

# Economic Impacts from the Minnesota Zoo 2009

Final Report

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## Executive Summary

An estimate was made of the Minnesota Zoo's economic impacts to the 7-county Metro Area using proven input-output impact estimation techniques. Based on the fiscal year 2009 gate totals of 1,355,260 visitors who came to the Zoo, its annual operations and visitors generated \$113.9 million in gross output, over 1,100 jobs and \$61.1 million in value-added to the local Metro economy on an annual basis. Impacts stemming from Zoo asset preservation investments and the multi-phase *Heart of the Zoo* renovation/transformation project are expected to generate \$119.9 million in gross output and \$59 million in value-added.

## Introduction<sup>1</sup>

Located in the southwest Metro community of Apple Valley, Minnesota, Dakota County, the Minnesota Zoo is considered one of the nation's top zoos. Currently caring for 504 species and home to more than 2,400 animals, the Zoo features exhibits such as a tropical rain forest, marine center, northern tundra, woodland forest and a family farm. Further, new Zoo additions like the Minnesota Trail and Russia's Grizzly Coast, which opened in 2008, continue to enhance the facility and visitor experience with a broadening array of opportunities. With its over 1.3 million visitors annually and even more investments in its exhibits and facilities planned in the years ahead, the Minnesota Zoo remains a vibrant and critical educational and recreational attraction for local residents of the 7-county Metropolitan area, as well as for visitors from outside of the local area in Minnesota and beyond.

As a major attraction in the Metro Area, the Zoo can be viewed as an "economic engine." Open 363 days a year, it employs full and part-time workers, purchases a wealth of supplies and services to keep operating, and generates further economic activity as it attracts and provides an on-site experience for all its visiting consumers. This report summarizes an estimate of the nature and significance of this economic activity.

## Background on Metro Area Tourism<sup>2</sup>

According to estimates provided by the Minnesota travel office, Explore Minnesota, Metro travelers spend approximately \$6.2 billion annually, with two-thirds of that spending coming from visitors who stay in the area overnight in local hotels, motels and bed and breakfasts. Service to those travelers across the spectrum of travel and tourism businesses supports nearly 131,200 full-time equivalent jobs. Fifty-one percent of Metro travelers are in the area for pleasure, 13% for conventions or conferences and 20% for business purposes. Average travel party size of Metro visitors is 2.6 with average length-of-stays of 3.5 nights (excluding daytrippers).

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<sup>1</sup> This study updates an economic impact assessment dated October 27, 2007 similarly detailing the effects from 2007 Minnesota Zoo visitors and annual operations on the seven county Metro Area. All descriptive information has been updated with the most current information available for 2009.

<sup>2</sup> Summarized from "The economic impact of expenditures by travelers on Minnesota's Metro Region and the profile of travelers June 2007 – May 2008," Davidson-Peterson Associates, Kennebunk, ME. 2008.

Metro travelers come to consume from, or experience, a dazzling wealth of tourism opportunities in the Metro Area. These opportunities include a wide array of dining and nightlife entertainment choices and shopping that span the Mall of America to other regional malls and specialty arts & crafts. Further, travelers come to visit friends and family in high numbers, while taking in Valley Fair or other amusement or museum offerings, professional sports or participating in recreational activities on area lakes, trails, etc. The context in which tourism operates within the Metro Area is diverse and the Minnesota Zoo is a critically valuable player in the splendid array of choices.

## Terms and Methods

Regional economic impacts are typically described by three components: direct, indirect and induced impacts or effects. Direct impacts are the immediate, first-round expenditures generated as firms or organizations expand production to supply the increased demand of their operation's goods and services. Indirect impacts are the intermediate sales as businesses buy inputs for their productive use. An example of this would include a restaurant replenishing food supplies or hiring services (e.g. accountants). Finally, induced impacts come from increased household income and the resulting expenditures of employees spending earnings in the local economy.

Impact measures typically quantify the following:

- Gross Industry Output – the total value of industry production or receipts
- Employment – annual average full and part-time jobs
- Total Value-added – the dollar value added to the production of intermediate goods and services. It is the total of employee compensation plus self-employment income, plus other property income plus indirect business taxes.

For many industries, products sold or services rendered are from outside of the region being evaluated. Economic effects from sales to visitors of those goods do not accrue to the region's economy and must be deducted from the impact analysis. For retail sales, for example, only the margin of value above the wholesale price benefits, or is "captured" by, the business and region. Typically 60-70% of spending by tourists ends up as final demand within a local area. The model used here handles these considerations and the impacts reflect those adjustments.

For example, if a visitor were to spend \$50 on a Minnesota Zoo memento, part of what was spent went to the company that produced the item. Regardless of whether the item was made in California or Japan, the wholesale cost a retailer paid for that item ends up being subtracted from gross spending, as another economic region received the benefit and not the 7-county Metro Area (or Minnesota). This represents the notion of "leakage." What leaks from the economy is the value of the purchase that did not accrue to local businesses because the memento was not produced locally. In this example, only the retail margin of the item accrues to the local area. If the item were assembled locally from foreign parts, only the value of the foreign parts would be considered leakage from the local economy.

Consequently, direct output or sales reported here only refer to the amount of money remaining in the area and available for re-spending on locally provided goods or services. The more that intermediate inputs to products and services are provided locally, the greater the direct sales levels (less leakage) and the greater the economic impact to the region to be re-spent locally. Further, the more extensive and complete a local area economic base is, the greater the likelihood that direct sales will result in greater local area spending.

Determination of the three components of impact, measured in gross output, employment and total value-added, was done with the help of the IMPLAN<sup>3</sup> model. IMPLAN is based on an input-output method of economic impact estimation that traces commodity flows from producers to intermediate and final consumers. Its level of detail is the county level and it is based on and conforms to the US Department of Commerce Bureau of Economic Analysis conventions for input-output analysis.

A model of the 7-county Metro economy in which the Minnesota Zoo operates was constructed with IMPLAN using the most recent 2008 IMPLAN data set for Minnesota. This included Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington Counties. This model was used to estimate the impact of the Zoo's annual visitors. A necessary consideration, in addition to estimating the proportions of visitors coming from the local area versus outstate or out-of-state, was the amount of daily spending each category of visitors would exhibit. For that, several spending profiles were used, derived from a number of secondary sources, as no on-site data collection from Zoo visitors was attempted.

## **Annual Economic Impacts**

Annual recurring impacts to the local economy from the Zoo come from the day-to-day operations of the facility and the economic activity generated by visitors coming to the facility, spending money on-site and in the surrounding Metro Area.

The Minnesota Zoo had 1,355,260 visitors in FY 2009. In order to estimate the impacts stemming from the economic activity generated in the local economy from these visitors, it is necessary to estimate the numbers and associated spending profiles of these visitors within the categories they fall into:

1. Annual visitors from the surrounding local Metro Area on daytrips
2. Annual visitors from outside the Metro Area on daytrips
3. Annual visitors from outside the Metro Area staying overnight

The Zoo's August 2008 Visitors Survey Report from the Morey Group indicated that approximately 72% of visitors were from the Metro Area and 17% were from outstate

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<sup>3</sup> IMPLAN (IMpact Analysis for PLANning) was originally developed for the USDA Forest Service for land and resource management planning. It is a sophisticated, yet flexible tool that uses microcomputer software and database from federal and state data sources to allow for economic impact assessments and analyses. Refined later by the University of Minnesota, it is now managed and supported internationally by the Minnesota IMPLAN Group, Inc., Stillwater, MN.

Minnesota, leaving 11% of visitors coming from beyond the state’s borders. Of the non-Metro (day) visitors to the Zoo, Morey reported that 41% stayed in the Metro Area while visiting. These values allow us to break down or calculate the annual visits for analysis:

Metro (day) visitors were 72% of the 1,355,260 total, equaling 975,787. Of the non-Metro visitors (379,473), 41% stayed overnight, totaling 155,584 visitors. The remaining were Minnesota visitors from outside the Metro that made daytrips to the Zoo, totaling 223,889.

As no new spending profile information surfaced since the 2007 Zoo impact report, the values used for spending estimates here were based on the 2007 numbers, modified as necessary for current conditions and described below.

### 1. Annual Day Visitors from Metro Area

The 2007 Zoo impact report noted the fact that there was no information about what Metro Area visitors would spend each day on a daytrip Zoo excursion. That report detailed an approach and the resulting estimates for spending and is not repeated here. As nothing new has emerged, the 2007 value of \$15/day per person spread across three categories of spending were used, but adjusted to 2009 conditions. For example, the Zoo’s FY 2009 season spread across the period where national gasoline prices spiked considerably, so local Metro gas price averages were reviewed and a modest (as compared to episodic 2009 gas-price highs) 40% increase was used for this period. The other two categories, shopping and eating/drinking, were inflated using the consumer price index (CPI); the values are presented in Table 1 and the economic impact from these visitors is displayed in Table 2.

**Table 1.** Daily per-person spending profile for 975,787 daytrip visitors from Metro Area.

<b>Spending Category – Daily Visitor</b>	<b>Value (2009 \$)</b>
Transportation	\$7.00
Shopping	\$5.19
Eating & Drinking	\$5.19

**Table 2.** Economic impacts from 975,787 annual daytrip visitors to Metro Area.

<b>Impact Type</b>	<b>Gross Output (\$ millions)</b>	<b>Jobs</b>	<b>Value-added (\$ millions)</b>
<i>Direct</i>	\$7.6	124	\$4.3
<i>Indirect</i>	\$3.2	18	\$1.8
<i>Induced</i>	\$3.4	25	\$2.0
<b>TOTAL</b>	<b>\$14.2</b>	<b>167</b>	<b>\$8.1</b>

## 2. Annual Visitors from Outside Metro Area on Daytrips

The 2007 spending pattern for this category was adjusted using CPI for all categories except transportation. As discussed, gas prices spiked nationally during this period, so the per-person spending was increased by 40%, rather than a CPI inflator. Table 3 displays the 2009 spending estimates and Table 4 shows the economic impacts from these visitors.

**Table 3.** Daily per-person spending profile for 223,889 non-local visitors on daytrips.

Spending Category	Value (2009 \$)
Grocery	\$1.27
Transportation	\$27.78
Shopping	\$24.18
Other Misc. Retail	\$3.77
Other Recreation, Amusement	\$18.55
Eating & Drinking	\$17.20

**Table 4.** Economic impacts from 223,889 annual non-local daytrip visitors.

Impact Type	Gross Output (\$ millions)	Jobs	Value-added (\$ millions)
<i>Direct</i>	\$11.1	219	\$6.0
<i>Indirect</i>	\$5.4	36	\$3.2
<i>Induced</i>	\$5.5	40	\$3.3
<b>TOTAL</b>	<b>\$22.0</b>	<b>295</b>	<b>\$12.5</b>

## 3. Annual Non-local Visitors Staying Overnight

Needed here for an economic impact of visitors remaining in the Metro Area multiple days is an estimate of total visitor-days spent in the area. This analysis gets complicated because we have people who are staying in commercial lodging facilities and others staying with friends and relatives. Both have daily spending in the area and only one of the two groups also spends on lodging.

What we do know from the existing data is that an estimated 155,584 people who visited the Zoo stayed overnight in the Metro Area. The Morey Report indicates an average 2.1 nights spent away from home when averaged across the entire group, but there is no way to know how many went to a hotel/motel and how many stayed with friends or relatives. The Morey Report also indicates that those who stayed in a hotel/motel stayed an average of 1.5 nights and those staying with friends/relatives stayed longer, an average of 3.0 nights. For simplicity in this analysis, a conservative estimate was made that the total of 155,584 visitors would be increased by a factor of 1.5, giving us 233,376 visitor-days for the analysis to estimate the spending of visitors who remain in the area longer than one day. (The consequence of this “conservative” approach means that we are applying a lodging expenditure to all, even though we know that some people stayed with friends/family; this is an overestimation of lodging impacts. It is believed that this will be more than off-set by the fact that, according to Morey,

those staying with friends/family stayed an average of 3 nights in the area, though we are only accounting for 1.5 stays. It is most likely that total economic impacts from this group are being under-reported, mainly because we don't know enough about how this group actually splits between commercial stays and friends/family.) Shown below in Table 5, the spending is the same as those in Table 3, but also includes lodging. The economic impact from these visitors is displayed in Table 6.

**Table 5.** Daily per-person spending profile for 233,376 non-local visitors staying overnight.

<b>Spending Category</b>	<b>Value (2009 \$)</b>
Grocery	\$1.27
Transportation	\$27.78
Shopping	\$24.18
Other Misc. Retail	\$3.77
Other Recreation, Amusement	\$18.55
Lodging	\$32.21
Eating & Drinking	\$17.20

**Table 6.** Economic impacts from 233,376 annual non-local visitors staying overnight.

<b>Impact Type</b>	<b>Gross Output (\$ millions)</b>	<b>Jobs</b>	<b>Value-added (\$ millions)</b>
<i>Direct</i>	\$18.9	309	\$10.8
<i>Indirect</i>	\$8.6	58	\$4.9
<i>Induced</i>	\$9.0	67	\$5.3
<b>TOTAL</b>	<b>\$36.5</b>	<b>434</b>	<b>\$21.0</b>

#### **4. Operations**

Current estimated annual cost of operations for the MN Zoo is \$20.4 million. The economic impact generated from annual operations to the Metro Area is displayed in Table 7.

**Table 7.** Economic impacts from annual operations.

<b>Impact Type</b>	<b>Gross Output (\$ millions)</b>	<b>Jobs</b>	<b>Value-added (\$ millions)</b>
<i>Direct</i>	\$20.4	71	\$7.7
<i>Indirect</i>	\$11.6	67	\$6.3
<i>Induced</i>	\$9.2	68	\$5.4
<b>TOTAL</b>	<b>\$41.2</b>	<b>206</b>	<b>\$19.5</b>

### **One-time Economic Impacts from Construction**

Construction and renovation projects to enhance or preserve Zoo assets stimulate activity in the Metro construction trades and contribute significantly to the local area economy.

In the last report, construction work on the new “Russia’s Grizzly Coast” exhibit at the MN Zoo was an estimated \$30 million project that generated a \$54 million total gross output boost to the area economy by the time the project was completed. This time, there is approximately \$5.2 million in asset preservation work on existing facilities that support the local building trades. Additionally, the “Heart of the Zoo” (HOTZ) renovation and visitor experience enhancement project is being rolled out in three phases spanning more than 36 calendar months. That project alone has an estimated cost totaling \$56.55 million. Table 8 displays the estimated impact from these construction projects. The asset preservation work is expected to occur in the first year, while the HOTZ project will span across three full years and into a fourth partial year.

**Table 8.** Economic impacts from Zoo renovations and new construction.

<b>Construction Year</b>	<b>Gross Output (\$ millions)</b>	<b>Jobs</b>	<b>Value-added (\$ millions)</b>
<i>Year 1 HOTZ</i>	\$31.6	208	\$15.4
<i>Year 2 HOTZ</i>	\$43.2	284	\$21.1
<i>Year 3 HOTZ</i>	\$31.3	206	\$15.3
<i>Year 4 HOTZ</i>	\$8.6	56	\$4.2
<i>Asset Preservation</i>	\$5.2	39	\$3.0
<b>TOTAL</b>	<b>\$119.9</b>	<b>*</b>	<b>\$59.0</b>

(\* Because the HOTZ project will be done in sequential phases across four years, the annual job impacts are not as meaningfully considered and represented as a summed total. While the gross output of all projects total nearly \$120 million, the HOTZ employment impacts are better described contributing to approximately 208 jobs in the Metro Area in year 1, rising to 284 in year 2, down to 206 in year three and ending with 56 jobs as the project ends several months into the fourth year. As the projects are different, HOTZ job impacts in year 1 could be combined with the asset preservation work, supporting 247 job impacts in that year from construction activity in the Metro Area.)

### Summary

The best available data and conservative assumptions were again used to estimate the economic impacts from the Minnesota Zoo for the Twin Cities 7-county Metro Area. Impacts were described for those resulting from the 2009 annual Zoo operations and visitors and from impacts generated by Zoo construction projects that are expected to span across four years.

Impacts that occur on an annual basis from Zoo operations and visitors include:

- \$113.9 million in gross output,
- Over 1,100 jobs, and
- \$61.1 million in value-added.

(The gross output impact of \$113.9 million is the sum of \$72.7 million associated with daily Zoo visitor spending on-site and in the Metro Area and \$41.2 million associated with annual operation of the facility and its effects in the local economy.)



The Minnesota Zoo has a valued tradition of upgrading its facility to meet the ever-changing interests of its clients and, in so doing, stimulates critical economic activity in the local area through construction and renovation projects, most directly in the construction trades and allied industries. The economic impact on the Metro economy related to the current Zoo construction projects is estimated to be \$119.9 million in gross output and \$59 million in value-added. Job impacts begin in the first year support approximately 247 people, rising to a high of 284 jobs in year 2 of the work and ending with roughly 39 jobs in the final, fourth year of construction.

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