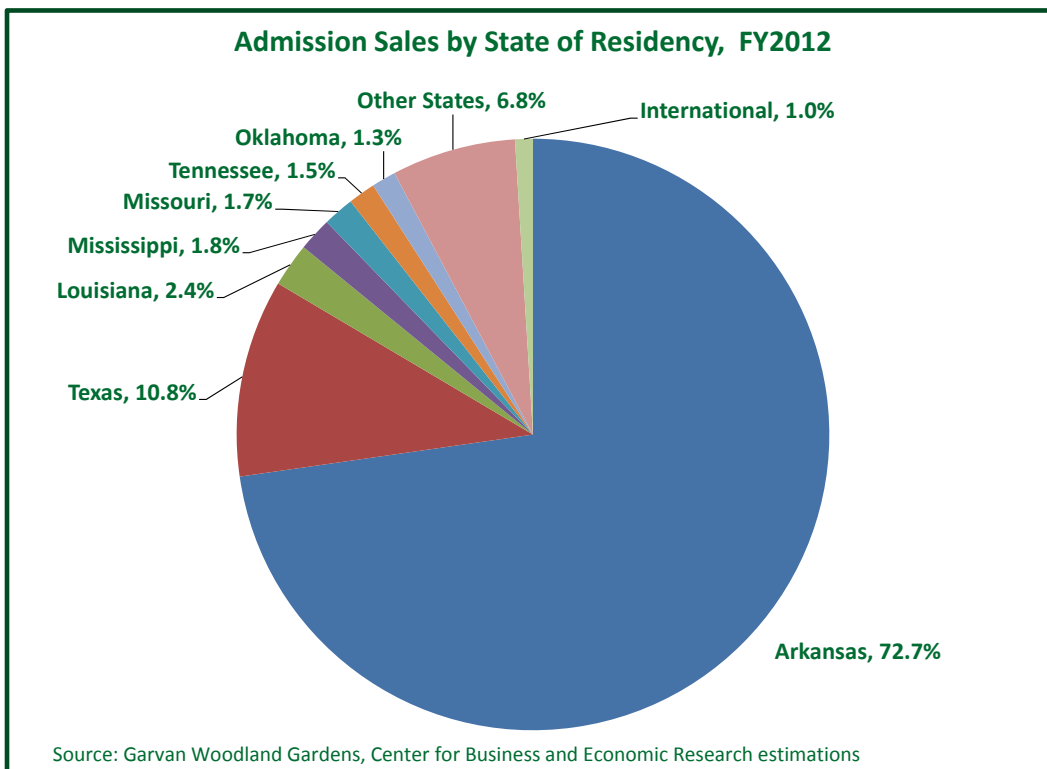
Visitors to the Gardens come for a wide variety of reasons. In the Garvan Woodland Gardens in 2011:

- **1,369 people** attended 55 educational programs for adults;
- **10 different art and photography exhibits and 15 concerts** were held in addition to other special events like Daffodil Days, Blessing of the Blooms, Tulip Extravaganza, and bridal fair;
- **71 children along with parents and grandparents** participated in the summer Children's Adventure Programs;
- **1,538 participants** including students, teachers, bus drivers, and adult chaperones visited the Gardens in 34 groups in field trips and tours;
- **153 weddings** were held; and
- **Nearly 60,000 visitors** attended the Holiday Lights or Lights on the Landscape event.

The number of admissions during fiscal year 2012 (FY2012) was the highest in the history of the Gardens with **138,478 visits**.

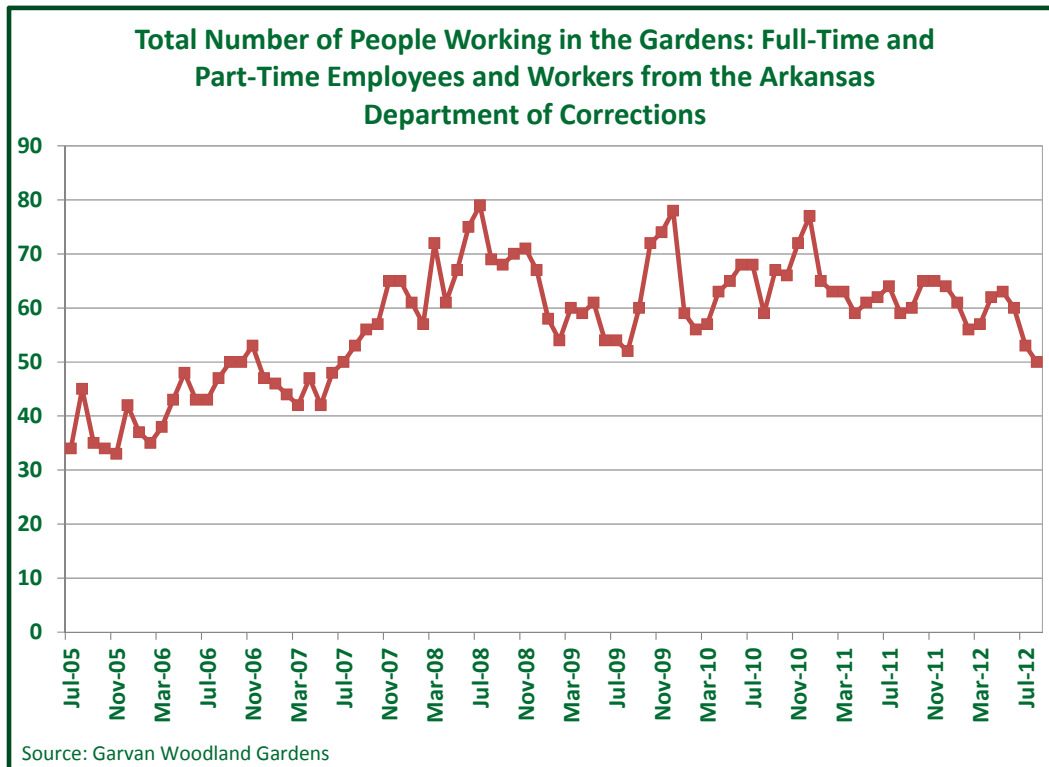


The majority or **72.7 percent** of tickets to the Gardens were purchased by Arkansas residents, followed by purchases from Texas and Louisiana residents.



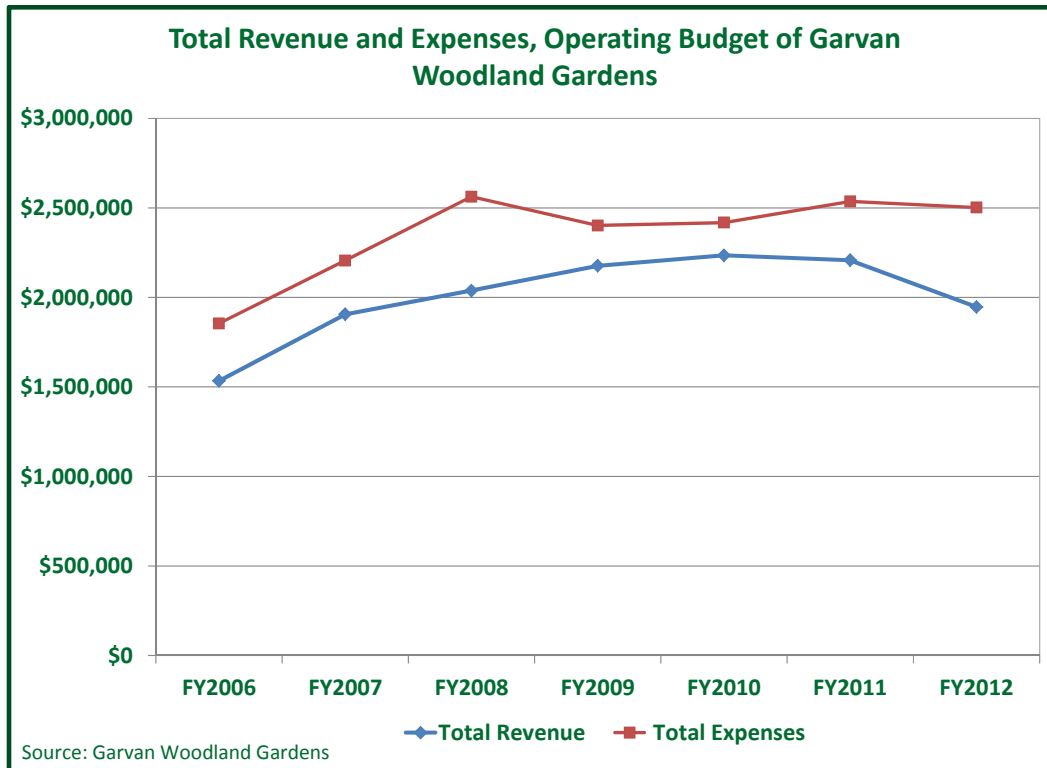
The involvement of local residents in the Gardens shows its importance to the community. There were **2,776 members** of Garvan Woodland Gardens and **volunteers contributed 17,575 hours** of work to the Gardens during 2011. The public perceives the Gardens as a feel-good place and takes a great sense of pride in it. If the Gardens did not exist, the local community would lose a critical component, according to interviews with representatives of the tourism industry.

On average, 63 people worked in the Gardens monthly from August 2009 to August 2012. As of August 2012, 50 people were employed at the Gardens. This number includes **28 full-time** and **18 part-time** employees, as well as 4 workers from the Arkansas Department of Correction.



Garvan Woodland Gardens keeps improving available facilities and building new features to attract the public. From FY2006 to FY2012, **almost \$10.5 million were spent on construction.**

The operating budget of the Gardens has increased over time as facilities were improved and the number of activities has increased. During FY2012, the Gardens had **\$1.9 million in total revenues** and **\$2.5 million in total expenses.**



Using the above information as a factual basis, Center researchers used IMPLAN input-output models, financial data from the Gardens, and relevant economic impacts studies to estimate the economic impacts of Garvan Woodland Gardens on the Hot Springs region (defined as Garland County) and on the state of Arkansas in FY2012. The results follow.

As a result of construction and operating activities of the Gardens, almost **\$5.4 million in total economic output** and **\$3.9 million in total value added** were generated and **60 full-time employee equivalent jobs** were created in the Hot Springs area in FY2012.

Total Economic Impacts of Construction Expenditures and Operational Activities in Garvan Woodland Gardens in Garland County, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact	Multiplier
Employment	34.5	10.1	15.7	60.3	1.75
Value Added	\$2,501,965	\$553,805	\$848,322	\$3,904,092	1.56
Output	\$3,027,659	\$905,307	\$1,447,029	\$5,379,995	1.78

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

For comparison, 31,295 employees worked in Garland County in March 2012, according to the latest data from the Bureau of Labor Statistics (BLS). The employment associated with the Gardens accounts for about 0.2 percent of employment in the county.

Overall, Garland County depends heavily on the tourism industry: **one fifth or 20.7 percent of area employees worked in the leisure and hospitality industry sector** in March 2012. The city

of Hot Springs also depends greatly on visitors generating tax revenues: **more than \$4.8 million was collected by Hot Springs Advertising & Promotion Commission** in hospitality tax revenues from hotel and prepared food taxes in 2011. Since the Gardens are perceived by local tourism leaders as an important asset in attracting and keeping higher income Hot Springs visitors, Garvan Woodland Gardens are critical to the continuing development of tourism industry in the area.

As a result of the activities and spending associated with the Gardens in Garland County, \$259,021 of state and local taxes were generated. These taxes include income, sales, and property taxes received from employees, companies, and households.

State and Local Taxes Impacts as a Result of Construction Expenditures and Operational Activities in Garvan Woodland Gardens in Garland County, FY2012

Category	State and Local Taxes
Employee Compensation	\$4,296
Proprietor Income	\$183,614
Indirect Business Tax	\$58,448
Households	\$12,663
Total State and Local Taxes	\$259,021

Source: IMPLAN, Center for Business and Economic Research estimates

Construction and operational activities in the Gardens resulted in **more than \$5.8 million in total output impact** that was generated in Arkansas in FY2012. This represents an average multiplier of 1.82. A **total value added impact of more than \$4.1 million** and a **total employment impact of 62.2 full-time employee equivalents** occurred in the state during that time period.

Total Economic Impacts of Construction Expenditures and Operational Activities in Garvan Woodland Gardens in the State of Arkansas, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact	Multiplier
Employment	35.9	10.3	16.0	62.2	1.73
Value Added	\$2,594,460	\$590,483	\$954,096	\$4,139,039	1.60
Output	\$3,205,383	\$981,322	\$1,642,464	\$5,829,169	1.82

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

Overall, the state had about 1,165,500 nonfarm employees in September 2012, according to the latest BLS data. About 8.9 percent or 103,500 employees worked in the leisure and hospitality industry that month, the industry that strongly depends on the tourism activities in the state.

Members of the Arkansas Department of Parks and Tourism staff view the Gardens as beneficial in attracting visitors to the state. The state plans to include a wedding theme for the first time in the 2012 advertising campaign because of the popularity of the Anthony Chapel in the Gardens. The Gardens are also perceived by some Arkansas Department of Parks and

Tourism staff as an important asset to the state from a group travel perspective and as an integral part of popular bus itineraries.

Center researchers also estimated **state and local taxes collected in Arkansas** that were generated as a result of construction and operational activities in the Gardens, **which included spending within the state. A total of \$282,543** was collected in employee compensation, proprietor income, indirect business tax, and household taxes in the state during FY2012.

State and Local Taxes Impacts of Construction Expenditures and Operational Activities in Garvan Woodland Gardens on the State of Arkansas, FY2012

Category	State and Local Taxes
Employee Compensation	\$5,833
Proprietor Income	\$193,008
Indirect Business Tax	\$69,180
Households	\$14,522
Total State and Local Taxes	\$282,543

Source: IMPLAN, Center for Business and Economic Research estimates

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Introduction

Garvan Woodland Gardens (the Gardens) were founded by Verna Cook Garvan, a resident of southern Arkansas. Mrs. Garvan, a self-taught gardener, started developing this place as a garden and possible future residence in 1956. She personally developed the paths and chose new plants and their locations. Mrs. Garvan bequeathed this property to the Department of Landscape Architecture at the University of Arkansas through the University of Arkansas Foundation upon her death in 1993. The Gardens have now hundreds of rare shrubs and trees, including camellias, magnolias and more than 160 different types of azaleas.

Currently, the Gardens are an autonomous department of the Fay Jones School of Architecture at the University of Arkansas and are additionally supported by the Arkansas Legislature, the Arkansas Natural and Cultural Resources Council, the Arkansas Economic Development Commission, private donors, and several thousand members.

The Gardens offer a variety of facilities that are used for recreational and educational programs and events. Tourism industry leaders in Hot Springs and at the Arkansas Department of Parks and Tourism perceive the Gardens as a world class location and a “jewel in the crown of Arkansas” that impacts the state brand at the highest-end of the tourism industry. Additionally, the Gardens are seen as providing amenity diversity to the Hot Springs area and acting as a very strong recruitment tool not only to retirees, but also for job candidates such as city managers and physicians.

In addition to providing intangible value to the community, the Gardens invest in construction activities and have operating expenses that result in economic impacts on the Hot Springs region and the state overall. The Center for Business and Economic Research in the Sam M. Walton College of Business at the University of Arkansas (the Center) has conducted an economic impact analysis of the activities associated with the Gardens and the results are presented in this report.

The study is organized as follows. First, the facilities and programs at Garvan Woodland Gardens are described in detail. Next, information on visitor and member counts, employment and volunteers, and financial information from the Gardens are provided. Finally, the results of the economic impact analysis from the IMPLAN input-output model are presented for employment, value-added, and output impacts on the Hot Springs area and the state of Arkansas. The detailed employment and output impacts by industry are available in the Appendix. Estimated employment impacts are compared to the county and state employment data from the Bureau of Labor Statistics to keep the numbers in perspective. Additionally, the state and local tax estimates generated by the IMPLAN model are provided. Throughout the report, the results of the Center staff interviews with leaders of the tourism sector in Hot Springs and at the Arkansas Department of Parks and Tourism are presented as anecdotal support to the data. The conclusions of the economic analysis are presented at the end of the report.

Facilities and Programs at Garvan Woodland Gardens

Garvan Woodland Gardens (the Gardens) is a 210-acre botanical garden that includes various architectural structures and botanical landscapes. The University of Arkansas opened the Gardens surrounded by Lake Hamilton to the public in 2002. Since that time, many additional facilities have been constructed and many educational and recreational programs have been offered to the public in the Gardens.

The Bottom Line Personal publication listed the Gardens as one of five most spectacular gardens in the United States in May 2012. According to interviews with local tourism industry leaders and member of the Arkansas Department of Parks and Tourism staff, the Gardens are one of the top six tourist destinations in the state. Garvan Woodland Gardens is perceived as one of the major attractions in the Hot Springs area, as a complementary tourism asset to Oaklawn Park, Magic Springs, and the Hot Springs National Park. Indeed, Hot Springs visitors listed the Gardens as one of the most appealing attractions along with the Scenic 7 byway, Bathhouse Row, Lakes Hamilton and Ouachita, Oaklawn Park, the Diamond lakes region, and the Mid America Science museum, based on a 2001 report by D. K. Shifflet & Associates Ltd.

Facilities

The facilities at the Gardens include various gardens with bridges, trails, and waterfalls, diverse buildings, and the Anthony Chapel complex. These facilities are perceived as world-class facilities by local community and state tourism leaders. They allow the Gardens to host a variety of activities from educational events for kids and adults to weddings and concerts.

Anthony Chapel Complex

The Anthony Chapel Complex is comprised of the Millsap Bride's Hall, Anthony Chapel, Evans Grooms Quarters, Anthony Family Carillon, and the Evans Celebration Garden. The Complex is positioned outside the required ticketed area of Garvan Woodland Gardens and does not require the public to pay an admission fee to access the chapel. The complex is usually visited by a large number of people, especially on the weekends, except for in January, when the Gardens are closed to the public.

The Anthony Chapel was designed by Maurice Jennings (the student of famed Arkansas architect E. Fay Jones) and David McKee and was dedicated in September 2006. With its floor-to-ceiling windows, the chapel serves primarily as a wedding venue, but also as a venue for other events such as memorials. In 2011, most of the wedding activities in the Gardens took place in the Anthony Chapel Complex: 136 out of a total 153 weddings.

Members of the Arkansas Department of Parks and Tourism staff shared that the state is planning for the 2012 state advertising campaign to include a wedding theme because of the Anthony Chapel. Arkansas will be showcased as a wedding destination due to this facility for the first time.

Gardens

Other facilities in the Gardens include the Pratt Welcome Center and Garvan Pavilion, beautiful trails along Ellen Edmondson Great Lawn and the Garden of the Pine Wind, and pleasant walks such as the Dierks Promenade and Warren's Woodland Walk that includes Camellia Trail and Singing Springs.

Garvan Pavilion is named in honor of the benefactress of the Gardens, Verna Cook Garvan. The building was commissioned by Mrs. Garvan and was designed by internationally recognized architects E. Fay Jones and Maurice Jennings. A beautiful redwood and sandstone structure with faceted steel and glass ceiling harmonizes well with its woodland surroundings.

The Ellen Edmondson Great Lawn serves as an outdoor venue for such events as annual bridal fair and fall plant sale. The Lawn is surrounded by nearly 10,000 square feet of mixed floral displays known as the Flowering Border. The Flowering Border offers variety of flowers for different seasons from tulips and chrysanthemums to tropical foliage plants and shrubs.

Visitors to the Gardens can also enjoy walking or driving in a golf cart on various bridges such as *Millsap Canopy Bridge*. This bridge is two stories above the forest floor, offering views of Lake Hamilton, and spans 120 feet in native stone and southern yellow pine.

Sightseers can also appreciate the richness of *the Hixson Family Nature Preserve* and the blooming flowers of *Three Sisters of Amity Daffodil Hill* with 235 varieties of narcissus. *The Hixson Family Nature Preserve* has 45 acres of natural Ouachita woodland and features educational displays about the trees and forest. The Garland County Audubon Society has spotted more than 120 species of birds in the area, including the bald eagle, pileated woodpecker, and tufted titmouse. The Preserve features 1.9 mile Birdsong Trail and *the Shannon Perry Hope Overlook*. This 1,500 square-foot flagstone terrace extends approximately 30 feet into a one-acre planting of more than 40 different varieties of wildflowers, with new ones added each spring. The site usually hosts small-scale weddings and other events.

The Paul W. & Valerie Klipsch Amphitheater in the Gardens provides 500 seats for outdoor events such as concerts and plays. The flagstone structure is located in a natural depression and is surrounded by the forest.

The Gardens also feature a piece of Asian culture. *The Garden of the Pine Wind* is a four-acre rock and stream garden that offers a peaceful place for contemplation and meditation. It was voted the eighth best Asian garden in North America in 2008 by the Journal of Japanese Gardening. The Asian garden here offers approximately 300 varieties of Asian ornamental plants, including 60 types of Japanese and other Asian maples and oriental dogwoods. Key features of the Pine Wind Garden include *the Sunrise Bridge*, based on Japanese precedents and named by the mayor of Hot Springs' sister city, Hanamaki, Japan; *the Joy Manning Scott Bridge of the Full Moon*, an 11 foot high structure in style of the ancient stone bridges of western China; three major cascades; a 12-foot waterfall; two springs; four pools; and a half-acre koi pond.

Next to the Garden of the Pine Wind, *the Weyerhaeuser Bonsai Garden and Learning Center* are located. The Bonsai Garden displays about 30 bonsai trees, including dwarf pines, elms, azaleas, junipers, and other plants trained in the Japanese tradition of bonsai and the Chinese tradition of penjing. The Bonsai Learning Center structure is in the traditional Japanese architecture style. The Learning Center hosts various educational programs and activities including tending bonsai trees.

In addition to traditional gardens, Garvan Woodland Gardens provide a special area and natural learning setting for children. *The Evans Children's Adventure Garden* is a 1.5 acre area with more than 6.4 million pounds of Arkansas-quarried boulders positioned to encourage exploration of the natural environment. The Adventure Garden also offers a 12-foot waterfall over the entryway to an ADA accessible, man-made cave and a unique bridge constructed from tree branches and a maze of rocks that lead down to a series of wading pools. A 450-foot long, 20-foot tall elevated walkway allows parents to watch their kids and provides scenic views of Lake Hamilton and the surrounding woodlands. Future plans exist about diversifying and improving the Evans Children's Adventure Garden with three large tree houses and other smaller structures.

The reputation of the Gardens as children-friendly location is also supported by the existing *Sugg Model Train Garden*. It is a G-scale garden railroad built to represent the two businesses that Verna Cook Garvan owned: the Malvern Brick and Tile Company and the Wisconsin Arkansas Lumber Mill. The railroad layout has three independent operating loops consisting of 389 feet of track and 259 trestles. On the lower outer loop runs a freight or passenger train, while on the lower inner loop a train hauls cars filled with clay for the brick factory. On the upper loop a logging train takes logs to the lumber mill. The Train Garden was a collaboration project between the Gardens and the Greater Hot Springs Garden Railway Society.

Programs

In addition to remarkable facilities, the Gardens offer to the public a variety of educational and entertainment programs. The programs include educational workshops for adults, summer children's programs, and school and youth field trips and tours. Other special events offered by the Gardens include Daffodil Days, Blessing of the Blooms, Tulip Extravaganza, bridal fairs and Holiday Lights.

Special food and beverage events are offered some Tuesdays and are called Tuesday Teas. These events are served in the traditional English tea style. In 2011, there were 8 such events hosted by the Gardens.

The Gardens also host multiple art and photography exhibits and concerts. During 2011, 10 different art and photography exhibits and 15 concerts were held in the Gardens. In addition, the Gardens featured the "WonderWood Hollow" art installation in 2011. In this temporary installation, artist Alice Guffey Miller designed tree trunk creatures and fashioned sculptural

components such as heads, faces, and wings with the aid of 5th and 6th grade students, along with the Drew Disabilities Council and students from the University of Arkansas at Monticello.

Adult Education

In 2011, the Gardens offered a total of 55 educational programs for adults. These programs included Naturalist Series workshops, art classes, horticulture workshops, the Entergy Conservation Workshop, and Gardening workshops: Gardening 101 and 201 series.

Overall, 1,369 people attended educational programs in 2011. Among these, 82.2 percent were women and 17.8 percent were men. Most participants or 91.2 percent were over 55 years old. Program participants represented 55 different Arkansas cities and towns and 16 cities or towns from 8 other states. In 2011, 18.7 percent of participants were attending a program or workshop at the Gardens for the first time, while 81.3 percent had attended programs or workshops at the Gardens previously.

As of September 22, 2012, a total of 27 educational workshops were conducted at the Gardens this year. These educational programs were attended by 447 people.

Since the year when the Gardens first opened to the public, they started offering horticulture-based educational programs. The popularity of these gardening workshops increased over time. Various topics are provided to participants from seed starting and soil basics to planting and maintaining a wide variety of cultivated plants. For more advanced gardeners, specialized “Gardening 201” workshops are offered on more sophisticated subjects such as Japanese garden design, cooking with plants, and advanced pruning techniques. Both gardening workshops are free to the members of the Gardens. Non-members pay the daily entrance fee.

Since 2007, in addition to these gardening workshops, the Gardens provided four quality educational programs that feature horticulture specialist Janet Carson from the University of Arkansas Cooperative Extension Service. Other programs for adults include art classes. Art classes have offered such topics as silk scarf painting, pysanky egg painting, hypertufa, and mosaic design.

Summer Children’s Adventure Programs

The Gardens offer a Children’s Adventure Programs for kids aged 7 to 12 during spring and summer seasons. In these half-day programs kids can explore the Gardens and learn about plant and animal life as well as ecology.

During summer 2011, five half-day programs were offered for children. The programs presented different topics like forest ecosystems and forest mythology. Overall, 71 children and several parents and grandparents participated in these programs that year.

From May to August 2012, four half-day programs were offered for children. The topics included “Tie Dying Silk Scarfs,” “Edible Birdhouses,” “Papermaking,” and “Night Hike.” Overall, 46 children and several parents and grandparents attended the programs. Each participant was

charged a small program fee for each program (\$4.00 for members and \$6.00 for non-members), which were used to provide take-home items for the children.

School and Youth Field Trips and Tours

In addition to the Children's Adventure Programs, the Gardens offer field trips and tours for students of different ages from pre-school to high school. The Gardens provide the ideal place for students to explore nature. Guided tours are usually offered, where students can learn about the Gardens' history, features, and plant collections. These tours are adapted to the group's age, curriculum focus, and can accommodate special needs students.

During the calendar year 2011, 34 groups of students visited the Gardens. Overall, 1,538 participants visited the Gardens, including 1,189 students, 110 teachers and bus drivers, and 284 adult chaperones.

As of September 2012, 22 groups of students visited the Gardens from public, parochial, and private schools, church youth groups, and Scouts groups. There were a total of 790 people in these groups, including 604 students, 59 teachers and bus drivers, and 127 adult chaperones. Most groups received guided tours, and a few tours were customized at the request of a teacher or a group leader.

Holiday Lights

The Gardens offer Holiday Lights or the Lights on the Landscape event to the public from November till the end of December. These Christmas lights have different showcase features every year. Holiday Lights are perceived by local community and tourism industry workers as a unique display, which help to extend tourism season in Hot Springs.

In 2011, nearly 60,000 visitors attended the Lights on the Landscape or the Holiday Lights event. These visitors generated \$215,689 revenue in admission fees, \$17,837 in golf cart ride fees, and \$30,448 in gift shop revenue.

Economic Impact of Garvan Woodland Gardens

This section provides estimated economic impacts of the activities described above at the Gardens. Annual attendance, the number of members, and the number of volunteers all show the importance of the Gardens to the public. The large number of members and volunteers supports the perception of this place as having a good reputation and status with local tourism leaders. The Gardens offer a family-friendly environment, which is also important for the tourism industry in the region because half of Hot Springs visitors travel with their families and about a third of visitors travel with their partners or spouses, according to the 2001 report by D. K. Shifflet & Associates Ltd. The Arkansas Department of Parks and Tourism staff also perceives the Gardens as an important asset to the state from a group travel perspective and sees this place as one of the key components of popular bus itineraries.

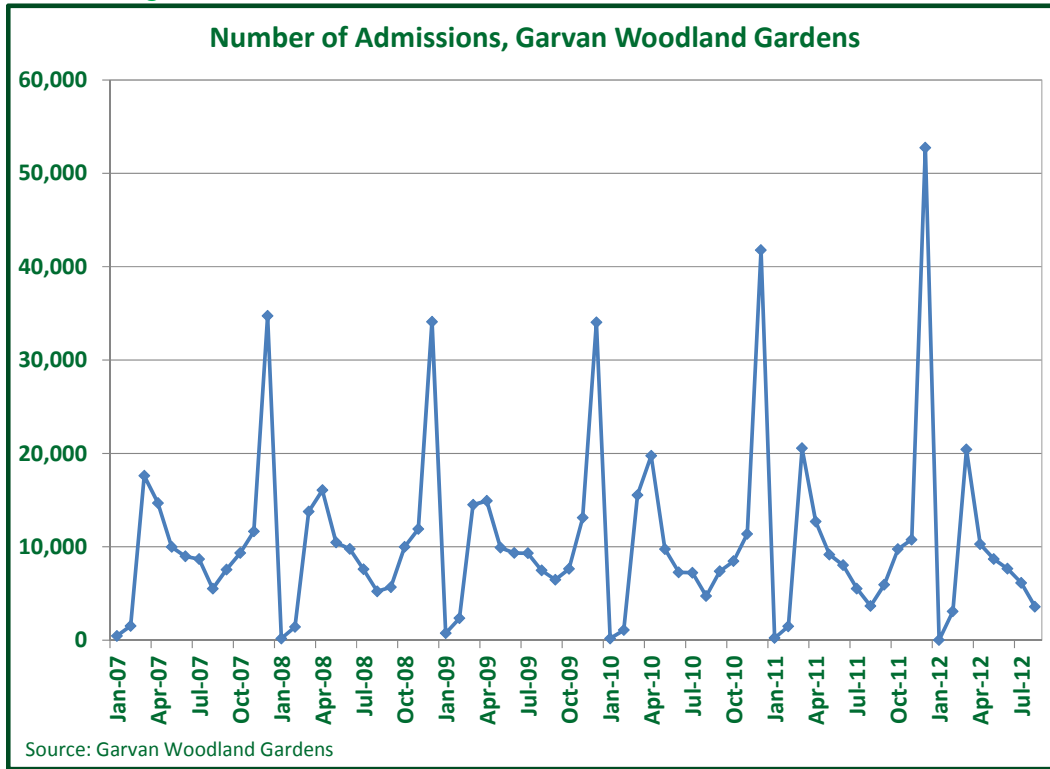
The number of employees and expenditures at the facilities represent the direct economic impacts of the Gardens. Detailed total economic impacts provided at the end of this section were estimated by the Center for Business and Economic Research staff utilizing relevant literature and the IMPLAN input-output model. Total economic impacts presented include employment, value-added, and output impacts as well as state and local tax impacts. These impacts were estimated for the Hot Springs metropolitan area (defined as Garland County) and for the state of Arkansas.

Annual Attendance and Members

During the 2011 calendar year, Garvan Woodland Gardens had 2,776 members. Out of these, 400 were new members. The renewal rate of existing members was high: 78 percent in 2011. The involvement of local residents in the Gardens demonstrates its importance to the community. According to the interviews with local tourism industry leaders, the public perceives the Gardens as a feel-good place and takes a great sense of pride in it. If the Gardens did not exist, the local community would lose a critical component.

The number of visitors to the Gardens varies depending on the particular month, with the highest numbers of visits occurring in December during Holiday Lights and then again in March and April, when spring blooming starts. Overall, the number of admissions increased from 2007 to 2012. The highest number of visits to the Gardens occurred within the most recent year: 52,735 admissions were counted during December 2011. Indeed, Holiday Lights generated the largest number of admissions last year. Golf carts were sent out 1,275 times carrying 3,606 people who paid for the tickets to see Holiday Lights. The Gardens' attendance record was set one night in December 2011 with 61 cart rides sent out. In 2012 the number of golf carts available is planned to be even higher, which can help to set a new record.

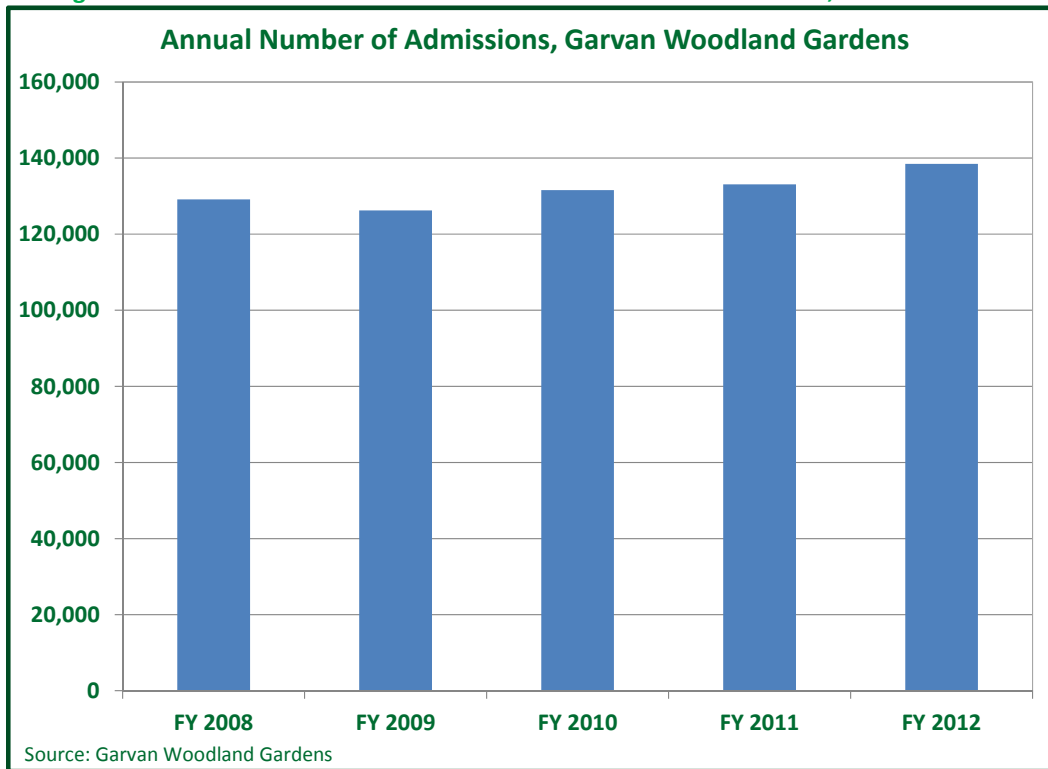
Figure 1: Number of Admissions to Garvan Woodland Gardens, 2007-2012



The annual number of visits to the Garvan Woodland Gardens has been increasing since FY2009. The number of admissions was highest during fiscal year 2012 (FY2012)¹ with 138,478 visits.

¹ FY is fiscal year from July 1 to June 30.

Figure 2: Annual Number of Admissions to Garvan Woodland Gardens, FY2008-FY2012²

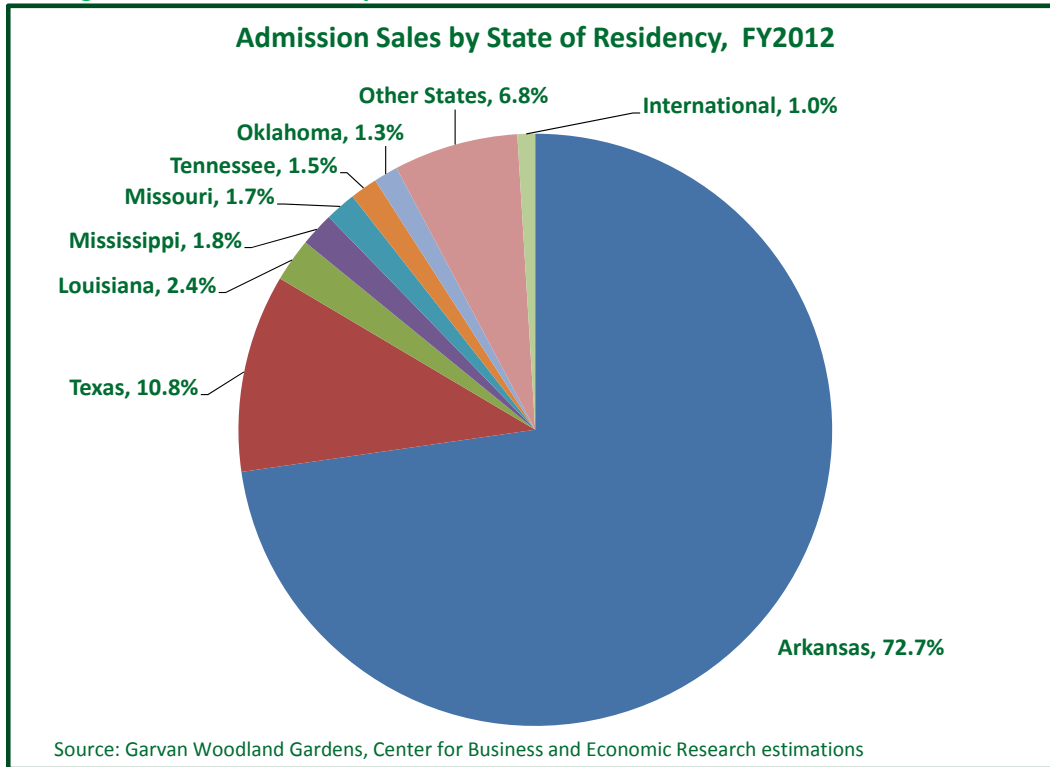


Using data on admission ticket purchases, Center researchers were able to estimate admission sales by zip code. The numbers include Holiday Light visitors, but not golf cart rides, participants of education programs or wedding parties. It should be noted that admission sales data represent the number of times a zip code was used, not the actual number of visitors. The system only allows collecting one zip code per sale, no matter how many tickets were purchased at a time.

The results show that the majority or 72.7 percent of tickets to Garvan Woodland Gardens in FY2012 were purchased by Arkansas residents. About 10.8 percent of admission ticket sales were purchased by Texas residents and 2.4 percent were purchased by Louisiana residents. Residents of Mississippi, Missouri, Tennessee, and Oklahoma also purchased more than 1.0 percent of admission tickets.

² FY is fiscal year from July 1 to June 30.

Figure 3: Admission Sales by State of Residence in Garvan Woodland Gardens, FY2012



The top ten states whose residents purchased admission tickets to the Gardens also included Florida, California, and Wisconsin with 0.7, 0.6, and 0.6 percent of ticket sales in FY2012, respectively. The great majority of admission tickets were purchased by United States residents. However, international visitors came to see the Gardens as well, accounting for 439 sales or 1.0 percent of total admission sales during that fiscal year. Indeed, the Arkansas Department of Parks and Tourism staff noted that visitors, especially international visitors that come to Little Rock for national conferences, often go to Hot Springs and visit the Gardens.

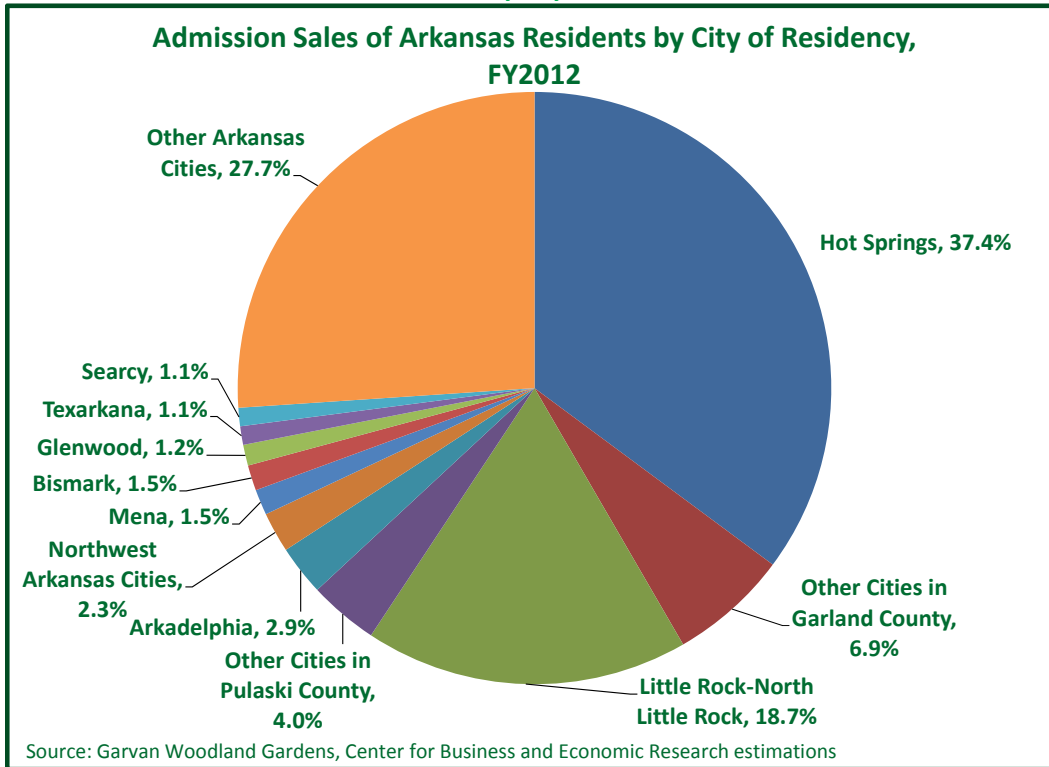
Table 1: Admission Sales by State of Residence in Garvan Woodland Gardens, FY 2012

State of Residence	Number of Admission Sales	Share out of Total Admission Sales
Arkansas	33,006	72.7%
Texas	4,904	10.8%
Louisiana	1,082	2.4%
Mississippi	835	1.8%
Missouri	768	1.7%
Tennessee	677	1.5%
Oklahoma	600	1.3%
Florida	336	0.7%
California	292	0.6%
Wisconsin	281	0.6%
Other States	2,165	4.8%
Other Countries	439	1.0%
Total Admission Sales	45,385	100.0%

Source: Garvan Woodland Gardens, Center for Business and Economic Research estimates

Among Arkansas residents who purchased admission tickets to the Gardens in FY2012, more than a third were Hot Springs residents and an additional 6.9 percent were from other communities in Garland County. Almost one fifth of Arkansas residents paying for admissions were from the Little Rock - North Little Rock city areas and another 4.0 percent were from other places in Pulaski County. Residents of Arkadelphia accounted for 2.9 percent of purchased admission tickets, while Northwest Arkansas residents accounted for 2.3 percent. Residents from other Arkansas cities that accounted for more than 1.0 percent of admission sales were from Mena, Bismark, Glenwood, Texarkana, and Searcy.

Figure 4: Admission Sales to Arkansas Residents by City of Residence, Garvan Woodland Gardens, FY2012



According to the tourism industry leaders in the Hot Springs region, the average visitor to Garvan Woodland Gardens usually has a higher income level than the average visitor to Hot Springs in general. Typical visitors to the Gardens are also perceived as older and having higher education.

Employees and Volunteers

During the 2011 calendar year, volunteers contributed 17,575 hours to the Garvan Woodland Gardens. As with the large number of members, this large number of volunteer hours shows how much the local community appreciates the Gardens and values its role in the area.

Volunteers usually provide assistance in the Welcome Center of the Gardens. They greet guests, assist in the gift shop, drive golf cart tours, and act as docents to tour and school groups. Volunteers also run the Garden Railroad, assist with Tuesday Tea and other special events, plant bulbs and flowers and maintain bird feeders. They also assist with construction projects. For instance, the Hot Springs Village Woodworkers Club, a non-profit organization, completed construction on the Weyerhaeuser Bonsai Learning Center in 2011.

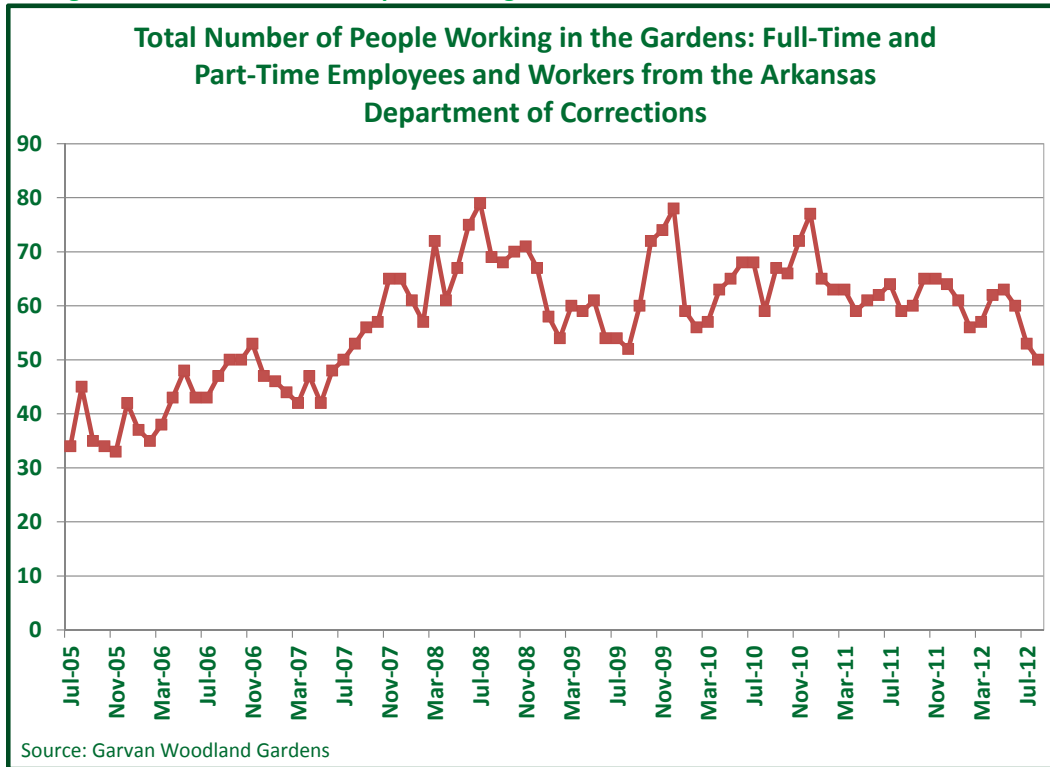
Volunteers provide immense help with one of the largest events in the Gardens, Holiday Lights or Lights on the Landscape. From November 19 to December 31, 2011, 227 volunteers filled 1,029 positions such as cart/shuttle drivers, hot chocolate servers, greeters, train engineers,

and gift shop helpers, contributing 4,786 hours during seven weeks of the event. Additionally, 36 volunteers contributed 1,331 hours from September through November to the preparation of the lights for the Lights on the Landscape. The combined total number of hours volunteers contributed to the Holiday Lights in 2011 was 6,117 hours.

The total number of people working in the Gardens increased from 2005 to 2008, decreased somewhat in early 2009, and then steadied at the same level through 2012. On average, 63 people worked in the Gardens monthly from August 2009 to August 2012. As of August 2012, 50 people were employed at the Gardens. This number includes 28 full-time and 18 part-time employees as well as 4 workers from the Arkansas Department of Correction.

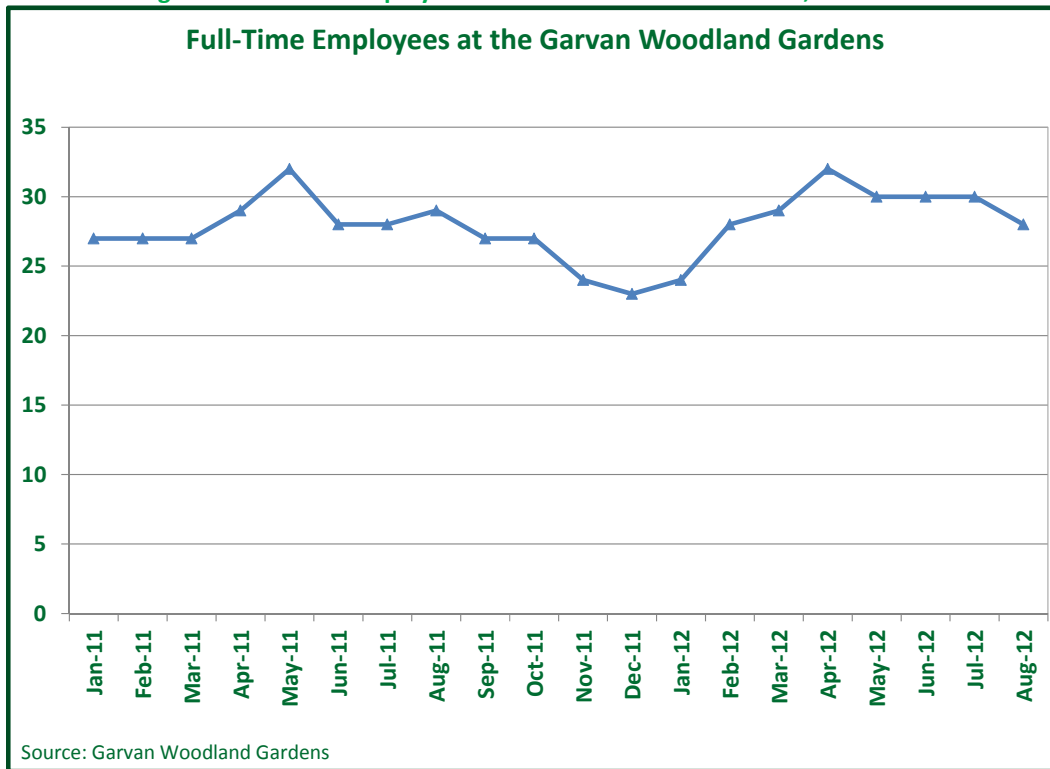
The Gardens have an established relationship with the Arkansas Department of Correction (ADC). For more than ten years, the Regional Maintenance Program at the ADC has collaborated with the Gardens. During FY2012, 108 men in this program assisted with general maintenance, improvements to planting beds and displays and construction. The Gardens also have been participating in the work release program for almost three years. This program allows non-violent offenders to earn money prior to parole. During FY2012, 31 men participated in this program and were paid \$126,000 in wages and benefits. Of these wages, \$119 per week went to the ADC, reducing taxpayers' costs; one third of wages went to dependents, improving standards of their living and reducing social welfare costs for support of these families; and the remaining earnings were given to inmates for personal expenses. The participants in the work release program in the Gardens not only earn additional income, but also work experience and good work references, which are invaluable for the time of their release. Two program participants actually joined the Gardens staff afterwards, taking appointed state jobs. One of the participants is still working for the Gardens.

Figure 5: Total Number of People Working at the Garvan Woodland Gardens, 2005-2012



The data on the number of full-time employees working at the Gardens are available from January 2011 to August 2012. The average monthly number of full-time employees was 28 during this time period. In August 2012, there were 28 full-time workers employed at the Gardens.

Figure 6: Full-Time Employees at Garvan Woodland Gardens, 2011-2012

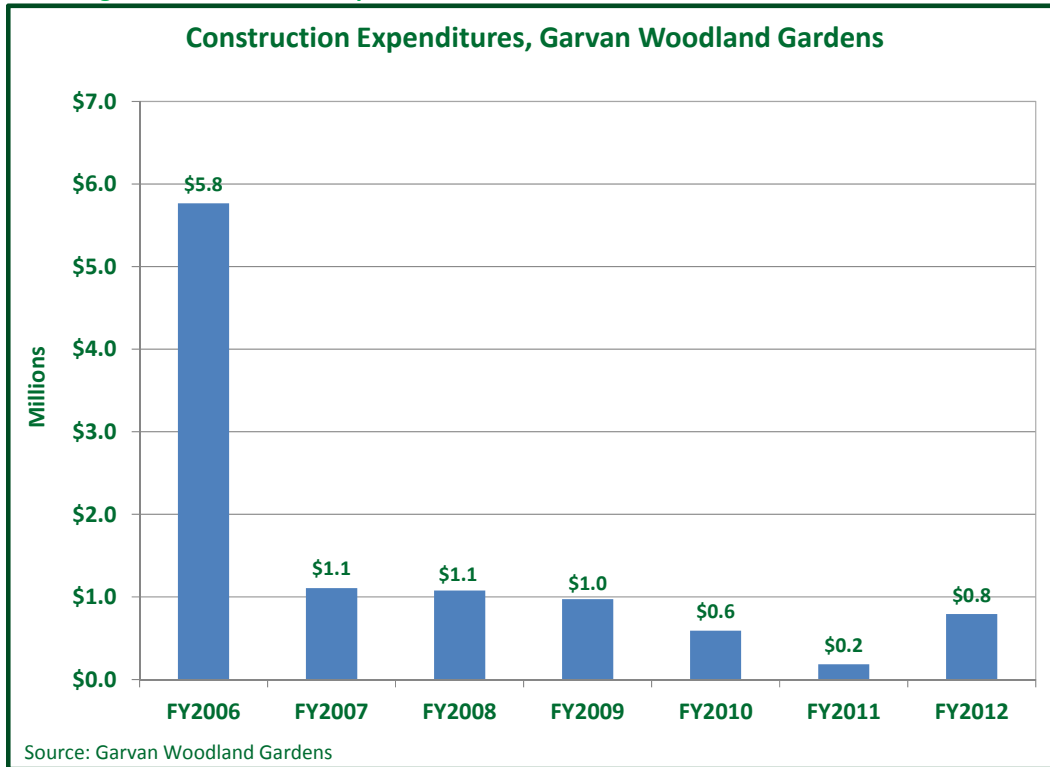


Construction Expenditures and Operating Budget

Garvan Woodland Gardens have been steadily improving facilities and adding new structures that are available to visitors. Since 2005, the Anthony Chapel Complex was built and several landscape structures such as bridges and waterfalls were constructed. The Weyerhaeuser Bonsai Garden and Learning Center as well as Evans Children’s Adventure Garden were also added to the Gardens. From FY2006 to FY2012, almost \$10.5 million were spent on construction. These expenditures include direct spending by the Gardens and support from private and public funds.

The Gardens plan to continue improving facilities and developing new structures in the future. The Rose Garden project is currently under way and plans are being developed to add new features such as tree houses for the Evans Children’s Adventure Garden.

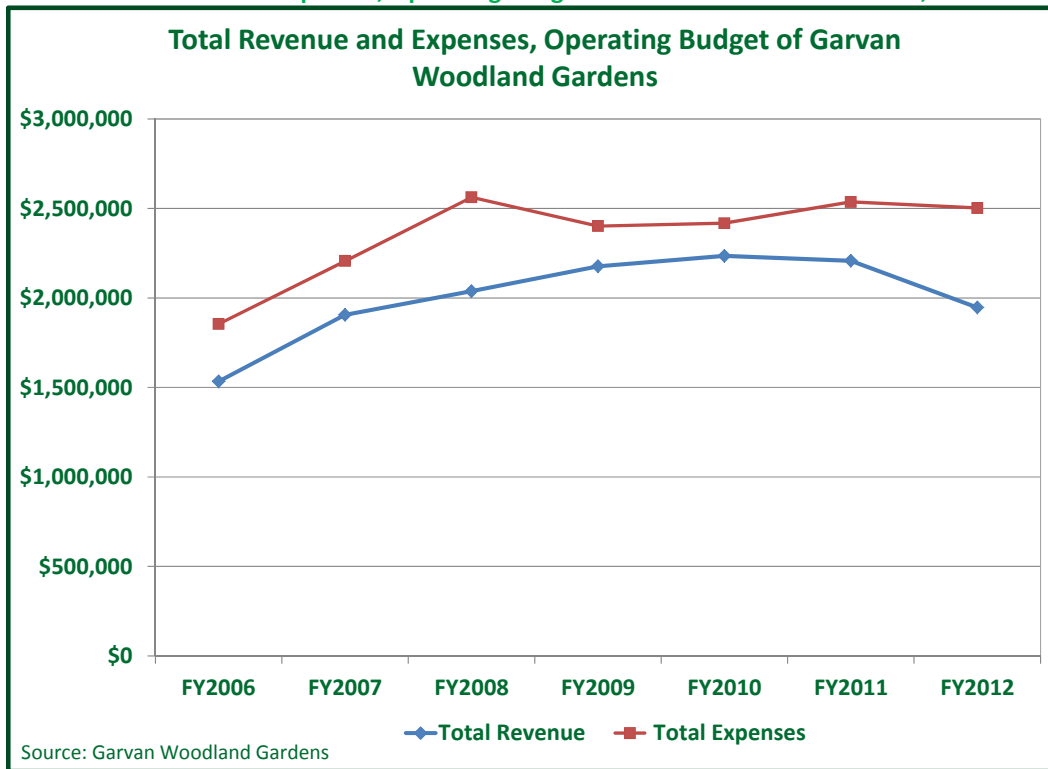
Figure 7: Construction Expenditures at Garvan Woodland Gardens, FY2006-FY2012



The operating budget of the Gardens has increased over time as facilities were improved and the number of activities has increased. Total revenues increased from more than \$1.5 million in FY2006 to \$2.2 million in FY2010, and then declined in FY2011 and in FY2012 to more than \$1.9 million. In the past three years, total revenues included University of Arkansas support of \$318,563 in FY2009, \$350,000 in FY2010 and in FY2011, and \$100,000 in FY2012.

Total expenses increased from \$1.8 million in FY2006 to almost \$2.6 million in FY2008, but then declined and stayed at approximately the same level for the past four fiscal years. From an economic impact perspective, the amount of expenditures that are the result of activities in the Gardens is very important as it reflects the amount of monetary investment into the economy.

Figure 8: Total Revenue and Expenses, Operating Budget of Garvan Woodland Gardens, FY2006-FY2012³



In FY2012, the operating budget of the Gardens had more than \$1.9 million in total revenues and \$2.5 million in total expenses. These were a decline of 11.8 percent and a decline of 1.3 percent from total revenue and expenses in the past fiscal year, respectively.

Table 2: Total Revenue and Total Expenses, Operating Budget of Garvan Woodland Gardens

Fiscal Year	Total Revenue	Annual Change	Total Expenses	Annual Change
FY2006	\$1,533,666		\$1,854,412	
FY2007	\$1,905,308	24.2%	\$2,206,097	19.0%
FY2008	\$2,037,802	7.0%	\$2,562,549	16.2%
FY2009	\$2,176,627	6.8%	\$2,401,423	-6.3%
FY2010	\$2,234,516	2.7%	\$2,417,381	0.7%
FY2011	\$2,207,272	-1.2%	\$2,535,968	4.9%
FY2012	\$1,946,448	-11.8%	\$2,502,041	-1.3%

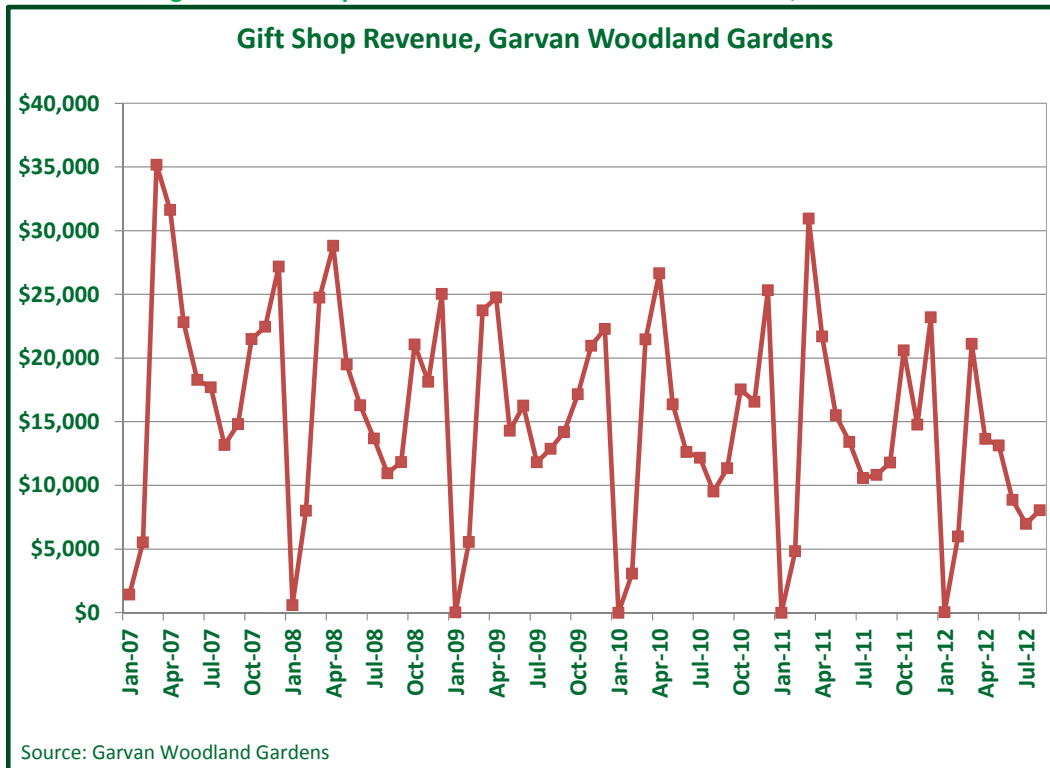
Source: Garvan Woodland Gardens, Center for Business and Economic Research estimates

The Gardens receive a stream of income from the gift shop located in the Welcome Pavilion. The revenue of the gift shop varies depending on the month, in accord with the admission numbers. The Great Recession seemed to impact this income as the peak monthly revenue

³ Total revenue includes University of Arkansas support from FY2009 to FY2012 and a legislative appropriation in FY2012.

occurred in March of 2007. In FY2012, visitors purchased goods in the gift shop valued at \$154,555, a decline of 13.6 percent from \$178,797 in FY2011.

Figure 9: Gift Shop Revenue in Garvan Woodland Gardens, 2007-2012



Estimated Economic Impact on the Hot Springs Community

Using the IMPLAN input-output model, financial data from the Gardens, and existing relevant economic impact studies, Center researchers estimated the economic impacts of the Gardens on the Hot Springs region in FY2012.

IMPLAN is a model created by MIG, Inc. that uses Social Accounting Matrices, which capture all business transactions taking place in a regional economy. This software was created as a development project between the U.S. Forest Service's Land Management Planning Unit in Fort Collins, and professors at the University of Minnesota in 1980s. The Center used the most updated version available, with 2010 Social Accounting Matrices. The study area for this section was defined as the Hot Springs Metropolitan Area or Garland County.

Two different IMPLAN models were constructed: to estimate economic impacts of construction and to estimate economic impact of operating expenses or operational activities in the Gardens. Construction expenditures and operating expenses in the Gardens were used as model inputs in order to evaluate the impacts. IMPLAN uses multipliers to measure how these expenditures affect the economy overall. Since construction activities occurred locally, 100 percent of construction expenditures were counted as direct impacts. These expenses were

entered as inputs in IMPLAN model under the construction of other new nonresidential structures industry sector. In order to estimate the amount of operating expenses and additional non-operating signage expenses spent by the Gardens within the Hot Springs area, the operating budget of FY2012 was examined in detail. The results showed that 89.3 percent of total expenses in FY2012 were spent within Garland County. The local purchase percentage in the IMPLAN model was adjusted accordingly, so that only the expenses spent within the county were counted as direct economic impacts. Total operating expenditures and non-operating signage costs of the Gardens were entered as inputs under the industry sector best describing the Gardens’ activities: museum, historical sites, zoos, and parks industry. Also, total wages paid by the Gardens in FY2012 or almost \$1.5 million were specified in the model as employee compensation and the number of full-time employees were specified as 30, to account for 28 full-time workers in FY2012 and for part-time employees.

The indirect effects estimated using the IMPLAN model are determined by local industries paying for supplies, services, and labor from other local industries. The induced effects measure the money that is received by employees of local companies as a result of industry spending from both the direct and the indirect effects and is then re-spent in the study area. The estimation of indirect and induced effects accounts for leakages from expenditures occurring outside of the Hot Springs area, which stop the money cycle in the end. Total direct, indirect, and induced economic impacts are presented in the report using 2012 dollars. The impacts of activities in the Gardens were estimated on employment, output, and value added category. Value added represents a difference between an industry’s total output and the cost of its intermediate inputs and includes employee compensation and production taxes.

During FY2012, \$792,328 were spent on construction in the Gardens. As a result of construction activities in the Gardens, a total of almost \$1.2 million in output and \$465,978 in value added occurred in the Hot Springs area in FY2012. These economic activities generated 11.8 full-time equivalent employees in the area during that time period. Average multipliers or the ratios of total impact to direct impact were 1.53 for employment, 1.85 for value added, and 1.48 for output.

Table 3: Economic Impacts of Construction in Garvan Woodland Gardens in Garland County, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact*	Multiplier
Employment	7.7	2	2	11.8	1.53
Value Added	\$251,967	\$103,224	\$110,787	\$465,978	1.85
Output	\$792,328	\$189,326	\$188,923	\$1,170,578	1.48

*Totals may not add up due to rounding.

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

In addition to construction, the Gardens managed their operational activities with the annual budget. Total operating expenses in FY2012 were more than \$2.5 million and additional non-operating expenses on signage were \$1,128. Out of these expenditures, 89.3 percent were spent within the Garland County and the remaining 10.7 percent were spent outside of the region. As a result of the operational activities of the Gardens, 48 full-time equivalent workers

were employed; \$4.2 million in output and \$3.4 million in value added were generated in FY2012 in the Hot Springs area.

Table 4: Economic Impacts of Operational Activities in Garvan Woodland Gardens in Garland County, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact*	Multiplier
Employment	26.8	8.1	13.6	48.5	1.81
Value Added	\$2,249,998	\$450,582	\$737,535	\$3,438,114	1.53
Output	\$2,235,330	\$715,981	\$1,258,107	\$4,209,418	1.88

*Totals may not add up due to rounding.

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

Overall, as a result of construction and operational activities in the Gardens, almost \$5.4 million in total economic output and \$3.9 million in total value added were generated in the Hot Springs area in FY2012. The resulting average multipliers were 1.78 and 1.56 for output and value added, respectively. This economic activity provided work for 60 full-time employees during that time period with an average multiplier of 1.75.

Table 5: Total Economic Impacts of Construction Expenditures and Operational Activities in Garvan Woodland Gardens in Garland County, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact	Multiplier
Employment	34.5	10.1	15.7	60.3	1.75
Value Added	\$2,501,965	\$553,805	\$848,322	\$3,904,092	1.56
Output	\$3,027,659	\$905,307	\$1,447,029	\$5,379,995	1.78

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

To provide a background for comparison, about 31,295 employees worked in Garland County in March 2012, according to the latest not seasonally adjusted data from the Bureau of Labor Statistics (BLS). The employment associated with the Gardens accounts for about 0.2 percent of employment in the county. Overall, tourism has a very important role in this county. In March 2012, about 20.7 percent or 6,493 employees worked in the leisure and hospitality industry sector in Garland County, according to the BLS data. In the state overall, by contrast, 8.9 percent of employees worked in this sector. In this light, the Gardens play an important role as one of the tourism industry assets in the area.

As a result of the activities of the Gardens, state and local taxes were generated. These taxes included income, sales, and property taxes received from employees, companies, and households. During FY2012, a total of \$259,021 were collected by local and state governments.

Table 6: State and Local Taxes Impacts of Construction Expenditures and Operational Activities in Garvan Woodland Gardens in Garland County, FY2012

Category	State and Local Taxes
Employee Compensation	\$4,296
Proprietor Income	\$183,614
Indirect Business Tax	\$58,448
Households	\$12,663
Total State and Local Taxes	\$259,021

Source: IMPLAN, Center for Business and Economic Research estimates

The Gardens are perceived by local tourism industry leaders as an important asset in attracting and keeping Hot Springs visitors. Visitors generate additional tax revenues to the city’s budget and the city depends on them. In total in 2011, more than \$4.8 million was collected by the Hot Springs Advertising & Promotion Commission in hospitality tax revenues from hotel and prepared food taxes.

In addition to these economic impacts, activities in the Gardens spurred some residential development in the nearby area. Local tourism representatives describe these activities as haphazard and hard to predict. Nonetheless, there are currently several new residential subdivisions that have emerged next to the Gardens.

Estimated Economic Impact on the State of Arkansas

The economic impacts of Garvan Woodland Gardens on the state of Arkansas in FY2012 are presented below. Center researchers used the IMPLAN input-output model and the methodology described in the previous section to estimate the impacts. The study area used in IMPLAN was the state of Arkansas. Social Accounting Matrices and multipliers relevant to the state were utilized by the software, and the results were estimated in 2012 dollars.

As in the economic analysis for Garland County, two different IMPLAN models were constructed for the state: to estimate economic impacts of construction and to estimate economic impacts of operating expenses or operational activities in the Gardens. Since construction in the Gardens occurred locally, 100 percent of construction expenditures were counted as direct impacts for the state of Arkansas, similarly to the estimates that were done for the Hot Springs region.

Construction worth of \$792,328 occurred in the Gardens in FY2012. Using construction expenditures as input to the IMPLAN model, the Center staff estimated that almost 12 full-time positions were occupied during that time period in the state as a result of these construction expenditures. More than \$1.3 million in output and \$586,643 in value added were generated in the state in FY2012.

Table 7: Economic Impacts of Construction in Garvan Woodland Gardens in Arkansas, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact*	Multiplier
Employment	7.0	2.2	2.4	11.6	1.66
Value Added	\$301,347	\$139,901	\$145,394	\$586,643	1.95
Output	\$792,328	\$265,341	\$250,268	\$1,307,937	1.65

*Totals may not add up due to rounding.

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

When examining the operating budget and the non-operating signage expenses of the Gardens, Center researchers found that 96.4 percent of total expenses in FY2012 were spent within the state. Thus, 96.4 percent of these expenses were counted as direct impacts. Employee compensation of almost \$1.5 million spent by the Gardens in FY2012 was added to the model's characteristics. Additionally, 30 full-time employees were specified in the model to account for 28 full-time workers in the Gardens that fiscal year and for part-time employees.

Operational activities of the Gardens of more than \$2.5 million generated more than \$2.4 million of direct output impact and more than \$4.5 million in total output in FY2012. More than \$3.5 million of total value added impacts occurred in the state. The multipliers were 1.87 and 1.55 for output and value added impacts, respectively. There were 50.6 full-time equivalent employees working in the state during that time period as a result of operational activities in the Gardens.

Table 8: Economic Impacts of Operational Activities in Garvan Woodland Gardens in Arkansas, FY2012⁴

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact	Multiplier
Employment	28.9	8.1	13.6	50.6	1.75
Value Added	\$2,293,113	\$450,582	\$808,702	\$3,552,397	1.55
Output	\$2,413,055	\$715,981	\$1,392,196	\$4,521,232	1.87

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

As a result of construction and operational activities in the Gardens, more than \$3.2 million of output in direct economic impact and \$5.8 million in total output impacts were generated in Arkansas in FY2012. This represented an average multiplier of 1.82. Direct value added impacts of almost \$2.6 million and total value added impacts of more than \$4.1 million occurred during that time period, resulting in a 1.60 average multiplier. The total employment impact of the Gardens on the state was 62.2 full-time employee equivalents in FY2012 with an average multiplier of 1.73.

⁴ IMPLAN does not allow accounting for the 89.3 percent of operating expenses that occurred within Garland County in this model, so estimated impacts were smaller for the state than for the county due to different purchasing characteristics of the state and region. To account for this discrepancy, Center researchers customized indirect employment, value added, and output as well as induced employment impacts from the original IMPLAN values.

Table 9: Total Economic Impacts of Construction Expenditures and Operational Activities in Garvan Woodland Gardens in Arkansas, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact	Multiplier
Employment	35.9	10.3	16.0	62.2	1.73
Value Added	\$2,594,460	\$590,483	\$954,096	\$4,139,039	1.60
Output	\$3,205,383	\$981,322	\$1,642,464	\$5,829,169	1.82

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

To put the employment numbers in perspective: the state had about 1,165,500 nonfarm employees in September 2012, according to the latest BLS data. About 8.9 percent or 103,500 employees worked in leisure and hospitality industry that month, the industry that strongly depends on the tourism activities in the state.

Construction and operational activities in the Gardens generated state and local taxes in Arkansas. A total of \$282,543 were collected in employee compensation, proprietor income, indirect business tax, and household taxes in the state during FY2012.

Table 10: State and Local Taxes Impacts of Construction Expenditures and Operational Activities in Garvan Woodland Gardens in Arkansas, FY2012

Category	State and Local Taxes
Employee Compensation	\$5,833
Proprietor Income	\$193,008
Indirect Business Tax	\$69,180
Households	\$14,522
Total State and Local Taxes	\$282,543

Source: IMPLAN, Center for Business and Economic Research estimates

Conclusions

Garvan Woodland Gardens offer various facilities like the Anthony Chapel Complex, world-class gardens, and landscape structures. These facilities provide space for educational and recreational events, attracting numerous visitors. The Gardens had 138,478 admissions during fiscal year 2012, which was the highest number in the history of this attraction.

The Center for Business and Economic Research conducted an economic impact study of the activities associated with the Gardens in the Hot Springs area and in the state overall. Economic impacts were estimated using the IMPLAN input-output model, FY2012 financial data from the Gardens, and existing economic impact literature. The estimates are presented in 2012 dollars.

As a result of \$792,328 construction expenditures and more than \$2.5 million in operational activities in FY2012, the Gardens generated almost \$5.4 million in total output impact and \$3.9 million in total value added impact in Garland County. The average multipliers or the ratios of total impacts to direct impacts associated with the output and value added impacts were 1.78 and 1.56, respectively. Total employment impact was 60 full-time employees in the county during that time period. A total of \$259,021 of state and local taxes was generated as a result of the activities of the Gardens in Garland County.

Expenditures that occurred within Arkansas in FY2012 were used to estimate total impacts of Garvan Woodland Gardens in the state. Construction and operational activities in the Gardens resulted in more than \$5.8 million of total output impact in the state during that time period. This represented an average multiplier of 1.82. Total value added impact was more than \$4.1 million, total state and local taxes impact was \$282,543, and total employment impact was 62.2 full-time employee equivalents in the state.

Data Sources and References

“2011 Year in Review Report,” Garvan Woodland Gardens, 2012.

Bureau of Labor Statistics, Employment Data, www.data.bls.gov

“Economic Impacts of the Florida Botanical Gardens and Related Cultural Attractions in Pinellas County Florida,” by A.W. Hodges, W.D. Mulkey, E. Philippakos and J. Yates; University of Florida; 2000, retrieved 9/11/2012 from: <http://www.fred.ifas.ufl.edu/economic-impact-analysis/pdf/PinellasPub.pdf>

“The Economic Impact of the University of Georgia’s Public Service and Outreach Programs,” J. Dorfman, A. Karner and W. Kriesel; University of Georgia; February 2012, retrieved 9/11/2012 from: http://outreach.uga.edu/uploads/documents/The_Economic_Impact_of_UGA-PSO_FY2011.pdf

Garvan Woodland Gardens, University of Arkansas, www.garvangardens.org

“Glorious Gardens,” by J.R. Heilman, Bottom Line Personal, May 2012, retrieved 10/15/2012 <http://www.bottomlinepublications.com/content/article/travel-a-recreation/glorious-gardens>

“Growing Hot Springs Tourism: A.D. K. Shifflet Approach,” D.K. Shifflet & Associates Ltd., November 2001.

Hot Springs Advertising & Promotion Commission, Hospitality Tax Collection, end of month: August 31, 2012.

Interviews with tourism leaders from the Hot Springs Convention and Visitors Bureau; the Greater Hot Springs Chamber of Commerce and the Hot Springs Metro Partnership; Oaklawn Racing and Gaming; and the Arkansas Department of Parks and Tourism; October 2012.

IMPLAN, MIG, Inc. <http://implan.com>

“Summary of Partnership with the Arkansas Department of Corrections,” Garvan Woodland Gardens, University of Arkansas, compiled July, 2012.

Appendix: Detailed Employment and Output Impact Tables

Table 11: Detailed Employment Impacts of Activities in Garvan Woodland Gardens in Garland County, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Museums, historical sites, zoos & parks	26.8	0.0	0.0	26.8
Construction of other new nonresidential structures	7.7	0.0	0.0	7.7
Real estate establishments	0.0	3.2	1.3	4.5
Food services and drinking places	0.0	0.2	1.8	2.0
Private hospitals	0.0	0.0	1.0	1.0
Services to buildings and dwellings	0.0	0.7	0.2	0.9
Offices of physicians, dentists, and other health practitioners	0.0	0.0	0.9	0.9
Employment services	0.0	0.5	0.2	0.7
Nursing and residential care facilities	0.0	0.0	0.6	0.6
Management, scientific, and technical consulting services	0.0	0.5	0.1	0.6
Retail stores - general merchandise	0.0	0.0	0.5	0.6
Accounting, tax preparation, bookkeeping, and payroll services	0.0	0.4	0.1	0.6
Wholesale trade businesses	0.0	0.2	0.4	0.6
Retail stores - food and beverage	0.0	0.0	0.5	0.5
Maintenance and repair construction of nonresidential structures	0.0	0.4	0.1	0.5
Private household operations	0.0	0.0	0.5	0.5
Securities, commodity contracts, investments, and related activities	0.0	0.1	0.4	0.4
Architectural, engineering, and related services	0.0	0.4	0.0	0.4
Automotive repair and maintenance, except car washes	0.0	0.2	0.2	0.4
Non-depository credit intermediation and related activities	0.0	0.1	0.3	0.4
Retail stores - motor vehicle and parts	0.0	0.0	0.3	0.4
Other private educational services	0.0	0.2	0.2	0.4
Civic, social, professional, and similar organizations	0.0	0.1	0.3	0.4
Other industries	0.0	3.0	5.7	8.7
Total	34.5	10.1	15.7	60.3

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

Table 12: Output Impacts of Activities in Garvan Woodland Gardens in Garland County, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Museums, historical sites, zoos & parks	\$2,235,330	\$0	\$2,272	\$2,237,602
Construction of other new nonresidential structures	\$792,328	\$0	\$0	\$792,328
Real estate establishments	\$0	\$288,539	\$120,022	\$408,561
Imputed rental activity for owner-occupied dwellings	\$0	\$0	\$194,796	\$194,796
Private hospitals	\$0	\$0	\$118,503	\$118,504
Offices of physicians, dentists, and other health practitioners	\$0	\$0	\$107,824	\$107,825
Food services and drinking places	\$0	\$10,998	\$90,399	\$101,398
Monetary authorities and depository credit intermediation activities	\$0	\$20,839	\$59,377	\$80,215
Wholesale trade businesses	\$0	\$18,924	\$49,797	\$68,721
Other state and local government enterprises	\$0	\$29,918	\$33,494	\$63,413
Telecommunications	\$0	\$26,404	\$24,747	\$51,151
Services to buildings and dwellings	\$0	\$37,314	\$12,412	\$49,726
Accounting, tax preparation, bookkeeping, and payroll services	\$0	\$36,083	\$12,234	\$48,317
Securities, commodity contracts, investments, and related activities	\$0	\$6,014	\$39,515	\$45,529
Maintenance and repair construction of nonresidential structures	\$0	\$33,590	\$10,423	\$44,013
Non-depository credit intermediation and related activities	\$0	\$10,159	\$27,975	\$38,134
Architectural, engineering, and related services	\$0	\$35,933	\$2,049	\$37,983
Management, scientific, and technical consulting services	\$0	\$29,009	\$6,006	\$35,015
Electric power generation, transmission, and distribution	\$0	\$22,023	\$11,446	\$33,470
Nursing and residential care facilities	\$0	\$0	\$32,593	\$32,593
Retail stores - motor vehicle and parts	\$0	\$3,655	\$28,545	\$32,200
Retail stores - general merchandise	\$0	\$2,037	\$26,864	\$28,901
Civic, social, professional, and similar organizations	\$0	\$4,388	\$24,078	\$28,466
Medical and diagnostic labs and outpatient & other amb. care services	\$0	\$6	\$28,132	\$28,138
Retail stores - food and beverage	\$0	\$1,954	\$25,585	\$27,539

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Automotive repair and maintenance, except car washes	\$0	\$14,615	\$12,791	\$27,406
Scenic and sightseeing transportation and support activities for transport.	\$0	\$22,820	\$3,458	\$26,278
Advertising and related services	\$0	\$20,824	\$4,298	\$25,122
Legal services	\$0	\$13,282	\$10,983	\$24,265
Employment services	\$0	\$16,161	\$5,799	\$21,960
Office administrative services	\$0	\$15,951	\$4,400	\$20,351
Insurance carriers	\$0	\$9,186	\$11,162	\$20,348
Other industries	\$0	\$174,680	\$305,048	\$479,728
Total	\$3,027,659	\$905,307	\$1,447,029	\$5,379,995

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

Table 13: Employment Impacts of Activities in Garvan Woodland Gardens in the State of Arkansas, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Museums, historical sites, zoos & parks	28.9	0.0	0.0	28.9
Construction of other new nonresidential structures	7.0	0.0	0.0	7.0
Real estate establishments	0.0	1.8	0.7	2.5
Food services and drinking places	0.0	0.2	1.8	2.0
Employment services	0.0	0.8	0.3	1.0
Offices of physicians, dentists, and other health practitioners	0.0	0.0	1.0	1.0
Private hospitals	0.0	0.0	0.8	0.8
Services to buildings and dwellings	0.0	0.6	0.2	0.8
Nursing and residential care facilities	0.0	0.0	0.7	0.7
Retail stores - general merchandise	0.0	0.0	0.6	0.7
Wholesale trade businesses	0.0	0.2	0.5	0.6
Retail stores - food and beverage	0.0	0.0	0.5	0.5
Non-depository credit intermediation and related activities	0.0	0.1	0.4	0.5
Architectural, engineering, and related services	0.0	0.4	0.0	0.5
Retail stores - motor vehicle and parts	0.0	0.0	0.4	0.4
Individual and family services	0.0	0.0	0.4	0.4
Management, scientific, and technical consulting services	0.0	0.3	0.1	0.4
Private household operations	0.0	0.0	0.4	0.4

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Maintenance and repair construction of nonresidential structures	0.0	0.3	0.1	0.4
Monetary authorities and depository credit intermediation activities	0.0	0.1	0.3	0.4
Civic, social, professional, and similar organizations	0.0	0.0	0.3	0.4
Automotive repair and maintenance, except car washes	0.0	0.2	0.2	0.4
Other industries	0.0	5.2	6.5	11.7
Total	35.9	10.3	16.0	62.2

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates

Table 14: Output Impacts of Activities in Garvan Woodland Gardens in the State of Arkansas, FY2012

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Museums, historical sites, zoos & parks	\$2,413,055	\$0	\$855	\$2,413,911
Construction of other new nonresidential structures	\$792,328	\$0	\$0	\$792,328
Real estate establishments	\$0	\$169,854	\$68,968	\$238,822
Imputed rental activity for owner-occupied dwellings	\$0	\$0	\$227,329	\$227,329
Offices of physicians, dentists, and other health practitioners	\$0	\$0	\$114,947	\$114,948
Monetary authorities and depository credit intermediation activities	\$0	\$24,025	\$82,771	\$106,796
Food services and drinking places	\$0	\$9,395	\$89,325	\$98,720
Private hospitals	\$0	\$0	\$97,892	\$97,892
Wholesale trade businesses	\$0	\$22,134	\$65,825	\$87,959
Electric power generation, transmission, and distribution	\$0	\$55,499	\$29,121	\$84,620
Telecommunications	\$0	\$40,841	\$40,411	\$81,252
Other state and local government enterprises	\$0	\$27,582	\$36,105	\$63,687
Non-depository credit intermediation and related activities	\$0	\$12,179	\$42,738	\$54,917
Insurance carriers	\$0	\$22,811	\$28,322	\$51,133
Architectural, engineering, and related services	\$0	\$43,842	\$2,928	\$46,769
Services to buildings and dwellings	\$0	\$31,499	\$10,667	\$42,166

Category	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Maintenance and repair construction of nonresidential structures	\$0	\$29,529	\$9,453	\$38,982
Management, scientific, and technical consulting services	\$0	\$31,585	\$6,103	\$37,688
Nursing and residential care facilities	\$0	\$0	\$37,067	\$37,067
Transport by truck	\$0	\$20,247	\$15,474	\$35,721
Retail stores - motor vehicle and parts	\$0	\$3,242	\$32,105	\$35,346
Securities, commodity contracts, investments, and related activities	\$0	\$3,879	\$29,917	\$33,797
Retail stores - general merchandise	\$0	\$1,843	\$30,837	\$32,680
Legal services	\$0	\$15,508	\$14,038	\$29,546
Employment services	\$0	\$21,936	\$7,388	\$29,324
Civic, social, professional, and similar organizations	\$0	\$3,694	\$24,304	\$27,998
Scenic and sightseeing transportation and support activities for transport.	\$0	\$23,179	\$3,319	\$26,498
Accounting, tax preparation, bookkeeping, and payroll services	\$0	\$19,549	\$6,771	\$26,320
Automotive repair and maintenance, except car washes	\$0	\$13,004	\$13,052	\$26,057
Retail stores - food and beverage	\$0	\$1,434	\$23,827	\$25,261
Other industries	\$0	\$333,032	\$450,603	\$783,635
Total	\$3,205,383	\$981,322	\$1,642,464	\$5,829,169

Source: Garvan Woodland Gardens, IMPLAN, Center for Business and Economic Research estimates