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## Economic Impacts of the *Florida Botanical Gardens* and Related Cultural Attractions in Pinellas County, Florida<sup>1</sup>

Alan W. Hodges, David Mulkey, Effie Philippakos, and Judy Yates<sup>2</sup>

### Introduction

This report estimates the potential regional economic impacts associated with construction, operations, and tourism in the *Heritage Village*, *Florida Botanical Gardens*, and *Gulf Coast Museum of Art* attractions. All three attractions are housed within a 180-acre site of Pinewood Cultural Park in Pinellas County, Florida and serve as research and public education vehicles on issues related to the arts, history, and the environment. The economic region is defined to include the Florida counties of Hillsborough, Hernando, Pinellas, and Pasco and is consistent with the commuting pattern-based definition offered by the Bureau of Economic Analysis (Figure 1).

Three types of economic impacts are associated with overnight visitors in the Pinellas County region. Direct economic impacts include facility construction, operations, and overnight visitor expenditures in the region. These impacts initiate a chain of economic events as workers are hired and as these facilities make purchases from other regional businesses. Regional businesses experience increased sales as a result of supplying inputs to these facilities

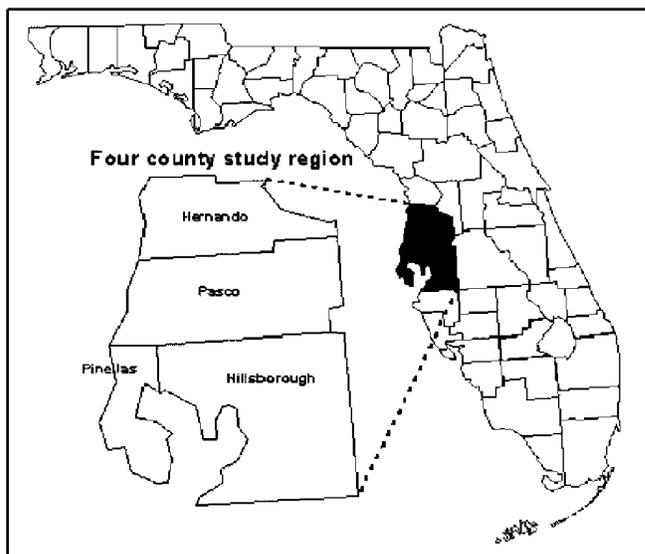


Figure 1. Map of the Four-County Study Region.

and, in turn, increase their purchases (indirect effects). Subsequently, the increased income accruing to employees in the region from direct and indirect activities leads to increased spending by regional households (induced effects). The total impact of overnight visitors on the regional economy is the sum of the direct, indirect, and induced effects. Total impact estimates are reported here for output, employment, value-added, and employee

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2. Alan W. Hodges, assistant in; David Mulkey, professor; and Effie Philippakos, research assistant, Department of Food and Resource Economics; and Judy Yates, county extension director, Pinellas County Extension Service; Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL.

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compensation. Impacts are reported for the three attractions and are reported separately on the basis of 1,000 overnight visitors to facilitate use of the results with differing levels of visitor attendance.

The IMPLAN input-output modeling system was utilized to assess the regional economic impacts of the three cultural facilities and associated overnight visitors in the four-county region. IMPLAN was originally developed by the USDA Forest Service in 1979 and was subsequently privatized in 1993 by the Minnesota IMPLAN Group (MIG), Inc., Stillwater, Minnesota. The IMPLAN system consists of database and software components. The database portion offers economic and sociodemographic descriptions for United States counties (including all Florida counties) across 528 economic sectors. The categorization of sectors is based on the U.S. Department of Commerce's four-digit Standard Industrial Classification system. The software component of the IMPLAN system performs calculations for a pre-defined study area (here, the four-county Florida region) to assess economic impacts relevant to the region. Economic impacts were estimated using 1997 Florida IMPLAN data, the most recent information available.

### Assumptions and Analysis

The time horizon for this analysis is three years (2000-2002). The analysis considers the construction, annual operating budget, and overnight visitor expenditures associated with the *Heritage Village*, *Florida Botanical Gardens* and *Gulf Coast Museum of Art*, respectively (Table 3). Overnight tourist visitors, defined as multi-day visitors residing outside the four-county region, were the only visitor group considered because this group introduces outside dollars into the region that ultimately trigger the chain of economic impacts noted earlier.

All data assumptions underlying this analysis were provided by the Pinellas County Cooperative Extension Service. Per-annum overnight visitor expenditures for each cultural attraction were calculated by multiplying the number of overnight visitor-days for each attraction (Table 1) by average 1998 per-person day expenditures on food, entertainment, retail purchases, accommodations, and

rental cars in Pinellas County (Table 2). This analysis assumes that 200,000 persons will attend *Heritage Village*, 250,000 persons will attend the *Florida Botanical Gardens*, and 100,000 persons will visit the *Gulf Coast Museum of Art* each year. Attendance estimates of *Heritage Village* and *Gulf Coast Museum of Art* were divided by one-half to reflect that these attractions are one-half day experiences. Overnight visitor impacts were calculated by taking annual attendance estimates per attraction and multiplying total visitor days by 70% (Table 1). The value of 70% was based on the proportion of overnight visitors in the *Dali Museum* of St. Petersburg, Florida. No construction activities are anticipated in *Heritage Village* during the 2000-2002 annual period, and the duration of construction activities in the *Gulf Coast Museum of Art* are projected to last during the first year only (2000). Values assigned to construction, operational, and overnight visitor expenditures are assumed to remain constant each annual period.

Information from Tables 1 and 2 were used to estimate the overnight-visitor impacts for use in the IMPLAN impact analysis (Table 3). Per-annum direct impact values associated with overnight visitors were calculated by multiplying overnight visitor attendance to total per-person-day overnight visitor expenditures for each attraction. The annual operations and construction impacts featured in Table 3 reflect the same values listed in Table 1. As noted earlier, these assumptions were based on information provided by the Pinellas County Cooperative Extension Service.

### Results

Total economic impacts for the combined cultural attractions will vary between the year 2000 and the years 2001 and 2002, owing to first-year construction activities in the *Florida Gulf Coast Art Museum* (Table 4). During the year 2000, construction and operations activities will increase output by \$31.7 million, stimulate employment by 343 jobs, increase value-added by \$16.2 million, and stimulate labor income by \$12.9 million. During the years 2001 and 2002, construction and operations activities will increase output by \$20.1 million, stimulate employment by 220 jobs, increase value-added by

\$10.0 million, and stimulate labor income by \$11.6 million. Tourism will stimulate output by \$32.8 million, increase employment by 543 jobs, increase value-added by \$18.6 million, and stimulate labor income by \$11.7 million.

The total economic impacts associated with *Florida Botanical Gardens* between the years 2000 and 2002 are a \$113.9 million increase in output, an increase in employment by 1,584 individuals, a \$61.7 million increase in value-added, and a \$43.1 million increase in labor income (Table 5). The majority of total impacts affiliated with *Florida Botanical Gardens* are influenced by overnight visitor expenditures. Overnight visitor expenditures account for 54% of total output impacts, 64% of employment impacts, 57% of value-added impacts, and 51% of labor income impacts. Construction expenditures represent 38% of total output impacts, 29% of employment impacts, 37% of value-added impacts, and 42% of labor income impacts. Operation expenditures capture 8% of total output impacts, 7% of employment and labor income impacts, and 8% of value-added impacts.

*Gulf Coast Museum of Art* will increase output by \$28.7 million, increase employment by 383 individuals, stimulate value-added by \$15.2 million, and stimulate labor income by \$11 million (Table 5). Overnight visitor expenditures exert the strongest influence on total impacts. Overnight visitor expenditures account for 43% of total output impacts, 53% of employment impacts, 46% of value-added impacts, and 40% of labor income impacts. Construction impacts represent 40% of total output impacts, 32% of employment impacts, 41% of value-added impacts, and 45% of labor income impacts. Operational expenses contribute toward 17% of output impacts, 15% of employment and labor income impacts, and 13% of value-added impacts.

Between the years 2000 and 2002, *Heritage Village* will stimulate output by \$27.6 million, increase employment by 442 jobs, stimulate value-added by \$15.2 million, and increase labor income by \$9.7 million (Table 5). The majority of these impacts originate from overnight-visitor activities. Overnight-visitor expenditures account for

89% of total output, employment, and value-added impacts, and 90% of labor income impacts. Construction activities represent 11% of total output impacts, 8% of employment and value-added impacts, and 10% of labor income impacts.

The *Heritage Village*, *Florida Botanical Gardens*, and *Gulf Coast Museum of Art* attractions collectively will stimulate output by \$170.1 million, increase employment by 2,409 individuals, stimulate value-added by \$92.1 million, and increase labor income by \$63.8 million (Table 6). Many regional industrial sectors will be affected by the existence of these attractions in Pinellas County, Florida. Table 6 lists the 10 existing industrial groupings of the four-county region (representing the aggregation of related sectors) and their associated output, employment, value-added, and labor income impact values between 2000 and 2002. Rankings were determined by ordering output values for each aggregated sector. All values are expressed in year 2000 dollars. Services, trade, and construction industries will receive the strongest impact from the three attractions. All three sectors collectively will account for 78% of total output impacts, 56% of employment impacts, 82% of value-added impacts, and 89% of labor income impacts.

Table 7 lists the economic impacts of 1,000-person-overnight-visitor expenditures in the four-county region. This is presented due to the degree of uncertainty about actual attendance, proportion of visitors as overnight visitors, and proportion of visitor-days per overnight visitor. Total impacts in the four-county region associated with 1,000 annual overnight visitors are an increase in output by \$156.6 thousand, an increase in employment by approximately three individuals, an increase in value-added by \$92.6 thousand, and an increase in labor income by 60.4 thousand (Table 7). The direct economic effects represent 47% of total output impacts, 56% of employment impacts, 42% of value-added impacts, and 41% of labor income impacts. Indirect economic effects account for 13% of output and labor income impacts, 8% of employment impacts, and 14% of value-added impacts. Induced economic effects capture 40% of output impacts, 36% of employment impacts, 44% of value-added impacts, and 46% of labor income impacts.

## Conclusion

This analysis estimated the total economic impacts associated with the *Heritage Village, Florida Botanical Gardens*, and *Florida Gulf Coast Art Museum* attractions. Specifically, the total economic impacts of expenditures on or by overnight visitors, annual operations, and construction between the years 2000 and 2002 were estimated for each attraction. This analysis was restricted to the four-county region of Hillsborough, Hernando, Pinellas, and Pasco Counties, and data assumptions employed in this study were based on information provided by the Pinellas County Cooperative Extension Service. Results revealed that the combined cultural attractions will stimulate output by \$170.1 million, increase employment by 2,409 jobs, stimulate value-added by \$92.1 million, and increase labor income by \$63.8 million between the years 2000 and 2002. Additionally, the annual economic impacts of 1000-person-overnight-visitor expenditures were presented, given some level of uncertainty surrounding actual overnight visitor attendance at each attraction. Each 1,000-person grouping will stimulate output by \$156.6 thousand, increase employment by three jobs, stimulate value-added by \$92.6 thousand, and stimulate labor income by \$60.4 thousand.

**Table 1.** Estimated annual overnight-visitor attendance, operating, and construction expenditures for three cultural attractions in Pinellas County, Florida.

	<i>Heritage Village</i>	<i>Florida Botanical Gardens</i>	<i>Gulf Coast Museum of Art</i>
Estimated Annual Attendance	200,000	250,000	100,000
Visitor Days (adjusted for half-day visitor days, where applicable)	100,000	250,000	50,000
Overnight-Visitor Days (adjusted by 70%)	70,000	175,000	35,000
Annual Operations Costs	\$621,890	\$2,000,000	\$1,000,000
Construction Costs	N/A	\$8,000,000	\$6,500,000

**Table 2.** Local overnight-visitor expenditures per-person day and per-thousand-person day in Pinellas County, Florida.

<b>Expense Item</b>	<b>Amount Per-Person Day</b>	<b>Amount Per-Thousand-Person Day</b>
<b>Total Overnight-Visitor Expenditures</b>	<b>\$75.01</b>	<b>\$75,010</b>
Lodging	\$28.58	\$28,580
Food and Entertainment	\$26.55	\$26,550
Retail Purchases	\$10.28	\$10,280
Rental Cars	\$9.60	\$9,600

Source: St. Petersburg/Clearwater Area Convention and Visitors Bureau, 1998 Annual Visitor Profile by W.J. Klages, Research Data Services, Inc., March 17, 1999.

**Table 3.** Annual direct impacts of construction, operational, and overnight-visitor expenditures associated with the *Heritage Village*, *Florida Botanical Gardens*, and *Gulf Coast Museum of Art* attractions, 2000-2002.

<b>Impacts</b>	<b><i>Heritage Village</i> (\$1,000)</b>	<b><i>Florida Botanical Gardens</i> (\$1,000)</b>	<b><i>Gulf Coast Museum of Art</i> (\$1,000)</b>
Construction	N/A	8,000*	6,500**
Operations	621.9	2,000	1,000
Overnight Visitors	5,250.7	13,126.8	2,625.4

\* Recurring impact throughout the 2000-2002 period.  
\*\* Impact present only during the year 2000.

**Table 4.** Estimated total economic impacts of combined cultural attractions, 2000-2002, by year.

	<b>Output (\$1,000)</b>	<b>Employment (Jobs)</b>	<b>Value-Added (\$1,000)</b>	<b>Labor Income (\$1,000)</b>
<b>Year 2000</b>				
Construction and Operations	31,684.7	343	16,209.0	12,901.6
Overnight Visitors	32,767.9	543	18,591.0	11,640
<b>Year 2001</b>				
Construction and Operations	20,073.2	220	10,044.2	7,996.8
Overnight Visitors	32,767.9	543	18,591.0	11,640
<b>Year 2002</b>				
Construction and Operations	20,073.2	220	10,044.2	7,996.8
Overnight Visitors	32,767.9	543	18,591.0	11,640

**Table 5.** Estimated economic impacts of *Florida Botanical Gardens*, *Gulf Coast Museum of Art*, and *Heritage Village*, 2000-2002.

<b>Facility</b>	<b>Impact Type</b>	<b>Output (Million \$)*</b>	<b>Employment (Jobs)</b>	<b>Value-Added (Million \$)*</b>	<b>Labor Income (Million \$)*</b>
<i>Florida Botanical Gardens</i>	Construction	42.9	454	22.8	18.1
	Operations	9.6	113	4.1	3.2
	Overnight Visitors	61.4	1,017	34.9	21.8
	<b>Total</b>	<b>113.9</b>	<b>1,584</b>	<b>61.8</b>	<b>43.1</b>
<i>Gulf Coast Museum of Art</i>	Construction	11.6	123	6.2	4.9
	Operations	4.8	57	2.0	1.6
	Overnight Visitors	12.3	203	7.0	4.4
	<b>Total</b>	<b>28.7</b>	<b>383</b>	<b>15.2</b>	<b>10.9</b>
<i>Heritage Village</i>	Operations	3.0	35	1.3	1.0
	Overnight Visitors	24.6	407	13.9	8.7
	<b>Total</b>	<b>27.6</b>	<b>442</b>	<b>15.2</b>	<b>9.7</b>
<b>Total Impacts for All Three Facilities</b>		<b>170.2</b>	<b>2,409</b>	<b>92.2</b>	<b>63.7</b>

\* Year 2000 dollars.

**Table 6.** Total impacts ranked by major economic sector for combined cultural attraction construction, operations, and overnight-visitor expenditures, 2000-2002.

Rank	Economic Sector	Output (\$1,000)	Employment (Jobs)	Value-Added (\$1,000)	Labor Income (\$1,000)
1	Services	60,087.4	957.7	34,750.9	26,200.9
2	Trade	40,302.4	984.3	25,414.5	16,737.5
3	Construction	32,233.1	284.3	15,086.4	14,128.5
4	Finance, Insurance, and Real Estate	13,829.2	81.3	10,139.7	2,871.5
5	Institutions	10,986.6	0.0	0.0	0.0
6	Transportation, Communications, and Public Utilities	6,383.7	42.9	3,932.2	1,824.5
7	Manufacturing	4,431.8	30.0	1,538.4	1,064.3
8	Government	1,325.8	7.6	763.7	666.6
9	Agriculture	449.3	11.9	341.8	222.1
11	Mining	6.5	0.1	3.6	0.7
	<b>Total</b>	<b>170,134.5</b>	<b>2,408.6</b>	<b>92,069.9</b>	<b>63,815.3</b>

**Table 7.** Annual impacts of overnight-visitor expenditures on the four-county region per-thousand-overnight-visitors.

	Output (\$1,000)	Employment (Jobs)	Value-Added (\$1,000)	Labor Income (\$1,000)
Direct	74.2	1.4	39.1	25.0
Indirect	20.1	0.2	12.6	7.9
Induced	62.3	0.9	41.0	27.5
<b>Total</b>	<b>156.6</b>	<b>2.5</b>	<b>92.6</b>	<b>60.4</b>