



New Study Shows Zoos and Aquariums Generate Jobs

In big cities and small towns across America, public zoos and aquariums are important generators of jobs and economic activity. A new analysis quantifies this economic activity.

Dr. Stephen Fuller, Dwight Schar Faculty Chair and University Professor and Director of the Center for Regional Analysis at George Mason University prepared the study, *Economic Impact of Zoo and Aquarium Operations and Construction Spending*, which concludes:

“These analyses confirm that the economic impacts of annual spending by AZA’s member zoos and aquariums have benefits that far exceed their initial annual operating and capital outlays and constitute an important source of new income and jobs that extend broadly across the effected economies.”

According to Dr. Fuller’s analysis (attached), zoos and aquariums had the following economic impacts in the United States:

- **\$8.4 billion in economic activity (contribution to U.S. Gross Domestic Product);**
- **\$2.65 billion in personal earnings (taxable income for Federal, state and municipal governments); and**
- **126,000 jobs**

Dr. Fuller further concluded that zoos and aquariums are important job generators during tough economic times:

“Besides their undisputed educational value, zoos and aquariums are a major source of economic activity within the national economy and were a significant source of personal income and employment growth during the height of the Great Recession.”

Economic Impact of Zoo and Aquarium Operations And Construction Spending

Prepared for

The Association of Zoos and Aquariums
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Summary of Research Findings

Spending by Zoos and Aquariums makes an important contribution to the national economy generating new personal earnings and supporting significant employment during the first year of the nation's worst recession since World War II. Analysis of the outlays by 218 member organizations of the Association of Zoos and Aquariums showed that their spending and the subsequent economic impacts this spending generated in the national economy increased 9.3 percent in 2008 compared to their outlays in 2007. These economic impacts included: contributions to the local, state and national economies; new personal earnings (salaries and wages) that accrued to workers residing in the host jurisdictions; and jobs that are supported across the breadth of the local, state and national economies as the initial direct spending by the zoos and aquariums was re-spent and re-cycled in the form of indirect and induced business activities and payroll disbursements.

In 2008, the most recent year for which data are available, AZA member zoos and aquariums spent \$3.262 billion. This spending was divided between operating outlays (these recur annually) and capital outlays (these vary annually according to construction scheduling). Excluded from this direct spending are the outlays of concessionaires that independently provide on-site retail and food services. AZA member organizations spent \$2.47 billion for operations (up 5.6% from 2007) and \$791 million for capital projects (up 23.0% from 2007).

The economic impacts of this direct spending in 2008 are shown in Table 1. The direct outlays by U.S. member zoos and aquariums of \$2.82 billion contributed a total of \$8.4 billion to U.S. GDP, a gain of 10.4 percent, reflecting an aggregate output multiplier of 2.9, generated \$2.65 billion in new personal earnings to the benefit of workers residing in the U.S. and supported 82,074 jobs across all sectors of the U. S. economy in addition to the 44,607 workers directly employed by these zoos and aquariums.

Table 1

Summary of Economic Impacts Generated By
AZA Member Zoos and Aquariums, 2008

| Sources | Direct Outlays | Total Output(1) | Personal Earnings(2) | Jobs Supported(3) |
|---------------|----------------|-----------------|----------------------|-------------------|
| Total US | \$2.893 | \$8.400 | \$2.647 | 82,074 |
| International | \$0.369 | \$0.858 | \$0.264 | 8,118 |
| Total Impacts | \$3.262 | \$9.258 | \$2.911 | 90,192 |

Source: Association of Zoos and Aquariums; GMU Center for Regional Analysis. Notes: (1) the total value of goods and services generated directly and indirectly as a result of annual operating and capital outlays by zoos and aquariums in the US in 2008; (2) the additional earnings generated within the U.S. from outlays for zoos and aquariums in 2008 for operations and capital projects; (3) the additional new jobs supported nationwide by the spending and re-spending of outlays associated with the operation and capital outlays of zoos and aquariums in 2008.

These analyses confirm that the economic impacts of annual spending by AZA’s member zoos and aquariums have benefits that far exceed their initial annual operating and capital outlays and constitute an important source of new income and jobs that extend broadly across the effected economies as this initial spending is re-cycled and re-spent by businesses and residents in the host jurisdictions.

Profile of Zoos and Aquariums

A survey conducted by the Association of Zoos and Aquariums (AZA) of its membership organizations establishes the broad dimensions of their economic importance as a source of business activity. This survey found that the Association’s member organizations had 173.4 million visitors in 2008, holding steady with 2007 attendance levels in spite of the sharp downturn in the economy.

These zoos and aquariums increased their spending on operations and capital improvements a total of 10.4 percent and expanded their paid workforce adding 10,312 new jobs at the same time the nation was experiencing accelerating job losses and a rapid increase in unemployment. These organizations reported operating outlays totaling \$2.47 billion, capital outlays of \$791 million and a total work force of 49,485. Further details of AZA’s economic profile are presented in Table 2.

Table 2

Direct Economic Impacts of Member Organizations,
Association of Zoos and Aquariums, 2008
(dollars in billions)

| AZA Members | Operations | Capital Outlays | Employees | Attendance |
|---------------|------------|-----------------|-----------|-------------|
| United States | \$2.242 | \$0.651 | 44,607 | 160,605,940 |
| Outside U.S. | 0.229 | 0.140 | 4,878 | 12,746,661 |
| Total | \$2.471 | \$0.792 | 49,485 | 173,352,601 |

Source: Association of Zoos and Aquariums, 2009

Economic Impacts of Zoos and Aquariums in the U.S.

The economic impacts of spending by AZA member organizations located in the United States for operations and capital improvements including infrastructure are presented in Table 3.

Table 3

Total Economic Impacts of Member U. S. Organizations
Association of Zoos and Aquariums, 2008
(dollars in billions)

| Source* | Total Output(1) | Personal Earnings(2) | Jobs Supported(3) |
|-------------------|-----------------|----------------------|-------------------|
| Operating Outlays | \$6.368 | \$2.029 | 63,683 |
| Capital Outlays | 2.032 | .618 | 18,391 |
| Total Outlays | \$8.400 | \$2.647 | 82,074 |

Sources: Association of Zoos and Aquariums, GMU Center for Regional Analysis. *Direct outlays from Table 1. Notes: (1) the total value of goods and services generated directly and indirectly as a result of annual operating and capital outlays by zoos and aquariums in the US in 2008; (2) the additional earnings generated within the U.S. from outlays for zoos and aquariums in 2008 for operations and capital projects; (3) the additional new jobs supported nationwide by the spending and re-spending of outlays associated with the operation and capital outlays of zoos and aquariums in 2008.

Total direct spending by AZA member organizations in the United States, for both operations and capital improvements in 2008, totaled \$2.89 billion, an increase of 10.4 percent from 2007. These direct outlays contributed a total of \$8.4 billion to the national economy (Gross Domestic Product) reflecting a combined multiplier (operating outlays and capital—construction—outlays) of 2.904. That is, for each dollar (\$1.00) of outlays by AZA's U.S. member organizations in 2008, an additional \$1.90 was generated to the benefit of the U.S. economy for a total economic impact of \$2.90.

This direct spending by AZA's U.S. member organizations also generated new wages and salaries earned by workers across the breadth of the U.S. economy and supported jobs beyond those of the member organizations. In 2008, the direct and indirect spending impacts of the zoos and aquariums covered by the AZA survey generated new personal earnings of U.S. resident workers totaling \$2.65 billion and supported the full-time equivalent of 82,074 jobs nationwide across all sectors. The combined direct employment of U.S. zoos and aquariums and the jobs supported by their direct and indirect spending in the United States totaled 126,681 jobs in 2008.

Summary of Economic Impacts

Annual spending by zoos and aquariums for operations and capital projects generate significant economic benefits for their host jurisdictions and for the U.S. economy. These benefits build from the initial outlays and grow as these outlays are re-spent across the breadth of the economy. These benefits accumulate and expand the economy's total output as measured by GDP. These benefits also generate new personal earnings to the benefit of workers residing in the host jurisdictions and support job growth locally, regionally and nationally. These benefits contributed to the host economies of these zoos and aquariums as well as to national economy at a time of economic contraction helped to mitigate the full negative impacts of the worsening recession. These economic benefits translated into new personal earnings and new jobs.

The annual outlays of zoos and aquariums for operations and capital improvements have been found to generate a significant return to the U.S. economy in terms of their contribution to Gross Domestic Product (\$2.90 for each \$1 of direct spending), new personal earnings (\$0.92 for each \$1.00 of direct spending) and job growth (28.4 jobs per \$1,000,000 in new direct spending). The \$3.26 billion in total direct outlays by AZA's member zoos and aquariums generated \$9.258 billion in total economic impact with \$8.4 billion of these benefits being captured by the US economy.

This direct spending of \$3.26 billion also generated \$2.9 billion in new personal earnings with \$2.65 billion accruing to workers residing in the U.S. In addition to the 49,485 full and part-time employees of the zoos and aquariums, their annual outlays and their indirect and induced effects supported a total of 90,192 jobs in 2008, a gain of 7,860 jobs from 2007 with 98.5 percent of these new jobs located in the U.S. Besides their undisputed educational value, zoos and aquariums are a major source of economic activity within the national economy and were a significant source of personal income and employment growth during the height of the Great Recession.