

# **Lake Superior Zoo & Fairmount Park** **Planning Report**

Prepared for: City of Duluth

Prepared by: ConsultEcon, Inc.

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# Introduction

The purpose of this report is to document strategic master plan scenarios and their potential operating impact for the Lake Superior Zoo (LSZ). The Executive Summary serves as the formal report, however additional documentation (including memos issued during the course of the project) is included in a series of appendices. This report contains the following sections:

- ◆ **Executive Summary Report**
- ◆ **Appendix A – Lake Superior Zoo/Fairmount Park Planning Group Purposes, Parameters and Exhibit Preferences** – a summary of planning parameters developed by the Lake Superior Zoo/Fairmount Park planning group to guide the development of alternative scenarios.
- ◆ **Appendix B – Review of Baseline Conditions and Market Context** – a description of the LSZ and Fairmount Park; an overview of the resident and tourist market context; a summary of the characteristics of local visitor attractions; a summary of LSZ historic and current operations; and a summary of the Planning Group’s SWOT analysis.
- ◆ **Appendix C – Attraction Trends, Best Practices and Examples of Relevant Projects** – a review of industry trends and success factors.
- ◆ **Appendix D – Lake Superior Zoo Workshop Summary** – summarizes planning workshops held on September 10<sup>th</sup>/11<sup>th</sup> to develop consensus on a proposed suite of capital improvements (core projects) that will best lead to an improved visitor experience at the Zoo with improved financial operating results.
- ◆ **Appendix E – Attendance and Operations Analysis** – a summary of potential operating impact of alternative Zoo master plan scenarios under consideration.

# Assumptions

In preparing this report, the following assumptions were made. This planning project is qualified in its entirety by these assumptions.

1. The size and design of any new Zoo project or program will be appropriate to its market potential, and will serve to create a high-quality, stimulating attraction with broad-based audience appeal and a distinctive image. Additional land uses in Fairmount Park adjacent to the Zoo will be used in a manner advantageous to the success of the Zoo.
2. The LSZ will be competently and effectively managed. An aggressive on-going promotional campaign will be developed and implemented. This marketing program will be targeted to prime visitor markets. The pricing at the Zoo will be consistent with the value offered, and with current prices for other comparable projects/services in the area and nationally.
3. There will be no long-term physical constraints to impede visitors to the facility, such as major construction activity. Changes in economic and social conditions due to events including, but not limited to, major recessions, major environmental problems or disasters that will negatively affect operations and visitation may impact on the results of the findings in this study, including visitor projections.

## Assumptions (continued)

In preparing this report, the following assumptions were made. This planning project is qualified in its entirety by these assumptions.

4. Every reasonable effort has been made in order that the data contained in this study reflect the most accurate and timely information possible, and it is believed to be reliable. This study is based on estimates, assumptions and other information developed by ConsultEcon, Inc. from its independent research efforts, general knowledge of the industry, and consultations with the client and the design team. No responsibility is assumed for inaccuracies in reporting by the client, its agents and representatives, or any other data source used in the preparation of this study. No warranty or representation is made that any of the projected values or results contained in this study will actually be achieved. There will usually be differences between forecasted or projected results and actual results because events and circumstances usually do not occur as expected and there is substantial lag time between project planning and implementation. During this period, on-the-ground conditions can change that may impact actual results. Other factors not considered in the study may also influence actual results.
5. This report will be presented to third parties in its entirety and no abstracting of the report will be made without first obtaining permission of ConsultEcon, Inc., which consent will not be unreasonably withheld.
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7. This report was prepared during June through November 2014. It represents data available at that time.

# Executive Summary

The purpose of this project was to assist the City of Duluth – Lake Superior Zoo/Fairmount Park Planning Group in developing and evaluating strategic master plan alternative capital project scenarios. A statement of Lake Superior Zoo/Fairmount Park Purposes, Parameters, and Preferences as described by the planning group is included in **Appendix A**. This process and project included: reviewing the current and historic operations of the Lake Superior Zoo (LSZ) and Fairmount Park, as well as the market context in which the activities of LSZ are being offered; reviewing the “strengths, weaknesses, opportunities, threats” (SWOT) analysis completed by planning group members and Zoo staff to evaluate opportunities for LSZ moving forward; in similarly scaled markets; reviewing industry best practices and trends; supporting the development of alternative capital investment scenarios to best leverage market opportunities and improve operating impact; evaluating the potential operating impact of alternative capital investment scenarios.

The following summarizes the findings that evolved out of the planning process:

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

A detailed analysis of baseline conditions and market context is included in **Appendix B.**

### Zoo Current and Historical Operating Data

- ◆ Site Context:
  - The Zoo is in an excellent location, just off a major interstate and less than a 10 minute drive from downtown Duluth.
  - The natural beauty of the site and the zoo's location within the larger Fairmount Park presents unique programming and visitor experience opportunities that are easily accessible to visitors to the downtown.
- ◆ Physical Plant and Capital Projects – The Zoo looks tired. There have not been any substantial capital projects built in nearly two decades that have improved the core product/visitor experience and the 2012 flood served as a further setback.

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

### Zoo Current and Historical Operating Data

- ◆ **Attendance Trends** – There has been a long term trend of decline in attendance, from a peak of near 140,000 (1994-1998) . Attendance dropped below 100,000 for the first time in 2007. At the same time, there has been limited reinvestment in the visitor experience. In 2013, attendance was 88,700.
- ◆ **Seasonality** – Zoo is an extremely seasonal operation; with 88% of attendance in the six months between May and October. Further, severe and or inclement weather can impact attendance during peak season, suggesting that indoor...all weather experiences are important.

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

### Zoo Current and Historical Operating Data

- ◆ **Community Support/Zoo History** – In spite of declining attendance and an atrophying visitor experience, membership has grown during the last 5 years and community support for the nearly 100 year old zoo has remained high. The zoo is much loved.
- ◆ **Revenue Trends** – There is earned revenue potential with an enhanced zoo product, better upcharge opportunities as well as food service and retail. At the current per capita ticket revenue of \$7.90 per paid visitor, every incremental 10,000 paid visitors could yield an additional \$79,000 in ticket revenue.
- ◆ **Staff Trends** – Many of the staff at Zoo are relatively new hires, bringing strong experience and new energy to the Zoo (e.g. Zoo's Executive Director was hired within the past year). The Development Director position is currently vacant, and is a position that should be fulfilled as soon as feasible, as there are immediate contributed revenue opportunities to be leveraged.

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

### Zoo Current and Historical Operating Data

- ◆ **Programming** – The education program at the Zoo is strong and there continues to be strong demand both for on-site and off-site programming.
- ◆ **Governance** – In the near term the city and zoo should explore operating efficiencies in an updated operating agreement. In the longer term, the Zoo and City may wish to evaluate full privatization.
  - Currently, operating revenues flow through the City, creating an additional administrative layer that can reduce transaction speed and flexibility of zoo society operations/cash flows. In the near term, the updated operating agreement could address this issue.
  - The City has retained ownership of all physical assets and zoo specimens. Based on the experience of privatization projects nationally, this situation can be a barrier to major fundraising for capital projects from private philanthropic sources as donors are more likely to give to a non-profit organization than a government entity. With a governmental entity owning the physical assets, there will always be uncertainty about future potential uses, which can be unappealing to donors. Organizationally however, for the Zoo to be successful as an independent entity will require the Zoo to substantially strengthen its organizational and board capacity for on-going fundraising and revenue generation. This can take several years.

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

### Resident Market Context

Demographic characteristics of the Resident Market Areas (0- 90 min drive time) include:

- **Modest Scale Market** - total Resident Market Area population in 2014 estimated at 394,600. (176,000 within 30 min.).
- **Low Growth** - population growth of less than 1% between 2014 and 2019– projected at 396,000 (compared to 3.1% in MN, 1.6% in WI, and 3.7% in US ).
- **Moderate Income Levels** - with Median Household Income of \$44,200 (compared to \$58,600 in MN, \$52,200 in WI, \$52,100 in the US)
- **An Older Age Profile** - in the Resident Market than in the State and U.S. with a median age of 42.3 ; 38 in MN, 39 in WI, 38 in US. Note primary market much younger than secondary/tertiary.
- **Declining School Population** - an estimated 54,000 school-age children in the Resident Market Area, with 46% of children residing in the Primary Market Area. School-age children population projected to decrease 2.0% by 2019.

Therefore, increases in population or enhancement in demographic profile are not expected to contribute to improved attendance performance at the Lake Superior Zoo. \* Can however increase market penetration of existing market.

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

### Duluth Tourism Market Context

- ◆ **An Emerging and Growing Adventure/Outdoor Tourism Brand** - In recent years Duluth has emerged as a recognized travel destination built around adventure/outdoor tourism.
- ◆ **Investment Supports Market Growth** - investment in existing and new attractions and infrastructure can support tourism market growth, especially adventure-oriented tourism.
- ◆ **Synergy of Zoo/Fairmount Park Plan** - the evolving status of Duluth as a tourist destination supports the planned initiatives that have been proposed for the repositioning of the Lake Superior Zoo and Fairmount Park.

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

### Duluth Local Attractions

- ◆ **Zoo is Currently a Top Paid Attraction Even In Its Deteriorated State-** and has positive economic impact in the City.
- ◆ **Live Animals and Conservation Mission Key to Current Zoo Positioning-**  
The Zoo's current positioning and novelty within the Duluth market is based on the visitors up-close experiences with animals.
  - Zoos serve as a proxy for travel, allowing intimate experiences with live animals and exotic locales that visitors may otherwise never see. This novelty value combined with a strong conservation mission creates high perceived value for visitors.
  - Looking forward, to maintain this high perceived value and maintain and/or increase attendance and revenues, it will be important for the Lake Superior Zoo to either maintain a collection of animals, and/or create "substitute" visitor experiences that have as high a perceived value, in addition to maintaining its strong conservation focus.

# Executive Summary

## **REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT**

### Summary of Planning Team SWOT

The following four tables summarize responses to a series of SWOT (strengths, weaknesses, opportunities, threats) questions completed by LSZ/Fairmount Park Project Team members as well as Zoo staff.

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

### Summary of Planning Team SWOT

STRENGTHS
<p>Natural beauty of the setting and site.</p>
<p>Access to adjacent Rec. Areas, St. Louis River, Spirit Mtn, trails.</p>
<p>Staff and Leadership</p>
<p>Nearly 90+ Year History in the Community</p>
<p>Educational Programming and Events (with emphasis on strength of Outreach Programming)</p>
<p>Offering Up-close experiences with animals. (specifically charismatic wildlife e.g. grizzly, snow leopard)</p>
<p>Care and Maintenance of Site (what is there is well -cared for in the context of limited resources).</p>

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

### Summary of Planning Team SWOT

#### **WEAKNESSES**

Facilities - some buildings in need of repair, updating, lack of storage, vehicles and other infrastructure in disrepair, parking lot too small for events and buses, Lack of bathrooms and meeting/programming space (as there is strong demand)

Entrance/Access - need a more welcoming entrance, clear wayfinding to zoo and directions.

Exhibits - Lack of multi-sensory/play exhibits, outdated exhibits, empty exhibits, short stay time, cheaper is better mentality to projects, need more exhibits.

Partnership and Community Relations - In need of stronger outreach to the community (business and tourism communities in particular).

Constant changes in planning, plans limit ability of Zoo to move forward with any plans and undermines credibility with funders.

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

### Summary of Planning Team SWOT

#### OPPORTUNITIES

Increased and Expanded Educational Programming - Comprehensive Ed. Program Aligned w/ Public School System and UMD, add more classroom and programming space, distance learning labs + new zoo mobile.

Expanding the location as an outdoor destination/experience - Invest in experiences that combine play and adventure; serve as a hub for St. Louis River Corridor; exhibit elements that emphasize play, adventure, physical challenge, exploration.

Forest Discovery Zone - to capitalize on outdoor experience trend and Duluth branding; active recreation essential to generating new visitation and revenue; outdoor play areas.

Main Building - Repurpose of Main Building for year-round exhibits; need for more indoor exhibits.

Farm Exhibit - less costly to update and popular, change to a 19th c. Northern Minnesota Homestead with heritage livestock breeds.

Travelling Exhibit Space - flexible indoor and outdoor spaces to house indoor exhibits and encourage repeat visitation; add travelling exhibits so there is always something new.

Amphitheater - repurpose polar shores; multi-use amphitheater for plays, music, movies in evening and supporting zoo programming during the day (animal shows).

Other Exhibits That Appeal to All Ages - art/ sculpture garden, botanical garden, conservatory/ arboretum; gardens; bigger and better playground, updated train, butterfly house.

Larger gift shop and café, coffee bar.

Activate the Site Year Round - winter programming and recreation (snowshoeing, sledding); more indoor travelling exhibits; more special events, etc.

# Executive Summary

## REVIEW OF BASELINE CONDITIONS AND MARKET CONTEXT

### Summary of Planning Team SWOT

THREATS
Staff and Leadership - Loss of knowledgeable and committed staff.
Funding - worsening city finances; status quo - lack of capital investment combined with unwillingness to close the zoo; reduced funding from City; dwindling public investment on state level, public perception of 100% funded.
Political Context - Zoo is part of an ever changing political entity, thus difficult to commit to any long-term plan; creating a master plan that will come true, no forward progress, due to no change - lack of credibility.
External Environment - competitors providing new, changing experiences that are four season and all weather; competitors doing a better job of securing funding, many other family activities in Duluth, weather.
Grand Avenue Construction Project
Conservationists and others who do not like Zoos, negative outlooks about zoos
Facilities - brown bear exhibit no longer AZA supported, outdated exhibits.

# Executive Summary

## IMPLICATION OF ATTRACTION TRENDS AND BEST PRACTICES FOR ZOO PLANNING

The follow summarizes visitor attraction industry trends as well as provides examples of smaller footprint zoos with high quality experiences along with examples of visitor experiences relevant to those currently being considered at the Lake Superior Zoo/Fairmount Park. A detailed review of attraction trends is included in **Appendix C**.

- ◆ Many Zoos Are Located Within A Larger Recreation Area/Park Context - This combination of recreation + zoo can help enhance a location as a destination. The concept of building out water and trail access as well as the Forest Discovery Center, in concert with improvements to the core of the Zoo, can serve to brand the area as a signature destination, and in turn enhance overall operating performance at the Zoo.
- ◆ In Cold Climes And In Inclement Weather, It Is Important To Have A Critical Mass Of Indoor Visitor Experiences - The Zoo primarily is a fair weather destination at present. With Duluth being positioned as an outdoor recreation city, competition during fair weather will only increase (e.g. on a sunny day visitors might rather be on the water or hiking outside). Adding a critical mass of high quality indoor experiences will be important. At the same the Zoo and Fairmount Park can mutually benefit from a mix of outdoor recreation experiences with additional indoor attractions.

# Executive Summary

## IMPLICATION OF ATTRACTION TRENDS AND BEST PRACTICES FOR ZOO PLANNING

- ◆ Technology creates opportunities for the Zoo to reach more people with programs and content, broaden audience reach, and extend a visitor's visit.
  - Thus, a visit to the Lake Superior Zoo, can become more than a visit to the site in West Duluth.
  - Outreach programming is a current strength at the Zoo. One way to continue to increase access to Zoo content for the community is to grow this programming, along with community based partnerships and other “pop-up” experiences. The challenge however is that this programming tends to be funded mostly through contributed revenues e.g. corporate sponsorship, grants.

# Executive Summary

## IMPLICATION OF ATTRACTION TRENDS AND BEST PRACTICES FOR ZOO PLANNING

- ◆ Changing content and frequent re-investment in visitor experience are key to successful attraction projects.
  - A key component of the Zoo experience looking forward should be a changing exhibition area. Further, the Zoo is important part of the community fabric in Duluth with a long-standing history. The Zoo currently is one of the most attended attractions in the region (even in its current state), and has economic impact in the City. Looking ahead, there must be a commitment in the long term to continuous improvement and re-investment.
  - Improvements to the Lake Superior Zoo such as new signage, way finding materials, and enhanced entrance features, although much needed. would be considered infrastructure improvements rather than addition of major new product and on their own are not likely to substantially impact the attendance or revenue baseline. The addition of substantial new repeatable experiences that are iconic and marketable, will enhance the overall visitor experience, extend length of stay and improve the attendance and revenue potential of the Zoo.

# Executive Summary

## SUMMARY OF LSZ PROJECT TEAM WORKSHOP

The primary purpose of the Lake Superior Zoo planning workshops on September 10<sup>th</sup>/11<sup>th</sup> was to develop consensus on a proposed suite of capital improvements (core projects) that will best lead to an improved visitor experience at the Zoo with improved financial operating results, as well as the development of a new tourism hub and quality of life improvement in the City. A summary of this workshop is included in **Appendix D**. The process included reviewing Zoo baseline operating conditions as common background for thinking about the future of the Zoo, then, reviewing a suite of capital projects proposed by the Zoo and/or City, developing an order of magnitude planning budget for each, then prioritizing those projects. A key assumption in the workshop was that a capital commitment from the City would range from \$0 to a maximum of \$12 million, and that the maximum budget available from the City was not enough to execute all projects under consideration, at the highest level. It was determined that a zero investment scenario is not feasible as there are acute infrastructure issues that require investment and in addition, there would be substantial decommissioning costs associated with closure of the site to the public should that one day be a consideration.

The workshop occurred with the Lake Superior Zoo/Fairmount Park Planning Group during a two-day period, on location at the Zoo. A substantial amount of prior planning, Zoo design, and cost estimating work has been completed, beginning in 2009. This work was utilized as one input into the workshop.

# Executive Summary

## SUMMARY OF LSZ PROJECT TEAM WORKSHOP

The following summarizes key points that came out of the workshop as well as a list of consensus capital projects:

- ◆ There is market demand for the Zoo as well as incremental revenue potential. The Zoo has a long history in the community, is much loved and has done relatively well in spite of limited investment and resources. Membership has grown during the last 5 years, attendance is up over last year and community support for the nearly 100-year old zoo has remained high although the visitor experience has continued to decay due to deferred maintenance, under-investment and a devastating 2012 flood. Zoo attendance as recent as 1998 was 140,000 vs. 88,000 today, and an analysis of zoos in comparable sized metro areas suggests that there is substantial incremental attendance potential.
- ◆ The Zoo, as one of the key paid tourism attractions in the City currently creates direct and indirect economic impact in the City. Incremental attendance will only add to that impact. Further, an enhanced Zoo will add to the quality of life in West Duluth and the region in general.
- ◆ The Zoo is worthy of support from both the public and private sectors, and at present is not fully leveraging (due to lack of a development director, and asset ownership structure) private sector support in spite of its status as a much loved institution. Visitor experience/content investments could be very attractive to potential private investment/philanthropy.

# Executive Summary

## SUMMARY OF LSZ PROJECT TEAM WORKSHOP

- ◆ Capital investment is needed both to improve core infrastructure and improve the visitor experience. At present, the Zoo suffers from deferred maintenance and damage from the flood. Initial investments to remedy infrastructure, although critical, will not likely positively impact operations as much as investments in core product e.g. exhibits, programs and experiences. In any investment scenario, there is a minimum requirement to cure infrastructure deficiencies.
- ◆ Based on the work of the planning group, there are ways to define the scale/level of investment and timing of the projects proposed depending on cash flows and philanthropic opportunities that supplement the City's capital contribution.
- ◆ A zero investment scenario is not feasible as there are acute infrastructure issues that require investment and in addition, there would be substantial decommissioning costs associated with closure of the site to the public.

# Executive Summary

## SUMMARY OF LSZ PROJECT TEAM WORKSHOP

- ◆ Investments in capital projects at the Zoo have been prioritized in the following way:
  - those projects which remedy immediate infrastructure issues either due to the flood and/or proposed City changes to the Zoo fence line which require relocation of exhibits, etc.;
  - projects which complete those already underway and enhance Zoo entrance visibility and arrival experience (e.g. Grand Avenue entrance project);
  - projects which improve and add indoor (four –season) exhibits/experiences concentrated out of the flood plain and in or near the main building (along the ridge);
  - projects that can substantially upgrade current successful exhibits with modest investment;
  - projects that already have funds committed which fit with the strategic direction of the Zoo.

# Executive Summary

## **SUMMARY OF LSZ PROJECT TEAM WORKSHOP**

*Consensus capital projects that emerged from the workshop include:*

### **Zoo Visitor Experience Improvements**

- ◆ Forest Discovery Zone
- ◆ Repurposed Polar Shores
- ◆ New Brown Bear Exhibit along with Animal Infill Exhibits
- ◆ Main Building Renovation/Expansion
- ◆ Upgraded Primate Conservation Center
- ◆ Upgraded Farm

### **Zoo Infrastructure Improvements**

- ◆ Entrance/Access Improvements At Grand Ave.
- ◆ Zoo Parking Lot and Main Building Entrance Improvements
- ◆ Zoo Wide Signage, Pathway Improvements
- ◆ New Programming Supplies and Materials

# Executive Summary

## SUMMARY OF POTENTIAL OPERATING IMPACTS OF ALTERNATIVE SCENARIOS

The following tables summarize the analysis of the potential operating impact of two different master plan investment scenarios (Scenario 1 and Scenario 2) at the Lake Superior Zoo, as well as an alternative analysis (Scenario 2a) of Scenario 2, that tests free admission to the Zoo for residents of the City of Duluth. Scenario 1 represents a \$12 million capital investment and Scenario 2 represents a \$16 million during a period of 6 years. Detailed analysis and tables for each scenario, as well as descriptions of the projects within the scenario are included in **Appendix E**.

The scenarios evaluated were developed through a workshop with the Lake Superior Zoo/Fairmount Park planning team. The scenarios were designed to respond to opportunities and challenges at the Zoo, and within the regional and attraction industry marketplace, and to position the Zoo such that attendance, revenue and mission impact improve over time. Specifically, the capital investment scenarios:

- ◆ Address blighted areas of the Zoo, specifically Polar Shores damaged by the 2012 flood.

# Executive Summary

## SUMMARY OF POTENTIAL OPERATING IMPACTS OF ALTERNATIVE SCENARIOS

- ◆ Improve the overall baseline visitor experience and increase the appeal of a visit to the Zoo for a broader audience base.
- ◆ Create consistently repeatable experiences and programs that appeal to both existing visitors and new visitors, and offer better indoor opportunities for year-round visitation.
- ◆ Improve Zoo entrance visibility from main access points.
- ◆ Reposition the Zoo – leveraging the growing adventure tourism brand in Duluth and communicating to current and potential visitors that the experience at the Zoo is fun and entertaining. Several of the new attractions planned including Forest Discovery Zone and indoor and outdoor playgrounds, emphasize adventure/active play.

Data in **Table 1** summarizes the alternative capital project scenarios evaluated. Data in **Table 2** shows the proposed budget allocations by project within each scenario. Data in **Table 3** summarizes the operating impacts of the alternative scenarios in a stable year (year 8 of plan improvements) in the current value of the dollar. ***Note that there is no City subsidy shown in the revenue lines and that net income is shown before any subsidy. Note also, that to understand the cumulative operating impact of each scenario it is important to review the detailed tables in Appendix E.***

# Executive Summary

For each scenario, attendance, revenue, and operating expense impacts were analyzed. The analysis of these impacts, development of underlying assumptions, and how each scenario might perform relative to one another and the Lake Superior Zoo's existing baseline is based on a suite of interrelated factors including, but not limited to the following:

- ◆ a general strengthening of the economy and specifically the tourism economy in Duluth, *which suggest that there is general upside potential at the Zoo as more people are traveling, visitor spending is up, etc.*
- ◆ industry experience that suggest that attractions of all types must reinvest to stay competitive, grow baseline revenues and attendance. *Since the Zoo generally has not had any major capital investments in visitor experience for more nearly two decades, and the experience is generally outdated, this suggests that there is substantial upside with any investment in "new" product that enhances the overall visitor experience and attracting power of the Zoo.*
- ◆ the degree to which scenarios: improve the visitor arrival experience and visibility of the main Zoo entrance; improve overall appeal of a visit; improve repeatability (through offering more year-round and changing exhibit experiences); leverage opportunities to view/interact with animals up-close; emphasize improvements with broad appeal; leverage Duluth's growing adventure tourism brand; leverage existing exhibits with strong interest to visitors e.g. farm, Primate Conservation Center; and, improve visitor amenities. *The projects within scenarios are assumed to be designed by a qualified design team to optimize these factors, thus increasing the attracting power of the Zoo, repeatability and increasing visitor length of stay.*

## Executive Summary

- ◆ the historical performance of attendance at the Zoo. *Prior to 2007, the Zoo's annual attendance consistently reached above 100,000, and for a six-year period between 1994 and 2000, attendance consistently reached above 125,000 with a high of 140,000 in 1998. Between 1997 and 1998 there was an 8% jump in attendance with the opening of the Primate Conservation Center. Also between 1993 and 1994 there was a 24% jump in attendance with the renovation of the main building.*
- ◆ level of investment and timing of City investment in destination tourism infrastructure in Fairmount Park. *The assumptions in this analysis assume that the City will implement the planned trailhead concept for Fairmount Park. The implementation of this infrastructure and other trails is assumed to have a positive impact on Zoo attendance and revenues.*
- ◆ the speed at which and the ability of the Zoo to: increase its fundraising capacity through building an active development department led by an experienced development director and, increase the capacity and reach of the board. *This analysis includes funding/expense budget for the hiring of a development director and assumes that the organization will be able to grow its contributed revenues by 30%-40% from 2013 levels during a period of 8 years.*

# Executive Summary

## SUMMARY OF POTENTIAL OPERATING IMPACTS OF ALTERNATIVE SCENARIOS

**Table 1**  
**Lake Superior Zoo**  
**Alternative Capital Project Scenarios**

	<i>Scenario -1</i>	<i>Scenario -2a</i>	<i>Scenario - 2b</i>
<b>Capital Budget</b>	\$12,000,000	\$16,000,000	\$16,000,000
<b>Implementation Timeline</b>	Phased project roll-out over period of 5 years.	" "	" "
<b>Visitor Experience Emphasis</b>	Improvements To High Value Core Facilities to Improve Yr-Round Potential e.g. Main Building, Primate Conservation, Farm + Experiences that Emphasize Active Recreation = Forest DiscoveryZone/Ropes Course, Outdoor Playground, Indoor Playground.	" "	" "
<b>Forest Discovery Zone</b>	2 seasonal ropes/adventure courses + live animal exhibits, interpretation and restrooms	" "	" "
<b>Main Building</b>	Improvements to building infrastructure + addition of several new modest scale exhibits + changing exhibit space.	Improvements to building infrastructure + addition of several new modest scale exhibits + changing exhibit space. Includes small multi-story indoor climbing structure.	Improvements to building infrastructure + addition of several new modest scale exhibits + changing exhibit space. Includes small multi-story indoor climbing structure.
<b>Primate Conservation Center/Farm</b>	Modest Improvements/refresh to Interpretation	" "	" "
<b>Food Service/Retail</b>	Modest Enhancements to Food Service and Retail in Main Building. Seasonal Kiosk Associated with Amphitheater	" "	" "
<b>Scenario 2 Differences</b>	Additional funding for live animal exhibits, indoor playground, higher quality outdoor playground experience, stronger signature bear exhibit, zoo train + higher quality entry/road access improvements increasing visibility.		
<b>Marquee Animal Exhibits</b>	Brown Bear, Lion, Possible relocation of Snow Leopard and other cats, Wolves within Forest Discovery Zone	Similar to Scenario 1 - however, animal in-fill budget allows for new exhibit for big cats.	
<b>Ticketing Strategy</b>	Zoo Only, Forest Discovery Zone Only, Adventure Pass (combination ticket)	Zoo Only, Forest Discovery Zone Only, Adventure Pass (combination ticket)	Zoo Only Free for City of Duluth Residents , Fee for Forest Discovery Zone for All.
<b>Up-Charges (ticket add-ons)</b>	\$8 - Forest Discovery Zone	" "	" "
<b>AZA Fence Line Assumption</b>	See Figure X	" "	" "
<b>Areas of Zoo Not Addressed</b>	Australia	Australia (some modest improvements made as staging area for Forest Discovery Zone)	" "
<b>Other</b>	Tigers would be deaccessioned in all scenarios.	" "	" "

Source: ConsultEcon and Lake Superior Zoo Planning Team - October 2014.

Note: Assumes costs associated with transition of Zoo land to Park land and incremental capital expenses associated with transition, removal of fence and new fence, animal exhibit demo, site work and removal outside fenceline, would be outside of \$12m and \$16m core projects budget.

# Executive Summary

**SUMMARY OF POTENTIAL OPERATING IMPACTS OF ALTERNATIVE SCENARIOS**  
**Table 2**  
**Lake Superior Zoo**  
**Alternative Capital Project Scenarios – Budget Allocations**

1/ Includes ropes course+ several live animal exhibits+ supporting infrastructure e.g. pathways, compost restrooms. Funding commitments totaling \$550,000+ have already been secured toward this project, with strong potential for other private sources. Alternatives 2 and 3 includes \$500,000 toward renovation of Australia exhibit for utilization as staging area for Forest Discovery Zone.

2/Includes enclosure large enough for 3-4 animals (with back of house), natural landscaping, indoor (unconditioned space) viewing area, modest exhibits + play elements + interpretation. It is assumed that some of the existing infrastructure from the Tiger exhibit would be utilized. If a AZA approved bear exhibit is possible within a \$2m budget, it is recommended that in Scenario 2, a \$1m is reallocated to the main building improvements and/or renovation of Australia to accommodate staff offices that may be relocated from the Main Building.

3/ Includes an estimated \$1M-\$1.5M in main building infrastructure improvements e.g roof. with the balance as substantive content/functionality improvements including addition of several modest but impactful exhibits, and changing exhibit space. To accommodate a changing exhibit space within the footprint of the main building would require re-location of some other use within the building e.g. staff offices or education programming space. A minimum of 2,000 SF for a changing exhibit gallery is recommended.

4/ Assumes multi-story climbing structure built into main building experience.

5/Includes refresh of interpretation only and a new orientation sign/experience at entry.

6/ Provides for small addition to built environment, refresh and new interpretation or exhibit or play element.

7/ Includes replacing and upgrading outdoor playground located adjacent to the current Polar Shores exhibit.

8/ Provides for new, modest enclosures with limited infrastructure and exhibits/interpretation for several small to medium size animals that require relocation due to changes in fence line and other capital improvements.

9/ Includes an estimated \$500,000 - \$600,000 in demolition, removal costs for existing facilities + stage, sitework, amphitheater landscaping + destination wildlife themed playground.

10/ Includes: main entrance signature sign, banners, ornamental landscaping, etc.

11/ Includes new/ resurfaced pathways where needed, new wayfinding and exhibit signs. In Alt#2 includes reconfigure of route for Zoo train.

12/Includes adding parking lines, adding banners + signage at Zoo main bldg. entry.

13/ Includes ZooMobile, start-up supplies for signature zoo live animal program in amphitheater.

CORE PROJECTS	ILLUSTRATIVE CAPITAL BUDGET (\$)	
	Scenario -1	Scenario -2
<b>Zoo Visitor Experience (Core Product)</b>		
Forest Discovery Zone 1/	\$1,750,000	\$2,000,000
Brown Bear Exhibit 2/	\$2,000,000	\$3,000,000
Renovation/Expansion of Main Bldg. 3/	\$4,000,000	\$4,300,000
Multi-Story Indoor Playground 4/		\$350,000
Primate Conservation Center & Nocturnal Bldg. 5/	\$250,000	\$350,000
Farm 6/	\$250,000	\$350,000
Outdoor Themed Destination Playground 7/	\$250,000	\$500,000
Animal In-fill exhibits 8/	\$500,000	\$1,300,000
<b>Subtotal</b>	<b>\$9,000,000</b>	<b>\$12,150,000</b>
<b>Zoo Infrastructure</b>		
Repurposing Polar Shores 9/	\$1,000,000	\$1,000,000
Entrance Improvements (along Grand Avenue). 10/	\$100,000	\$175,000
Zoo Site-Wide Improvements	\$200,000	\$200,000
Reconfigure Zoo Train Route		\$200,000
Visitor Arrival Improvements/Parking Lot Improvements 12/	\$100,000	\$150,000
<b>Subtotal</b>	<b>\$1,400,000</b>	<b>\$1,725,000</b>
<b>Programming</b>		
Programming Supplies & Materials 13/	\$50,000	\$75,000
<b>Contingency at 15%</b>	<b>\$1,567,500</b>	<b>\$2,092,500</b>
<b>Total</b>	<b>\$12,017,500</b>	<b>\$16,042,500</b>
<b>Rounded</b>	<b>\$12,000,000</b>	<b>\$16,000,000</b>

Source: Lake Superior Zoo Planning Team Workshop - September 2014. Revised October 2014.

# Executive Summary

## SUMMARY OF POTENTIAL OPERATING IMPACTS OF ALTERNATIVE SCENARIOS

**Table 3**  
**Lake Superior Zoo**  
**Potential Operating Impacts of Alternative Capital Project Scenarios**

Plan Scenario	Stable Year 8 Value (in current dollars)			Baseline	% Change Baseline to Scenario 1	% Change Baseline to Scenario 2	% Change Baseline to Scenario 2a
	Scenario 1	Scenario 2	Scenario 2a				
<b>Capital Investment</b>	\$12,000,000	\$16,000,000	\$16,000,000				
<b>Attendance</b>	112,907	121,418	155,494	88,694	27%	37%	75%
<b>Memberships</b>	2,738	3,029	2,455	2,189	25%	38%	12%
<b>Per Capital Admissions Revenue</b>	\$8.68	\$8.89	\$6.33	\$5.52	57%	61%	15%
<b>Earned Revenue</b>							
Admissions	\$980,000	\$1,079,300	\$984,800	\$489,700	100%	120%	101%
Gift Shop (Gross)	\$225,300	\$255,300	\$306,500	\$124,600	81%	105%	146%
Education Program Revenue	\$92,100	\$100,000	\$118,800	\$47,300	95%	111%	151%
Food Service (Gross)	\$158,800	\$175,800	\$210,800	\$57,600	176%	205%	266%
Special Event Sales	\$4,600	\$5,100	\$6,600	\$2,000	130%	155%	230%
Depot Sales (Gross)	\$29,900	\$37,300	\$47,700	\$18,300	63%	104%	161%
Membership	\$241,900	\$280,300	\$227,200	\$143,000	69%	96%	59%
<b>Total Earned Revenue</b>	<b>\$1,732,600</b>	<b>\$1,933,100</b>	<b>\$1,902,400</b>	<b>\$882,500</b>	96%	119%	116%
<b>Contributed Revenue</b>	\$521,900	\$521,900	\$541,900	\$389,300	34%	34%	39%
<b>Expenditures</b>							
<i>Personnel and Contract Services</i>							
Payroll Expenses, Employee Insurance and Taxes	\$1,410,200	\$1,441,100	\$1,469,400	\$1,118,100	26%	29%	31%
LSZ - Staff Devlpmt & Training	\$13,500	\$13,500	\$13,500	\$12,200	11%	11%	11%
Outside & Contract Services	\$57,600	\$57,600	\$59,900	\$54,900	5%	5%	9%
Employee Misc Expense	\$100	\$100	\$100	\$100	0%	0%	0%
<i>Non Personnel</i>							
Zoo Services	\$108,000	\$111,300	\$111,300	\$111,300	-3%	0%	0%
Utilities	\$114,600	\$114,600	\$114,600	\$122,000	-6%	-6%	-6%
Marketing	\$139,700	\$139,700	\$139,700	\$110,100	27%	27%	27%
Building and Grounds	\$6,600	\$6,600	\$6,800	\$6,200	6%	6%	10%
Repairs and Maintenance	\$67,700	\$69,100	\$69,800	\$65,900	3%	5%	6%
Other Non-Personnel Expenses	\$279,200	\$284,800	\$287,600	\$265,800	5%	7%	8%
<b>Total Operating Expenses</b>	<b>\$2,197,200</b>	<b>\$2,238,400</b>	<b>\$2,272,700</b>	<b>\$1,866,600</b>	18%	20%	22%
<b>Net Income Before Exhibit Reinvestment 1/</b>	<b>\$57,300</b>	<b>\$216,600</b>	<b>\$171,600</b>	<b>(\$594,800)</b>			
<b>Percent Earned Revenue of Operating Expenses</b>	78.9%	86.4%	83.7%	47.3%			
<i>Recommended Exhibit Replacement/Capital Improvements 2/</i>							
	\$575,000	\$575,000	\$575,000	\$381,900			
<b>Net Income After Capital Reinvestment (w/o City Operating Subsidy)</b>	<b>(\$517,700)</b>	<b>(\$358,400)</b>	<b>(\$403,400)</b>	<b>(\$976,700)</b>			

Source: ConsultEcon and Lake Superior Zoo Planning Team - October 2014.

Note: All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation. Revenues and Expenses rounded to the nearest 'hundredth'.

1/ Does not include City Subsidy. Net income is before required capital reinvestment in exhibits, visitor experience, repairs.

2/ Includes annual changing exhibit budget, exhibit refresh/repair (every other year), and other minor capital repair.

# Executive Summary

## SUMMARY OF POTENTIAL OPERATING IMPACTS OF ALTERNATIVE SCENARIOS

Data in Table 3 shows a comparison of the estimated Net Income by scenario in current value of the dollar for Year 8. **Note, these totals are shown after including a recommended capital expenditures budget for large repairs and reinvestment in visitor experience (exhibits).** It is anticipated that the on-going capital expenditure budget would decrease with investment in the facility to correct current facility deficiencies and improve visitor experience. However, it is assumed that since some areas of the Zoo e.g. Australia are not being fully addressed with these investments, that there still would need to be a sizeable (but lower than current levels) capital expenditures budgeted. **Further, it is critical to future attendance and revenue outcomes to continuously reinvest in visitor experience as indicated by the exhibit replacement/capital improvement line item in Table 3.**

All three scenarios result in substantially more revenue for the Zoo and as a result decrease the need for operating subsidy from the City. Scenario 2 realizes the highest positive impact followed by Scenario 2a, and Scenario 1. In Scenario 1 for example the total subsidy required during an 8 year period is \$4.1 million vs. \$5.4 million if the City continued to contribute \$670,000 annually. Annualized this is a savings to the City of \$152,000 annually. Likewise in Scenario 2, the savings is estimated at \$268,000 annualized or \$2.1 million cumulatively during a period of 8 years.

## **APPENDIX A**

# **Lake Superior Zoo/Fairmount Park Project Parameters, Purposes and Facility Development Principles**

Prepared by: Lake Superior Zoo/Fairmount Park

Planning Group

August 21, 2014

# Purposes

**For the 2014 work of the Zoo/Fairmount Park Planning Group to develop Zoo/Fairmount Park facility plans, the purposes of the zoo and park facilities are assumed to be:**

**1. Advance shared environmental learning and sustainability goals.**

- ◆ Zoo and park facilities envisioned in the plans will provide up close experiences with wildlife and nature which inspire connection to wildlife and nature and actions toward conservation in our region and around the world.

**2. Achieve long-term financial sustainability for the City and the Society.**

- ◆ Plans shall provide for a strong LSZS business model that, to the extent permitted by our other agreed upon purposes, maximizes operational efficiency and generation of earned and contributed income.
- ◆ Plans shall decrease the long-term capital liability for zoo facilities to a financially sustainable level enabling more prompt and full funding of ongoing capital maintenance.

**3. Meet rigorous professional standards for zoo operations and retain AZA accreditation.**

- ◆ Plans shall enable LSZS to continue meeting rigorous AZA accreditation standards for animal welfare, veterinary care, wildlife conservation, scientific research, education, professional staffing, and safety.
- ◆ Plans shall enable LSZS to continue meeting USDA requirements.

**4. Improve accessibility and connectivity of the zoo/Fairmount Park and the community**

- ◆ The goal is to establish free and unobstructed public access to sizable areas of Fairmount Park along lower Kingsbury Creek from adequately sized and located parking lots, the Western Waterfront Trail, Superior Hiking Trail, Duluth Traverse, the DWP Trail, and the surrounding neighborhoods.

## Purposes (continued)

### **5. Strengthen the zoo and park as tourist attractions**

- ◆ Plans shall support increased tourist visitation and expenditures in Duluth in general and the St. Louis River Corridor specifically.

### **6. Improve neighborhood quality of life**

- ◆ Plans shall add real and perceived value to quality of life in the St. Louis River neighborhoods for existing and prospective residents.

### **7. Contribute to the development of a tourism hub in the Lake Superior Zoo/Fairmount Park/Spirit Mountain/Indian Point Campground area**

- ◆ Plans shall contribute to the creation of an integrated and appealing outdoor learning and environmental recreation experience throughout the hub area for tourists and residents alike.

### **8. Improve the effectiveness and efficiency of vehicular and pedestrian flow for visitors and LSZS personnel.**

- ◆ Plans shall improve the flow of visitors from Grand Avenue into the zoo parking lot, into the zoo gate, through the zoo, and between Fairmount Park, the zoo, and surrounding neighborhoods, trails, and parks.
- ◆ Plans shall maximize the effectiveness, efficiency, and safety with which LSZS moves personnel, materials, and animals within the zoo and between the zoo and the Animal Care Center.

# Parameters

**The 2014 work of the Zoo/Fairmount Park Planning Group to develop Zoo/Fairmount Park facility plans shall be informed and constrained by the following parameters:**

## **1.Capital Funding**

- ◆ Plans shall assume the availability of a total of \$0-to-\$12 million dollars in capital funding from all sources – federal, state, local, and private – for the six-year period from 2015-to-2020. Actual funding levels will depend on the perceived merit of the final facility plan and the City/LSZS partnership responsible for implementing it.

## **2.Operational Funding**

- ◆ For the purposes of modeling the financial performance of different facility scenarios, plans shall assume that the City will continue to annually provide \$510,000 from tourism tax revenues to LSZS for operation and maintenance of the zoo.
- ◆ Plans shall assume that the City will continue to convey State of Minnesota annual operating support for zoos to LSZS. In 2014, state operating support for Duluth’s zoo was \$160,000.

## Parameters (continued)

### 3. Zoo Footprint – Animal Perimeter Fence and Zoo Operating Area

- ◆ Unless and until the planning team identifies another way to increase accessibility and connectivity per Purpose #4, all plans shall assume that, with the exception of the Willard Munger Animal Care Center (ACC), the southwest portion of Fairmount Park bounded by Grand Avenue, N. 74<sup>th</sup> Avenue West, Coleman Street, Kingsbury Creek, and its western tributary shall no longer be within the zoo's animal fence or operating area. (See Exhibit A.)
- ◆ All plans shall assume that the Willard Munger Animal Care Center will remain the zoo's primary veterinary medical care site with site security improvements necessary to retain AZA accreditation and USDA licensure.
- ◆ All plans shall assume that the area of the former Polar Shores exhibit and current playground shall have dual park and zoo uses (see Exhibit A).

# Facility Development Principles

The Fall 2014 work of the Zoo/Fairmount Park Planning Group to develop Zoo/Fairmount Park facility plans shall be informed, but in no way restricted, by emergent agreement between the City and LSZS about the desirability of the following facility development principles:

1. Integrate facilities functionally, programmatically, and spatially so that park, adventure, outdoor recreation, play, animal exhibit, and education facilities function smoothly together and complement each other.
2. Integrate play, adventure, and outdoor recreation facilities that combine destination appeal and educational impact.
3. Design all facilities to powerfully reflect the zoo and park's unique place – lower Kingsbury Creek, Kingsbury Bay and the St. Louis River, the St. Louis River Corridor neighborhoods, Duluth, northeast Minnesota, and the upper Midwest.
4. Focus on facilities that engage a wide variety of visitors – diverse in age, race, residence, socio-economic status, etc. – via a wide variety of multi-sensory, interactive experiential and educational modalities.
5. Provide flexible indoor and outdoor spaces for new and/or travelling exhibits.
6. Maximize the efficiency of the building and land used by moderately reducing unused/unprogrammed space.

## **APPENDIX B**

# **Baseline Conditions Memorandum**

Prepared for: City of Duluth

Prepared by: ConsultEcon, Inc.

September 8, 2014

## ConsultEcon, Inc.

- ◆ ConsultEcon, Inc. (CEI) was founded to provide strategic business planning services to non-profit, governmental and for-profit clients in the areas of project and plan concept development, market and financial feasibility evaluation, and implementation with a particular focus on visitor attractions and tourism development. The staff of CEI has completed more than 800 projects including strategic business plans; master plans; market research reports; financial feasibility studies; evaluation of earned revenue strategies; operations analyses; and economic impact studies. The firm was founded in 1991 as The Office of Thomas J. Martin and renamed ConsultEcon, Inc. in January 2001 and is headquartered in Cambridge, MA. We have completed projects for clients both domestically and throughout the world.
- ◆ The senior staff at ConsultEcon has many years of experience serving a wide range of clients. Our substantial knowledge of market, financial and operational issues of visitor venue projects nationally and internationally is the basis for our work. Our ongoing work and more than 3,000 project reference files provide a large body of information from which to draw comparable experiences, operating factors, and to identify the approaches that are most effective. More information about the firm can be found on our web site, [www.consultecon.com](http://www.consultecon.com).

# Executive Summary

The following memorandum summarizes baseline research about the Lake Superior Zoo, located in Fairmount Park, as input into the strategic master planning process. This baseline conditions “memorandum” includes: an overview of the site and current facility context, a review of visitation and operations data from the Zoo, and a summary of the characteristics of both the resident and tourism markets available to support Zoo programs and services. A summary of findings follows.

# Executive Summary

## SITE CONTEXT AND EXISTING CONDITIONS

- ◆ The Zoo is located a short distance from I-35 which provides access from the Twin Cities and visitors from the south to Duluth (2.5 hr. drive). The northern terminus of I-35 is Duluth. Duluth is a central place in the region and is part of a bi-state metro area. The Zoo is less than a 10 minute drive from downtown Duluth.
- ◆ The natural beauty of the site and the zoo's location within the larger Fairmount Park presents unique programming and visitor experience opportunities that are easily accessible to visitors to the downtown. For example, visitors to Duluth can have both an urban and a unique natural experience in a day trip.
- ◆ The Lake Superior Zoo can be characterized as a small Zoo with a modest number of dated exhibits and visitor amenities. The zoo suffered substantial damage due to a 2012 flood that led to closure of facilities (including the signature Polar Shores exhibit at the center of the zoo) that remain off limits to the public and not used for zoo operations. This event further degraded the visitor experience.
- ◆ Substantial planning constraints include:
  - 54% of the current Zoo boundary is located within a floodplain, limiting developable area (particularly for live animal exhibits),
  - The zoo's location in a residential neighborhood which may limit parking and other activities; and there may be neighborhood complaints stemming from the zoo expansion's expansion, activities, operations and/or traffic.

# Executive Summary

## SITE CONTEXT AND EXISTING CONDITIONS

- ◆ In addition to improving the overall exhibits at the zoo, the zoo's visitor arrival sequence needs improvement visibility and access, improve residential connectivity and minimize potential conflict between potential future residential, zoo and other recreational and commercial uses.
- ◆ The Zoo's Master Plan was originally established in 2010 and has since been updated with multiple consultant and city plans for projects. However it requires strategic repositioning to address future flooding potential. Major facilities should be built out of the flood plain according to standards for animal care as specified by AZA.
- ◆ Because the condemned former signature Polar Shores exhibit is in the basin of the 100 year flood plain, the most recent reconstruction plans have focused on rebuilding the "Heart of the Zoo" with an amphitheater and Bear Territory estimated at \$8.2 million.
- ◆ There are also further planning opportunities to create more business activity through expanded zoo concession and/or new private operators in Forest Discovery Zone or in other areas in Fairmount Park, and Indian Point Park.
- ◆ There are further planning opportunities to position Zoo, Fairmount Park, and Indian Point Park as a multi-modal transit and recreational hub in the Duluth region by connecting to trail systems, facilitating multi-modal transfers, encouraging exercise, and offering natural and live animal experiences.
- ◆ If executed properly, a major capital project that would improve the visitor experience is likely to result in positive operating impact.

# Executive Summary

## REVIEW OF VISITATION AND OPERATIONS DATA

- ◆ **Governance** – In 2009, the City of Duluth transferred management and day to day operations to the private, non-profit - Lake Superior Zoological Society. The City has retained ownership of all physical assets and zoo specimens. The result is that The zoo society must pay for capital repairs and maintenance out of its annual operating budget. Based on the experience of privatization projects nationally, this situation can be a barrier to major fundraising for capital projects from private philanthropic sources. In addition, operating revenues flow through the City, creating an additional administrative layer that can reduce transaction speed and flexibility of zoo society operations/cash flows.
- ◆ **Facility Program** – Spread over 25 acres, the Lake Superior Zoo has approximately 400 animals representing approximately 200 species, including 89,711 GSF of outdoor animal exhibits and 43,475 GSF of indoor building area, with 144 parking spaces.
- ◆ **Capital Projects** – There have not been any substantial capital projects built during the past decade that have positively impacted zoo attendance. Due to 2012 flood and reconstruction planning, there have been many plans with limited investment.

# Executive Summary

## REVIEW OF VISITATION AND OPERATIONS DATA

- ◆ **Attendance Trends** – There is a long term trend of decline in attendance. The zoos' peak attendance was near 140,000 in 1994 and in 1998. Attendance dropped below 100,000 for the first time in 2007. Over the past five years, attendance has ranged between 74,000 and 103,000, for an annual average of 89,000.
- ◆ **Seasonality** – Zoo is an extremely seasonal operation; with 88% of attendance in the six months between May and October. Further, severe weather impacts attendance due to facility closures. The new indoor facilities would help to expand off season visitation and provide additional reasons to visit during peak season.

# Executive Summary

## REVIEW OF VISITATION AND OPERATIONS DATA

- ◆ **Revenue Trends** – On average, the zoo earns 50% of its revenue and receives the balance from non-earned sources of revenue which are composed largely of City contributions. Between 2011 and 2013 total revenue increased about 8%. The city contribution has been stable; donations and memberships have increased, but earned revenues are down about 2.5%.
- ◆ **Staff Trends** – There are currently 43.75 full time equivalent positions at the zoo including 26 full time positions and 35.5 part time and seasonal positions. The Zoo's Executive Director was hired within the past year and the Development Director position is currently vacant.
- ◆ **Operating Expense Trends** – The 3-year average zoo expense is just under \$2.0 million, with 58% of it due to payroll expense and contract services. Other than payroll, the largest expense categories include: Zoo Services, Zoo Legacy Expense, Utilities, Marketing and Major Improvements. Operating Expenses increased 11% between 2011 and 2013.

# Executive Summary

## RESIDENT MARKET CONTEXT

- ◆ The Resident Market Areas for the Lake Superior Zoo are defined as: Primary Resident Market – the population within a 30-minute drive time of Lake Superior Zoo; Secondary Resident Market – 30 to 60-minute drive time; Tertiary Resident Market – 60 to 90-minute drive time.
- ◆ Demographic characteristics of the Resident Market Areas include:
  - Total Resident Market Area population in 2014 estimated at 394,600.
  - Population growth of less than 1% between 2014 and 2019– projected at 396,000.
  - Moderate income levels with Median Household Income of \$44,200 - 85% of the U.S. as a whole.
  - A somewhat older age profile in the Resident Market than in the State and U.S. at a median age of 42.3; which is 12% above the median for the U.S.
  - In 2014, an estimated 54,000 school-age children in the Resident Market Area, with 46% of children residing in the Primary Market Area. School-age children population projected to decrease very slightly by 2019.
- ◆ Therefore increases in population or enhancement in demographic profile are not expected to contribute to improved attendance performance at the Lake Superior Zoo.

# Executive Summary

## TOURIST MARKET CONTEXT

- ◆ In recent years Duluth has emerged as a travel destination in the Northeast Region of Minnesota, the Northwest Region of Wisconsin, and the State of Minnesota as a whole.
- ◆ Once an industrially-oriented city that was largely considered a “drive-by,” Duluth has become a destination in its own right, with a tourism character built around the natural beauty of Lake Superior and the adventurous spirit of the area.
- ◆ Duluth is also getting more attention in the adventure tourism industry on a national level, being selected in June 2014 by Outside Magazine as the “Best Town in America.” In March 2013, it was selected as the runner-up in the “Best Adventure Hub” category for Outside’s Travel Awards, behind Kununurra, Australia.
- ◆ Approximately 2.9 million out of an estimated 3.5 million visitors to Duluth visit for leisure purposes.
- ◆ Investment in Duluth’s tourist infrastructure and marketing, especially related to active and adventure tourism will further increase tourism activity to the city and allow it to continue gaining momentum as a destination for the region and beyond.

# Executive Summary

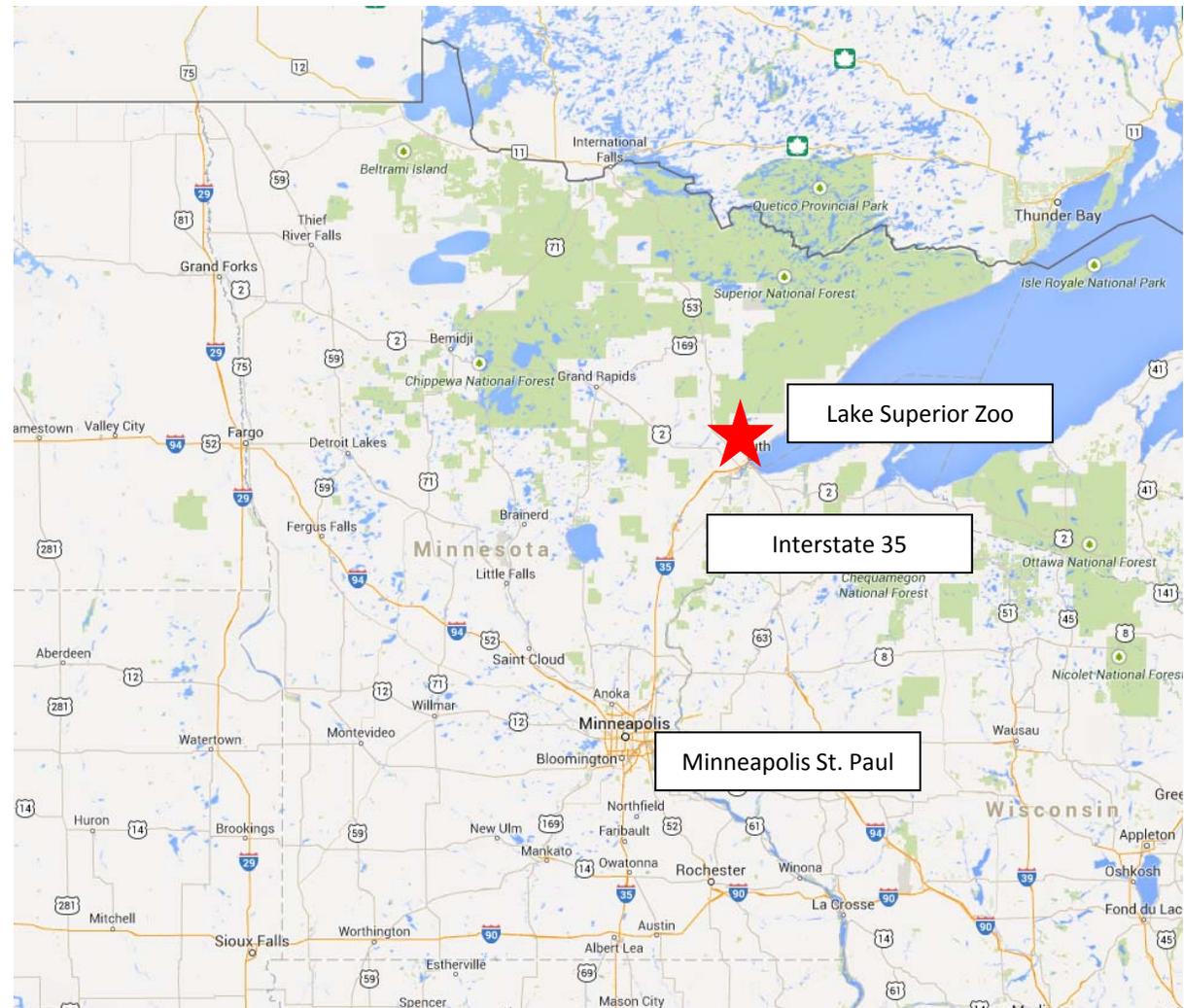
## LOCAL ATTRACTIONS CONTEXT

- ◆ Investment in existing and new attraction has supported the enhanced level of tourism, especially adventure-oriented tourism, in Duluth.
- ◆ The result of these investments indicate additional opportunity for outdoor- and adventure-oriented visitor experiences in Duluth.
- ◆ Based on trends in tourism activity, appropriate new investments in targeted visitor experiences will support the continued development of Duluth as a regional destination for adventure tourism.

# Site Context and Existing Conditions

## REGIONAL CONTEXT

- ◆ Duluth is within 2.5 hours drive of Minneapolis St. Paul Metro Area.
- ◆ Interstate 35 is major access route from Minneapolis St. Paul and other US point south that terminates in Duluth.
- ◆ Duluth is part of a bi-state metro area that straddles Minnesota and Wisconsin.



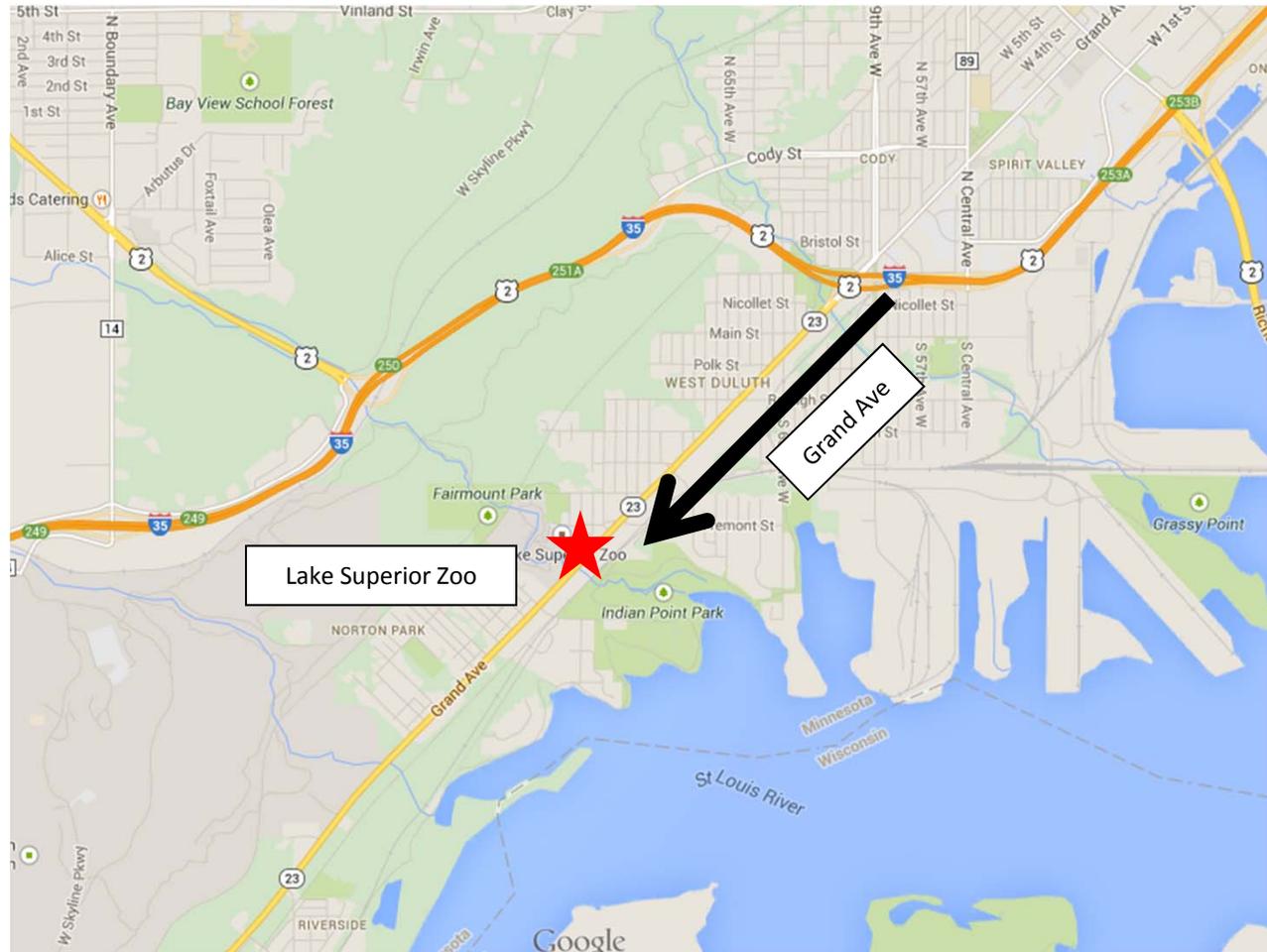
Source: ESRI and ConsultEcon, Inc.

# Site Context and Existing Conditions

Street Map of Duluth Area

**CITY CONTEXT**

- ◆ The Zoo is easily accessible off of I-35, and is less than a 10 minute drive from the center of downtown Duluth.



Source: ESRI and ConsultEcon, Inc.

# Site Context and Existing Conditions

## NEIGHBORHOOD CONTEXT

- ◆ Zoo is located in largely residential neighborhoods to the north and the south in the West End.

Street Map of Zoo Area



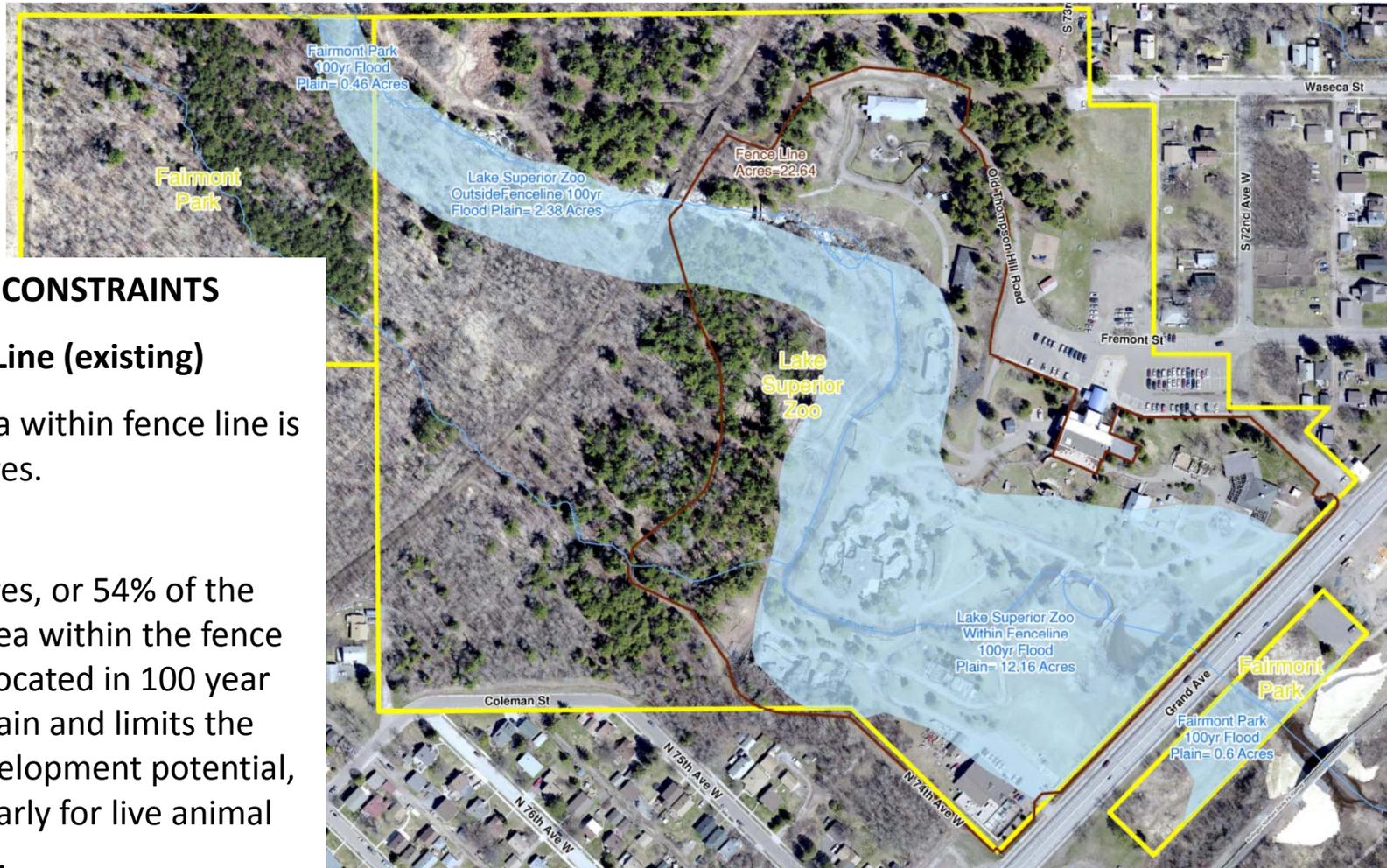
**Residential Use**

Source: Google Maps and ConsultEcon, Inc.



# Site Context and Existing Conditions

Aerial Photograph with Fairmount Park Boundaries, Zoo Fence Line and Current Flood Plain



## PLANNING CONSTRAINTS

### Zoo Fence Line (existing)

- ◆ Zoo area within fence line is 22.6 acres.

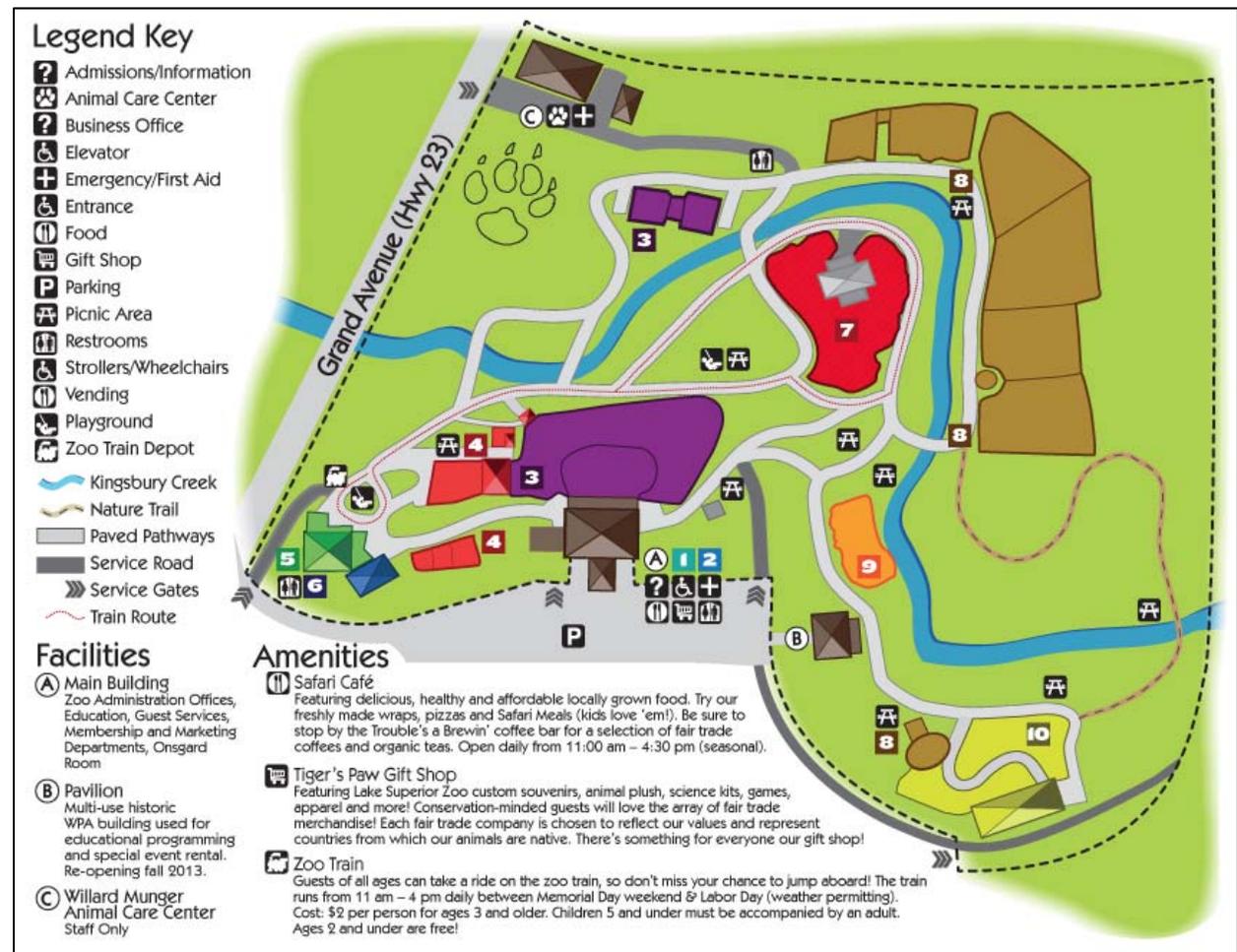
### Flood Plain

- ◆ 12.2 acres, or 54% of the zoo's area within the fence line, is located in 100 year flood plain and limits the zoo development potential, particularly for live animal exhibits.

# Site Context and Existing Conditions

## ZOO VISITOR MAP AND EXPERIENCE PRE-FLOOD

- ◆ Lake Superior Zoo has approximately 400 animals representing approximately 200 species.
- ◆ The signature Polar Shores exhibit is closed due to damage sustained during the 2012 flood.
- ◆ Zoo visitor amenities include café, retail store and vending machines.
- ◆ The Zoo train is a paid add-on experience.



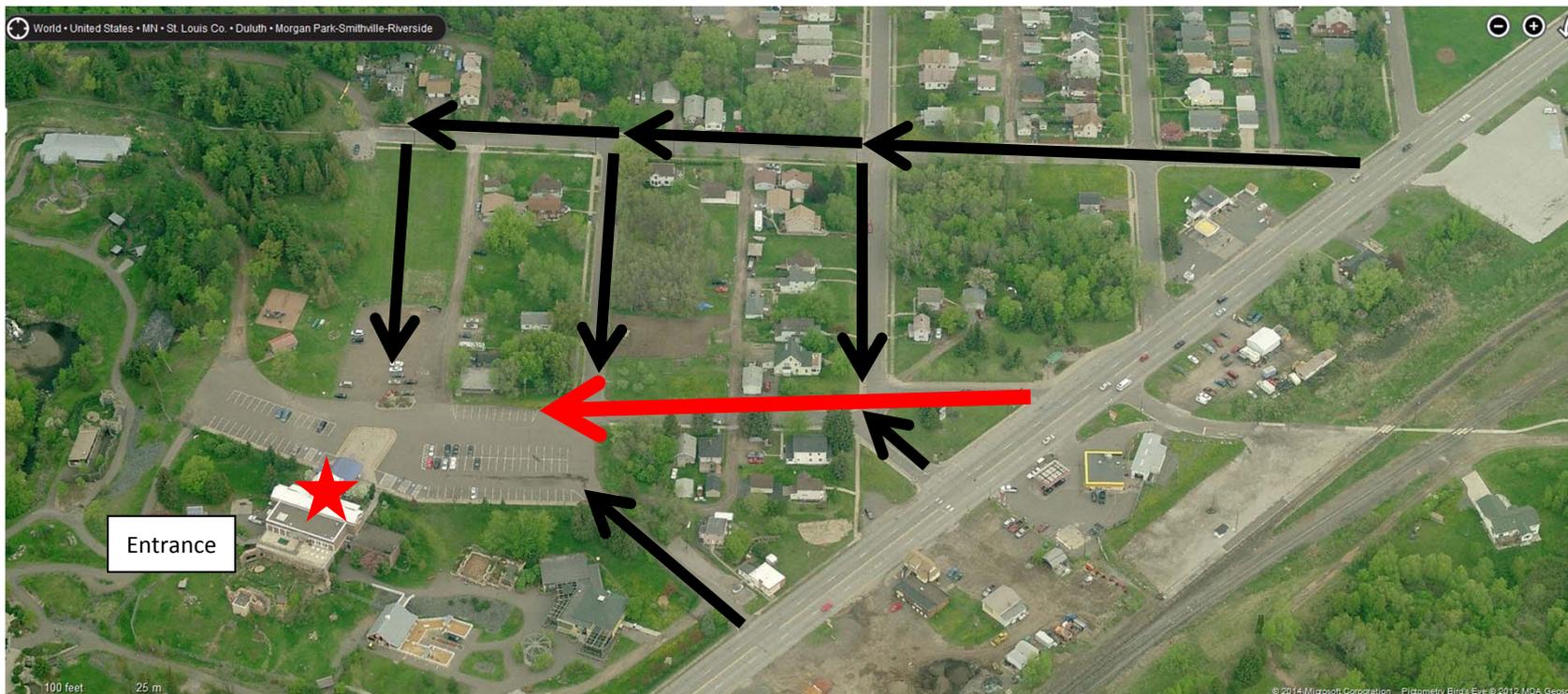
Source: Lake Superior Zoological Society

# Site Context and Existing Conditions

## PLANNING CONSTRAINTS

- ◆ **Access** - Zoo entrance accessed through residential neighborhood off of Grant Ave. Access to the Zoo off Grant Ave. through residential streets.

**Aerial View of Zoo Access Roads from Grant Ave. and Parking, Lake Superior Zoo**



Source: Bing Maps and ConsultEcon, Inc.

# Site Context and Existing Conditions

## PLANNING CONSTRAINTS

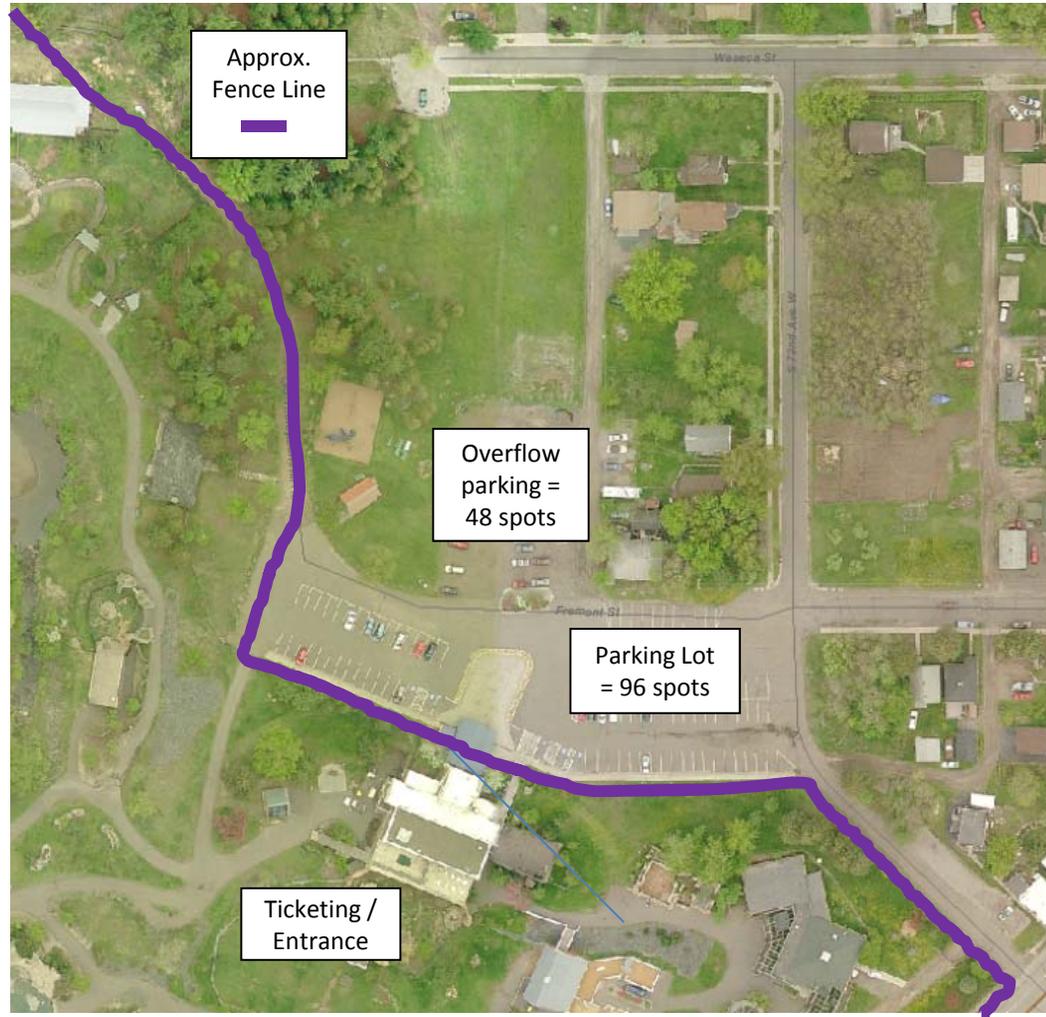
### Parking

- ◆ Due to location adjacent to residences, parking expansion may be limited in this area.

### Parking Inventory

- ◆ Total 144 parking spaces
  - 92 permanent paved spaces
  - 4 handicapped parking spaces
  - 48 spaces in the dirt lot and shared overflow parking with nearby churches and businesses

Aerial View of Zoo Parking Area



Source: City of Duluth.

# Site Context and Existing Conditions

## PLANNING SITUATION

- ◆ Last five years have produced different plans, including:
  1. 2010 Master Plan
  2. 2012 Bear Territory
  3. 2013 Lake Superior Zoo Education & Heritage Project
  4. 2014 Rebuild the Heart of Our Zoo
  5. 2014-2015 Forest Discovery Zone (pending)
- ◆ Most recent plan includes renovating the heart of the zoo, the former Polar Shores exhibit, which is now planned as an amphitheater and bear territory exhibit. Total proposed \$8.2 million rebuild the heart of the zoo.

# Site Context and Existing Conditions

## PLANNING SITUATION - 2014

- ◆ City plans for **Lake Superior Zoo Education & Heritage Project**, including Forest Discovery Zone, Bear Territory in Zoo, Native American Cultural Center in Fairmount Park and St. Louis River Estuary Center in Indian Point Park.

**Summary of LSZ Education and Heritage Project Costs by Phase in 2013 \$**

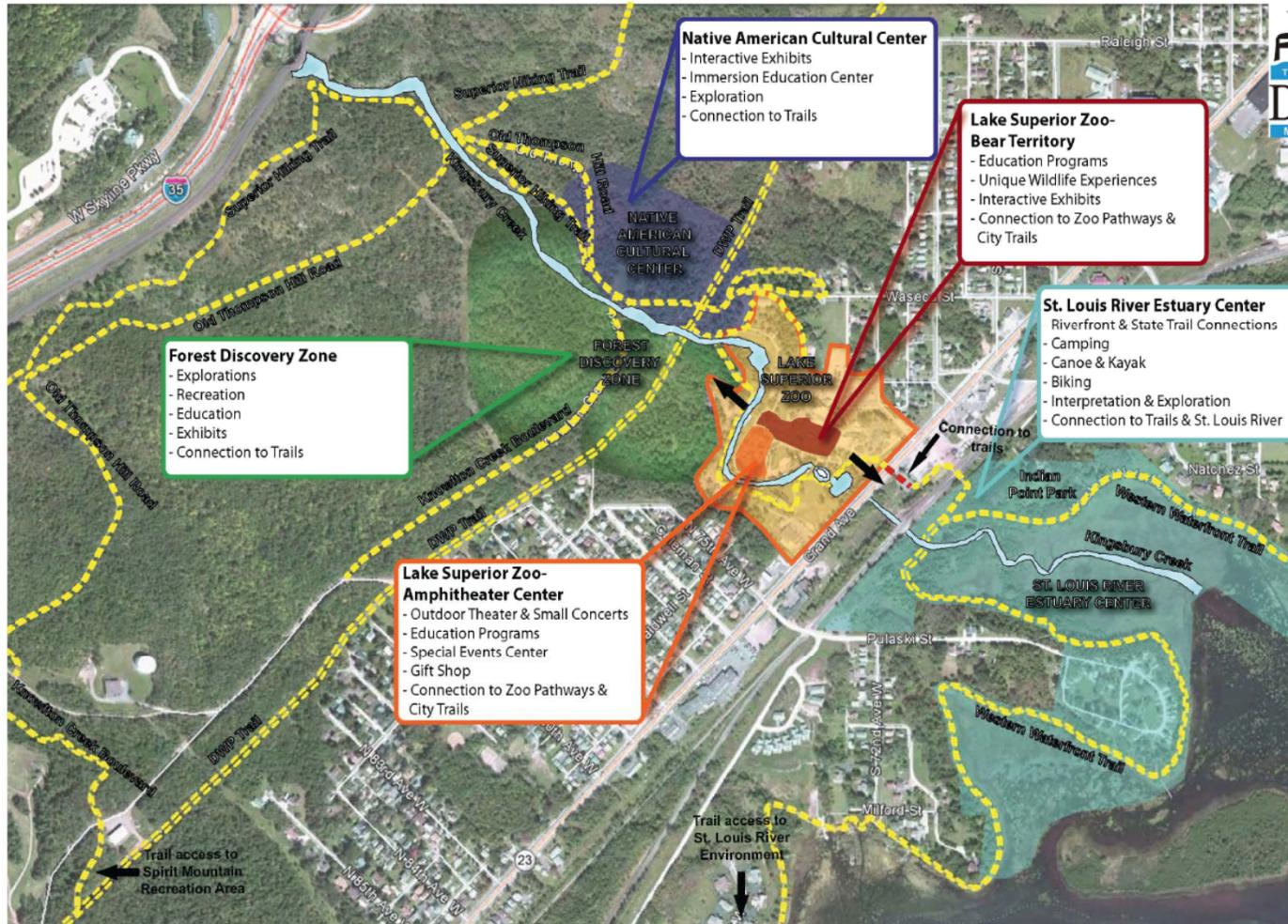
Phase	Name	Cost	Area	Duration
1	Native American Cultural Center	\$1,365,000	NA	NA
2	Forest Discovery Zone	\$2,120,000	NA	NA
3	Amphitheater Center	\$3,818,000	NA	NA
4	Bear Territory	\$4,379,000	NA	NA
5	St. Louis River Exploratory Center	\$1,240,000	NA	NA
	<b>Total</b>	<b>\$12,922,000</b>		

Source: dsgw.

# Site Context and Existing Conditions

## PLANNING SITUATION - 2014

- ◆ City plans for Lake Superior Zoo Education & Heritage Project.



City of Duluth and Lake Superior Zoological Gardens Environmental Discovery Program

Duluth, Minnesota  
Source: dsgw.

October 20, 2013



# Site Context and Existing Conditions

## CURRENT ZOO SOCIETY PROJECTS

Zoo projects in design, fundraising, and under construction.

- ◆ **Fox Exhibit** – status: design concept completed – city approved – zoo society to issue requests for construction - \$13k private funds secured during February auction
- ◆ **Pollinator Garden** – status: concept proposal to Duluth Legacy Foundation in conjunction with Lake Superior Botanical Gardens
- ◆ **Raptor Mews** – status: design concept in development – requires survey of area, sort out electrical access - \$25k private funds raised as of July
- ◆ **Swamp Monkey Exhibit** – status: applied for grant to cover construction cost – design concept complete and submitted in grant proposal – city approved – grant notification in August



# Site Context and Existing Conditions



## CURRENT CITY PROJECTS

- ◆ City projects and other public infrastructure impacting the future potential of the zoo.
- ◆ Existing City of Duluth projects on the boards, under construction include:
  - Grand Ave Culvert Removal and Bridge Construction Project – status: in design, construction in 2015
  - Grand Ave Entrance, zoo access project

# Site Context and Existing Conditions

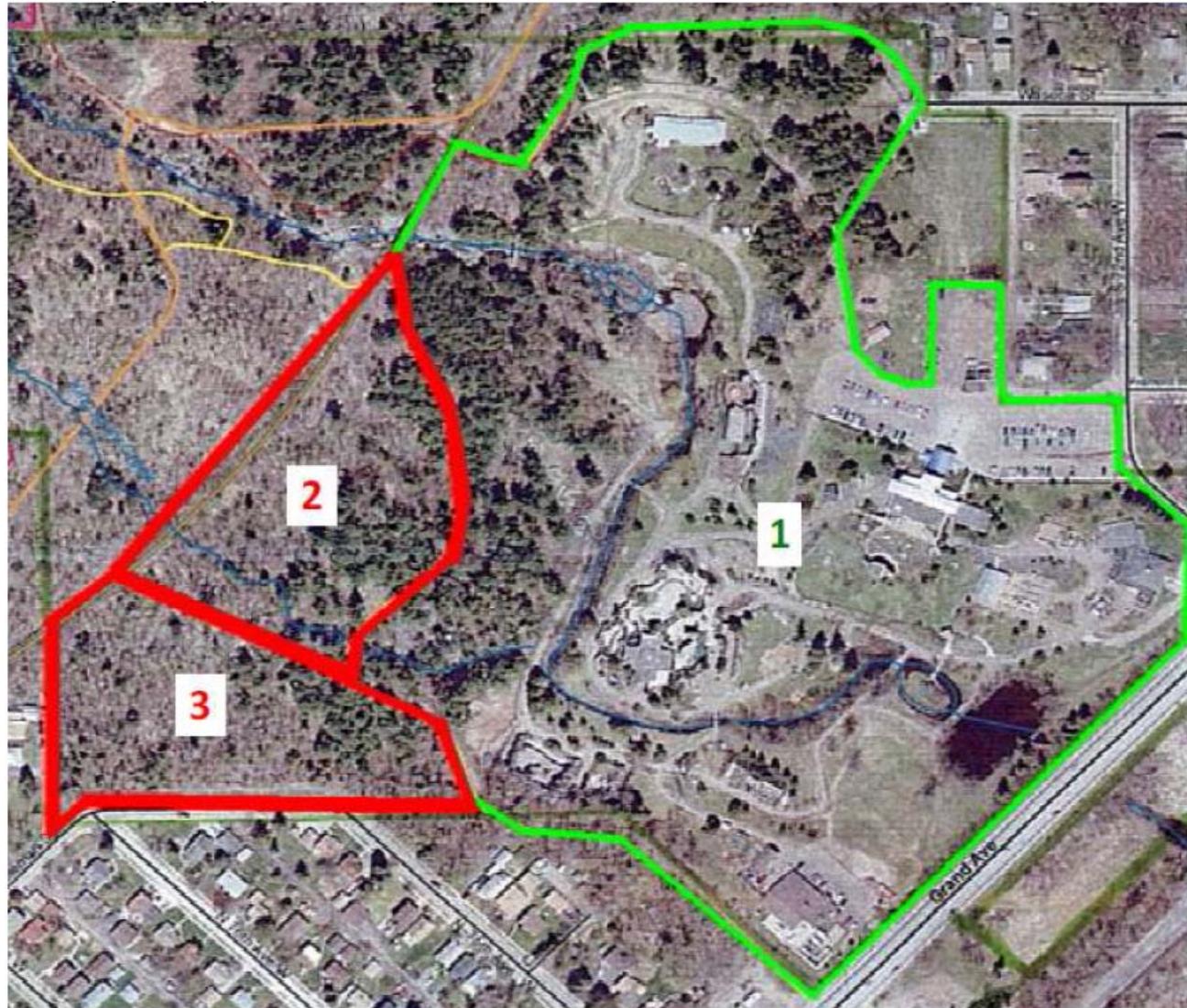
## PLANNING OPPORTUNITIES

- ◆ Adjacent areas under consideration for outdoor recreation and expansion of activity.

### Legend

- ◆ Zone 1 shows the current zoo boundary.
- ◆ Zone 2 shows city-owned land that was proposed for the Forest Discovery Zone.
- ◆ Zone 3 shows an adjacent city-owned tract of land that is currently not being used.
- ◆ The upper blue line shows the location of Kingsbury Creek.
- ◆ The lower blue line shows the location of a seasonal tributary.

Source: City of Duluth.



# Review of Visitation and Operating Data

The following section reviews the long term and recent operating trends at the Lake Superior Zoo to establish the baseline for future operations analysis under the strategic master plan.

## GOVERNANCE

- ◆ **Transition to Public-Private Partnership** – The City operated the zoo until 2009, when management and day to day operations were transferred to a private, non-profit - (Arrowhead Zoological Society DBA Lake Superior Zoological Society.) The initial contract period was three years, which has since been renewed for another three years through December, 2014. The City and zoo society are currently negotiating a new contract.
- ◆ **Zoo Capital Assets** – A byproduct of the zoo's privatization is that the non-profit zoo does not own the capital assets. The zoo society must pay for capital repairs and maintenance out of its annual operating budget. Based on the experience of privatization projects nationally, this situation can be a barrier to major fundraising for capital projects from private philanthropic sources.
- ◆ **Transaction Speed and Management Contract Administration** – Operating revenues flow through the City, creating an additional administrative layer that can reduce transaction speed and flexibility of zoo society operations/cash flows.

# Review of Visitation and Operating Data

## FACILITY PROGRAM

- ◆ Zoo area encompasses 23 acres within the fence line plus approx. 2 acres of parking
- ◆ Total building area = 43,475 GSF (30,925 GSF Currently Open)
- ◆ Total outdoor exhibit areas = 89,711 GSF of outdoor animal exhibits
- ◆ The Lake Superior Zoo has approximately 400 animals representing approximately 200 species.
- ◆ Total 144 parking spaces, including:
  - 92 permanent paved spaces
  - 4 handicapped parking spaces
  - 48 spaces in the dirt lot and shared overflow parking with nearby churches and businesses

**Existing Zoo Building Areas by Indoor Program Space, 2014**

Category	Year Built	Gross Floor Area in SF
<i>Facilities</i> <sup>1/</sup>		
Main Building	1927	15,240 <sup>2/</sup>
Polar Shores	1937	12,550
Australia Building	1989	4,300
Primate Conservation Center	1998	5,560
Willard Munger Animal Care Center Building	2003	5,825
<b>Total</b>		<b>43,475</b>

1/ All facilities have 25+ remaining years of useful life and had energy audits completed by the city in Nov., 2010.

2/ Both levels.

Source: Lake Superior Zoo and ConsultEcon, Inc.

# Review of Visitation and Operating Data

## CAPITAL PROJECTS

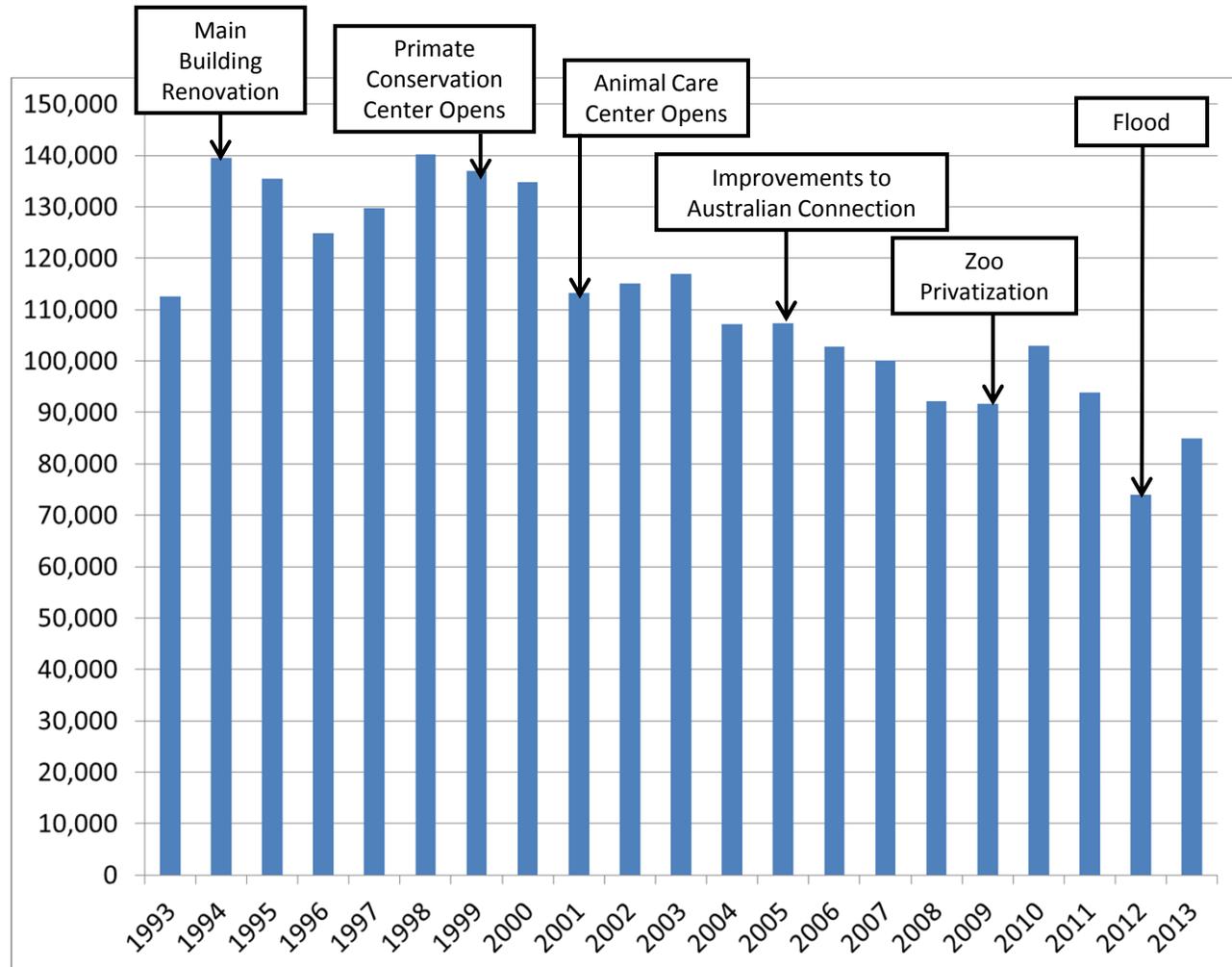
- ◆ **No Substantial Capital Projects Built During the Past Decade** – The most impactful zoo facility development projects were those implemented over a decade ago including the Main Building renovation in 1994, the Primate Conservation Center opened in 1999, and the Animal Care Center and Griggs Learning Center opened in 2001.
- ◆ **Zoo's last Major Capital Improvement was in 2011**, with the construction of the pavilion
- ◆ **Lots of planning in recent years with limited actual investment** – creating a need to show forward progress and implementation to maintain credibility and improve operating performance.

# Review of Visitation and Operating Data

## ATTENDANCE HISTORY

- ◆ Long term attendance trend reflects decline in overall attendance level.
- ◆ Historic peak attendance near 140,000 in 1994 and 1998.
- ◆ Attendance dropped below 100,000 for the first time in 2007.
- ◆ Over the past five years, attendance has ranged between 74,000 and 103,000, for an annual average of 89,000.

Long Term Attendance Trend, 1993 through 2013, Lake Superior Zoo



# Review of Visitation and Operating Data

## KEY EVENTS IMPACTING LONG TERM ATTENDANCE – see table on following page

New facility openings, animal births and weather can impact attendance substantially.

### ◆ Noteworthy Exhibit Impacts

- 1994 Renovation of Main Building
  - 24% attendance increase
- 1998 Primate Conservation Center
  - 8.1% attendance increase between 1997 and 1998
- 2001 Animal Care Center

### ◆ Noteworthy Weather Impacts

- 2012 Flood – catastrophic damage
- 2013 closed multiple days in April and December
- Lowered ticket prices July 2012 when reopened after the flood through January 2013
- 2014 to date, closed 6 to 8 days in January and February

# Review of Visitation and Operating Data

## Key Events at Lake Superior Zoo

Year	Annual Attendance	Attendance Percent Change from Previous Year	Key Events
1993	112,591	NC	Main building renovation Barnyard opened, snow leopard exhibit opened
1994	139,525	23.9%	Main building re-opened to the public
1995	135,479	-2.9%	
1996	124,919	-7.8%	
1997	129,721	3.8%	
1998	140,188	8.1%	Primate Conservation Center opens
1999	137,034	-2.2%	
2000	134,805	-1.6%	
2001	113,250	-16.0%	Willard Munger Animal Care Center opened and Griggs Learning Center opened in February, 2001.
2002	115,102	1.6%	Added solar cells to the barn, ____ 2002 Added solar photovoltaic shelter and charging station with interactive solar power carousel was started to recharge the zoo' Global Electric Motorcar, ____ 2002
2003	116,862	1.5%	
2004	107,227	-8.2%	Purchased Zoomobile, ____ 2004
2005	107,303	0.1%	Improvements to Australian Connection building and exhibits, ____ 2005
2006	102,865	-4.1%	Zoo loses AZA accreditation, Sept. 2006
2007	100,139	-2.7%	

2007	100,139	-2.7%	
2008	92,218	-7.9%	
2009	91,606	-0.7%	Zoo operations transferred from City to Society, Jan. 2009 for 3-yr contract No animal births
2010	102,986	12.4%	Animal births: One male and one female Bat-eared fox One male Reeve's Muntjac
2011	93,798	-8.9%	Ticket price increase, June 2011 Zoo regains accreditation, Sept. 2011 No animal births
2012	76,301	-18.7%	Major flood on June 20, 2012. Zoo closed through July 13. Lowered price when reopened July 13, 2012 due to flood damage to zoo. Animal births: One male and two female Ring-tailed lemur
2013	88,694	Not Calculated	Ticket price increase, February, 2013. Animal Births: One male and one female Angolan Colobus Weather Impacts: closed 3-4 days in April and multiple days in December
2014	NA	NA	Animal Births: One male and one female Guinea Pig and four ring-tailed lemur of unknown sex City-Society contract ends Dec. 2014 Weather Impacts: closed 4 days in January and 2-4 days in February

NC = Not Calculated

NA = Not Available

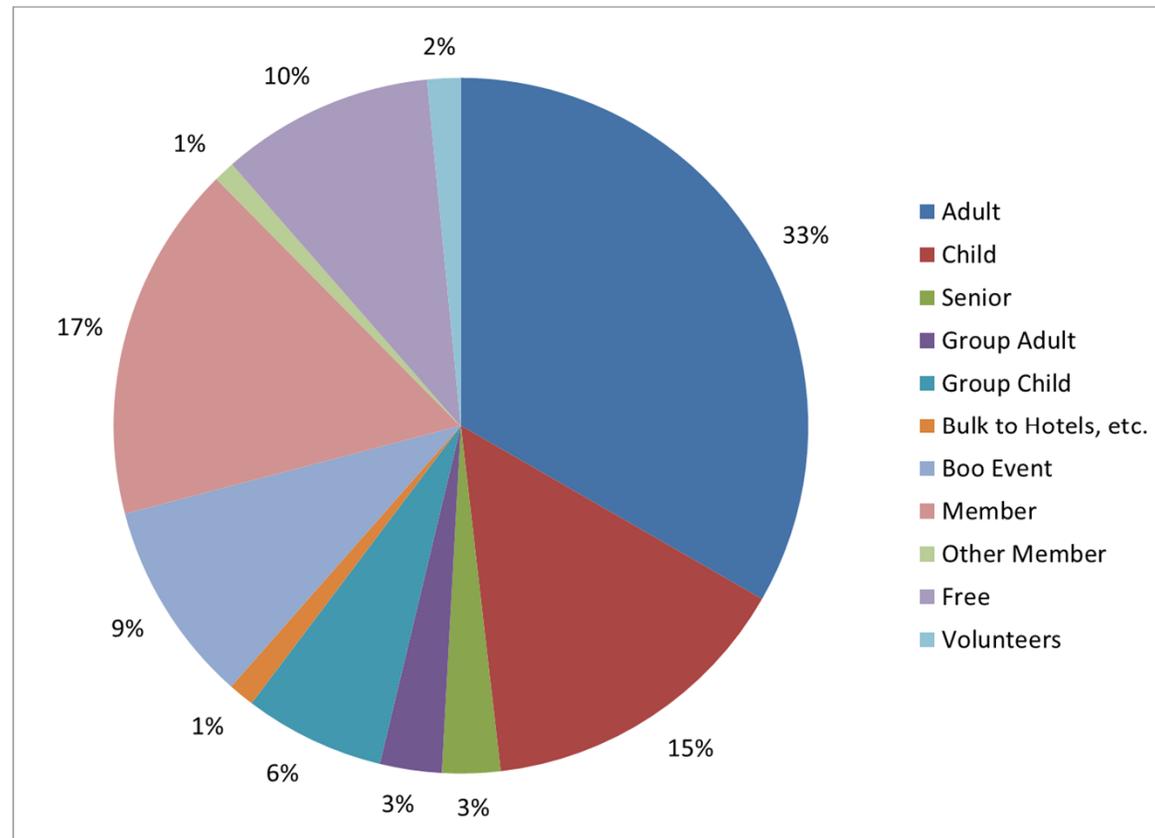
Source: Lake Superior Zoo and ConsultEcon, Inc.

# Review of Visitation and Operating Data

## ATTENDANCE MIX

- ◆ 71% paid tickets, mostly general admission tickets (adults, child, senior, group, and boo event)
- ◆ 29% non-paid tickets, including zoo memberships, other memberships, free tickets, and volunteers

Attendance by Ticket Type, Two Year Average 2011 and 2013



Source: Lake Superior Zoological Society and ConsultEcon, Inc.

# Review of Visitation and Operating Data

## Attendance Trend, 2011-2013, and 2014 through June 2014, Lake Superior Zoo

### RECENT ANNUAL ATTENDANCE TREND

### Average Ticket Revenue per Onsite Paid and Non-Paid Attendance

- ◆ 2011 - \$5.55
- ◆ 2012 - \$5.01
- ◆ 2013 - \$5.76
  
- ◆ Per capita gate revenue in 2013 was 58% of the adult ticket price

Category	2011	2012	January to		Percent Change, 2011 to 2013	3-Year Average, Percent		2-Year Average, Percent	
			2013	June, 2014		2011 to 2013	to Total	2011 and 2013	to Total
<b><i>Paid</i></b>									
Adult <sup>1/</sup>	31,643	23,496	28,892	8,871	-8.7%	28,010	32.4%	30,268	33.3%
Child	14,086	9,727	12,940	3,831	-8.1%	12,251	14.2%	13,513	14.9%
Senior	1,967	1,952	2,952	664	50.1%	2,290	2.6%	2,460	2.7%
Group Adult	2,984	2,315	2,245	1,009	-24.8%	2,515	2.9%	2,615	2.9%
Group Child	6,812	5,820	5,078	3,992	-25.5%	5,903	6.8%	5,945	6.5%
Public Classes	NA	573	718	439	NA	646	0.7%	NA	NA
Bulk to Hotels, etc.	1,245	404	953	211	-23.5%	867	1.0%	1,099	1.2%
Boo Event	8,850	8,508	8,263	0	NC	8,540	9.9%	8,557	9.4%
<b>Subtotal Paid</b>	<b>67,587</b>	<b>52,795</b>	<b>62,041</b>	<b>19,017</b>	<b>-8.2%</b>	<b>61,023</b>	<b>70.6%</b>	<b>64,455</b>	<b>70.9%</b>
<b><i>Non-Paid</i></b>									
Member	15,802	15,857	14,458	5,939	-8.5%	15,372	17.8%	15,130	16.6%
Other Member <sup>2/</sup>	1,206	363	575	130	-52.3%	715	0.8%	891	1.0%
Free <sup>3/</sup>	7,516	5,770	10,469	1,321	39.3%	7,918	9.2%	8,993	9.9%
Volunteers	1,687	1,516	1,151	489	-31.8%	1,451	1.7%	1,419	1.6%
<b>Subtotal Non-Paid</b>	<b>26,211</b>	<b>23,506</b>	<b>26,653</b>	<b>7,879</b>	<b>1.7%</b>	<b>25,457</b>	<b>29.4%</b>	<b>26,432</b>	<b>29.1%</b>
<b>Total Onsite Attendance</b>	<b>93,798</b>	<b>76,301</b>	<b>88,694</b>	<b>26,896</b>	<b>-5.4%</b>	<b>86,480</b>	<b>100.0%</b>	<b>90,887</b>	<b>100.0%</b>
<b><i>Paid Versus Non-Paid Attendance</i></b>									
Percent Paid Attendance	72.1%	69.2%	69.9%	70.7%		70.6%		70.9%	
Percent Non-Paid Attendance	27.9%	30.8%	30.1%	29.3%		29.4%		29.1%	
<b><i>Outreach</i></b>									
Zoomobile	7,165	8,650	10,507	7,972	46.6%	8,774		8,836	

NC = Not Calculated

NA = Not Available.

1/ Adult includes Grandparent visitors, some of whom may be senior citizens.

2/ Other member visitation, or visitation due to visitors holding memberships to other zoos and attractions, varies year to year because institutions change the terms of their participation annually.

3/ Increase in Free attendance due to free day offered on the first anniversary of the 2012 flood. Not offered in 2014.

Source: Lake Superior Zoo and ConsultEcon, Inc.

# Review of Visitation and Operating Data

## VISITOR ORIGIN

- ◆ Zip codes collected from a sample of general admission transactions indicates that the zoo's general admission visitors are from throughout the state of Minnesota.

General Admission Transactions by Origin, May 2013 through June 2014

Origin	May to Dec. 2013			Jan. to June 2014		
	Number	Percent to Total Transactions	Percent to Total US and Canada	Number	Percent to Total Transactions	Percent to Total US and Canada
<b>Known Origin</b>						
City of Duluth	2,203	5.7%	23.9%	331	2.2%	33.8%
Remainder of Duluth MSA	1,040	2.7%	11.3%	177	1.2%	18.1%
Remainder of MN	3,521	9.1%	38.2%	271	1.8%	27.7%
<b>Subtotal Minnesota</b>	<b>6,764</b>	<b>17.6%</b>	<b>73.3%</b>	<b>779</b>	<b>5.2%</b>	<b>79.5%</b>
Other US	2,129	5.5%	23.1%	171	1.1%	17.4%
Canada	335	0.9%	3.6%	30	0.2%	3.1%
<b>Total US and Canada</b>	<b>9,228</b>	<b>24.0%</b>	<b>100.0%</b>	<b>980</b>	<b>6.6%</b>	<b>100.0%</b>
<b>Unknown Origin</b>						
Refused/Not Entered	29,057	75.4%		13,884	93.0%	
Blanks/Other No Zips	227	0.6%		61	0.4%	
<b>Total Unknown</b>	<b>29,284</b>	<b>76.0%</b>		<b>13,945</b>	<b>93.4%</b>	
<b>Total Transactions</b>	<b>38,512</b>	<b>100.0%</b>		<b>14,925</b>	<b>100.0%</b>	

Note: Each transaction represents one or more zoo visitors. The transactions data includes some stroller rentals when visitors rent the stroller from the admissions booth (they can also rent them from the gift shop).

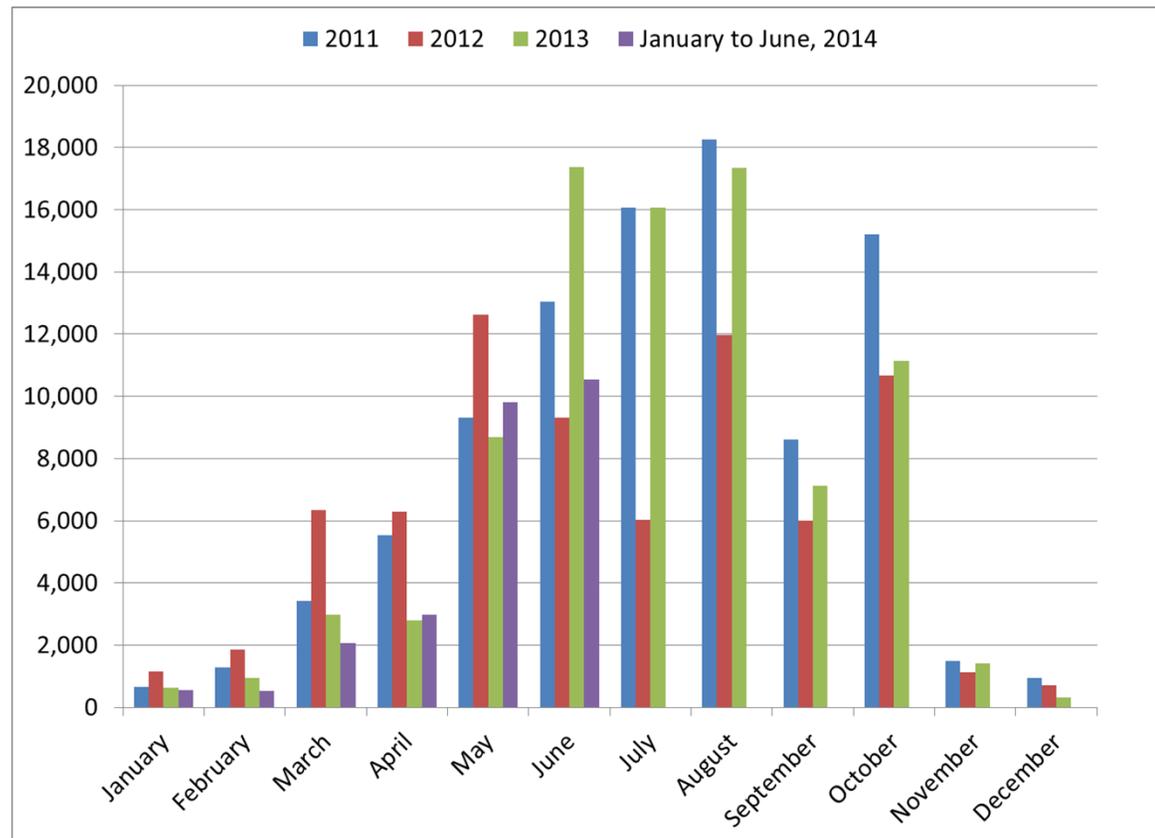
Source: Lake Superior Zoo and ConsultEcon, Inc.

# Review of Visitation and Operating Data

## SEASONALITY OF ATTENDANCE

- ◆ Highly peaked attendance pattern due to northern location and resident and tourist summer vacation seasons.
- ◆ Peak months- May through October, which accounts for 88% of attendance in just half a year.
- ◆ August peak month accounts for 20% of annual attendance.
- ◆ Inclement weather impacts monthly attendance substantially, indicating need for more indoor facilities to expand shoulder season, off peak attendance, as well as attendance during inclement weather in peak season.

Monthly Attendance, 2011 to 2014 (year to date), Lake Superior Zoo



Source: Lake Superior Zoological Society and ConsultEcon, Inc.

# Review of Visitation and Operating Data

## REVENUE TREND

- ◆ 3 year average of 45% earned revenue / 55% non-earned revenue
- ◆ Largest sources of revenue include Gate Revenue and City Subsidy
- ◆ Between 2011 and 2013 total revenue increased about 8%
- ◆ The city contribution has been stable; donations and memberships have increased, but earned revenues are down about 2.5%

Revenue Trend, 2011 through 2013, Lake Superior Zoo

	2011	2012	2013	Percent Change, 2011 to 2013	3-Year Average	Percent to Total	2014 Budget	Percent to Total
<b>Earned Revenue</b>								
Gate revenue	\$520,705	\$370,819	\$489,660	-6.0%	\$460,395	24.7%	\$550,000	29.3%
Concessions Sales, Gross	61,159	35,495	57,561	-5.9%	51,405	2.8%	58,000	3.1%
Tiger's Paw Retail Sales, Gross	128,437	105,200	124,604	-3.0%	119,413	6.4%	140,000	7.5%
Depot sales, Gross	24,892	13,558	18,254	-26.7%	18,901	1.0%	24,500	1.3%
PCC Kiosk Income, Gross <sup>1/</sup>	400	0	0	-100.0%	133	0.0%	0	0.0%
Special Event Sales/Revenue	3,390	2,570	2,025	-40.3%	2,662	0.1%	35,000	1.9%
Membership Dues	127,919	143,797	142,979	11.8%	138,232	7.4%	150,000	8.0%
Education Program Revenue	38,309	37,733	47,308	23.5%	41,117	2.2%	51,500	2.7%
<b>Total Earned Revenue</b>	<b>\$905,210</b>	<b>\$709,173</b>	<b>\$882,390</b>	<b>-2.5%</b>	<b>\$832,258</b>	<b>44.7%</b>	<b>\$1,009,000</b>	<b>53.8%</b>
<b>Non-Earned Revenue</b>								
City Subsidy Earned	\$670,000	\$670,000	\$670,000	0.0%	\$670,000	35.9%	\$670,000	35.7%
Fundraising Revenue	79,056	64,627	71,710	-9.3%	71,798	3.9%	106,000	5.7%
Donations Income	62,414	220,069	155,598	149.3%	146,027	7.8%	65,000	3.5%
Miscellaneous Income	0	1,129	2,644	NC	1,258	0.1%	1,000	0.1%
Grants	86,582	181,598	159,350	84.0%	142,510	7.6%	25,000	1.3%
<b>Total Non-Earned Revenue</b>	<b>\$898,052</b>	<b>\$1,137,423</b>	<b>\$1,059,302</b>	<b>18.0%</b>	<b>\$1,031,593</b>	<b>55.3%</b>	<b>\$867,000</b>	<b>46.2%</b>
<b>Total Revenue</b>	<b>\$1,803,262</b>	<b>\$1,846,595</b>	<b>\$1,941,693</b>	<b>7.7%</b>	<b>\$1,863,850</b>	<b>100.0%</b>	<b>\$1,876,000</b>	<b>100.0%</b>

1/ Discontinued.

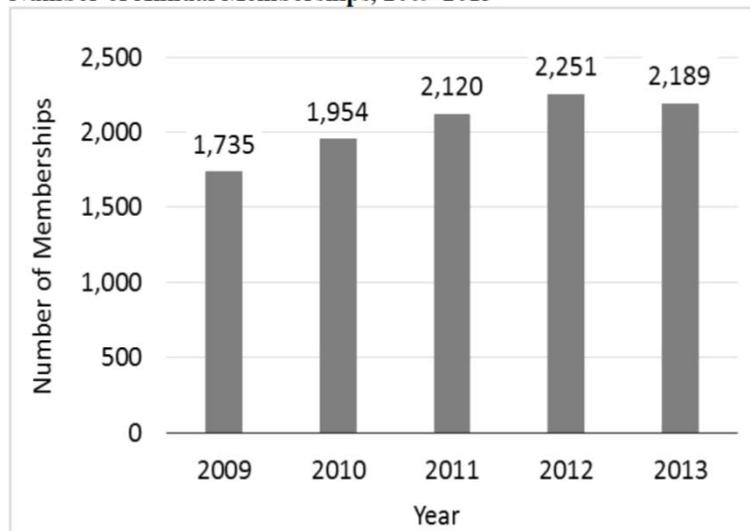
Source: 2013 Lake Superior Zoo Annual Report, Lake Superior Zoological Society, and ConsultEcon, Inc.

# Review of Visitation and Operating Data

## MEMBERSHIP PRICING AND MEMBERSHIP TRENDS

- ◆ Number of memberships peaked at 2,251 in 2012 and then decreased to 2,189 in 2013. Still, the trend in memberships reflects steady increase in memberships, which reflects necessary and sustained increase in private support if the city is to scale back public support as a consequence of reducing public support.

Number of Annual Memberships, 2009-2013



Source: Lake Superior Zoological Society.

### Standard Membership Levels, Descriptions, and Costs

Membership Level	Description	Cost
Individual	For one adult named on the card	\$40
Family	For a maximum of two named adults residing at the same address and their dependent children under 18	\$65
Grandparent	For a maximum of two named adults residing at the same address and their grandchildren under 18	\$65
Conservationist	For a maximum of two named adults residing at the same address and their children or grandchildren under 18, plus two additional free guests per visit.	\$90
Plus One	This option can be added to any membership. For each additional \$15, you can bring one guest per visit for a year. Or use this option for an additional named adult(s) on the card. If used in this manner, only the named adults may use the card (i.e. no additional guests).	\$15

Source: Lake Superior Zoological Society

# Review of Visitation and Operating Data

## GROUPS AND EDUCATION PROGRAMS - 2011 THROUGH 2013

### Onsite Groups

- ◆ Number of groups down, during flood year 2012, and rebounding in 2013; however, attendance steady decline over the recent three year period.

### Education Programs

- ◆ Onsite education programs have expanded significantly. Off-site programming has expanded as well and reportedly demand currently exceeds staff capacity.

**On-site Group Numbers, Attendance, and Revenue, 2011-2013**

Fiscal Year	2011	2012	2013
Total Adults in Groups (N, \$)	1,769 \$15,921	2,386 \$21,474	1,791 \$16,119
Total Children in Groups (N, \$)	6,904 \$27,616	5,327 \$21,308	3,662 \$14,648
Total Groups (N)	189	146	162
Total Attendance, Adults & Children (N)	8,673	7,713	5,453
Total Revenue (\$)	\$43,537	\$35,042	\$30,767

Source: Lake Superior Zoological Society

**Education Program Numbers and Revenue, 2011-2013**

Fiscal Year	2011	2012	2013
On-site education programs (N)	48	159	173
Off-site education programs (N)	121	152	187
Attendance at on-site and off-site education programs (N)	11,020	11,729	13,293
Education program revenue (\$)	\$38,309	\$37,733	\$47,248

Source: Lake Superior Zoological Society .

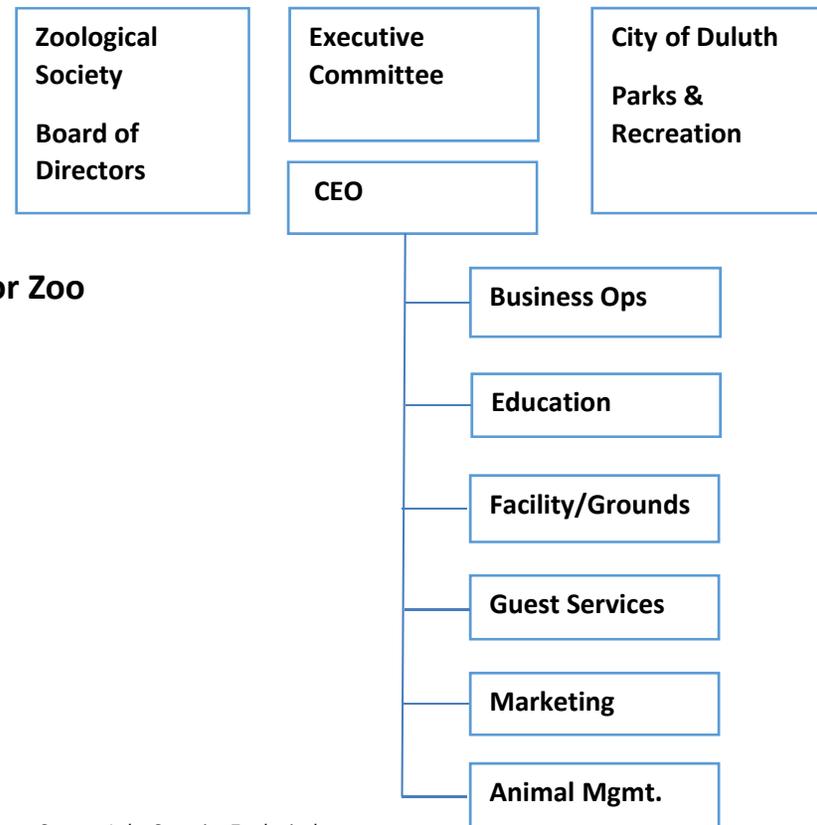
# Review of Visitation and Operating Data

## ORGANIZATIONAL CHART AND STAFFING BY DEPARTMENT

### Current Staff Positions

- ◆ 26 full time positions
- ◆ 35.5 part time and seasonal positions
- ◆ 43.75 full time equivalent positions
- ◆ Zoo without a Development Director, which limits opportunities for increased contributed revenues.

### Zoo Organization Chart



### Existing Staff Positions by Department at the Lake Superior Zoo

Department	Full-Time	Part-Time / Seasonal	Full Time Equivalent (FTE) <sup>1/</sup>
Administration and Business Operations	3	0	3
Education	3	3	4.5
Facility/Grounds	3	8	7
Guest Services	3	22.5	14.25
Marketing	3	0	3
Animal Management	11	2	12
<b>Total Positions</b>	<b>26</b>	<b>35.5</b>	<b>43.75</b>

1/ Assumes part time staff at 50% full time.

Source: Lake Superior Zoological Society and ConsultEcon, Inc.

Source: Lake Superior Zoological Society and ConsultEcon, Inc.

# Review of Visitation and Operating Data

## Expense Trend, 2011 through 2013, and 2014 Budget for Lake Superior Zoo

### EXPENSES TREND

- ◆ 3-year average operating expenses are just under \$1.9M, not including capital expenses
- ◆ 59% payroll and contract services
- ◆ Largest operating expense categories including Zoo Services, Utilities, and Marketing
- ◆ Operating expenses were stable between 2011 and 2013
- ◆ Capital expenditures averaged \$192,000 between 2011 and 2013

Category	2011	2012	2013	3-Year Average, 2011 to 2013	Percent to Total Operating Expenses	2014 Budget	Percent to Total
<b>Personnel and Contract Services</b>							
Payroll Expenses	\$929,385	\$995,956	\$1,060,287	\$995,209	52.5%	\$1,114,563	61.7%
Insurance - Employee Group	43,068	39,942	54,601	45,870	2.4%	59,710	3.3%
LSZ - Staff Devlpmt & Training	15,024	13,267	12,235	13,509	0.7%	8,450	0.5%
Outside & Contract Services	61,764	71,732	54,857	62,784	3.3%	71,250	3.9%
Employee Misc Expense	3,377	4,422	100	2,633	0.1%	0	0.0%
Fed/State Taxes	1,984	2,131	3,183	2,432	0.1%	2,300	0.1%
<b>Subtotal Personnel</b>	<b>\$1,054,601</b>	<b>\$1,127,449</b>	<b>\$1,185,262</b>	<b>\$1,122,438</b>	<b>59.2%</b>	<b>\$1,256,273</b>	<b>69.6%</b>
<b>Non-Personnel Operating Expenses</b>							
Zoo Services	\$182,990	\$235,216	\$111,299	\$176,502	9.3%	\$142,000	7.9%
Utilities	159,748	122,821	122,031	134,867	7.1%	115,000	6.4%
Marketing <sup>1/</sup>	93,971	97,976	110,150	100,699	5.3%	79,122	4.4%
Building and Grounds	54,510	60,781	6,240	40,510	2.1%	0	0.0%
Repairs and Maintenance	1,056	350	65,900	22,435	1.2%	53,000	2.9%
Other Non-Personnel Expenses	312,061	315,229	265,777	297,689	15.7%	160,305	8.9%
<b>Subtotal Non-Personnel</b>	<b>\$804,335</b>	<b>\$832,372</b>	<b>\$681,397</b>	<b>\$772,701</b>	<b>40.8%</b>	<b>\$549,427</b>	<b>30.4%</b>
<b>Total Operating Expenses</b>	<b>\$1,858,936</b>	<b>\$1,959,821</b>	<b>\$1,866,659</b>	<b>\$1,895,139</b>	<b>100.0%</b>	<b>\$1,805,700</b>	<b>100.0%</b>
<b>Capital Expenses</b>							
Zoo Legacy Expense <sup>2/</sup>	\$27,871	\$24,828	\$381,919	\$144,873	7.6%	NA	
Major Improvements	140,788	0	0	46,929	2.5%	NA	
<b>Total Capital Expenses</b>	<b>\$168,659</b>	<b>\$24,828</b>	<b>\$381,919</b>	<b>\$191,802</b>	<b>10.1%</b>	<b>NA</b>	
<b>As % of Operating Expenses</b>	<b>9.1%</b>	<b>1.3%</b>	<b>20.5%</b>	<b>10.1%</b>		<b>NA</b>	
<b>Percent to Total Expenses</b>							
Personnel and Contract Services	57%	58%	63%	59%		70%	
Non-Personnel Expenses	43%	42%	37%	41%		30%	
<b>Total Expenses</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>		<b>100%</b>	

1/ Includes advertising, printing and bulk mail, signs and graphics and maps brochures and catalogues.

2/ "Zoo Legacy" is the name of the fund for capital expenses.

Source: 2013 Lake Superior Zoo Annual Report, Lake Superior Zoological Society, and ConsultEcon, Inc.

# Resident Market Context

## RESIDENT MARKET

### Resident Market Definition

Resident markets are analyzed within a “gravity model” context; that is, the closer residents live to the Lake Superior Zoo, the more likely they are to visit. On its periphery, the resident market changes over to the visitor (or tourist) market.

- ◆ Factors that can affect the market definition include: transportation networks and travel patterns; project type, size and location; natural barriers (e.g. topography, rivers, lakes and other geographic features, etc.), and the location of other competitive recreation or educational attractions.
- ◆ The Resident Market Area for the Lake Superior Zoo is defined as the geographic area whose residents would visit the Zoo as a primary purpose or important part of a day trip. The Resident Market Area is further differentiated into Primary, Secondary and Tertiary Market Areas.

# Resident Market Context

## RESIDENT MARKET DEFINITION

Several approaches to defining the resident market area were considered. These included: by counties within defined distances; and by MSA (Metropolitan Statistical Area) and DMA (Designated Market Area which indicates media market coverage). Ultimately a drive time definition was found to be most useful. This area extends 75 up to 100 miles from Duluth.

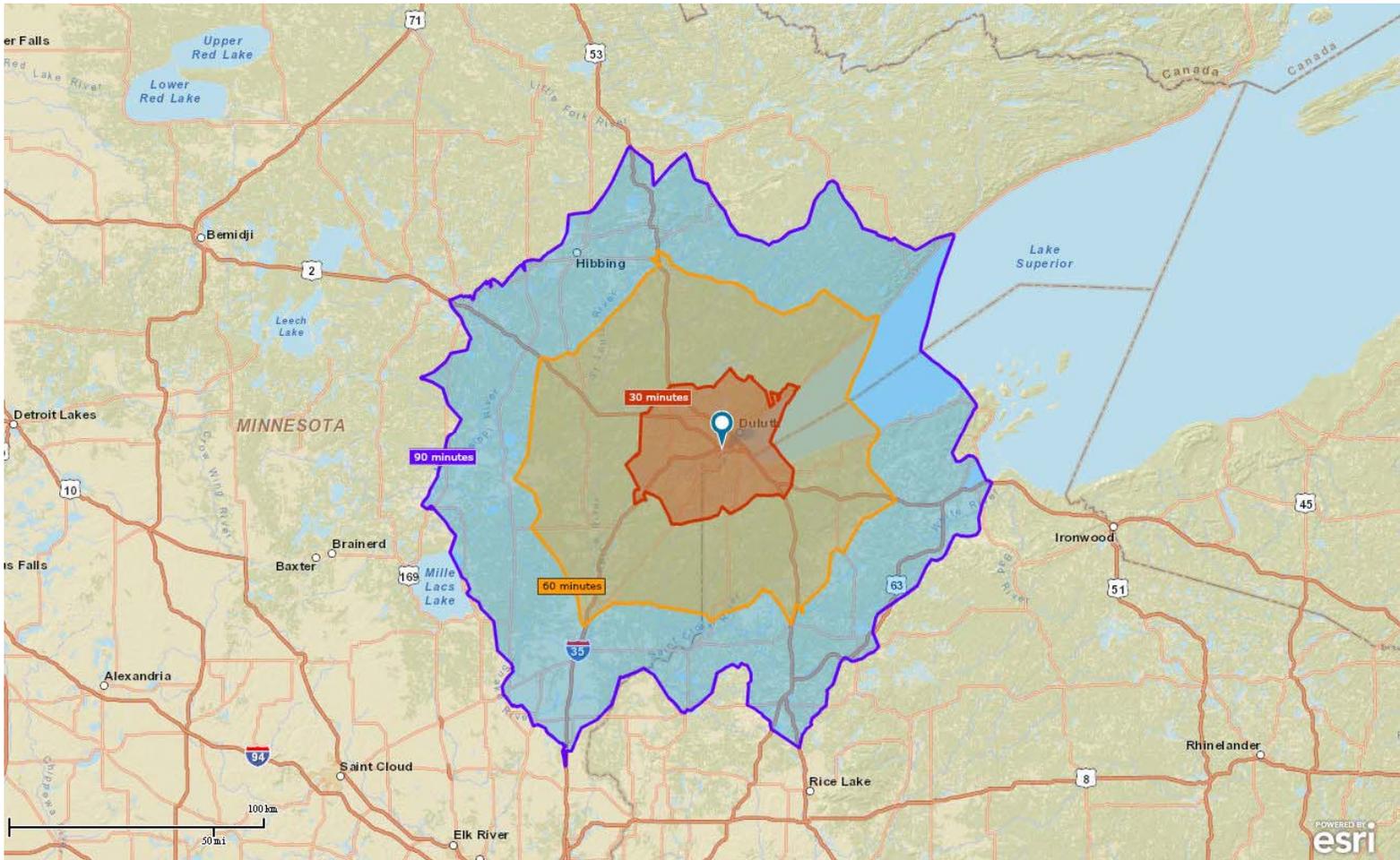
The Resident Market Areas for the Lake Superior Zoo are defined as follows:

- ◆ **Primary Resident Market:** Population within 30-minute drive time from Lake Superior Zoo.
- ◆ **Secondary Resident Market:** Population within 30 to 60-minute drive time from Lake Superior Zoo.
- ◆ **Tertiary Resident Market:** Population within 60 to 90-minute drive time from Lake Superior Zoo.

The map on the following page illustrates these drive times.

# Resident Market Context

Map of Defined Resident Market Areas for Lake Superior Zoo showing 0-30, 30-60 and 60-90 minute drives times



# Resident Market Context

## POPULATION TRENDS

### Population Trend in Resident Market Area

	2010	2014	2019	Percent Change, 2014 to 2019
Primary Market Area	175,600	176,400	177,700	0.7%
Secondary Market Area	50,400	50,500	50,700	0.4%
Tertiary Market Area	168,700	167,700	167,600	-0.1%
<b>Total Resident Market Area</b>	<b>394,700</b>	<b>394,600</b>	<b>396,000</b>	<b>0.4%</b>
<i>State of Minnesota</i>	<i>5,303,900</i>	<i>5,401,700</i>	<i>5,568,400</i>	<i>3.1%</i>
<i>State of Wisconsin</i>	<i>5,687,000</i>	<i>5,731,700</i>	<i>5,822,800</i>	<i>1.6%</i>
<i>United States</i>	<i>308,745,500</i>	<i>316,297,000</i>	<i>327,981,300</i>	<i>3.7%</i>

- ◆ Total Resident Market Area estimated 2014 population of 394,600.
- ◆ Low population growth between 2014 and 2019, with an increase of less than 1 percent; lower rate than State or U.S.
- ◆ Of the primary market area population about 50% resides in the City of Duluth (estimated 2014 population of 86,700).

Source: U.S. Census Bureau, Census 2010 Data; Esri forecasts for 2014 and 2019; and ConsultEcon, Inc.

Note: Population values are rounded to nearest hundred.

# Resident Market Context

## RESIDENT MARKET AGE CHARACTERISTICS

	Median Age	0 to 17	18 to 24	25 to 34	35 to 54	55 +
Primary Market Area	37.7	21.0%	12.5%	13.6%	24.2%	28.7%
Secondary Market Area	46.0	19.5%	6.9%	10.4%	27.6%	35.5%
Tertiary Market Area	45.8	19.9%	7.7%	10.8%	24.8%	36.9%
<b>Total Resident Market Area</b>	<b>42.3</b>	<b>19.9%</b>	<b>7.7%</b>	<b>10.8%</b>	<b>24.8%</b>	<b>36.9%</b>
<i>State of Minnesota</i>	<i>37.9</i>	<i>23.4%</i>	<i>9.6%</i>	<i>13.4%</i>	<i>26.4%</i>	<i>27.2%</i>
<i>State of Wisconsin</i>	<i>39.1</i>	<i>22.6%</i>	<i>9.9%</i>	<i>12.6%</i>	<i>26.4%</i>	<i>28.5%</i>
<i>United States</i>	<i>37.7</i>	<i>23.2%</i>	<i>9.9%</i>	<i>13.5%</i>	<i>26.3%</i>	<i>27.0%</i>

Source: ESRI and ConsultEcon, Inc.

- ◆ The Median Age in the Total Resident Market Area is 42.3, 12% above the U.S. median.
- ◆ The Primary Market Area contains the youngest median age.
- ◆ Important visitor segments to family oriented educational venues are adults in their mid-20s through 40s with children, as these will most likely represent families involved in school and other educational programs.
- ◆ Other important audiences include school-age children, especially as visits to educational attractions could potentially be part of the curricula in market area school districts.
- ◆ Residents over 50 including retirees are another important group for visitation and for volunteerism since they often have more time and disposable income available for such recreational pursuits.

# Resident Market Context

## SCHOOL AGE CHILDREN

- ◆ For the purposes of this analysis, children aged 5 to 17 are considered to be “school-age.”
- ◆ In 2014, there were an estimated 54,000 school-age children in the Resident Market Area, with 46% of these children residing in the Primary Market Area.
- ◆ Total Resident Market Area school-age population is projected to decrease slightly - about 2% by 2019. But, the decrease totals about 1,000 children; with the primary market area projected to lose 200 children.

**School Age Children in the Resident Market**

	2014 Estimated School-Age Children	2019 Estimated School-Age Children	Percent Change, 2014 to 2019
Primary Market Area	24,700	24,500	-0.8%
Secondary Market Area	6,800	6,600	-2.9%
Tertiary Market Area	22,500	21,900	-2.7%
<b>Total Resident Market Area</b>	<b>54,100</b>	<b>53,000</b>	<b>-2.0%</b>
<i>State of Minnesota</i>	<i>852,000</i>	<i>867,500</i>	<i>1.8%</i>
<i>State of Wisconsin</i>	<i>878,700</i>	<i>867,700</i>	<i>-1.3%</i>
<i>United States</i>	<i>49,284,200</i>	<i>50,093,000</i>	<i>1.6%</i>

Source: ESRI and ConsultEcon, Inc.

Note: Population values are rounded to nearest hundred.

# Resident Market Context

## HOUSEHOLD CHARACTERISTICS OF RESIDENT MARKET

### Resident Market Area Household Profile

	Estimated Number of Households	Estimated Number of Family Households	Percent of Families to Total Households	Average Household Size
Primary Market Area	72,200	42,400	58.7%	2.31
Secondary Market Area	20,500	13,800	67.3%	2.32
Tertiary Market Area	72,700	44,900	61.8%	2.22
<b>Total Resident Market Area</b>	<b>165,500</b>	<b>101,100</b>	<b>61.1%</b>	<b>2.28</b>
<i>State of Minnesota</i>	<i>2,140,400</i>	<i>1,376,100</i>	<i>64.3%</i>	<i>2.46</i>
<i>State of Wisconsin</i>	<i>2,319,600</i>	<i>1,485,100</i>	<i>64.0%</i>	<i>2.41</i>
<i>United States</i>	<i>119,862,900</i>	<i>79,114,800</i>	<i>66.0%</i>	<i>2.57</i>

Source: ESRI and ConsultEcon, Inc.

Note: Household numbers are rounded to nearest hundred.

- ◆ An analysis of households characteristics is helpful to determine household sizes and make-up related to potential families and children to visit the Lake Superior Zoo.
- ◆ Larger household sizes often reflect the presence of children in the household.
- ◆ In 2014, there were an estimated 165,500 households in the Resident Market Area. Of the total households, 101,100 – or 61% – are classified as “family” households.
- ◆ The average household size in the Resident Market Area is slightly smaller than those of the States of Minnesota and Wisconsin, and the U.S. as a whole.

# Resident Market Context

## HOUSEHOLD INCOME

### Household Income Characteristics

	Median Household Income	Less than \$25,000	\$25,000-\$49,999	\$50,000-\$74,999	\$75,000-\$99,999	\$100,000+
Primary Market Area	\$45,631	26.8%	26.9%	19.1%	11.9%	15.4%
Secondary Market Area	\$49,525	22.1%	28.3%	21.5%	13.8%	14.3%
Tertiary Market Area	\$41,673	27.9%	30.3%	19.5%	11.7%	10.6%
<b>Total Resident Market Area</b>	<b>\$44,200</b>	<b>26.7%</b>	<b>28.6%</b>	<b>19.5%</b>	<b>12.0%</b>	<b>13.2%</b>
<i>State of Minnesota</i>	<i>\$58,634</i>	<i>18.5%</i>	<i>23.0%</i>	<i>19.4%</i>	<i>13.8%</i>	<i>25.4%</i>
<i>State of Wisconsin</i>	<i>\$52,211</i>	<i>22.8%</i>	<i>24.5%</i>	<i>19.9%</i>	<i>13.8%</i>	<i>19.0%</i>
<i>United States</i>	<i>\$52,076</i>	<i>23.8%</i>	<i>24.0%</i>	<i>18.2%</i>	<i>12.2%</i>	<i>21.8%</i>

Source: ESRI and ConsultEcon, Inc.

- ◆ Higher incomes are associated with visitation to educational attractions, both in terms of ability to visit (disposable income, available transportation and leisure time).
- ◆ Resident Market Area Median Household Income is 85% of the U.S. as a whole.
- ◆ The \$50,000 to \$99,999 household income range is on par with the U.S., but lower income households make up a larger percentage, and households with \$100,000 income a much smaller percentage.
- ◆ These lower income levels are tempered by lower than average cost of living in the area.
- ◆ The moderate income profile indicates that care should be taken to assure ticket prices are affordable.

# Resident Market Context

## DULUTH DEMOGRAPHIC CHARACTERISTICS IN CONTEXT OF RELEVANT DEFINED ECONOMIC REGIONS

- ◆ Duluth is the central place in its MSA and DMA (media market).
- ◆ Duluth comprises 31 % of MSA population and 20% of DMA.
- ◆ Duluth is somewhat younger and has somewhat lower income levels.
- ◆ The Duluth MSA has similar population to the defined drive-time Resident Market Area.
- ◆ The MSA and DMA extend in some directions well beyond the drive-time Resident Market Area suggesting additional market opportunity.

**Population and Demographic Characteristics of Duluth and its MSA and DMA**

	Population		Median Age 2014	Median Household Income 2014
	2014	2019		
City of Duluth	86,656	87,380	34.4	\$40,076
Remainder of Duluth, MN-WI MSA	194,175	195,530		
Duluth, MN-WI MSA	280,831	282,910	41.3	\$44,972
Remainder of Duluth, MN- Superior, WI DMA	145,130	145,534		
Duluth, MN-Superior, WI DMA	425,961	428,444	43.4	\$43,628

City of Duluth is in St. Louis County

MSA (Metropolitan Statistical Area) - is defined as St. Louis and Carlton Counties, MN, and Douglas County, WI

DMA (Designated Market Area) - is defined as Koochiching, Itasca, St. Louis, Carlton, Lake, and Cook Counties, MN, and Douglas, Bayfield, Sawyer, Ashland, Iron, and Gogebic Counties, WI

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2014 and 2019; and ConsultEcon, Inc.

# Resident Market Context

## RESIDENT MARKET SUMMARY

The Resident Market Areas for the Lake Superior Zoo are defined as: Primary Resident Market – the population within a 30-minute drive time of Lake Superior Zoo; Secondary Resident Market – 30- to 60-minute drive time; Tertiary Resident Market – 60- to 90-minute drive time.

Demographic characteristics of the Resident Market Areas include:

- ◆ Total Resident Market Area population in 2014 estimated at 394,600.
- ◆ Population growth of less than 1% between 2014 and 2019 – projected at 396,000.
- ◆ Moderate income levels with Median Household Income of \$44,200 - 85% of the U.S. as a whole.
- ◆ A somewhat older age profile in the Resident Market than in the State and U.S. at a median age of 42.3; which 12% above the median for the U.S.
- ◆ In 2014, an estimated 54,000 school-age children in the Resident Market Area, with 46% of children residing in the Primary Market Area. School-age children population projected to decrease very slightly by 2019.

Therefore increases in population or enhancement in demographic profile are not expected to contribute to improved attendance performance at the Lake Superior Zoo.

# Tourist Market Context

## CHARACTER OF TOURISM IN DULUTH

- ◆ Over the past ten years, Duluth's tourism character has changed significantly, according to professionals in the city's tourism industry.
- ◆ In the 1990s up to the early 2000s Duluth was largely considered a drive-through city or stopping point en route to destinations on Lake Superior's North Shore. Its industrial history and underdeveloped tourist amenities made it less attractive to tourists passing through.
- ◆ More recently, Duluth has emerged as a destination city in its own right. Development in the downtown lake-front area and increased marketing of Duluth as an outdoors-oriented, small-city destination has attracted different types of vacationing parties and enticed them to stay in Duluth for longer periods of time.
- ◆ Duluth is also getting more attention in the adventure tourism industry on a national level, being selected in June 2014 by Outside Magazine as the "Best Town in America." In March 2013, it was selected as the runner-up in the "Best Adventure Hub" category for Outside's Travel Awards, behind Kununurra, Australia.
- ◆ The evolving status of Duluth as a tourist destination support the planned initiatives that have been proposed for the repositioning of the Lake Superior Zoo.

Source for data on this slide: Interviews with Duluth tourism professionals; Outside Magazine.

# Tourist Market Context

## DULUTH IN ITS STATEWIDE CONTEXT

- ◆ Duluth is a popular destination within Minnesota because the active, adventure-oriented elements of its tourism profile align with those of the state as a whole. Duluth has a strategic location in this respect as well.
- ◆ Tourism to Minnesota can be characterized by these trends:
  - Tourism to Minnesota is a \$12.5 billion industry.
  - In 2013 the travel and tourism industry generated 245,000 jobs.
  - In 2011 there were an estimated 70.6 million visitors to MN.
  - 60.8 million of those visitors to Minnesota were traveling for leisure purposes.
- ◆ As the largest city in the Northeast region, Duluth plays a central role for in the statewide and regional tourism economy.
  - St. Louis County, in which Duluth is located, generated \$473.9 million in gross leisure and tourism sales in 2012, ranking it fifth among all Minnesota counties in tourism sales, and first among counties outside the Twin Cities Tourism Region.
  - The large Minnesota tourism market, which has a strong outdoor and lake-oriented element, presents good opportunities for continued growth in Duluth tourism.

Source for data on this slide: Explore Minnesota, Minnesota Department of Revenue, Minnesota Department of Employment and Economic Development

# Tourist Market Context

## DULUTH IN ITS BI-STATE CONTEXT

- ◆ In addition to being well-positioned in a state-wide tourism context, Duluth also benefits from marketing and tourism development in Northwest Wisconsin, including Douglas County, which is a part of Duluth's Metropolitan Statistical Area.
- ◆ Wisconsin's Northwest region is marketed as the "land of the adventurer," very much in line with the development of Duluth's active-adventure tourism character.
- ◆ Douglas County has an active tourism economy of its own, ranking 4<sup>th</sup> among 17 counties in Northwest Wisconsin and 30<sup>th</sup> among the state's total 72 counties, with \$74.4 million in direct visitor spending.
- ◆ As Northwest Wisconsin further develops its adventure-oriented tourism economy, Duluth will continue to develop as a destination for both Minnesota and Wisconsin tourists.

Source for data on this slide: The Wisconsin Department of Tourism.

# Tourist Market Context

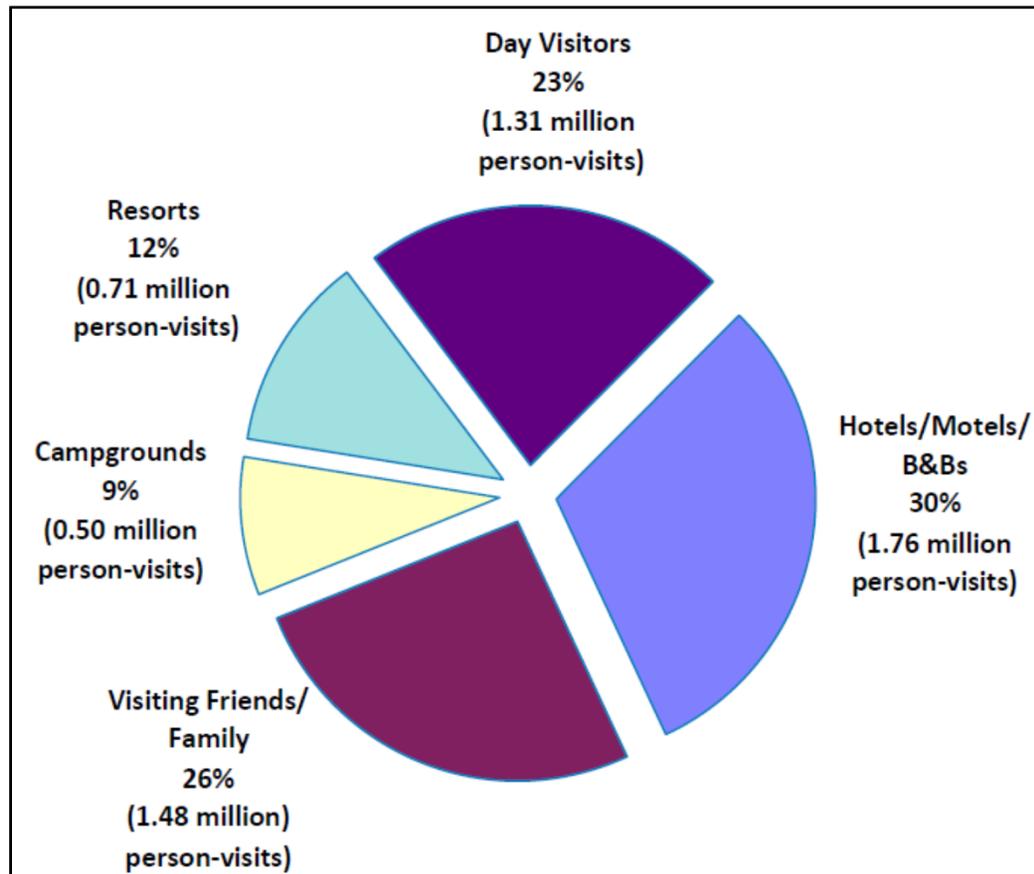
## DULUTH IN ITS REGIONAL CONTEXT

- ◆ Duluth is the most populous area and the major destination for the Northeast Region, which comprises 8 counties in Minnesota's northeast. (Previously the region comprised 10 counties, until a reconfiguration of the regions took place in 2009).
- ◆ The Northeast region of the State generated approximately 5.77 million person-visits in the one-year period between June 2007 and May 2008.
- ◆ Of those 1.31 million were day trips and 4.45 million were overnight trips.
- ◆ Tourism to the Northeast Region generated approximately \$1.6 billion in visitor expenditures, which supported 33,500 full-time jobs.
- ◆ 2/3 of visitors participated in "active" recreation including hiking and swimming during their trip to the Northeast region. In addition, visitors were sightseeing and driving for pleasure (45%), shopping (49%), and dining out (70%). (Visitors participated in more than one activity while traveling).
- ◆ Duluth is already a destination in the region, so continued development in Duluth would ultimately benefit the region as a whole.

Source for data on this slide: "The Economic Impact of Expenditures By Travelers on Minnesota's Northeast Region and the Profile of Travelers," 2008. Davidson-Peterson Associates and Explore Minnesota.

# Tourist Market Context

## DULUTH AS A DESTINATION FOR DAY TRIPS AND OVERNIGHTS



Source: Davidson-Peterson Associates and Explore Minnesota

Visits to the Northeast Region comprised of both day and overnight trips.

- ◆ Approximately one quarter of visits were day trips.
- ◆ The remaining visitors were overnight trips, with the majority staying in hotels, motels, and B&Bs.
- ◆ In recent years a number of hotel renovations and new hotel developments indicate a trend toward increased overnight visitation, and greater tourism impact on both Duluth and the region.

# Tourist Market Context

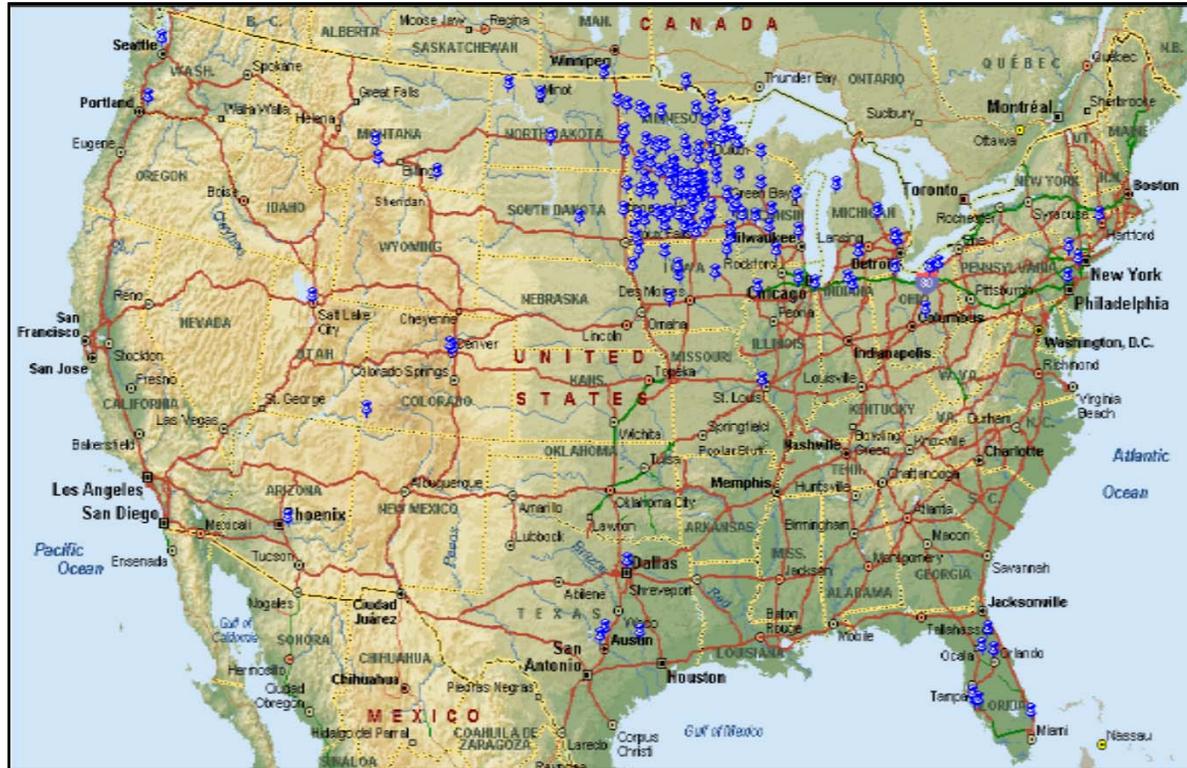
## DULUTH TOURISM ACTIVITY

- ◆ Previously Duluth had been considered by many to be a stopping point en route to resorts on the north shore of Lake Superior. More recently, Duluth has emerged as a destination in its own right.
- ◆ 3.5 million visitors were estimated to visit Duluth annually in 2005.
- ◆ 2.9 million visitors, approximately 83 percent, are traveling to Duluth for leisure purposes, while the remaining 17 percent travel for business, meetings, or conventions.
- ◆ 55 percent of visitors are estimated to visit during the summer months, followed by 20 percent in the autumn, 15 percent in winter, and 10 percent in the spring.
  - Weather is a key part of gauging tourism activity in this area.
- ◆ Visitors to Duluth associate the city with its attractive scenery and proximity to Lake Superior. These associations are paired with an interest in outdoor activities, especially hiking.

Source for data on this slide: Visit Duluth; Zenith Research.

# Tourist Market Context

## DULUTH'S VISITOR ORIGINS



- ◆ This U.S. map shows the locations of 365 visitors to Duluth who were interviewed for the 2005 tourism study.
- ◆ Most visitors to Duluth are coming from the Twin Cities (Minneapolis/St. Paul) and other parts of Southern Minnesota.
- ◆ Other feeder markets are Eau Claire, WI and other cities in Northern Wisconsin; Fargo, ND; Sioux Falls, SD; and Des Moines, IA.

# Tourist Market Context

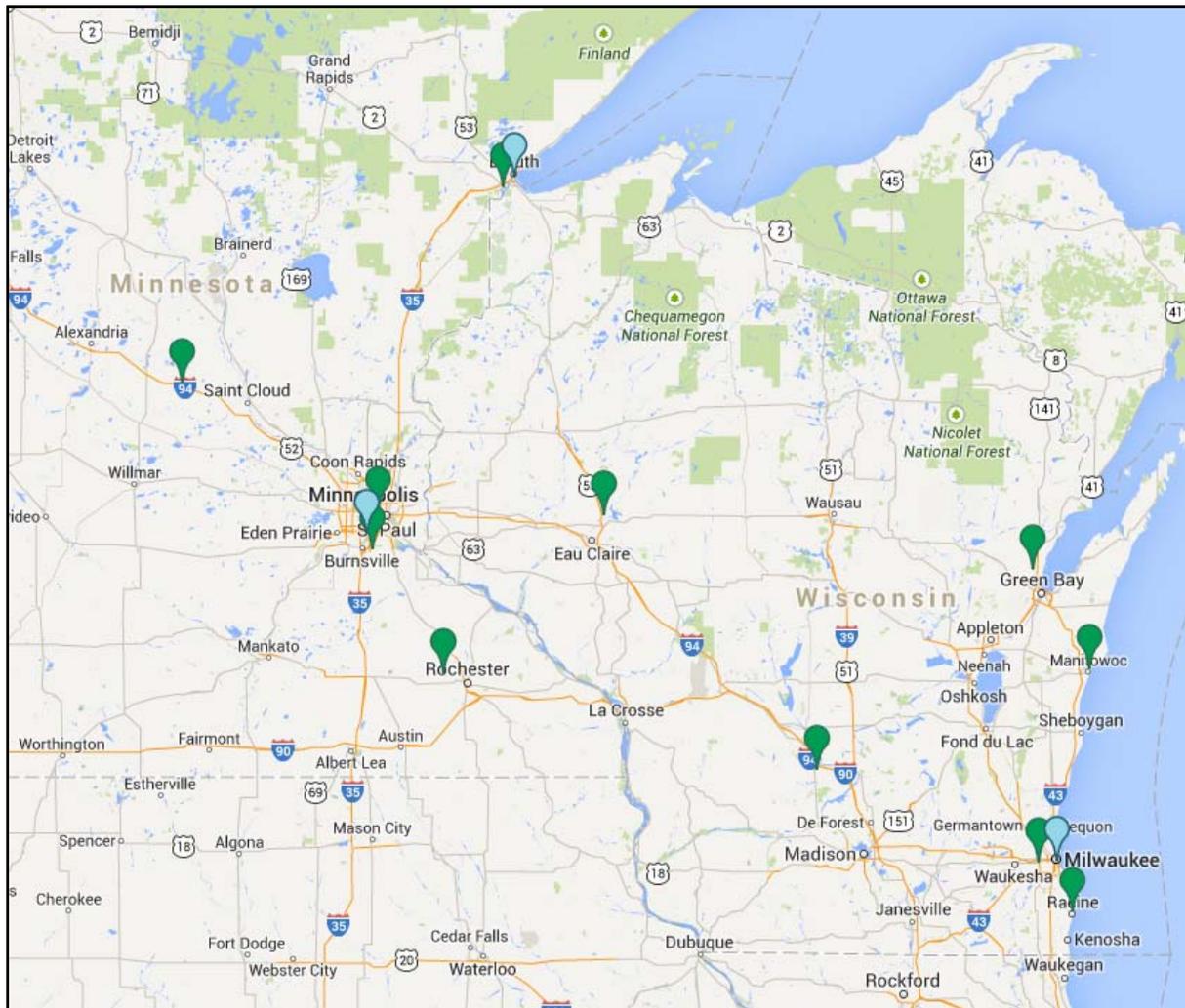
## SUMMARY OF TOURIST MARKET IN DULUTH

- ◆ In recent years Duluth has emerged as a travel destination in the Northeast Region of Minnesota, the Northwest Region of Wisconsin, and the State of Minnesota as a whole.
- ◆ Once an industrially-oriented city that was largely considered a “drive-by,” Duluth has become a destination in its own right, with a tourism character built around the natural beauty of Lake Superior and the adventurous spirit of the area.
- ◆ Duluth is also getting more attention in the adventure tourism industry on a national level, being selected in June 2014 by Outside Magazine as the “Best Town in America.” In March 2013, it was selected as the runner-up in the “Best Adventure Hub” category for Outside’s Travel Awards, behind Kununurra, Australia.
- ◆ Approximately 2.9 million out of an estimated 3.5 million visitors to Duluth visit for leisure purposes.
- ◆ Investment in Duluth’s tourist infrastructure and marketing, especially related to active and adventure tourism will further increase tourism activity to the city and allow it to continue gaining momentum as a destination for the region and beyond.

# Local Attractions

## THE LAKE SUPERIOR ZOO IN A BI-STATE CONTEXT

- ◆ The Lake Superior Zoo serves a substantial market area, though it is among a number of visitor attractions related to the living world between Minnesota and Wisconsin. There are a total of 15 zoos and aquariums in this area.
- ◆ Table 1 in Appendix A lists some of these regional attractions, their locations, amenities, and some visitation data.
- ◆ This map shows the locations of these attractions – green markers show the locations of zoos, blue markers show the locations of aquariums.



# Local Attractions

## DULUTH VISITOR ATTRACTIONS IN THEIR LOCAL CONTEXT

There are a number of visitor attractions in Duluth and its surrounding area that provide insights to market opportunity and a competitive market context for the Lake Superior Zoo. These include:

- ◆ 6 Nature Centers located on sites ranging in size from 2.5 acres to 18,000 acres.
- ◆ 17 Museums and other Visitor Attractions ranging in ticket price from free admission to \$29 for some rides on the North Shore Scenic Railroad.
- ◆ 3 Amphitheaters providing a variety of programming from big-ticket concerts (up to \$125 per ticket) to small, outdoor venues with lawn seating.
- ◆ 7 Adventure-themed attractions, which range in price depending on the season and the attraction type.
- ◆ 140 total Duluth city parks, ranging in size and programming.

Table 2 through Table 6 in Appendix A list some of these regional attractions, their locations, amenities, and some visitation data.

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# Local Attractions

## **LOCAL CONTEXT FOR THE LAKE SUPERIOR ZOO**

Following are profiles of several leading visitor attractions in Duluth to inform this analysis regarding market context and in-place offerings to residents and tourists.

Profiled attractions include:

- ◆ Hartley Nature Center
- ◆ Spirit Mountain Adventure Park
- ◆ Great Lakes Aquarium
- ◆ Duluth Children's Museum

# Local Attractions



Source: ConsultEcon, Inc.

## HARTLEY NATURE CENTER

- ◆ Located on the east end of Duluth.
- ◆ 7,500-SF Education Center Building on 650-acre park featuring hiking, biking, and skiing trails, as well as winter sport equipment rentals.
- ◆ City owned property, but operated by an independent nonprofit.
- ◆ Programming includes on-site preschool, field trips, day-camp programs, and a variety of special events.
- ◆ Approximately 20,000 visitors per year, including 12,000 school-aged children participating in field trips, special events, and public programming.
- ◆ Visiting the park and most programming is free.

# Local Attractions

## SPIRIT MOUNTAIN ADVENTURE PARK

Among the top tourist attractions in Duluth and the Northeast region, with 279,013 visitors in 2010.

Located just south of the Lake Superior Zoo.

Features both winter sports including skiing, snowboarding, and snow tubing; and summer attractions, such as an alpine coaster, a 90-second zip line attraction, scenic chair lift rides, disc golf, mini golf, mountain bike trails and a mountain bike skills park.

Day camp programming and facility rentals are also available.

Ticket prices vary depending on the activity. For example, adult season passes for skiing and snowboarding are \$244.



Source: Spirit Mountain Adventure Park ([spiritmt.com](http://spiritmt.com))  
Lake Superior Zoo & Fairmount Park

Source: <https://www.facebook.com/pages/Spirit-Mountain/169923041393?fref=photo>

# Local Attractions



Source: ConsultEcon, Inc.



## THE GREAT LAKES AQUARIUM

- ◆ Located in the downtown tourist area of Duluth, attendance was estimated at 127,000 visitors in 2011.
- ◆ The only major public aquarium in the region, it features exhibits from a variety of freshwater ecosystems, from the Great Lakes to the Amazon River.
- ◆ Facility rentals, as well as school programs and overnights, are available.
- ◆ Ticket prices range from \$10.50 for young children (ages 3-12) to \$16.50 for adults.
- ◆ “Shipwrecks Alive!,” an in-house designed exhibit, opened in July 2014, exploring the history of shipwrecks in Lake Superior, the South Pacific, and the Mediterranean.

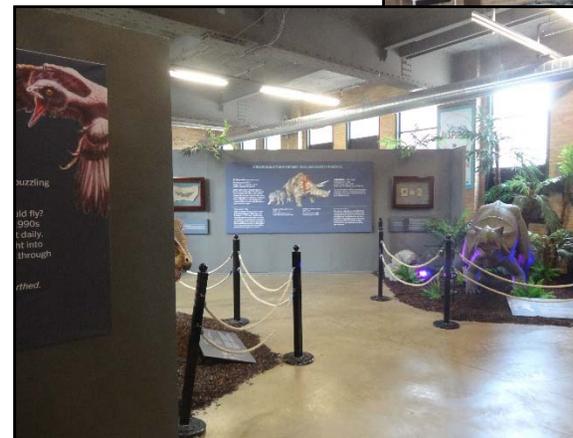
Source: Great Lakes Aquarium ([glaquarium.com](http://glaquarium.com))

# Local Attractions

## DULUTH CHILDREN'S MUSEUM

- ◆ Located just south of the downtown tourist area of Duluth, it is the fifth-oldest children's museum in the United States.
- ◆ The museum was previously located at the Depot, where it shared the space with the Lake Superior Railroad Museum and other cultural organizations. In 2012 it moved to its current location on West Ave. Plans are in place to adapt the Duluth Brewing and Malting Building as a new museum in the coming years.
- ◆ Facility rentals for birthday parties are available.
- ◆ The general admission ticket price is \$12.50.
- ◆ An exhibition called "Dinosaurs Unearthed" is on display from May to September, 2014.

Source: Official Museum Directory; Duluth Children's Museum.



Source: ConsultEcon, Inc.

# Local Attractions



## ADVENTURE PARKS

Given the opportunities identified for the Lake Superior Zoo, several local adventure parks are highlighted here. Some are indoors, while others feature varying outdoor activities in both summer and winter.

- ◆ Spirit Mountain Adventure Park
- ◆ Duluth Adventure Zone (Canal Park)
- ◆ Edgewater Hotel and Waterpark
- ◆ Challenge Course – University of Wisconsin, Superior



Lake Superior Zoo & Fairmount Park

Source: Referenced Attractions

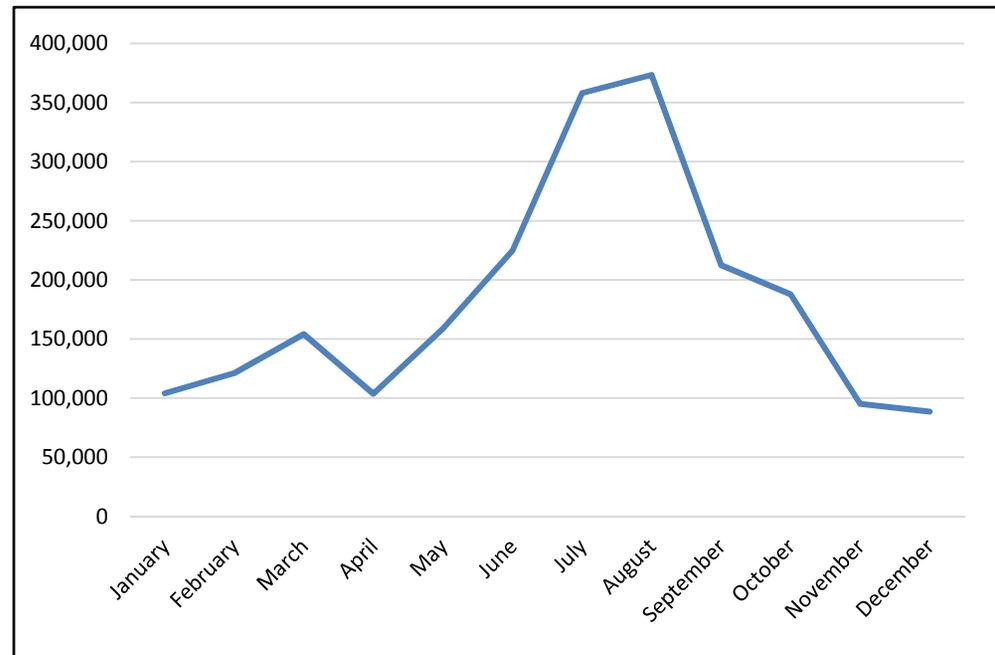
# Local Attractions

## SEASONALITY OF DULUTH VISITOR ATTRACTIONS

**6 out of 13 tourist attractions in Duluth had total attendance of over 100,000 in 2013.**

**Combined monthly attendance for all 13 attractions was highest at 373,000 in August and lowest at 89,000 in December.**

Total Attendance by Month, 2013



Source for data on this slide: The Duluth Area Attractions Council.

# Local Attractions

## **SUMMARY OF LOCAL ATTRACTIONS IN DULUTH**

- ◆ Investment in existing and new attraction has supported the enhanced level of tourism, especially adventure-oriented tourism, in Duluth.
- ◆ The result of these investments indicate additional opportunity for outdoor- and adventure-oriented visitor experiences in Duluth.
- ◆ Based on trends in tourism activity, appropriate new investments in targeted visitor experiences will support the continued development of Duluth as a regional destination for adventure tourism.

# Regional Attractions Tables

**Table 1: Selected Zoos and Aquariums**

Name	Location	Distance From Lake Superior Zoo (miles & drive time)	Attendance	Price	Description
Lake Superior Zoo (Included for Comparison Purposes)	7210 Fremont St, Duluth, MN 55807		79,115	Adults - \$10, Children - \$5, Seniors - \$9, Children under 2 - Free	AZA-accredited zoo on property owned by the City of Duluth, but operated by a private organization.
Great Lakes Aquarium	353 Harbor Dr., Duluth, MN, 55802-2639	6 mi. (est. 8 min.)	127,000 (est. from 2011 Annual Report)	\$16.50 adult \$13.50 senior \$12.50 age 13-17 \$10.50 age 3-12	A freshwater aquarium, GLA features animals and habitats found within the Great Lakes Basin. The Aquarium also houses animals from other freshwater ecosystems such as the Amazon River. A changeable exhibit space is designed to interpret marine (saltwater) animals and habitat.
Como Park Zoo and Conservatory	1225 Estabrook Dr, St Paul, MN 55103	147 mi. (est. 2 hr. 30 min.)	2010 - 2,223,936 2011 - 1,884,772 2012 - 1,979,042	Free. Recommended donation of \$3 for adults and \$2 for children.	AZA-accredited zoo and attraction park located in the heart of the Twin Cities.
Irvine Park and Zoo	116 Bridgewater Ave., Chippewa Falls, WI 54729	148 mi. (est. 2 hr. 28 min.)	NA	Free	A 318-acre park includes a number of attractions, such as a band shell, historic schoolhouse, log cabin, and the Glen Loch Dam, in addition to a zoo and petting zoo with a variety of local and exotic animals.
SEA LIFE Minnesota Aquarium	120 E Broadway, Bloomington, MN 55425	158 mi. (est. 2 hr. 27 min.)	NA	Adults - \$22.99 + tax, Children (3-12) - \$16.99 + tax, Children under 3 - Free	Located inside the Mall of America, this is one of 35 SEA LIFE aquariums worldwide and the largest underground aquarium in the world.
Minnesota Zoo	13000 Zoo Blvd, Apple Valley, MN 55124	163 mi. (est. 2 hr. 35 min.)	1.3 Million for FY 2012-2013. 1,338,581 in 2010.	0-2 - Free, 3-12 - \$12, 13-64 - \$18, 65+ - \$12; Upcharge for IMAX.	AZA-accredited zoo located just south of the Twin Cities.
Hemker Park & Zoo	County Road 39, Freeport, MN 56331	171 mi. (est. 2 hr. 58 min.)	NA	Adults - \$8.75 + tax, Seniors - \$7.75 + tax, Children \$6.75 + tax	ZAA-accredited (Zoological Association of America), family-run zoo located approximately 1.5 hours northwest of the Twin Cities.
Oxbow Park and Zollman Zoo	5731 County Road 105 NW, Byron, MN 55920	218 mi. (est. 3 hr. 30 min.)	Nearly 50,000 annually (includes many school groups)	Free	Animal habitats for wild animals native to Minnesota.
International Crane Foundation	E11376 Shady Lane Road, Baraboo, WI 53913	285 mi. (est. 4 hr. 34 min.)	24,500	Adults - \$9.50, Seniors/Students - \$8, Youth - \$5	An AZA-accredited, seasonally open crane habitat featuring to further education about the world's 15 crane species with an exhibition of a captive flock of over 100 cranes.

Source: Facilities listed, Association of Zoos & Aquariums (AZA), American Alliance of Museums (AAM) Official Museum Directory, Mapquest, and ConsultEcon, Inc.

# Regional Attractions Tables

**Table 1: Selected Zoos and Aquariums (Continued)**

Name	Location	Distance From Lake Superior Zoo (miles & drive time)	Attendance	Price	Description
Northeastern Wisconsin Zoo	4378 Reforestation Rd, Green Bay, WI 54313	327 mi. (est. 5 hr. 18 min.)	72,000	Adults - \$7, Children/Seniors - \$5, Children under 2/Members - Free	An AZA-accredited zoo and adventure park owned and operated without public support by Brown County, WI.
Henry Vilas Zoo	702 S Randall Ave, Madison, WI 53715	333 mi. (est. 5 hr. 26 min.)	700,000 (estimated)	Free	AZA-accredited, 28-acre zoo featuring a variety of global wildlife.
Lincoln Park Zoo	1215 N 8th St, Manitowoc, WI 54220	373 mi. (est. 5 hr. 57 min.)	55,584	Free	A city-operated zoo featuring a number of both local and exotic animals in a natural-looking habitat.
Milwaukee County Zoo	10001 W Blue Mound Rd, Milwaukee, WI 53226	393 mi. (est. 6 hr. 11 min.)	1,232,899 (2013)	Prices vary by season. Summer: Adult - \$14.25, Senior - \$13.25, Child 3-12 - \$11.25, Child 0-2 - Free; Winter: Adult - \$11.75, Senior - \$10.75, Child 3-12 - \$8.75, Child 0-2 - Free.	AZA-accredited zoo featuring over 2000 animals in a 200-acre zoo park.
Reiman Aquarium at Discovery World Science & Technology Center	500 N. Harbor Dr., Milwaukee, WI 53202	400 mi. (est. 6 hr. 19 min.)	400,000	Adults - \$16.95, Child 3-17 - \$12.95, Child under 3 - Free, Senior 60+ - \$14.95, Students - \$9.95, Military - \$10	A 120,000-square foot facility featuring interactive exhibits to teach about innovation, science, technology, and the environment. The aquarium features ten tanks representing the wild waters of Lake Michigan to the Caribbean.
Racine Zoo	200 Goold St, Racine, WI 53402	424 mi. (est. 6 hr. 49 min.)	85,000	Adults - \$8, Senior - \$7, Child - \$6	AZA-accredited zoo features approximately 100 species of animals in a 28-acre park.

Source: Facilities listed, Association of Zoos & Aquariums (AZA), American Alliance of Museums (AAM) Official Museum Directory, Mapquest, and ConsultEcon, Inc.

# Regional Attractions Tables

**Table 2: Selected Nature Centers**

Name	Location	Distance From Lake Superior Zoo (miles & drive time)	Price	Description
Hartley Nature Center	3001 Woodland Ave, Duluth, MN 55803	12 mi. (est. 25 min)	Most programming is free.	Established in 1987. An independent, non-profit organization governed by a Board of Directors, dedicated to environmental education for all people, focusing on school-aged youth from the surrounding region. Facilities include a 7,500-SF building in the 975-acre Hartley Park.
Boulder Lake Environmental Learning Center	5013 Miller Trunk Highway, Duluth, MN 55811	28 mi. (est. 45 min)	Programming varies in price.	Established in 1991. The Boulder Lake Management Area (BLMA) is a "window" for various audiences to view full-scale, integrated natural resource management occurring in the BLMA using such things as interpretive trails, public programs and formal environmental education activities. The 18,000-acre park includes campsites, parking, picnic areas, a ski den, and an education center.
Hawk Ridge Bird Observatory	3980 East Skyline Parkway, Duluth, MN	13 mi. (est. 25 min)	Programming varies depending on the season. Price for owl programming is \$5 per person.	The mission of the Hawk Ridge Bird Observatory is to protect birds of prey and other migratory birds in the Western Lake Superior Region through research, education, and stewardship. There are no buildings on this 315-acre municipal nature reserve. Operating organization, Friends of Hawk Ridge, was established in 1979.
Laurentian Environmental Center	8950 Peppard Rd, Britt, MN 55710	81 mi. (est. 1 hr 25 min)	Overnight group rates vary depending on program selected. Day programs cost \$15 per person.	Laurentian Environmental Center is a public residential educational facility that combines science, environmental education, leadership training, and outdoor skills recreation programs. The property includes access to a 100-acre lake, and hiking and ski trails in the Big Aspen network which comprises a 30-mile system
International Wolf Center	1396 Highway 169, Ely, Minnesota 55731-8129	116 mi. (est. 2 hr 8 min)	Adults - \$9.50, Children - \$5.50, Seniors - \$8.50, Children under 3 and Members - Free	Established in 1993 as the first of its kind research center, this 1.25-acre enclosed wolf habitat and exhibition space is accompanied by a 20,000-square-foot educational and wolf-research facility.
North American Bear Center	1926 Highway 169, Ely, Minnesota	113 mi. (est. 2 hr 1 min)	Adults - \$9.50, Children - \$5.50, Seniors - \$8.50, Children under 3 and Members - Free	The North American Bear Center is the only Science/Nature museum of its kind. Dedicated to replacing old myths with facts, it lets people learn from the bears themselves about bear behavior, ecology, and their relations with humans. Bears are enclosed in a 2.5-acre naturally-forested habitat with a pond and waterfalls.

Source: Facilities listed and ConsultEcon, Inc.

# Regional Attractions Tables

**Table 3: Selected Museums and Attractions**

Name	Location	Distance From Lake Superior Zoo (miles & drive time)	Annual Attendance	Ticket Pricing	Description
Lake Superior Maritime Visitors Center	600 Lake Ave., S., Duluth, MN, 55802-2322	7 mi. (est. 12 min)	408,000 (actual)	Free (donations accepted)	Marine Museum located at Duluth Ship Canal.
St. Louis County Historical Society	506 W. Michigan St., Duluth, MN, 55802-1519	6 mi. (est. 9 min)	129,582 (estimate)	\$12.00 adult \$ 6.00 age 3-13 (incl. entrance to all St. Louis County Heritage & Arts Ctr (Depot) museums)	History Museum housed in restored Duluth Union Depot.
Lake Superior Railroad Museum	506 W. Michigan St., Ste. 19, Duluth, MN, 55802-1533	6 mi. (est. 9 min)	100,000 (estimate)	\$12.00 adult \$ 6.00 age 3-13	Railroad Museum housed in 1891-92 Duluth Union Depot Building. Collections of historic railroad equipment; steam locomotives; diesel locomotives; electric locomotives; passenger & freight cars; railway post office car; snowplows; steam wrecking crane; cabooses; china & silver; manuscripts; 8,000 photographs; 300 timetables.
Glensheen Historic Congdon Estate	3300 London Rd., Duluth, MN, 55804-2010	9 mi. (est. 13 min)	60,000	\$15.00 adult \$14.00 senior \$ 9.00 child 6-12 \$45.00 – family of four	Historic House & Site: 1905-08 Glensheen, 6.7-acre historic estate featuring 39-room Jacobean Revival mansion, built for Chester A. Congdon, along the shore of Lake Superior. Listed on National Register of Historic Places.
Duluth Children’s Museum	115 S. 29th Ave. W., Duluth, MN, 55806	4 mi. (est. 12 min)	54,321	\$12.50 general admission	Children’s & Youth Museum: housed in 1892 French Norman style former railway station, the St. Louis County Heritage & Arts Center including two additional museums, an art institute & five performing arts organizations.
Duluth Art Institute	506 W. Michigan St., Ste. 2, Duluth, MN, 55802-1519	6 mi. (est. 9 min)	50,000 (est.)	Free (some special exhibitions charge admission)	Art gallery featuring local artists; educational program; artist services.
Tweed Museum of Art	Univ. of Minnesota Duluth, 1201 Ordean Ct., Duluth, MN, 55812-3041	10 mi. (est. 19 min)	35,000 (actual)	Free (donations accepted)	Art Museum featuring Modern & contemporary works; paintings; drawings; works on paper; photography; sculpture & ceramics; Glenn C. Nelson international ceramics; 14th to 19th-century European & 19th to 20th-century American paintings, prints & sculpture.

Source: Facilities listed, American Alliance of Museums (AAM) Official Museum Directory, and ConsultEcon, Inc.  
 Note: Unless otherwise noted, attendance figures are from AAM OMD online; NA = Not available.

# Regional Attractions Tables

**Table 3: Selected Museums and Attractions (Continued)**

Name	Location	Distance From Lake Superior Zoo (miles & drive time)	Annual Attendance	Ticket Pricing	Description
Vista Fleet	323 Harbor Drive, Duluth, MN 55802	6 mi. (est. 10 min)	NA	\$15 to \$20 depending on the cruise program.	Vista Fleet operates a number of sightseeing cruises around Duluth's Lake Superior Harbor and the St. Louis River.
S.S. William A. Irvin	350 Harbor Drive, Duluth, MN 55802	6 mi. (est. 10 min)	NA	\$12 - Adults, \$8 - Students and Seniors, Free for Children under 10 accompanying an adult.	This historic ship was once one of the most powerful carriers of iron ore in the U.S. Steel Great Lakes Fleet. Now open to visitors as a museum of Duluth Maritime and Industrial history.
Fond-du-Luth Casino	129 E Superior St, Duluth, MN 55802	7 mi. (est. 12 min)	NA	Not Applicable.	Casino resort owned and operated by the Fond du Lac Band of Lake Superior Chippewa.
North Shore Scenic Railroad	506 West Michigan Street Duluth, MN 55802	6 mi. (est. 9 min)	NA	Ranges \$16 to \$29 for adults, and \$8 to \$18 for children on three different train route programs.	Historic trains ride along the north shore of Lake Superior providing scenic views of the lake and forest, and giving passengers a look into the history and story of the City.
Thompson Hill Travel Information Center	8525 W Skyline Pkwy Duluth, MN 55810	4 mi. (est. 8 min)	NA	Free tourism info center	Located on a hill in West Duluth offering information to visitors, access to walking trails, and views of the river and city.
Bentleyville Christmas Light Show at Bayfront Festival Park	700 Railroad Street Duluth, MN 55802	6 mi. (est. 9 min)	NA	Free	Annual Holiday light display in Bayfront Festival Park.
Bob Dylan Way	600 East Superior Street	7 mi. (est. 13 min)	NA	Free	1.8-mile walking tour of sites related to Bob Dylan in the city of his birth.
Harrington ARTS Center / World of Accordions Museum	1401 Belknap Street Superior, WI 54880	6 mi. (est. 11 min)	NA	Admission depends on programs offered.	Music and arts center in an adaptive-reuse church.
Douglas County Historical Society	1101 John Avenue, Superior, WI 54880	6 mi. (est. 11 min)	NA	No price listed.	Historical society offers a collection of historic documents and artifacts for research, as well as a community theater organization.
Superior Public Museums (Fairlawn, S.S. Meteor, Old Fire House and Police Museums)	906 East 2nd St Superior, WI 54880	9 mi. (est. 14 min)	NA	Admission varies for three museums. Fairlawn: Adult - \$9, Students/Seniors - \$7.50; S.S. Meteor: Adult - \$7, Students/Seniors - \$6; Fire and Police Museum: Free.	Three historical sites operate as museums, including the restored 1890 Fairlawn Mansion / Historical House, the S.S. Meteor Whaleback Ship (the world's last remaining of the type), and the last of Superior's 19th Century Fire Houses.

Source: Facilities listed, American Alliance of Museums (AAM) Official Museum Directory, and ConsultEcon, Inc.  
 Note: Unless otherwise noted, attendance figures are from AAM OMD online; NA = Not available.

# Regional Attractions Tables

**Table 4: Selected Amphitheatres**

Name	Location	Distance From Lake Superior Zoo (miles & drive time)	Acreage	Ticket Prices	Adjacent Amenities	Event Types
Bayfront Festival Park	350 Harbor Dr, Duluth, MN 55802	6 mi. (est. 9 min)	2.5	Many events free, depends on the program. Example: Tickets to Howling Moon Music Festival range from \$45 to \$125.	Part of a large event space with indoor amenities and a children's play area located by the aquarium, convention center, and with a view of the iconic Aerial Lift Bridge.	Concerts, charity runs, picnics, food festivals, music festivals, Bentleyville tour of lights (annual holiday light show).
Leif Erikson Park	12th Ave E & London Road, Duluth, MN	8 mi. (est. 16 min)	19.2	Mostly free.	City park includes a gazebo, rose garden, lake views, and small natural amphitheater.	Outdoor movie showings, wedding venue.
Giesen Concert Shell at the Lucius Woods Performing Arts Center	9245 East Main Street, Solon Springs, WI 54873	39 mi. (est. 47 min)	NA	Most regularly-priced tickets are \$15 in advance, \$20 at the gate.	The park is 40-acres and includes a swimming beach, playgrounds, nature trails, camping facilities, a picnic area, pavilion, and picnic shelters.	Concerts and other performances.

Source: Facilities listed and ConsultEcon, Inc.

Note: NA = Not available.

# Regional Attractions Tables

**Table 5: Selected Adventure Parks**

Name	Location	Distance From Lake Superior Zoo (miles & drive time)	Ticket Pricing	Description
Adventure Zone Canal Park	349 Lake Ave South Duluth, Minnesota	6 mi. (est. 15 min)	Pricing varies depending on activity.	Family attraction with over 50,000 square feet, featuring Laser Tag, Batting Cages, mini golf, the largest video/redemption arcade in the area, Vertical Endeavor’s rock climbing walls, a kid’s playground, an 18’ inflatable fire truck slide.
Spirit Mountain Adventure Park	9500 Spirit Mountain Place, Duluth, MN 55810	6 mi. (est. 14 min)	Pricing varies depending on activity.	Adventure park features seasonal attractions including skiing and snowboarding slope, camping facilities, mountain biking trails, disc golf, mini golf, tubing, scenic chair lift, alpine coaster, and zip line attractions.
Edgewater Hotel and Waterpark	2400 London Road, Duluth, Minnesota 55812	9 mi. (est. 13 min)	A limited number of passes to the waterpark are available to non-guests, and the prices vary depending on the season.	Waterpark featuring two 4.5-story waterslides, 150,000 gallons of water, a 400-foot lazy river, hot tubs, mini golf, and a tiki bar in a 35,000-square-foot indoor oasis.
Challenge Course - University of Wisconsin, Superior	2701 Catlin Avenue Superior, WI 54880	7 mi. (est. 15 min)	No prices listed.	A high-ropes course open for programming use by groups. Not a tourist attraction.

Source: Facilities listed and ConsultEcon, Inc.

# Regional Attractions Tables

**Table 6: Selected City Parks**

Park Name	Location	Distance From Lake Superior Zoo (miles & drive time)	Acreage	Description
Indian Point Campground	700 Pulaski St	1 mi. (est. 3 min)	27.0	74 tent and RV campsites in Duluth's West End. Waterfront access allows for boat rentals and river exploration. Property owned by City, but privately managed.
Park Point	45th St & Minnesota Ave	11 mi. (est. 24 min)	342.1	Beach area on a long peninsula extending into the bay of Lake Superior. Amenities include a beach and picnic area, play area, several sports fields, and boardwalk networks through sand dunes.
Lester Park	61st Ave E & Superior St	12 mi. (est. 20 min)	306.8	Park includes two hockey rinks and three miles of cross-country ski trails, as well as mountain bike, hiking, and snowmobile trails.
Hartley Nature Center	Woodland Ave & Hartley Rd	12 mi. (est. 25 min)	975.0	Large acreage open to the public as a "natural playground." Nature center features educational programming, as well as equipment rentals for all-seasons exploration.
Brighton Beach	Congdon Blvd & 63rd Ave E	13 mi. (est. 21 min)	153.2	Public beach features picnic area, playground, and beach house with restrooms.
Hawk Ridge	E Skyline & 52nd Ave E	13 mi. (est. 25 min)	70.0	Operated in cooperation with birding group, the property is designated for the observation of migratory birds of prey during the fall and offering trail exploration year-round.
Bayfront Festival Park	South 5th Ave W & RR St	6 mi. (est. 9 min)	4.8	A waterfront, outdoor, recreational park and event space used for public concerts and also available for event rentals. Included are a playground and a family center that offers free use of recreational equipment.
Lakewalk	Bayfront to Brighton Beach	6 mi. (est. 9 min)	3.1	This scenic, 7.3-mile walking and bike path follows the shores of Lake Superior from the Bayfront Park Pavilion to Brighton Beach.
Enger Park	16th Ave W & Skyline Dr	7 mi. (est. 12 min)	129.9	Park is home to the historic Enger lookout Tower as well as perennial gardens.
Leif Erikson Park	11th Ave E & London Rd	8 mi. (est. 16 min)	19.2	This small city park is on the waterfront and features a small event lawn and amphitheater with stone performance stage.
Rose Garden	13th Ave E & London Rd	8 mi. (est. 16 min)	4.4	Over 3,000 rose bushes and other plants make a beautiful garden along the Lakewalk.
Chester Park	1800 E Skyline Parkway	8 mi. (est. 17 min)	109.2	Park features public ski slopes, 2-miles of cross country ski trails, summer concerts, playground, and sports fields.

Source: City of Duluth Parks and Recreation, Facilities Listed, and ConsultEcon, Inc.

## Appendix C

# Attraction Trends, Best Practices and Examples of Relevant Projects Memorandum

Prepared for: City of Duluth

Prepared by: ConsultEcon, Inc.

September 5, 2014

# Introduction

The follow report summarizes visitor attraction industry trends as well as provides examples of smaller footprint zoos with high quality experiences along with examples of visitor experiences relevant to those currently being considered at the Lake Superior Zoo/Fairmont Park.

# Industry Trends

The zoo, visitor attraction, and park industry landscape has been rapidly changing in response to the technological revolution, changing demographics and economic conditions. The confluence of these macro environmental factors has forced projects of all types to reexamine how best to meet the changing needs of the communities in which they are located, how best to compete for the limited leisure time and money of visitors, and how to fund on-going operations, improvements and capital projects in a changing funding environment.

# Industry Trends

Some of the major visitor attraction industry trends/themes in the last several years include:

- ◆ *Content Blending* – as attendance at some attraction types has tended to erode over time, many institutions have pursued broadening their content to expand audience appeal e.g. a cultural history focused museum adding natural history content; science centers adding an aquarium; zoos and aquariums expanding their science exhibits or adding sculpture; art and science museums blending content. It could be said that the live animal experiences at zoos and aquariums are not as “replaceable” where as today’s technology has provided unlimited access to content, games and experiences that may now serve as a proxy for what was a science center visit. Blending content is one way for attractions to diversify their audience and in the minds of some visitors enhance the value of their visit.
- ◆ *Community Centered Programming* – as the demographics of the country change and the audience composition of many zoos and attractions does not (at least, on pace with the demographics of many of the communities in which attractions are located), organizations are seeking new ways to interact with audiences outside of the physical confines of their traditional bricks and mortar location and overall increase access. Mobile cultural engagement via “pop-up” experiences, satellite facilities, off-site community partnerships, and “meet-ups” are some of the ways organizations are trying to increase their relevance – by going out to the public. Many of these strategies however can be cost prohibitive unless underwritten through corporate or other sponsorship.

# Industry Trends

- ◆ *Competition* – the increasing presence of themed experiences, other types of attractions (whose content covers natural science, environmental, art, history topics) as well as content delivered at home via HDTV and online, create competition for leisure time and dollars.
- ◆ *Funding* – declining public funding has forced zoos to be hyper focused on finding new sources of earned and unrestricted revenue. Therefore, more zoos and attractions are venturing, innovating, and collaborating than ever before. In addition to seeking new sources of earned revenue, new technology enabled funding platforms have enabled organizations to raise funds in new ways e.g. crowd funding. This overall changing funding environment suggests that development and marketing departments at these organizations are technology and social media savvy, as well as innovative.
- ◆ *Market Driven Content and Exhibits* – in the face of declining funding, organizations continue to try to balance what they should be doing to meet mission and what they need to do to survive. This has often manifested itself in the debate about (entertainment vs. education). In today’s challenging climate, organizations can no longer afford to pursue solely wants, they have to pursue what meets the needs and interests of their target markets. The content that zoos offer must be relevant, interesting, and market driven. The trend toward integrating adventure/ropes courses into Zoo experiences is one example of ways that zoos are diversifying their visitor experience and at the same time developing new sources of revenue.

# Industry Trends

- ◆ *Planning for An Aging Population* – one great challenge to maintaining attendance levels at our country’s educational attractions is the aging population. The Survey of Public Participation in the Arts suggests that the percentage of attraction-goers in general, generally declines as Americans pass their mid-40s. The physical ability to access a zoo, aquarium, museum or other attraction due to decreased mobility, etc. is often cited as a barrier to visitation. This suggests again that whereas a site-based visit may not be as feasible for an aging population, there are opportunities to bring content to the aging population using technology and a community centered or collaborative approach. The implications of an aging population also manifest themselves in the layout of the zoo, physical design of exhibits, materials, and the overall visitor experience to be friendly to the mobility impaired, or those who have sight and hearing limitations.
- ◆ *Perceived Value and Pricing* – Pricing has been top of mind for attraction operators during the past several years. Value is a complicated construct, and there may also be perceived value differences across types of visitor attractions. For example, live animal based visitor attractions e.g. large aquariums and zoos have some of the highest general admissions prices in the industry. For many visitors, aquariums and zoos serve as a proxy for travel, allowing intimate experiences with live animals and exotic locales that they may otherwise never see. In addition, most zoos and aquariums have a conservation- based mission, thus creating high perceived value.

# Industry Trends

- ◆ *Use of Technology* – rapid advances in technology have provided both a threat and an opportunity for zoos and other attractions. As an opportunity, technology has enabled zoos to broaden audience reach bringing their content to millions of potential viewers who may not previously have known about the organization or may not be able to physically access the zoo. Further, technology can create a platform to easily update content so that it is constantly fresh and dynamic. On the other hand, as a threat, technology has enabled potential zoo visitors to access content and experiences with high production values (via television, the web, etc.) that had previously been inaccessible. Further, rapidly evolving technology may create an expectation in potential zoo visitors to have the latest most current technology. However, many zoos do not have the financial capacity to “upgrade” or even sometimes maintain their technology to keep pace with the commercial marketplace.

# Industry Trends

Other technology enabled trends include:

- ◆ Crowdsourcing – user-generated content has allowed organizations to acquire content/data at low cost, interact with audiences in new and different ways, and gain real time feedback about programs, exhibits, etc. For example, Citizen Science projects amplify the impact of scientists by allowing the public to contribute to data collection and research projects.
- ◆ Social Media – Facebook, Twitter, and Pinterest have also created opportunities for zoos to reach new audiences, to broadcast their brand/content at low cost and to solicit real time feedback about programs and exhibits. While digitally savvy youth are social media staples, the fastest growing demographic segments for social media are those over 55, making social media a key marketing strategy for all zoos.
- ◆ Mobile – from audio/video tours to advanced ticketing, visitor attractions are using mobile devices to enhance the user experience, maintain connectivity to users after their visit, and to make transactions more efficient for their audience.

# Success Factors

Factors that contribute to a successful visitor attraction operation include:

- ◆ An Excellent Location And Site – that is easily accessible and visible.
- ◆ Strong Community Support
- ◆ Serving The Needs And Interests Of Both Resident And Visitor Markets
- ◆ Critical Mass Of Attraction Elements = Sufficient Content And High Quality Visitor Experiences To Attract A Length Of Stay ½ Day+
- ◆ Dynamic/Changing Programs And Exhibits = Creates Repeat Visit Opportunities
- ◆ Content That Appeals To A Broad Audience Mix
- ◆ Experiences That Offer Opportunities To Have Fun AND Learn + Spend (Earned Revenue Opportunities)
- ◆ Has A Strong Cause-Related Component to Its Mission (A Focus/Emphasis/Strength That Resonates With People Outside Of The Market Area)
- ◆ An Established and Growing Endowment Fund

# Reinvestment

## THE IMPORTANCE OF REINVESTMENT

Major public attractions such as zoos must re-invest to stay competitive and to encourage repeat visitation. A rule of thumb in the commercial recreation industry suggests that average annual re-investment in new attractions, etc. should be 10 to 15 percent of fixed assets to stay competitive. The level of investment can range widely from smaller additions of new exhibits or temporary exhibits which tend to maintain existing visitation levels and fee structures, to periodic larger expansions that may boost attendance to a different baseline or allow for higher fee structures. Typically, temporary and frequently changing exhibits and programs are used to maintain audience interest and encourage repeat visitation, while major exhibits or facility expansions are necessary to change the attendance baseline and increase market penetration. New product and frequent facility and program improvements are important to long-term viability of any attraction, as they reinforce existing visitation patterns, can increase facility utilization and often induce new visitation.

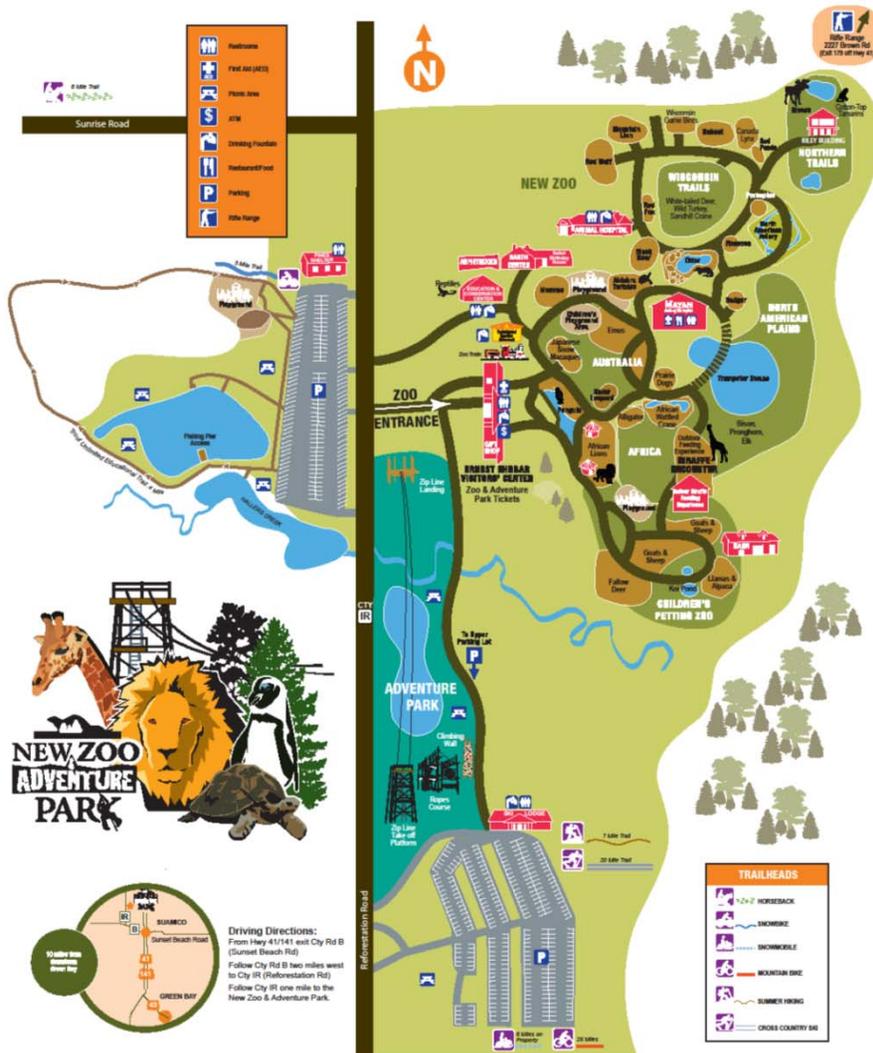
Improvements to the Lake Superior Zoo such as new signage, way finding materials, and enhanced entrance features, although much needed, would be considered infrastructure improvements rather than addition of major new product and on their own are not likely to substantially impact the attendance or revenue baseline. The addition of substantial new repeatable experiences that are iconic and marketable, will enhance the overall visitor experience, extend length of stay and improve the attendance and revenue potential of the Zoo.

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## Examples of Zoos and Visitor Attraction Experiences

The following section provides examples of smaller footprint zoos/attractions (most AZA accredited) with high quality visitor experiences and a critical mass of content. Although several of the Zoos have large operating budgets compared to the Lake Superior Zoo, they illustrate the range of visitor experiences possible within a smaller footprint. Two Zoos, the New Zoo and the Syracuse Zoo have budgets that are more similar to Lake Superior Zoo. In addition to smaller footprint zoos, several examples of visitor experiences relevant to some of the planning concepts for the Zoo and Fairmount Park, being contemplated are included.

# A. Smaller Scale Zoos With High Quality Visitor Experiences



Source: newzoo.org

- ◆ Acreage – 43 Acres located 20 minutes north of downtown Green Bay.
- ◆ Approximate Annual Attendance – 250,000
- ◆ Annual budget – \$2.1 Million
- ◆ 200 individual animals representing 90 species.
- ◆ Admission is \$7 for adults, \$5 for children 3-14 and seniors.
- ◆ Mission: “Your NEW Zoo is an always new natural adventure that promotes recreation, education, and conservation through encounters with live animals.”
- ◆ Owned and operated by Brown County.
- ◆ Emphasis is on Recreation, Education, Conservation

## NEW Zoo and Adventure Park

Green Bay, Wisconsin



Source: newzoo.org

- ◆ The NEW Zoo & Adventure Park is located 10 miles northwest of downtown Green Bay, within the Brown County Reforestation Camp. The NEW Zoo & Adventure Park and Brown County Reforestation Camp together function as a 1560-acre recreational area serving over a half million visitors each year with miles of hiking, biking, and nature trails. Winter use includes snowshoers and cross-country skiers.
- ◆ Animal Collection includes some signature species: Giraffes, African Lions, Otter, Penguin, Bison; have petting zoo/farm; native animals; + Carousel and Train.

## NEW Zoo and Adventure Park

Green Bay, Wisconsin

## RELEVANT PROGRAM ELEMENTS ADVENTURE PARK

Adventure Park Element of the NEW Zoo was opened in May 2014.

Park includes 1,000-foot zip line, aerial adventure challenge high ropes course, and 40-foot climbing tower.

Adventure park pricing varies from \$7 for the climbing tower to \$23 for a combined ticket to the ropes course, climbing tower, and zip line.

Zoo and park is traversed by several miles of hiking, biking, and ski trails, and includes picnic areas, trout ponds, and other outdoor recreation elements.



## NEW Zoo and Adventure Park Green Bay, Wisconsin

Source: [newzoo.org](http://newzoo.org), [wearegreenbay.com](http://wearegreenbay.com),  
[www.dailyherald.com](http://www.dailyherald.com)



Source: turtlebackzoo.com

# Turtle Back Zoo

West Orange, New Jersey

Located on a site of approximately 20 acres within the 2000-acre South Mountain Reservation.

West Orange is a densely populated suburban area within one hour of New York City.

Approximate annual attendance – 500,000

Estimated Annual Budget – \$2.2 Million

Admission to the zoo is \$11 for adults, \$8 for children and seniors; Admission is discounted from December through March at \$9 for adults and \$7 for children.

The zoo is home to over 200 animals, however, the collection includes a lower profile collection (no lions, tigers, elephants, giraffe.)

The county has invested \$70 million in upgrades to the zoo since 2003. The zoo is operated by the New Jersey Zoological Society in collaboration with the County.

## Turtle Back Zoo

West Orange, New Jersey



Source: Examiner.com, primorisacademy.org, Wikipedia.org

- ◆ In summer 2013, the zoo opened a new “Prehistoric Playground” that incorporates a dinosaur theme into an interactive play space.
- ◆ The area caters to children ages 2-12.
- ◆ In addition to the play elements, a sheltered area has been designed to give children the experience of a fossil-dig.
- ◆ Design and development of the playground cost just under \$1 million.



Source: [thealternativepress.com](http://thealternativepress.com)

## Turtle Back Zoo

West Orange, New Jersey



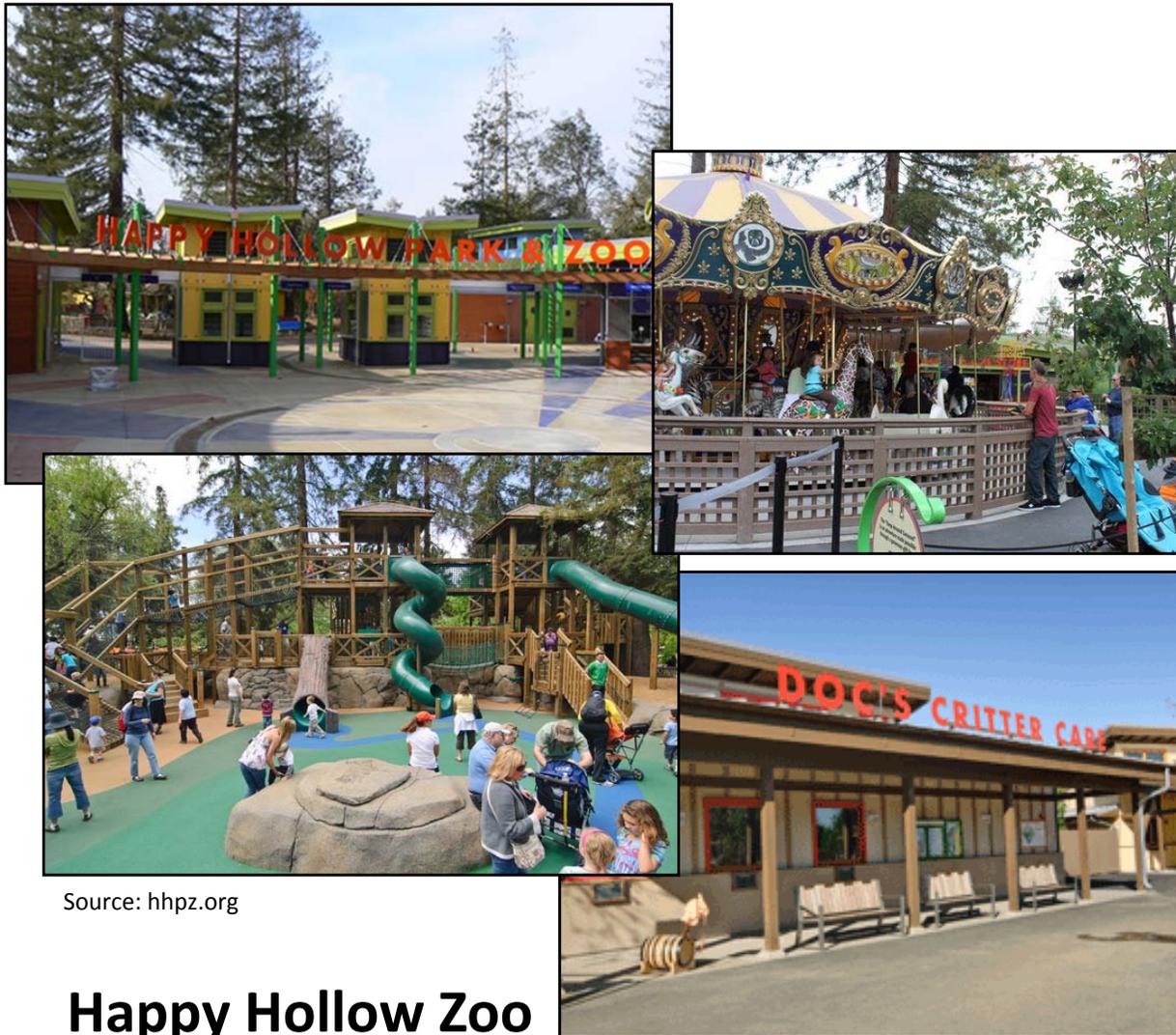
Source: blacktieandflipflops.blogspot.com, thealternativepress.com, www.flickr.com

- ◆ Additional amenities within the zoo include a carousel, amphitheater, pony rides, and a train ride attraction.
- ◆ The South Mountain Reservation, a natural area operated by the Essex County Parks and Recreation Department, has a number of amenities that can be accessed without entering the zoo. These include:
  - A Treetop Adventure Course – reservations made through the zoo.
  - Paddle Boating
  - A 2-rink ice arena
  - A “safari” Mini Golf Course
- ◆ The Treetop Adventure Course has two course options and a zip line.
  - The adult course has 30 elements which can be completed in approximately 1.5 hours and costs \$25.
  - The Junior course has 15 elements and costs \$15.
  - The Zip Line costs \$10.
  - A combination ticket for the Adult Course and the Zip Line costs \$30.

## Turtle Back Zoo

West Orange, New Jersey





Source: hhpz.org

# Happy Hollow Zoo

San Jose, California

Lake Superior Zoo & Fairmount Park

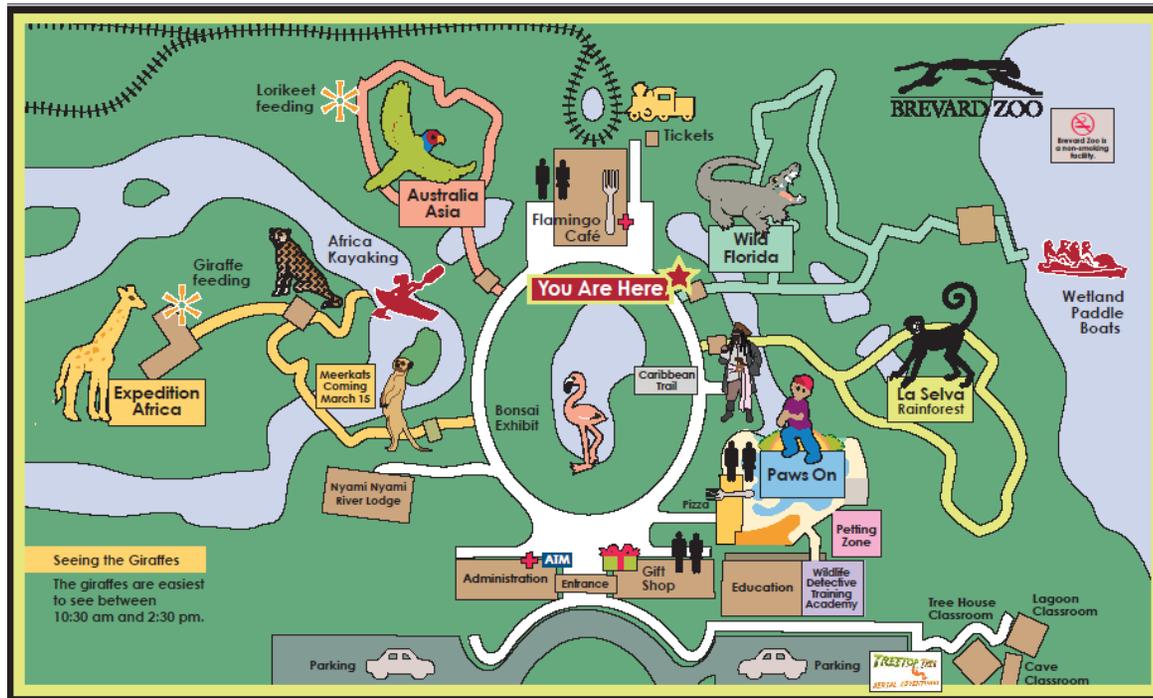
- ◆ The Park closed its gates after 46 years on July 9, 2008, for a \$72 million green renovation. The scope of the project included the renovation of the 12 acres of existing ride areas and Zoo, as well as adding 4 additional acres to the facility which include several new animal exhibits, Veterinary and commissary buildings, Education Center, Guest Services and Gift Shop, Restaurant, new parking lot and pedestrian bridge, and updates the facility to meet all ADA requirements.
- ◆ In 2000, voters approved a Parks Bond Act that dedicated \$52 million to the renovation of the Zoo.
- ◆ Over the years the project has gained an additional \$20 million from the C&C taxes fund and from savings from other Parks Bond projects.

## HAPPY HOLLOW ZOO – NEW PROJECTS ADDED

- ◆ **Education Center** - Learning L.O.D.G.E. (Learn, Observe, Discover, Go Explore!) The greenest of all the new buildings and built out of hay bales – the Learning L.O.D.G.E. is the center of educational activity for the new facility.
- ◆ **Doc’s Critter Care** – the new animal hospital featuring indoor and outdoor quarantine, surgery and radiology facilities.
- ◆ **Giggle Grove** – the new rides area featuring the Kiddie Swings, Frog Hopper, and returning ride favorites, the Granny Bugs and the Mini Putts.
- ◆ **Family Rides** – a Keep-Around-Carousel that features endangered species characters, Pacific Fruit Express Family Roller Coaster, and an “Extreme Make-Over” of the beloved Danny the Dragon Ride.
- ◆ **Double H Ranch Exhibit** - includes expansive animal contact area with an additional play areas for children. The area features the Animal Barn, which will offer close contact with domestic species along with new exhibits of animals typically found in a barn.
- ◆ **Explore and More Retail Shop** – 1500 square feet of shopping.
- ◆ **Lemur Woods Exhibit** – featuring endangered lemurs with a parallel play area for children to hop, jump and move like a lemur.
- ◆ **Redwood Lookout** play area is perfect for multiple age groups with an area for toddlers, a sitting area for parents and then a larger play structure for older children. Built to model a Ranger lookout station, the giant play structure is nestled in the redwoods with slides, swings, ropes and climbing areas.
- ◆ **New Fossa Exhibit** – the largest member of the mongoose family, it is the largest carnivore and top predator native to Madagascar. Happy Hollow will be one of 22 facilities in the United States to exhibit this endangered species and the only Zoo in the Bay Area.
- ◆ **The Wilds** with the new Parma Wallaby Exhibit.
- ◆ **Entry Plaza** the home to the whimsical public art created by internationally known artist Tom Otterness. The artwork entitled *Another World* is a bronze menagerie of both animals found in the zoo and whimsical ones found in the Park.
- ◆ **Picnic Basket Restaurant** - 2400 square feet of indoor and outdoor dining space, which will accommodate 162 guests outside, and 54 inside.
- ◆ **Expansion of the Backyard Habitat Exhibit** to include Beehives and living examples of how to attract wildlife to your yard.
- ◆ Renovation of the pot-bellied pig exhibit into a **collard peccary exhibit**.
- ◆ **525-space parking** lot built on capped landfill with suspended network arch pedestrian bridge to the new facility.

Source: hhpz.org

**Happy Hollow Zoo**  
San Jose, California



Source: Brevard Zoo

## Brevard Zoo

Melbourne, Florida

- ◆ Opened in 1994
- ◆ Total Acreage – 72 acres;  
Developed Acreage – 56 acres
- ◆ Located about one hour from Orlando on the Atlantic Coast of Florida.
- ◆ Approximate Annual Attendance – 400,000
- ◆ Annual Budget – \$6.1 million+
- ◆ Zoo organized into four geographic regions: Expedition Africa, Australia/Asia, Wild Florida, and La Selva Rainforest.
- ◆ The zoo features approximately 120 animal species of which about 34 are mammals.
- ◆ Admission to the zoo is \$15 for adults and \$11 for children 2-12, with additional charges for other attractions.

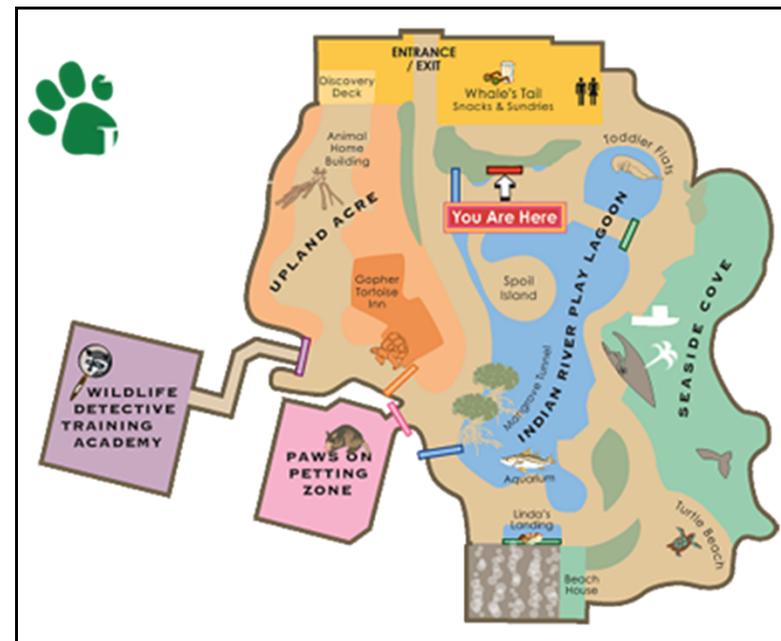
## RELEVANT PROGRAM ELEMENTS – PAWS ON PLAY

The “Paws on Play” Area features a number of attractions for children including:

- Water Play Lagoon
- “Paws on” Petting Zone
- A seaside cove for play fishing and shrimping
- Animal Detective Training Academy, an 1,800 SF building where children can learn about animal research and care with both live and toy animals.
- The “upland acre,” a wooded outdoor play area

Adjacent to the play area is a café with free Wi-Fi for adults and chaperones.

Admission to the “Paws on Play” area is free with regular Zoo admission.



Source: [www.inparkmagazine.com](http://www.inparkmagazine.com), Brevard Zoo

## Brevard Zoo

Melbourne, Florida

## RELEVANT PROGRAM ELEMENTS – BOATS AND RIDES

### Kayaking

- Visitors over age 5 can explore the Expedition Africa exhibit with a guided kayak tour.
- \$8 per person, visitors over under 13 must share a kayak with an adult.

### Paddle Boats

- Visitors can rent paddle boats for a self-guided tour around the restored wetlands in the Wild Florida exhibit.
- \$12 for members, \$15 for non-members.

### Train Ride

- A 10-minute train ride brings visitors around the Australian Aviary and Lemur Island.
- \$3 for visitors ages 2 and up.

### Animal Encounters

- Visitors explore the animal environments up close accompanied by a zookeeper to learn about animal care and zoo operations.
- \$65 for zoo members, \$75 for non-members. Tours are offered on weekends at noon.



## Brevard Zoo

Melbourne, Florida

Source: Brevard Zoo, Trip Advisor, [homeschoolinginheels.blogspot.com](http://homeschoolinginheels.blogspot.com)

**RELEVANT PROGRAM ELEMENTS – TREETOP TREK**

The zoo has a partnership with the adjacent Treetop Trek Aerial Adventure Park, which features 3 levels of challenge ropes courses and a canopy walk for visitors over 54 inches in height.

Elements include a canopy walk, treetop challenge, a black diamond, a zip-line tour, and the children’s chutes and ladders.

Admission to the ropes course is separate, but a two-day combination zoo pass is available for purchase at the ropes course. Prices range from \$22 to \$57 for different passes to activities within the adventure park.



**Brevard Zoo**  
Melbourne, Florida

Lake Superior Zoo & Fairmount Park

Source: treetoptrek.com



Source: Bristol Zoo

## Bristol Zoo

Bristol, United Kingdom

Lake Superior Zoo & Fairmount Park

- ◆ Acreage – 12 acres with high density of attractions in a small space.
- ◆ Located about 2 hours west of London in downtown Bristol – urban context.
- ◆ Established in 1835, it is the fifth oldest zoo in the world and the oldest that is not in a capital city.
- ◆ Approximate annual attendance – 550,000
- ◆ The zoo has approximately 400 animal species, of which approximately 35 are mammals both large and small, including a pair of Asiatic Lions.
- ◆ Other attractions at the park include a **botanical garden** and a number of children’s activities, including a **ropes course attraction called ZooRopia**.
- ◆ The zoo has a budget of approximately 8 million GBP or \$13 million.
- ◆ Admission to the zoo is approximately \$25 for adults and \$15 for children, with discounts available for children, students, seniors, and those with disabilities – high ticket price.



## RELEVANT PROGRAM ELEMENTS – ZOOROPIA

- ◆ ZooRopia is open to all visitors over 5 years old, allowing participants to experience an environment similar to that of the primates exhibit in the zoo.
- ◆ The course comprises 17 elements including a plank bridge, a balance beam, and a zip line onto the zoo's main lawn.
- ◆ ZooRopia is an add-on experience that costs approximately \$14 for adults and \$12 for children.
- ◆ Additional discounts are available to those to purchase tickets online in advance.

Source: [www.bristolzoo.org.uk/zooropia](http://www.bristolzoo.org.uk/zooropia)

## **Bristol Zoo**

Bristol, United Kingdom

## RELEVANT PROGRAM ELEMENTS – BOTANIC GARDEN

The zoo and adventure park are situated in a 12-acre garden that includes a wealth of diverse plant specimens from around the world.

As the zoo and gardens are historic, there is a long tradition of botanical care and different displays for every season.

Some unique specimen include a monkey puzzle tree, tree ferns, Wollemi pine, and a purple-berried flax lily.

In 2012 the Bristol Zoo gardeners were awarded a gold medal in the Hampton Court Palace Flower Show.



Source: Wikipedia.org,  
bristolzoo.org.uk,  
worldzootoday.com

## Bristol Zoo

Bristol, United Kingdom



# Rosamond Gifford Zoo

Burnet Park, Syracuse, New York

Source: Rosamondgiffordzoo.org

**Zoo acreage – 43 Acres within the 88-acre Burnet Park**

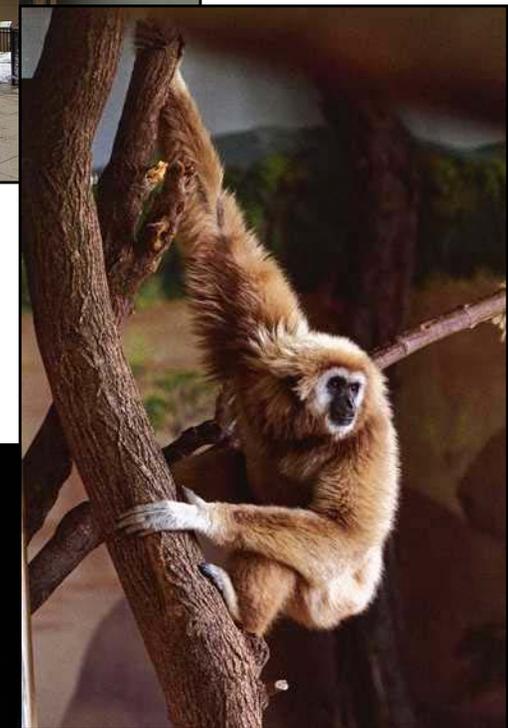
**Approximate annual attendance – 340,000**

**Annual budget – \$3 Million**

**The zoo has approximately 700 animals representing over 100 species, 31 of which are mammals.**

**Admission to the zoo is \$8 for adults and \$4 for youth 3-18. In the winter, during the “Snow Leopard Days,” Admission is \$4 for adults and \$2 for children.**

**The zoo is open year round with 60 percent of exhibits indoors, most in one main building, including the ecosystems building with views of the lions, monkeys, and meerkats.**



Source: [Rosamondgiffordzoo.org](http://Rosamondgiffordzoo.org), [trekaroo.com](http://trekaroo.com)

## **Rosamond Gifford Zoo**

**Burnet Park, Syracuse, New York**

**Lake Superior Zoo & Fairmount Park**



Source: Rosamondgiffordzoo.org

## Rosamond Gifford Zoo

Burnet Park, Syracuse, New York

Lake Superior Zoo & Fairmount Park

- ◆ The Zoo completed a new master plan in April 2014, which includes a capital investment of \$30 million over the next 8 years.
- ◆ Some key physical developments highlighted by the Master Plan include updating the Savannah and Otter exhibits, renovating the animal health and entry way facilities, and improving wayfinding around the zoo.
- ◆ New Vision Statement Developed:
  - *“Rosamond Gifford Zoo provides its guests the ‘Best Day Ever,’ ensuring experiences that excite, memories that endure, and knowledge that inspires worldwide conservation.”*
- ◆ The Zoo is located within Burnet Park, which is the largest park in the City of Syracuse, located adjacent to an historic residential neighborhood and the George Washington Memorial forest.
- ◆ Additional amenities at Burnet Park include a swimming pool, a number of athletic fields, a playground, a picnic area, and a 9-hole golf course.

## B. Adventure, Natural, Parallel Play Experiences



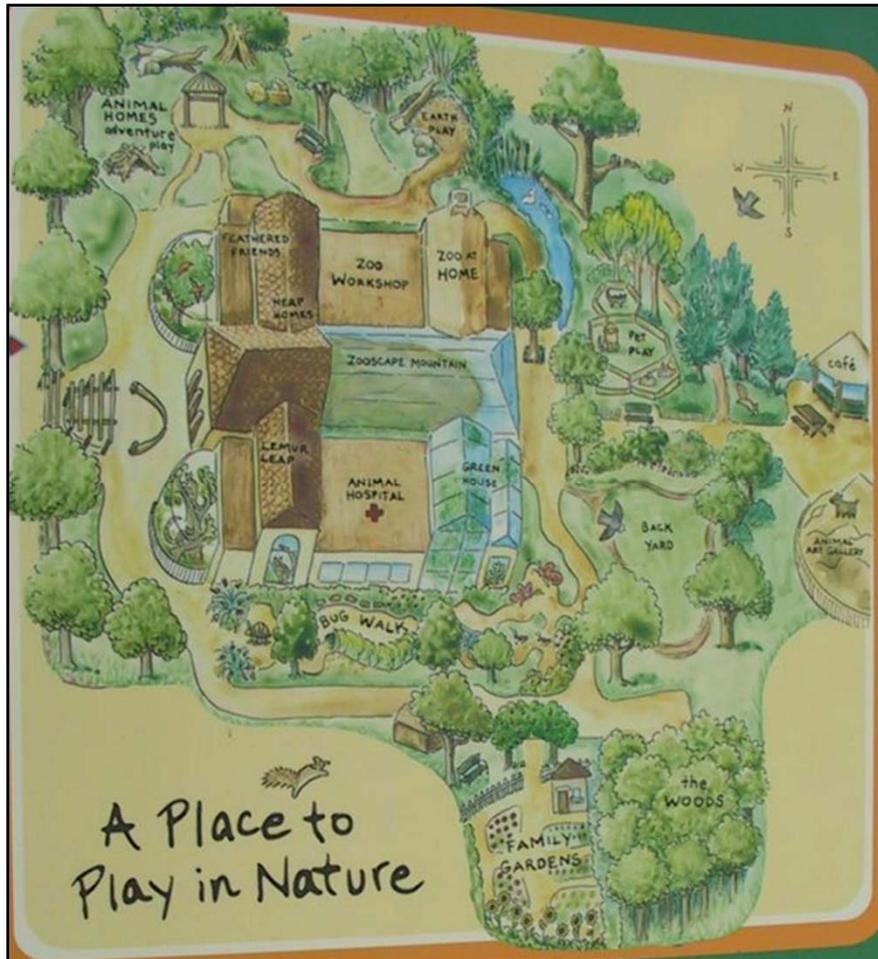
Source: Brookfield Zoo

## Hamill Family Play Zoo

Brookfield Zoo, Chicago, Illinois

Lake Superior Zoo & Fairmount Park

- ◆ The Hamill Family Play Zoo at the Brookfield Zoo in Chicago is one add-on exhibit that offers activities for zoo visitors under 10 years old.
- ◆ The concept was designed in 1998, constructed for \$6.7 million, completed in June 2000, and opened in June 2001.
- ◆ The 10-acre area offers children opportunities to touch live animals, plant in the garden, examine animal X-rays, fingerprint with mud, and other hands-on activities.
- ◆ Admission to the Hamill Family Play Zoo is \$2.50 for all visitors and \$1.25 for zoo members.
- ◆ The new Hamill Family Wild Encounters experience will open in 2015, allowing visitors to “feed and touch” animals like wallabies, emus, and parakeets.



Source: [www.cz.s.org](http://www.cz.s.org), [www.zoolex.org](http://www.zoolex.org), [www.natureexplore.org](http://www.natureexplore.org)

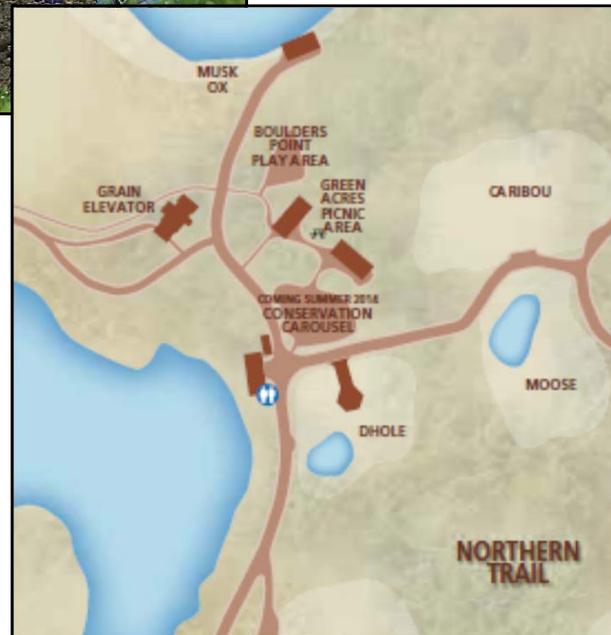
## Hamill Family Play Zoo

Brookfield Zoo, Chicago, Illinois

Lake Superior Zoo & Fairmount Park



Source: Minnesota Zoo



- ◆ The Minnesota Zoo broke ground on a new nature-based play area in July of 2014.
- ◆ The attraction, called the Hanifl Family Wild Woods, will be a 30,000 SF wooded area near the zoo’s conservation carousel.
- ◆ The area will feature boulder climbs and caves, mazes, slides, treetop towers, and monkey bars, to encourage active curiosity.
- ◆ The \$1.2 million attraction is due to open in the summer of 2015.<sup>1/</sup>

1/ [http://www.twincities.com/localnews/ci\\_26112209/minnesota-zoo-breaks-ground-nature-based-outdoor-play](http://www.twincities.com/localnews/ci_26112209/minnesota-zoo-breaks-ground-nature-based-outdoor-play)

## Hanifl Family Wild Woods

Minnesota Zoo, Apple Valley, Minnesota



Source: Cambridge Seven Associates

- ◆ A New \$6.6 Million project at Zoo New England in Boston will intermingle live animal exhibits and parallel play activities to allow children to combine imagination and nature. Featured animal exhibits will include red pandas, North American river otters, prairie dogs.
- ◆ The exhibit will be organized into biome-based animal exhibits and experience zones, including woodlands, wetlands, grasslands, and thicket.
- ◆ Adventure play elements include a giant eagle’s nest, a live bamboo climbing structure, and a grass maze.
- ◆ By comparing ecosystems to neighborhoods, zoo officials say, children will be able to explore various habitats and the roles that living creatures, including themselves, play in healthy environments.

## Nature’s Neighborhoods

Zoo New England, Boston, Massachusetts



Source: Cambridge Seven Associates

## Nature's Neighborhoods

Zoo New England, Boston, Massachusetts



Source: Roger Williams Park Zoo

- ◆ Children’s natural play area includes a small stage, a water garden, a building area, and a natural play exploration area.
- ◆ The \$5 Million 1.2-acre project first opened in the summer of 2012, with the 2014 expansion already planned.
- ◆ Indoor exploration space includes a nature swap and opportunities to interact with live animals with the assistance of naturalists.
- ◆ The “Beyond the Fence” extension, opened in 2014, includes animal exhibits of local New England wildlife.
- ◆ Admission to the Big Backyard exhibit is free with regular admission, which is \$14.95 for adults, \$12.95 for seniors 62+, and \$9.95 for children.

## Hasbro Our Big Backyard Exhibit and CVS Caremark All Kids Can Treehouse

Roger Williams Park Zoo, Providence, RI



Source: The Wild Center

- ◆ This new project, with a planned opening of summer 2015, is an elevated walkway that allows visitors to experience the treetop world of the Adirondacks.
- ◆ The highest point on the 850-foot walkway will be approximately 4 stories above the ground.
- ◆ The whole walkway will offer interactive experiences such as giant climbable spider webs and towers, hands-on activities, and unique views into elements of natural Adirondack wildlife.
- ◆ Capital cost for the project is \$4-5 Million.
- ◆ The Wild Center attracts approximately 60,000 visitors annually. It is a natural history attraction located in a small town in the Adirondack Park, with a highly seasonal market.

## Wild Walk

Wild Center, Tupper Lake, NY

# Implication of Attraction Trends and Experience on Lake Superior Zoo and Fairmount Park Planning

- ◆ Many zoos are located within a larger recreation area/park context. This combination of recreation + zoo can help enhance a location as a destination. The concept of building out water and trail access as well as the Forest Discovery Center, in concert with improvements to the core of the Zoo, can serve to brand the area as a signature destination, and in turn enhance overall operating performance at the Zoo.
- ◆ The Zoo's positioning and novelty within the Duluth market hinges on a strong animal collection and up-close experiences with animals. Zoos serve as a proxy for travel, allowing intimate experiences with live animals and exotic locales that visitors may otherwise never see. This, combined with strong conservation mission, creates high perceived value. Looking forward, it will be important for the Lake Superior Zoo to maintain a critical mass of animals in its collection as well as its strong conservation focus.

# Implication of Attraction Trends and Experience on Lake Superior Zoo and Fairmount Park Planning

- ◆ A high quality visitor experience typically includes a mix of: animals+ recreation+ rides+ signature programs along with eating and shopping experiences.
- ◆ In cold climes and in inclement weather, it is important to have a critical mass of indoor visitor experiences. The Zoo primarily is a fair weather destination at present. With Duluth being positioned as an outdoor recreation city, competition during fair weather will only increase (e.g. on a sunny day visitors might rather be on the water or hiking outside). Adding a critical mass of high quality indoor experiences will be important. At the same the Zoo and Fairmount Park can mutually benefit from a mix of outdoor recreation experiences with additional indoor attractions.

# Implication of Attraction Trends and Experience on Lake Superior Zoo and Fairmount Park Planning

- ◆ It is possible to have a high quality zoo experience within a small foot print as long as there is a critical mass of things to see and do. This suggest that even within a smaller foot print than the Zoo currently occupies, it is possible to maintain and increase attendance and operating performance, as long as there is sufficient investment in the visitor experience on a new footprint that maintains and increases the visitor experience.
- ◆ Ropes courses and adventure play areas are one way to enhance the appeal of a visit, diversify appeal of the zoo (or destination area) to different age and interest groups, add new earned revenue opportunities. However, they are add-on experiences to a core animal collection. Ropes courses tend to target older children and adventurous adults, while natural/adventure play areas (some incorporating parallel play) tend to target younger children. A ropes course in Fairmount Park could add destination appeal and attracting power to the overall experience as well as a new source of revenue as an add-on ticket. However, it is not a substitute for renovated high quality live animal exhibits. Likewise, an adventure/natural “playground” that combines indoor and outdoor elements will also increase attracting power and can enhance length of stay at the Zoo, particularly for young families.

# Implication of Attraction Trends and Experience on Lake Superior Zoo and Fairmount Park Planning

- ◆ Outreach programming is a current strength at the Zoo. One way to continue to increase access to Zoo content for the community is to grow this programming, along with community based partnerships and other “pop-up” experiences. The challenge however is that this programming tends to be funded mostly through contributed revenues e.g. corporate sponsorship, grants.
- ◆ Technology creates opportunities for the Zoo to reach more people with programs and content, broaden audience reach, and extend a visitor’s visit. Thus, a visit to the Lake Superior Zoo, can become more than a visit to the site in West Duluth
- ◆ Changing content and frequent re-investment in visitor experience are key to successful attraction projects. A key component of the Zoo experience looking forward should be a changing exhibition area. Further, the Zoo is important part of the community fabric in Duluth with a long-standing history. The Zoo currently is one of the most attended paid attractions in the region (even in its current state), and has economic impact in the City. Looking ahead, there must be a commitment in the long term to continuous improvement and re-investment.

**Appendix D**

**Lake Superior Zoo Workshop Summary**  
**Memorandum**

Prepared for: City of Duluth

Prepared by: ConsultEcon, Inc.

September 22, 2014

# Introduction

The primary purpose of the Lake Superior Zoo planning workshops on September 10<sup>th</sup>/11<sup>th</sup> was to develop consensus on a proposed suite of capital improvements (core projects) that will best lead to an improved visitor experience at the Zoo with improved financial operating results, as well as the development of a new tourism hub and quality of life improvement in the City. The process included reviewing Zoo baseline operating conditions as common background for thinking about the future of the Zoo, then, reviewing a suite of capital projects proposed by the Zoo and/or City, developing an order of magnitude planning budget for each, then prioritizing those projects. A key assumption in the workshop was that a capital commitment from the City would range from \$0 to a maximum of \$12 million, and that the maximum budget available from the City was not enough to execute all projects under consideration, at the highest level. It was determined that a zero investment scenario is not feasible as there are acute infrastructure issues that require investment and in addition, there would be substantial decommissioning costs associated with closure of the site to the public<sup>1</sup> should that one day be a consideration.

The workshop occurred with the Lake Superior Zoo/Fairmount Park Planning Group during a two-day period, on location at the Zoo. The following summarizes Zoo core projects that received consensus among the suite of projects considered:

<sup>1/</sup> A substantial amount of prior planning, Zoo design, and cost estimating work has been completed, beginning in 2009. This work was utilized as one input into the workshop.

# Zoo Visitor Experience

- ◆ *Forest Discovery Zone* - The Forest Discovery Zone takes advantage of the natural beauty, topography and diversity of northeast Minnesota within the Zoo and Fairmount Park to engage families in fun and meaningful learning opportunities that encourage exploration and discovery. This experience is envisioned to include: a ropes course; animal exhibits with animals that are comfortable being outdoors yearlong; interactive exhibit spaces; and play opportunities. Existing trees would be maintained to minimize impact, and exhibits and pathways would be designed around existing landscape. The main trail loop would be ADA accessible. A seasonal ropes course would weave in and around exhibits adjacent to animal exhibits. There would be compostable restrooms on-site. Animal exhibits would be accessible year-round. This is a priority project as it fits well with the reposition of the park/zoo as an adventure/nature hub, provides long-term opportunities for enhanced revenue and funds have already been committed toward planning and project development<sup>2</sup>. Further, this would be a substantial new exhibit/experience for the Zoo.

<sup>2</sup>/ Possible reuse of the Australia Exhibit as a staging area for the Forest Discovery Zone due to its proximity to parking, etc. was discussed.

# Zoo Visitor Experience

- ◆ *Repurposed Polar Shores* – Includes demolition and removal of existing hardscape and transition to a modest amphitheater – with a basic stage with storage, some seating (e.g. stone embedded in landscape or benches), and a landscaped bowl. Primary use would be for public Zoo programming during day including a new signature Zoo live animal program (e.g. raptors). Other after hours programming would appeal to the resident market e.g. music, movies. The goal is to minimize investment in this area (as it is partially or all in the flood plain) and at the same time provide enhanced programming opportunities for both residents and visitors. Due to the need to remove the existing infrastructure, this is a project that has high initial costs for removal, yet adds only moderately to the Zoo core product.
- ◆ *Main Building Renovation/Expansion* - A core goal for the Zoo is to create additional indoor four-season space. It is envisioned that renovation/expansion of the main building is core to this goal. Improvements to the structure would include: creating a welcoming entry; a staging area for groups; an advanced "organizer" for visitors; new admissions area; a "wow" exhibit that sets the tone for the Zoo and draws visitors in; renovated kitchen for food service; an optimized retail area; indoor play space for young children; and a high density of high quality exhibits. The primary food service and retail offerings would be located in or adjacent/connected to the main building for four season access. One opportunity discussed was creating a new highly visible signature entrance to the east of the main building connecting to the main building (and possibly the Primate Conservation Center). This new entrance/and connector building could include a signature exhibit e.g. indoor rainforest or aviary/conservatory that is particularly appealing during inclement weather days and winter months. A new structure that creates a new entry experience and indoor connectivity to the main building and Primate Conservation Center could enable a critical mass of indoor content in a condensed all weather environment, out of the flood plain.

# Zoo Visitor Experience

- ◆ *Brown Bear Exhibit* – Given the assumption of a new Zoo fence line, along with the failing condition of the existing bear exhibit, a new bear exhibit is required. A new exhibit would be located in the current location of the tiger exhibit, and would be designed to increase visitor stay time. An optimal exhibit would include space for 3-4 bears with multiple covered (possibly all- weather) visitor viewing/sitting opportunities (connected to the main building) as well as education nodes to include exhibits that offer opportunities for visitors to learn and have fun.
- ◆ *Primate Conservation Center* – Includes upgrade of infrastructure and animal habitats where needed, upgrade of interpretation, addition of interactive exhibits and additional content. Includes addition of parallel play element.
- ◆ *Farm* – Includes enlargement and upgrade of exhibit, including additional interpretation, play elements, and re-theming, as well as additional indoor space for animals.
- ◆ *Infill Exhibits* – Includes development of new exhibits for animals needing relocation due to changes in fence line (Snow leopard, Eurasian Lynx, Goral, White Naped Cranes, Cougar, Great Horned Owl), possible small animal additions to the collection and other facility improvements.

# Zoo Infrastructure

In addition to core improvements to exhibits/Zoo content, there are a number of infrastructure improvements needed to improve visitor experience at the Zoo as well as the overall visibility of the Zoo. These include:

- ◆ *Entrance/Access Improvements At Grand Ave.* – Includes unbudgeted Grand Ave. project items such as: ornamental landscaping, a new signature; highly visible Zoo sign on Grand; banners along grand and entrance road; and other signage to create a "sense of arrival."
- ◆ *Zoo Parking Lot and Main Building Entrance Improvements* – Painted lines on parking lot to improve parking efficiency; banners in parking lot to create sense of arrival and modest cosmetic enhancements to the current Zoo main entry.
- ◆ *Zoo Wide Signage, Pathway Improvements* – Repaving, rerouting of Zoo pathways as needed due to changes in Zoo fence line, new way finding and circulation signage. New exhibit signage.
- ◆ *New Programming Supplies and Materials* – Includes new Zoo Mobile for enhanced outreach programming to the community, start-up supplies for signature programming at the new amphitheater.

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# Animal Collection

A critical mass of live animals was deemed important to the mission and appeal of the Zoo. The following animals were deemed important to the future of the Zoo as a core collection: bear; primate center animals; barnyard animals; cougar; snow leopard; Griggs learning center program animals; raptors; river otters and wolves. Animals that could add value to the Zoo experience but are not currently in the collection include: moose, wolverine, bison, elk, badger, beaver, black bear, bobcats, Canadian lynx, coyote, and fisher. To accommodate animals core to the mission, it was agreed that some of the existing animals in the collection e.g. Amur Tigers could be de-accessioned.

# Lake Superior Zoo Illustrative Core Project Costs

Data in **Table 1** outlines illustrative, low, medium and high, order of magnitude costs for core capital projects that received consensus, as well as an “optimized alternative” that reflects the proposed highest and best use allocation of a maximum capital budget of \$12 million (over 6 years) in order to maximize operating impact. Low, medium, and high scenarios reflect the following:

- ◆ *Low* - a minimum investment needed to remediate flood damage, move exhibits requiring relocation due to proposed change in fence line due to implementation of new trail hub, refresh a number of core existing exhibits, and add some new content. Any level of investment less than this amount puts the Zoo at risk of further erosion of visitor experience and attendance decline.
- ◆ *Medium* - offers opportunities to both remediate flood damage, respond to changes in fence line and make targeted high value investments in visitor experience, signaling substantial change in the Zoo, providing improvements to the visitor experience and raising visibility of the Zoo.
- ◆ *High* - offers opportunities to both remediate flood damage, respond to changes in fence line and invest in core visitor experience to substantially reposition the Zoo and improve the visitor experience.

Data in **Table 2** shows the percent allocation of the budget within the “optimized alternative” and indicates that 14% of the total budget is allocated to infrastructure improvements, which, are critical, however, alone, do not impact long-term operating performance of the Zoo. The “optimized alternative” reflects a proposed hybrid of the low, medium and high scenarios toward a highest and best use of proposed capital budget.

# Lake Superior Zoo Illustrative Core Project Costs

**Table 1**  
**Lake Superior Zoo Sept. 2014**  
**Workshop – Core Projects List**

CORE PROJECTS	ILLUSTRATIVE CAPITAL BUDGET (\$)				
	Optimized Alternative	Low	Mid	High	Prioritization
<b>Zoo Visitor Experience (Core Product)</b>					
Forest Discovery Zone 1/	\$ 1,750,000	\$1,250,000	\$2,250,000	\$3,000,000	1
Brown Bear Exhibit 2/	\$ 2,000,000	\$2,000,000	\$3,000,000	\$4,500,000	1
Renovation/Expansion of Main Bldg. 3/	\$ 4,000,000	\$1,500,000	\$3,500,000	\$5,000,000	1
Primate Conservation Center & Nocturnal Bldg. 4/	\$ 250,000	\$250,000	\$500,000	\$1,000,000	2
Farm 5/	\$ 250,000	\$250,000	\$500,000	\$1,000,000	2
In-fill exhibits 6/	\$ 500,000	\$500,000	\$1,000,000	\$1,500,000	2
	\$ 8,750,000	\$5,750,000	\$10,750,000	\$16,000,000	
<b>Zoo Infrastructure</b>					
Repurposing Polar Shores 7/	\$ 1,250,000	\$1,000,000	\$1,500,000	\$2,500,000	1
Entrance Improvements (along Grand Avenue). 8/	\$ 100,000	\$100,000	\$175,000	\$250,000	1
Zoo Site-Wide Improvements 9/	\$ 200,000	\$200,000	\$400,000	\$600,000	1
Parking Lot/Visitor Arrival Improvements 10/	\$ 100,000	\$100,000	\$150,000	\$200,000	1
<b>Subtotal</b>	\$ 1,650,000	\$1,400,000	\$2,225,000	\$3,550,000	
<b>Programming</b>					
Programming Supplies & Materials 11/	\$ 50,000	\$50,000	\$75,000	\$100,000	1
<b>Contingency at 15%</b>	\$1,567,500	\$1,080,000	\$1,957,500	\$2,947,500	
<b>Total</b>	\$ <b>12,017,500</b>	\$ <b>8,280,000</b>	\$ <b>15,007,500</b>	\$ <b>22,597,500</b>	
<b>Max. 6-Year City Budget Goal</b>	\$12,000,000	\$12,000,000	\$12,000,000	\$12,000,000	
<b>Total difference from Budget Goal</b>	<b>(\$17,500)</b>	<b>\$3,720,000</b>	<b>(\$3,007,500)</b>	<b>(\$10,597,500)</b>	

Source: Lake Superior Zoo Planning Team Workshop - September 2014.

Note: Assumes costs associated with transition of Zoo land to Park land and incremental capital expenses associated with transition e.g. Animal Care Facility, new fence, animal exhibit demo and removal outside fenceline, would be outside of \$12m core projects budget.

Note: Prioritization of 1 reflects highest priority projects.

1/ Includes ropes course+ several live animal exhibits+ supporting infrastructure e.g. pathways, compost restrooms. Funding commitments totaling \$550,000+ have already been secured toward this project, with strong potential for other private sources.

2/Includes enclosure large enough for 3-4 animals (with back of house), natural landscaping, indoor (unconditioned space) viewing area, modest exhibits + play elements + interpretation.

3/ Includes an estimated \$1M-\$1.5M in main building infrastructure improvements e.g roof. with the balance as substantive content/functionality improvements including addition of several modest but impactful exhibits, play experience.

4/Includes refresh of interpretation only and a new orientation sign/experience at entry.

5/ Provides for small addition to built environment, refresh and new interpretation or exhibit or play element.

6/ Provides for new, modest enclosures with limited infrastructure and exhibits/interpretation for 1-2 small animals.

7/ Includes an estimated \$500,000 - \$600,000 in demolition, removal costs for existing facilities + modest stage, sitework and amphitheater landscaping.

8/ Includes: main entrance signature sign, banners, ornamental landscaping, etc.

9/ Includes new/ resurfaced pathways where needed, new wayfinding and exhibit signs.

10/Includes adding parking lines, adding banners + signage at Zoo main bldg. entry.

11/ Includes ZooMobile, start-up supplies for amphitheater programming.

# Lake Superior Zoo Illustrative Core Project Costs

**Table 2**  
**Lake Superior Zoo Sept. 2014**  
**Workshop – Core Projects List –**  
**Optimized Alternative**

CORE PROJECTS				
<i>Zoo Visitor Experience (Core Product)</i>	Optimized Alternative	Percent to Total	Prioritization	Type
Forest Discovery Zone 1/	\$ 1,750,000	14.6%	1	New Exhibit/Experience
Brown Bear Exhibit 2/	\$ 2,000,000	16.6%	1	Exhibit Replacement
Renovation/Expansion of Main Bldg. 3/	\$ 4,000,000	33.3%	1	New Exhibits/Experience
Primate Conservation Center & Nocturnal Bldg. 4/	\$ 250,000	2.1%	2	Existing Exhibit Upgrade
Farm 5/	\$ 250,000	2.1%	2	Existing Exhibit Upgrade
In-fill exhibits 6/	\$ 500,000	4.2%	2	Exhibit Replacement
	\$ 8,750,000	72.8%		
<b>Zoo Infrastructure</b>				
Repurposing Polar Shores 7/	\$ 1,250,000	10.4%	1	Flood Damage Mitigation/New Infrastructure
Entrance Improvements (along Grand Avenue). 8/	\$ 100,000	0.8%	1	New Infrastructure = Improved Visibility
Zoo Site-Wide Improvements 9/	\$ 200,000	1.7%	1	New and Replacement Infrastructure
Parking Lot/Visitor Arrival Improvements 10/	\$ 100,000	0.8%	1	New Infrastructure = Improved Visibility
<b>Subtotal</b>	\$ 1,650,000	13.7%		
<b>Programming</b>				
Programming Supplies & Materials 11/	\$ 50,000	0.4%	1	New Programs and Support for Existing Programs
<b>Contingency at 15%</b>	\$1,567,500	13.0%		
<b>Total</b>	\$ <b>12,017,500</b>	100.0%		
<b>Max. 6-Year City Budget Goal</b>	\$12,000,000			
<b>Total difference from Budget Goal</b>	<b>(\$17,500)</b>			

Source: Lake Superior Zoo Planning TeamWorkshop - September 2014.

Note: Assumes costs associated with transition of Zoo land to Park land and incremental capital expenses associated with transition e.g. Animal Care Facility, new fence, animal exhibit demo and removal outside fenceline, would be outside of \$12m core projects budget.

Note: Prioritization of 1 reflects highest priority projects.

1/ Includes ropes course+ several live animal exhibits+ supporting infrastructure e.g. pathways, compost restrooms. Funding commitments totaling \$550,000+ have already been secured toward this project, with strong potential for other private sources.

2/Includes enclosure large enough for 3-4 animals (with back of house), natural landscaping, indoor (unconditioned space) viewing area, modest exhibits + play elements + interpretation.

3/ Includes an estimated \$1M-\$1.5M in main building infrastructure improvements e.g roof. with the balance as substantive content/functionality improvements including addition of several modest but impactful exhibits, play experience.

4/Includes refresh of interpretation only and a new orientation sign/experience at entry.

5/ Provides for small addition to built environment, refresh and new interpretation or exhibit or play element.

6/ Provides for new, modest enclosures with limited infrastructure and exhibits/interpretation for 1-2 small animals.

7/ Includes an estimated \$500,000 - \$600,000 in demolition, removal costs for existing facilities + modest stage, sitework and amphitheater landscaping.

8/ Includes: main entrance signature sign, banners, ornamental landscaping, etc.

9/ Includes new/ resurfaced pathways where needed, new wayfinding and exhibit signs.

10/Includes adding parking lines, adding banners + signage at Zoo main bldg. entry.

11/ Includes ZooMobile, start-up supplies for amphitheater programming.

# Summary Points/Key Considerations

- ◆ The ConsultEcon study included reviewing the market and operating context for the Zoo, as well as providing input and analysis on a suite of potential improvements to the Zoo that would improve operating (attendance and revenue) potential given a \$0 to \$12m capital investment range for a period of up to 6 years.
- ◆ There is market demand for the Zoo as well as incremental revenue potential. The Zoo has a long history in the community, is much loved and has done relatively well in spite of limited investment and resources. Membership has grown during the last 5 years, attendance is up over last year and community support for the nearly 100-year old zoo has remained high although the visitor experience has continued to decay due to deferred maintenance, under-investment and a devastating 2012 flood. Zoo attendance as recent as 1998 was 140,000 vs. 88,000 today, and an analysis of zoos in comparable sized metro areas suggests that there is substantial incremental attendance potential.
- ◆ The Zoo, as one of the key paid tourism attractions in the City currently creates direct and indirect economic impact in the City. Incremental attendance will only add to that impact. Further, an enhanced Zoo will add to the quality of life in West Duluth and the region in general.
- ◆ The Zoo is worthy of support from both the public and private sectors, and at present is not fully leveraging (due to lack of a development director, and asset ownership structure) private sector support in spite of its status as a much loved institution. Visitor experience/content investments could be very attractive to potential private investment/philanthropy.

## Summary Points/Key Considerations

- ◆ Capital investment is needed both to improve core infrastructure and improve the visitor experience. At present, the Zoo suffers from deferred maintenance and damage from the flood. Initial investments to remedy infrastructure, although critical, will not likely positively impact operations as much as investments in core product e.g. exhibits, programs and experiences. In any investment scenario, there is a minimum requirement to cure infrastructure deficiencies.
- ◆ Based on the work of the planning group, there are ways to define the scale/level of investment and timing of the projects proposed depending on cash flows and philanthropic opportunities that supplement the City's capital contribution.
- ◆ A zero investment scenario is not feasible as there are acute infrastructure issues that require investment and in addition, there would be substantial decommissioning costs associated with closure of the site to the public.

## Summary Points/Key Considerations

- ◆ Investments in capital projects at the Zoo have been prioritized in the following way:
  - those projects which remedy immediate infrastructure issues either due to the flood and/or proposed City changes to the Zoo fence line which require relocation of exhibits, etc.;
  - projects which complete those already underway and enhance Zoo entrance visibility and arrival experience (e.g. Grand Avenue entrance project);
  - projects which improve and add indoor (four –season) exhibits/experiences concentrated out of the flood plain and in or near the main building (along the ridge);
  - projects that can substantially upgrade current successful exhibits with modest investment;
  - projects that already have funds committed which fit with the strategic direction of the Zoo.

## Appendix E

# Operating Impact Summary of Alternative Master Plan Scenarios Memorandum

Prepared for: City of Duluth

Prepared by: ConsultEcon, Inc.

November 14, 2014

# Introduction

The following memorandum report summarizes the analysis of the potential operating impact of two different master plan investment scenarios (Scenario 1 and Scenario 2) at the Lake Superior Zoo, as well as an alternative analysis (Scenario 2a) of Scenario 2, that tests free admission to residents of the City of Duluth. This analysis is meant to be utilized as a planning tool to guide decision-making and strategy related to development and implementation of a multi-year Master Plan for the Lake Superior Zoo.

# Introduction

The scenarios evaluated were developed through a workshop with the Lake Superior Zoo/Fairmount Park planning team. The scenarios were designed to respond to opportunities and challenges at the Zoo, and within the regional and attraction industry marketplace, and to position the Zoo such that attendance, revenue and mission impact improve over time. Specifically, the capital investment scenarios:

- ◆ Address blighted areas of the Zoo, specifically Polar Shores damaged by the 2012 flood.
- ◆ Improve the overall baseline visitor experience and increase the appeal of a visit to the Zoo for a broader audience base.
- ◆ Create consistently repeatable experiences and programs that appeal to both existing visitors and new visitors, and offer better indoor opportunities for year-round visitation.
- ◆ Improve Zoo entrance visibility from main access points.
- ◆ Reposition the Zoo – leveraging the growing adventure tourism brand in Duluth and communicating to current and potential visitors that the experience at the Zoo is fun and entertaining. Several of the new attractions planned including Forest Discovery Zone and indoor and outdoor playgrounds, emphasize adventure/active play.

The workshop occurred with the Lake Superior Zoo/Fairmount Park Planning Group during a two-day period, on location at the Zoo. The following summarizes Zoo core projects that received consensus among the suite of projects considered:

# Introduction

## ZOO VISITOR EXPERIENCE

- ◆ *Forest Discovery Zone* - The Forest Discovery Zone takes advantage of the natural beauty, topography and diversity of northeast Minnesota within the Zoo and Fairmount Park to engage families in fun and meaningful learning opportunities that encourage exploration and discovery. This experience is envisioned to include: a ropes course; animal exhibits with animals that are comfortable being outdoors yearlong; interactive exhibit spaces; and play opportunities. Existing trees would be maintained to minimize impact, and exhibits and pathways would be designed around existing landscape. The main trail loop would be ADA accessible. A seasonal ropes course would weave in and around exhibits adjacent to animal exhibits. There would be compostable restrooms on-site. Animal exhibits would be accessible year-round. This is a priority project as it fits well with the reposition of the park/zoo as an adventure/nature hub, provides long-term opportunities for enhanced revenue and funds have already been committed toward planning and project development<sup>1</sup>. Further, this would be a substantial new exhibit/experience for the Zoo.

<sup>1</sup>/Possible reuse of the Australia Exhibit as a staging area for the Forest Discovery Zone due to its proximity to parking, etc. was discussed. Scenario 2 includes a Forest Discovery Zone Budget for modest improvements to Australia to support its use as a staging area.

# Introduction

## ZOO VISITOR EXPERIENCE

- ◆ *Repurposed Polar Shores* – Includes demolition and removal of existing hardscape and transition to a modest amphitheater – with a basic stage with storage, some seating (e.g. stone embedded in landscape or benches), and a landscaped bowl. Primary use would be for public Zoo programming during day including a new signature Zoo live animal program (e.g. raptors). Other after hours programming would appeal to the resident market e.g. music, movies. The goal is to minimize investment in this area (as it is partially or all in the flood plain) and at the same time provide enhanced programming opportunities for both residents and visitors. Due to the need to remove the existing infrastructure, this is a project that has high initial costs for removal, yet adds only moderately to the Zoo core product. In addition to the amphitheater, the existing playground would be replaced and upgraded with a wildlife themed and/or natural adventure playground.
- ◆ *Brown Bear Exhibit* – Given the assumption of a new Zoo fence line, along with the failing condition of the existing bear exhibit, a new bear exhibit is required. A new exhibit would be located in the current location of the tiger exhibit, and would be designed to increase visitor stay time. An optimal exhibit would include space for 3-4 bears with multiple covered (possibly all- weather) visitor viewing/ sitting opportunities (connected to the main building) as well as education nodes to include exhibits that offer opportunities for visitors to learn and have fun.
- ◆ *Primate Conservation Center* – Includes upgrade of infrastructure and animal habitats where needed, upgrade of interpretation, addition of interactive exhibits and additional content.

# Introduction

## ZOO VISITOR EXPERIENCE

- ◆ *Main Building Renovation/Expansion* – A core goal for the Zoo is to create additional indoor four-season space. It is envisioned that renovation/expansion of the main building is core to this goal. Improvements to the structure would include: creating a welcoming entry; a staging area for groups; an advanced "organizer" for visitors; new admissions area; a "wow" exhibit that sets the tone for the Zoo and draws visitors in; renovated kitchen for food service; an optimized retail area; indoor play space for young children; a high density of high quality exhibits including interactive animal exhibits and a changing exhibit space. The primary food service and retail offerings would be located in or adjacent/connected to the main building for four season access. Scenario 2 includes a modest indoor 2-story climbing structure<sup>2</sup>.

Note that in order to accommodate a changing exhibit space within the footprint of the main building, it would be necessary to re-locate some other use within the space e.g. staff offices, education programming space, or add on to the main building. One possible location for staff offices would be within the location of the current Australia exhibit. Renovation of Australia for offices is not included in this plan, however, in Scenario 2 there is a modest amount of funding allocated in the Forest Discovery Zone line to upgrade a portion of Australia as a staging area for the Forest Discovery Zone. One potential source of funding to accommodate upgrade of the Australia exhibit for staff offices would be a portion of the additional \$1m allocated to the Bear Exhibit in Scenario 2.

<sup>2</sup>/Although not budgeted in the two scenarios evaluated, one opportunity discussed was creating a new highly visible signature entrance to the east of the main building connecting to the main building (and possibly the Primate Conservation Center). This new entrance/and connector building could include a destination indoor playground and a signature exhibit e.g. indoor rainforest or aviary/conservatory that is particularly appealing during inclement weather days and winter months. A new structure that creates a new entry experience and indoor connectivity to the main building and Primate Conservation Center could enable a critical mass of indoor content in a condensed all weather environment, out of the flood plain.

# Introduction

## ZOO VISITOR EXPERIENCE

- ◆ *Farm* – Includes upgrade of exhibit, including additional interpretation, play elements, and place-based re-theming, as well as additional indoor space for animals.
- ◆ *Infill Exhibits* – Includes development of new exhibits for animals needing relocation due to changes in fence line (Snow leopard, Eurasian Lynx, Goral, White Naped Cranes, Cougar, Great Horned Owl), possible small animal additions to the collection and other facility improvements.

# Introduction

## ZOO INFRASTRUCTURE

In addition to core improvements to exhibits/Zoo content, there are a number of infrastructure improvements needed to improve visitor experience at the Zoo as well as the overall visibility of the Zoo. These include:

- ◆ *Entrance/Access Improvements at Grand Ave.* – Includes unbudgeted Grand Ave. project items such as: ornamental landscaping, a new signature; highly visible Zoo sign on Grand; banners along grand and entrance road; and other signage to create a "sense of arrival."
- ◆ *Zoo Parking Lot and Main Building Entrance Improvements* – Painted lines on parking lot to improve parking efficiency; banners in parking lot to create sense of arrival and modest cosmetic enhancements to the current Zoo main entry.
- ◆ *Zoo Wide Signage, Pathway Improvements* – Repaving, rerouting of Zoo pathways as needed due to changes in Zoo fence line, new way finding and circulation signage. New exhibit signage.
- ◆ *New Programming Supplies and Materials* – Includes enhanced outreach programming to the community, start-up supplies for signature programming at the new amphitheater.

# Introduction

## ANIMAL COLLECTION

A critical mass of live animals was deemed important to the mission and appeal of the Zoo. The following animals were deemed important to the future of the Zoo as a core collection: bear; primate center animals; barnyard animals; cougar; snow leopard; Griggs learning center program animals; raptors; river otters and wolves. Animals that could add value to the Zoo experience but are not currently in the collection include: moose, wolverine, bison, elk, badger, beaver, black bear, bobcats, Canadian lynx, coyote, and fisher. To accommodate animals core to the mission, it was agreed that some of the existing animals in the collection e.g. Amur Tigers could be transferred to the care of other reputable animal care providers.

## ALTERNATIVE CAPITAL PROJECT SCENARIOS

Data in **Table 1** summarizes the alternative capital project scenarios evaluated. Data in **Table 2** shows the proposed budget allocations by project within each scenario. Data in **Table 3** summarizes the operating impacts of the alternative scenarios in a stable year (year 8 of plan improvements) in the current value of the dollar.

# Alternative Capital Project Scenarios

**Table 1**  
**Lake Superior Zoo**  
**Alternative Capital Project Scenarios**

	<i>Scenario -1</i>	<i>Scenario -2a</i>	<i>Scenario - 2b</i>
<b>Capital Budget</b>	\$12,000,000	\$16,000,000	\$16,000,000
<b>Implementation Timeline</b>	Phased project roll-out over period of 5 years.	" "	" "
<b>Visitor Experience Emphasis</b>	Improvements To High Value Core Facilities to Improve Yr-Round Potential e.g. Main Building, Primate Conservation, Farm + Experiences that Emphasize Active Recreation = Forest DiscoveryZone/Ropes Course, Outdoor Playground, Indoor Playground.	" "	" "
<b>Forest Discovery Zone</b>	2 seasonal ropes/adventure courses + live animal exhibits, interpretation and restrooms	" "	" "
<b>Main Building</b>	Improvements to building infrastructure + addition of several new modest scale exhibits + changing exhibit space.	Improvements to building infrastructure + addition of several new modest scale exhibits + changing exhibit space. Includes small multi-story indoor climbing structure.	Improvements to building infrastructure + addition of several new modest scale exhibits + changing exhibit space. Includes small multi-story indoor climbing structure.
<b>Primate Conservation Center/Farm</b>	Modest Improvements/refresh to Interpretation	" "	" "
<b>Food Service/Retail</b>	Modest Enhancements to Food Service and Retail in Main Building. Seasonal Kiosk Associated with Amphitheater	" "	" "
<b>Scenario 2 Differences</b>	Additional funding for live animal exhibits, indoor playground, higher quality outdoor playground experience, stronger signature bear exhibit, zoo train + higher quality entry/road access improvements increasing visibility.		
<b>Marquee Animal Exhibits</b>	Brown Bear, Lion, Possible relocation of Snow Leopard and other cats, Wolves within Forest Discovery Zone	Similar to Scenario 1 - however, animal in-fill budget allows for new exhibit for big cats.	
<b>Ticketing Strategy</b>	Zoo Only, Forest Discovery Zone Only, Adventure Pass (combination ticket)	Zoo Only, Forest Discovery Zone Only, Adventure Pass (combination ticket)	Zoo Only Free for City of Duluth Residents , Fee for Forest Discovery Zone for All.
<b>Up-Charges (ticket add-ons)</b>	\$8 - Forest Discovery Zone	" "	" "
<b>AZA Fence Line Assumption</b>	See Figure X	" "	" "
<b>Areas of Zoo Not Addressed</b>	Australia	Australia (some modest improvements made as staging area for Forest Discovery Zone)	" "
<b>Other</b>	Tigers would be deaccessioned in all scenarios.	" "	" "

Source: ConsultEcon and Lake Superior Zoo Planning Team - October 2014.

Note: Assumes costs associated with transition of Zoo land to Park land and incremental capital expenses associated with transition, removal of fence and new fence, animal exhibit demo, site work and removal outside fenceline, would be outside of \$12m and \$16m core projects budget.

# Alternative Capital Project Scenarios

**Table 2**  
**Lake Superior Zoo**  
**Alternative Capital Project Scenarios –**  
**Budget Allocations**

1/ Includes ropes course+ several live animal exhibits+ supporting infrastructure e.g. pathways, compost restrooms. Funding commitments totaling \$550,000+ have already been secured toward this project, with strong potential for other private sources. Alternatives 2 and 3 includes \$500,000 toward renovation of Australia exhibit for utilization as staging area for Forest Discovery Zone.

2/Includes enclosure large enough for 3-4 animals (with back of house), natural landscaping, indoor (unconditioned space) viewing area, modest exhibits + play elements + interpretation. It is assumed that some of the existing infrastructure from the Tiger exhibit would be utilized. If a AZA approved bear exhibit is possible within a \$2m budget, it is recommended that in Scenario 2, a \$1m is reallocated to the main building improvements and/or renovation of Australia to accommodate staff offices that may be relocated from the Main Building.

3/ Includes an estimated \$1M-\$1.5M in main building infrastructure improvements e.g roof. with the balance as substantive content/functionality improvements including addition of several modest but impactful exhibits, and changing exhibit space. To accommodate a changing exhibit space within the footprint of the main building would require re-location of some other use within the building e.g. staff offices or education programming space. A minimum of 2,000 SF for a changing exhibit gallery is recommended.

4/ Assumes multi-story climbing structure built into main building experience.

5/Includes refresh of interpretation only and a new orientation sign/experience at entry.

6/ Provides for small addition to built environment, refresh and new interpretation or exhibit or play element.

7/ Includes replacing and upgrading outdoor playground located adjacent to the current Polar Shores exhibit.

8/ Provides for new, modest enclosures with limited infrastructure and exhibits/interpretation for several small to medium size animals that require relocation due to changes in fence line and other capital improvements.

9/ Includes an estimated \$500,000 - \$600,000 in demolition, removal costs for existing facilities + stage, sitework, amphitheater landscaping + destination wildlife themed playground.

10/ Includes: main entrance signature sign, banners, ornamental landscaping, etc.

11/ Includes new/ resurfaced pathways where needed, new wayfinding and exhibit signs. In Alt#2 includes reconfigure of route for Zoo train.

12/Includes adding parking lines, adding banners + signage at Zoo main bldg. entry.

13/ Includes ZooMobile, start-up supplies for signature zoo live animal program in amphitheater.

CORE PROJECTS	ILLUSTRATIVE CAPITAL BUDGET (\$)	
	Scenario -1	Scenario -2
<b>Zoo Visitor Experience (Core Product)</b>		
Forest Discovery Zone 1/	\$1,750,000	\$2,000,000
Brown Bear Exhibit 2/	\$2,000,000	\$3,000,000
Renovation/Expansion of Main Bldg. 3/	\$4,000,000	\$4,300,000
Multi-Story Indoor Playground 4/		\$350,000
Primate Conservation Center & Nocturnal Bldg. 5/	\$250,000	\$350,000
Farm 6/	\$250,000	\$350,000
Outdoor Themed Destination Playground 7/	\$250,000	\$500,000
Animal In-fill exhibits 8/	\$500,000	\$1,300,000
<b>Subtotal</b>	<b>\$9,000,000</b>	<b>\$12,150,000</b>
<b>Zoo Infrastructure</b>		
Repurposing Polar Shores 9/	\$1,000,000	\$1,000,000
Entrance Improvements (along Grand Avenue). 10/	\$100,000	\$175,000
Zoo Site-Wide Improvements	\$200,000	\$200,000
Reconfigure Zoo Train Route		\$200,000
Visitor Arrival Improvements/Parking Lot Improvements 12/	\$100,000	\$150,000
<b>Subtotal</b>	<b>\$1,400,000</b>	<b>\$1,725,000</b>
<b>Programming</b>		
Programming Supplies & Materials 13/	\$50,000	\$75,000
<b>Contingency at 15%</b>	<b>\$1,567,500</b>	<b>\$2,092,500</b>
<b>Total</b>	<b>\$12,017,500</b>	<b>\$16,042,500</b>
<b>Rounded</b>	<b>\$12,000,000</b>	<b>\$16,000,000</b>

Source: Lake Superior Zoo Planning Team Workshop - September 2014. Revised October 2014.

# Alternative Capital Project Scenarios

**Table 3**  
**Lake Superior Zoo**  
**Potential Operating Impacts of Alternative**  
**Capital Project Scenarios**

Plan Scenario	Stable Year 8 Value (in current dollars)			Baseline	% Change Baseline to Scenario 1	% Change Baseline to Scenario 2	% Change Baseline to Scenario 2a
	Scenario 1	Scenario 2	Scenario 2a				
<b>Capital Investment</b>	\$12,000,000	\$16,000,000	\$16,000,000				
<b>Attendance</b>	112,907	121,418	155,494	88,694	27%	37%	75%
<b>Memberships</b>	2,738	3,029	2,455	2,189	25%	38%	12%
<b>Per Capital Admissions Revenue</b>	\$8.68	\$8.89	\$6.33	\$5.52	57%	61%	15%
<b>Earned Revenue</b>							
Admissions	\$980,000	\$1,079,300	\$984,800	\$489,700	100%	120%	101%
Gift Shop (Gross)	\$225,300	\$255,300	\$306,500	\$124,600	81%	105%	146%
Education Program Revenue	\$92,100	\$100,000	\$118,800	\$47,300	95%	111%	151%
Food Service (Gross)	\$158,800	\$175,800	\$210,800	\$57,600	176%	205%	266%
Special Event Sales	\$4,600	\$5,100	\$6,600	\$2,000	130%	155%	230%
Depot Sales (Gross)	\$29,900	\$37,300	\$47,700	\$18,300	63%	104%	161%
Membership	\$241,900	\$280,300	\$227,200	\$143,000	69%	96%	59%
<b>Total Earned Revenue</b>	<b>\$1,732,600</b>	<b>\$1,933,100</b>	<b>\$1,902,400</b>	<b>\$882,500</b>	96%	119%	116%
<b>Contributed Revenue</b>	\$521,900	\$521,900	\$541,900	\$389,300	34%	34%	39%
<b>Expenditures</b>							
<i>Personnel and Contract Services</i>							
Payroll Expenses, Employee Insurance and Taxes	\$1,410,200	\$1,441,100	\$1,469,400	\$1,118,100	26%	29%	31%
LSZ - Staff Devlpmt & Training	\$13,500	\$13,500	\$13,500	\$12,200	11%	11%	11%
Outside & Contract Services	\$57,600	\$57,600	\$59,900	\$54,900	5%	5%	9%
Employee Misc Expense	\$100	\$100	\$100	\$100	0%	0%	0%
<i>Non Personnel</i>							
Zoo Services	\$108,000	\$111,300	\$111,300	\$111,300	-3%	0%	0%
Utilities	\$114,600	\$114,600	\$114,600	\$122,000	-6%	-6%	-6%
Marketing	\$139,700	\$139,700	\$139,700	\$110,100	27%	27%	27%
Building and Grounds	\$6,600	\$6,600	\$6,800	\$6,200	6%	6%	10%
Repairs and Maintenance	\$67,700	\$69,100	\$69,800	\$65,900	3%	5%	6%
Other Non-Personnel Expenses	\$279,200	\$284,800	\$287,600	\$265,800	5%	7%	8%
<b>Total Operating Expenses</b>	<b>\$2,197,200</b>	<b>\$2,238,400</b>	<b>\$2,272,700</b>	<b>\$1,866,600</b>	18%	20%	22%
<b>Net Income Before Exhibit Reinvestment 1/</b>	<b>\$57,300</b>	<b>\$216,600</b>	<b>\$171,600</b>	<b>(\$594,800)</b>			
<b>Percent Earned Revenue of Operating Expenses</b>	78.9%	86.4%	83.7%	47.3%			
<i>Recommended Exhibit Replacement/Capital Improvements 2/</i>							
Replacement/Capital Improvements 2/	\$575,000	\$575,000	\$575,000	\$381,900			
<b>Net Income After Capital Reinvestment (w/o City Operating Subsidy)</b>	<b>(\$517,700)</b>	<b>(\$358,400)</b>	<b>(\$403,400)</b>	<b>(\$976,700)</b>			

Source: ConsultEcon and Lake Superior Zoo Planning Team - October 2014.

Note: All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation. Revenues and Expenses rounded to the nearest 'hundredth'.

1/ Does not include City Subsidy. Net income is before required capital reinvestment in exhibits, visitor experience, repairs.

2/ Includes annual changing exhibit budget, exhibit refresh/repair (every other year), and other minor capital repair.

# Operating Impact

## SUMMARY OF POTENTIAL OPERATING IMPACT

For each scenario, attendance, revenue, and operating expense impacts were analyzed.

The analysis of these impacts, development of underlying assumptions, and how each scenario might perform relative to one another and the Lake Superior Zoo's existing baseline is based on a suite of interrelated factors including, but not limited to the following:

- ◆ a general strengthening of the economy and specifically the tourism economy in Duluth, *which suggest that there is general upside potential at the Zoo as more people are traveling, visitor spending is up, etc.*
- ◆ industry experience that suggest that attractions of all types must reinvest to stay competitive, grow baseline revenues and attendance. *Since the Zoo generally has not had any major capital investments in visitor experience for more than a decade, and the experience is generally outdated, this suggests that there is substantial upside with any investment in "new" product that enhances the overall visitor experience and attracting power of the Zoo.*
- ◆ the degree to which scenarios: improve the visitor arrival experience and visibility of the main Zoo entrance; improve overall appeal of a visit; improve repeatability (through offering more year-round and changing exhibit experiences); leverage opportunities to view/interact with animals up-close; emphasize improvements with broad appeal; leverage Duluth's growing adventure tourism brand; leverage existing exhibits with strong interest to visitors e.g. farm, Primate Conservation Center; and, improve visitor amenities. *The projects within scenarios are assumed to be designed by a qualified design team to optimize these factors, thus increasing the attracting power of the Zoo, repeatability and increasing visitor length of stay.*

# Operating Impact

## SUMMARY OF POTENTIAL OPERATING IMPACT

- ◆ the historical performance of attendance at the Zoo. *Prior to 2007, the Zoo's annual attendance consistently reached above 100,000, and for a six-year period between 1994 and 2000, attendance consistently reached above 125,000 with a high of 140,000 in 1998. Between 1997 and 1998 there was an 8% jump in attendance with the opening of the Primate Conservation Center. Also between 1993 and 1994 there was a 24% jump in attendance with the renovation of the main building.*
- ◆ level of investment and timing of City investment in destination tourism infrastructure in Fairmount Park. *The assumptions in this analysis assume that the City will implement the planned trailhead concept for Fairmount Park. The implementation of this infrastructure and other trails is assumed to have a positive impact on Zoo attendance and revenues.*

# Operating Impact

## ATTENDANCE

For each scenario a range of attendance potential was estimated for a period of eight years as the rollout of capital improvements is assumed to take five years, and generally, following the last improvement, attendance will take three years to “stabilize.” These attendance estimates assume a “Mid-Range” attendance potential. The actual attendance might range up or down from this “best estimate” based on factors such as: 1) future economic conditions; 2) the amount and type of place making and infrastructure that occurs in Fairmount Park and the area surrounding the Zoo; 3) tourism market conditions in Duluth; 4.) weather; 5) the quality and quantity of marketing and; the quality of design installation and operations of the renovated Zoo. It is assumed that each project would have both an attendance surge (a short-term attendance bump) impact and a sustained attendance benefit. With a project implementation schedule spanning five years, it is also anticipated that there could be some negative impact on attendance due to construction. Following opening of each project/phase there would likely be a short-term attendance increase followed by attendance stabilization. In the case with free admission for residents of the City of Duluth, it is anticipated that there would be substantially higher baseline attendance.

In a stable year 8, attendance in Scenario 1 is estimated to be 27% above the current baseline (year 2013 Zoo attendance), while attendance Scenario 2 is estimated to be 37% above the current baseline attendance. With free admission for City of Duluth residents, attendance is expected to be 75% higher (above baseline). Sustaining these higher levels of visitation will be dependent on: creating permanent exhibitions that incorporate repeatable experiences; consistently creating an exciting “out of the box” program of changing exhibitions; developing innovative programming; and continuing to improve “place making” both on and off site over time. The difference in capital investment between the \$12m in Scenario 1 and the \$16m in Scenario 2, allows for higher quality product and more experiences, thus reducing operating risk and ensuring that the impact from initial investments in Scenario 1 are lasting. Data in tables in Appendix A-1 – Appendix A-3 provide a detailed analysis of attendance potential.

# Operating Impact

## REVENUES

Data in Table 3 summarizes revenue by category. Data in tables in Appendix A-28 through Appendix A-30 provide detailed analysis of revenue potential by scenario. Earned revenues include ticket sales, food and retail, programs, memberships, event income, and depot sales. This analysis utilizes the baseline per capita revenues by category at the Zoo in 2013, and applies growth factors, to arrive at potential future revenues. Total revenue is a function of the per capita revenue multiplied by the total attendance. It is important to note that there are no inflationary adjustments in this analysis and all dollar amounts are shown as the current value of the dollar.

## ADMISSION PRICING

It is assumed in all scenarios that there are increases in admission fees in Year 2, 3, 5, and 7 of the plan to correspond with the opening of different improvements. It is assumed that the ropes course in the Forest Discovery Zoo will be a separate, pay-one-price, admission of \$7 beginning in year 2 of the plan. Additional value is created by the additional capital investment in Scenario 2, thus admission prices are slightly higher (than in Scenario 1) in Years 3 and 5 with the opening of Bear Territory and the Main Building. In Scenario 2a – all residents of the City of Duluth are assumed to have free admission to the Zoo only, however, an admission fee would apply to Duluth City residents who opt to participate in the ropes course in the Forest Discovery Zone. The implication is that per capital admissions revenue with investment at the Zoo is substantially higher in all scenarios. Scenario 2 yields the highest per capital admissions revenue, and per capita admissions revenue drops substantially with free Duluth City resident admissions.

# Operating Impact

## **RETAIL AND FOOD SERVICE**

This analysis utilizes the baseline per capita retail revenues at the Lake Superior Zoo in 2013, and applies growth factors, to arrive at potential future revenues. This analysis follows the same logic as admission pricing, with modest additional increases in retail per capita, associated with increased stay times and higher capture rates of visitors who are making purchases in the gift shop, as a result of master plan improvements, and, improvements and investment outside of the Zoo (in Fairmount Park).. The analysis also assumes improvements to the retail shop and food service with main building improvements, as well as some seasonal retail/food kiosk associated with the new amphitheater and signature programming, as well as the Forest Discovery Zone. These other per capita earned revenues are somewhat higher in Scenario 2, than in Scenario 1.

In Scenario 2a with free resident admission, it is anticipated that revenues would be somewhat higher for retail and food service than in other scenarios, since some visitors may be more apt to spend on these ancillary activities given free admission.

## **MEMBERSHIPS**

With improvements to the Zoo visitor experience, reinforcement of the Zoo mission and the addition of more indoor- year round, repeatable experiences, it is projected that there would be growth in membership. Scenario 1 assumes 25% growth (549 memberships) in the number of memberships sold (including both family and corporate memberships) over 2013 numbers, and 38% growth in Scenario 2 (840). This results in additional revenues from memberships in both scenarios. In Scenario 2a, with free resident admission, membership is assumed to be somewhat higher than in the baseline, but lower than in the other two scenarios. Without creating additional value to a membership other than free admission, a free admission scenario tends to undermine membership potential from City residents. However, some membership growth in the free admission scenario is reasonable as with investment in the Zoo, there will be some residents of Duluth who wish to also support the Zoo in this manner and receive discounts in the Zoo gift shop and other membership benefits.

# Operating Impact

## **OTHER EARNED REVENUES**

Following a similar assumption as food service, retail and admissions per capita revenue growth, it is assumed that there would be some increase in per capita program, special event and depot sales revenues with improvements to the Zoo visitor experience. The addition of more quality attractions at the Zoo will improve the attractiveness of the Zoo as a wedding or other event venue. These other per capita earned revenues are somewhat higher in Scenario 2, than in Scenario 1.

In Scenarios 1 and 2, gains in earned revenues are largely driven by increases in paid attendance coupled with assumed admission fee increases. In addition, this increase in attendance drives increases in both per capita retail and food service sales; as well as benefitting memberships and also having the potential to enhance, philanthropic support.

## **CONTRIBUTED REVENUES**

Improvements to the Zoo visitor experience, reinvestment in the Zoo in general, and renewed commitment to the mission of the Zoo can drive growth in contributed/philanthropic revenues. Further, this analysis assumes and budgets for a paid full time Development Director. It is assumed in this analysis that these investments could increase contributed revenues by 34% over baseline (2013) in Scenario 1, 34% in Scenario 2, and 39% in Scenario 2a. With free admission for Duluth City residents the propensity to give may be stronger among some residents.

# Operating Impact

## EXPENSES

Data in Table 3 shows estimated total expenses by scenario. Data in Tables in Appendix A-34 through Appendix A-36 provide detailed expense analysis by scenario. While it is projected that there would be some savings on utilities, zoo services and other non-personnel expenses associated with a smaller “footprint,” it is projected that in Scenarios 1 and 2, there would be a smaller area, but a higher quality experience. Thus, overall operating expenses increase somewhat, and most substantially in marketing and personnel. Increases in personnel are associated with the hiring of a Development Director as well as seasonal staff to operate the Forest Discovery Zone ropes course and additional educators to implement a signature live animal program at the new amphitheater. These selective investments in operations are designed to more than pay for themselves and contribute to the enhanced revenue potential in these scenarios. Operating expense budgets assume: a smaller zoo footprint, but with addition of Forest Discovery Zone; fewer live animal exhibits; and, upgraded utilities infrastructure in the main building.

Note that normal maintenance of exhibits is assumed to be in-house and/or funded through the repairs/maintenance line item. However, major repairs and reinvestment in exhibits is a capital cost outside of the annual operating budget as separate line items in the expense analysis.

Operating expense increases are driven by new/different personnel needs, enhanced marketing and promotion, enhanced programming and modest utility increases in other categories to overall upgrade the quality and level of visitor experience.

# Operating Impact

## NET OPERATING IMPACT

Data in Table 3 also shows a comparison of the estimated Net Income by scenario in current value of the dollar. Note, these totals are shown after including a capital expenditures budget for large repairs and maintenance. It is anticipated that the on-going capital expenditure budget would decrease with investment in the facility to correct current facility deficiencies. However, it is assumed that since some areas of the Zoo e.g. Australia are not being fully addressed with these investments, that there still would need to be a sizeable capital expenditures budgeted. This analysis uses \$191,000 (half the current amount). All three scenarios result in substantially more revenue for the Zoo and as a result decrease the need for operating subsidy from the city. Scenario 2 realizes the highest positive impact followed by Scenario 2a, and Scenario 1.

# Summary

## SUMMARY

The potential operating impacts of three alternative master plan scenarios for the Lake Superior Zoo were evaluated. Operating impacts are tied not just to total level of investment, but also to how the investment is allocated to different components/projects within the Plan, and how well the plan is implemented. Both scenarios fulfill the goals of the project in: reducing the city operating subsidy, improving the appeal of the Zoo; creating fun, active, repeatable experiences; improving the visibility of the Zoo entrance and arrival experience, and generally strengthening the Zoo brand. Both scenarios, increase opportunities for programming. However, Scenario 2 as detailed includes, additional investments that allow for a more substantial, sustained, impact on the Zoo. Scenario 2, as would be expected, has a larger positive impact. In Scenario 2a, a policy change that allows for free Zoo admission for City of Duluth residents results in higher attendance, lower admissions revenue (than in other scenarios), but higher ancillary revenues.

# Assumptions

## ASSUMPTIONS

In preparing this analysis, the following assumptions were made. This planning project is qualified in its entirety by these assumptions.

1. The size and design of any new Zoo project or program will be appropriate to its market potential, and will serve to create a high-quality, stimulating attraction with broad-based audience appeal and a distinctive image. Additional land uses in Fairmount Park adjacent to the Zoo will be used in a manner advantageous to the success of the Zoo.
2. The Lake Superior Zoo will be competently and effectively managed. An aggressive on-going promotional campaign will be developed and implemented. This marketing program will be targeted to prime visitor markets. The pricing at the Zoo will be consistent with the value offered, and with current prices for other comparable projects/services in the area and nationally.
3. There will be no long-term physical constraints to impede visitors to the facility, such as major construction activity. Changes in economic and social conditions due to events including, but not limited to, major recessions, major environmental problems or disasters that will negatively affect operations and visitation may impact on the results of the findings in this study, including visitor projections.
4. Every reasonable effort has been made in order that the data contained in this study reflect the most accurate and timely information possible, and it is believed to be reliable. This study is based on estimates, assumptions and other information developed by ConsultEcon, Inc. from its independent research efforts, general knowledge of the industry, and consultations with the client group. No responsibility is assumed for inaccuracies in reporting by the client, its agents and representatives, or any other data source used in the preparation of this study. No warranty or representation is made that any of the projected values or results contained in this study will actually be achieved. There will usually be differences between forecasted or projected results and actual results because events and circumstances usually do not occur as expected. Other factors not considered in the study may influence actual results.
5. This report may not be used for any purpose other than that for which it was prepared. Possession of this report does not carry with it the right of publication. This report will be presented to third parties in its entirety and no abstracting of the report will be made without first obtaining permission of ConsultEcon, Inc., which consent will not be unreasonably withheld.
6. Outputs of computer models used in this report are rounded. These outputs may therefore slightly affect totals and summaries.
7. The research and analysis of this report was prepared from June 2014 through November 2014. It represents data available at that time.

# Appendix Tables

**Table A-1**  
**Lake Superior Zoo Master Plan**  
**Mid-Range Attendance Potential - Scenario 1**

Proposed Improvement Program <sup>1/</sup>	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Stable Year				
	Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements./ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin	Improvements to Primate Conservation Center, Farm Open/ Main Building Renovation/ Expansion	Main Building Renovation/ Expansion Opens	Year 4	Year 5	Year 6	Year 7	Year 8
Baseline: 2013	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 8	
<b>Percent Change from Baseline:</b>										
Estimated Increase Due to Average Market (Resident and Tourism Market) Growth Rate	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
<b>Exhibit &amp; Renovation Plan Attendance Impacts <sup>2/</sup></b>										
Phase 1 Attendance Surge	4%	2%								
Phase 2 Attendance Surge		6%	4%	2%						
Phase 3 Attendance Surge			6%	4%						
Phase 4 Attendance Surge				2%						
Phase 5 Attendance Surge					8%	5%	3%			
Sustained Attendance Benefit Phase 1	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Sustained Attendance Benefit Phase 2		7%	7%	7%	7%	7%	7%	7%	7%	7%
Sustained Attendance Benefit Phase 3			7%	7%	7%	7%	7%	7%	7%	7%
Sustained Attendance Benefit Phase 4				3%	3%	3%	3%	3%	3%	3%
Sustained Attendance Benefit Phase 5					8%	8%	8%	8%	8%	8%
<b>Total Master Plan Impacts</b>	<b>6%</b>	<b>17%</b>	<b>26%</b>	<b>27%</b>	<b>35%</b>	<b>32%</b>	<b>30%</b>	<b>30%</b>	<b>27%</b>	<b>27%</b>
<b>Construction Impacts <sup>3/</sup></b>										
	-3%	-5%	-5%	-8%						
<b>Total Impacts</b>	<b>3.0%</b>	<b>12.0%</b>	<b>21.0%</b>	<b>19.0%</b>	<b>35.0%</b>	<b>32.0%</b>	<b>30.0%</b>	<b>30.0%</b>	<b>27.0%</b>	<b>27.0%</b>
<b>Mid-Range Attendance Estimates:</b>										
Baseline Attendance	88,694	88,694	88,694	88,694	88,694	88,694	88,694	88,694	88,694	88,694
Estimated Increase Due to Average Market (Resident and Tourism Market) Growth Rate	887	53	151	231	239	310	284	266		266
<b>Exhibit &amp; Renovation Plan Attendance Impacts Against Baseline</b>										
Phase 1 Attendance Surge	3,548	1,774	-	-	-	-	-	-	-	-
Phase 2 Attendance Surge	-	5,322	3,548	1,774	-	-	-	-	-	-
Phase 3 Attendance Surge	-	-	5,322	3,548	-	-	-	-	-	-
Phase 4 Attendance Surge	-	-	-	1,774	-	-	-	-	-	-
Phase 5 Attendance Surge	-	-	-	-	7,096	4,435	2,661	-	-	-
Sustained Attendance Benefit Phase 1	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774	1,774
Sustained Attendance Benefit Phase 2	-	6,209	6,209	6,209	6,209	6,209	6,209	6,209	6,209	6,209
Sustained Attendance Benefit Phase 3	-	-	6,209	6,209	6,209	6,209	6,209	6,209	6,209	6,209
Sustained Attendance Benefit Phase 4	-	-	-	2,661	2,661	2,661	2,661	2,661	2,661	2,661
Sustained Attendance Benefit Phase 5	-	-	-	-	7,096	7,096	7,096	7,096	7,096	7,096
<b>Total Master Plan Impact</b>		5,322	15,078	23,060	23,947	31,043	28,382	26,608	23,947	23,947
<b>Master Plan Attendance Potential before Construction Impacts</b>	88,694	94,903	103,825	111,905	112,872	119,976	117,387	115,586	112,907	112,907
<b>Construction Impact against Total Attendance</b>		(2,847)	(5,191)	(5,595)	(9,030)	-	-	-	-	-
<b>Total Mid-Range Attendance Potential</b>		<b>92,056</b>	<b>98,634</b>	<b>106,310</b>	<b>103,842</b>	<b>119,976</b>	<b>117,387</b>	<b>115,586</b>	<b>112,907</b>	<b>112,907</b>
Percent Change from Previous Year	3.8%	7.1%	7.8%	-2.3%	15.5%	-2.2%	-1.5%	-2.3%		
Percent Change from 2013 Baseline	3.8%	11.2%	19.9%	17.1%	35.3%	32.4%	30.3%	27.3%		

Source: ConsultEcon and Lake Superior Zoo

1/ Capital investment by Phase includes the following: Phase I - \$1,650,000; Phase II - \$1,750,000; Phase III - \$2,500,000, Phase IV: \$500,000; Phase V: \$4,000,000

2/ Exhibit and renovation plan impacts will depend on how well the exhibits and renovations are executed and received. Impacts are estimated against the FY13 baseline attendance.

3/ Year prior to opening Year 1 - Phase 1 there would be construction impacts. Construction impacts reflect the partial closing of different areas of the Zoo and visitor interruption due to the renovation and addition of new exhibits. The most severe construction impacts may occur with renovation of main building as this may interrupt parking, visitor flow, etc. However, it is assumed that this main building renovation project could take place during 9 months of non-peak visitation.

# Appendix Tables

**Table A-2**  
**Lake Superior Zoo Master Plan**  
**Mid-Range Attendance Potential - Scenario 2**

Proposed Improvement Program <sup>1/</sup>	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Stable Year		
	Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements./ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal In-Fill Exhibits	Improvements to Primate Conservation Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion	Main Building Renovation/ Expansion Opens	Year 5	Year 6	Year 7
Baseline: 2013	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>Percent Change from Baseline:</b>								
Estimated Increase Due to Average Market (Resident and Tourism Market) Growth Rate	1%	1%	1%	1%	1%	1%	1%	1%
<b>Exhibit &amp; Renovation Plan Attendance Impacts <sup>2/</sup></b>								
Phase 1 Attendance Surge	4%	2%						
Phase 2 Attendance Surge		6%	4%	2%				
Phase 3 Attendance Surge			7%	5%				
Phase 4 Attendance Surge				2%	1%			
Phase 5 Attendance Surge					8%	5%	3%	
Sustained Attendance Benefit Phase 1	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Sustained Attendance Benefit Phase 2		7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Sustained Attendance Benefit Phase 3			12%	12%	12%	12%	12%	12%
Sustained Attendance Benefit Phase 4				3.5%	3.5%	3.5%	3.5%	3.5%
Sustained Attendance Benefit Phase 5					10.0%	10.0%	10.0%	10.0%
<b>Total Master Plan Impacts</b>	<b>9.0%</b>	<b>20.0%</b>	<b>35.0%</b>	<b>36.5%</b>	<b>46.5%</b>	<b>42.5%</b>	<b>40.5%</b>	<b>37.5%</b>
<b>Construction Impacts <sup>3/</sup></b>								
Construction Impacts	-3%	-5%	-5%	-8%				
<b>Total Impacts</b>	<b>6.0%</b>	<b>15.0%</b>	<b>30.0%</b>	<b>28.5%</b>	<b>46.5%</b>	<b>42.5%</b>	<b>40.5%</b>	<b>37.5%</b>
<b>Mid-Range Attendance Estimates:</b>								
Baseline Attendance	88,694	88,694	88,694	88,694	88,694	88,694	88,694	88,694
Estimated Increase Due to Average Market (Resident and Tourism Market) Growth Rate	887	71	169	302	315	404	368	350
<b>Exhibit &amp; Renovation Plan Attendance Impacts</b>								
Phase 1 Attendance Surge	3,548	1,774	-	-	-	-	-	-
Phase 2 Attendance Surge	-	5,322	3,548	1,774	-	-	-	-
Phase 3 Attendance Surge	-	-	6,209	4,435	-	-	-	-
Phase 4 Attendance Surge	-	-	-	1,774	887	-	-	-
Phase 5 Attendance Surge	-	-	-	-	7,096	4,435	2,661	-
Sustained Attendance Benefit Phase 1	3,548	3,548	3,548	3,548	3,548	3,548	3,548	3,548
Sustained Attendance Benefit Phase 2	-	6,209	6,209	6,209	6,209	6,209	6,209	6,209
Sustained Attendance Benefit Phase 3	-	-	10,643	10,643	10,643	10,643	10,643	10,643
Sustained Attendance Benefit Phase 4	-	-	-	3,104	3,104	3,104	3,104	3,104
Sustained Attendance Benefit Phase 5	-	-	-	-	8,869	8,869	8,869	8,869
<b>Total Master Plan Impact</b>	<b>7,096</b>	<b>16,852</b>	<b>30,156</b>	<b>31,486</b>	<b>40,356</b>	<b>36,808</b>	<b>35,034</b>	<b>32,373</b>
<b>Master Plan Attendance Potential before Construction Impacts</b>	<b>88,694</b>	<b>96,676</b>	<b>105,617</b>	<b>119,018</b>	<b>129,365</b>	<b>125,906</b>	<b>124,096</b>	<b>121,418</b>
<b>Construction Impact</b>	<b>(2,900)</b>	<b>(5,281)</b>	<b>(5,951)</b>	<b>(9,639)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Mid-Range Attendance Potential</b>	<b>93,776</b>	<b>100,336</b>	<b>113,068</b>	<b>110,843</b>	<b>129,365</b>	<b>125,906</b>	<b>124,096</b>	<b>121,418</b>
Percent Change from Previous Year	5.7%	7.0%	12.7%	-2.0%	16.7%	-2.7%	-1.4%	-2.2%
Percent Change from 2013 Baseline	5.7%	13.1%	27.5%	25.0%	45.9%	42.0%	39.9%	36.9%

Source: ConsultEcon and Lake Superior Zoo

1/ Capital investment by Phase includes the following: Phase 1- \$1,650,000; Phase II - \$1,750,000; Phase III - \$2,500,000, Phase IV: \$500,000; Phase VI: \$4,000,000

2/ Exhibit and renovation plan impacts will depend on how well the exhibits and renovations are executed and received. Impacts are estimated against the FY13 baseline attendance.

3/ Year prior to opening Year 1 - Phase 1 there would be construction impacts. Construction impacts reflect the partial closing of different areas of the Zoo and visitor interruption due to the renovation and addition of new exhibits. The most severe construction impacts may occur with renovation of main building as this may interrupt parking, visitor flow, etc. However, it is assumed that this main building renovation project could take place during 9 months of non-peak visitation.

# Appendix Tables

**Table A-3**  
**Lake Superior Zoo Master Plan**  
**Mid-Range Attendance Potential - Scenario 2a**

Proposed Improvement Program <sup>1/</sup>	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Stable Year							
	Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements./ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin, Reconfigure Zoo Train Track	Improvements to Primate Conservation Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion	Main Building Renovation/ Expansion Opens	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>Percent Change from Baseline:</b>													
<b>Estimated Increase Due to Average Market (Resident and Tourism Market) Growth Rate</b>		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
<b>Exhibit &amp; Renovation Plan Attendance Impacts <sup>2/</sup></b>													
Phase 1 Attendance Surge	21%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Phase 2 Attendance Surge	0%	16%	8%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Phase 3 Attendance Surge	0%	0%	15%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Phase 4 Attendance Surge	0%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%
Phase 5 Attendance Surge	0%	0%	0%	0%	15%	10%	6%	0%	0%	0%	0%	0%	0%
Sustained Attendance Benefit Phase 1	21%	11%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Sustained Attendance Benefit Phase 2	0%	19%	15%	14%	13%	14%	14%	14%	14%	14%	14%	14%	14%
Sustained Attendance Benefit Phase 3	0%	0%	25%	24%	23%	23%	24%	24%	24%	24%	24%	24%	24%
Sustained Attendance Benefit Phase 4	0%	0%	0%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Sustained Attendance Benefit Phase 5	0%	0%	0%	0%	19%	19%	20%	20%	20%	20%	20%	20%	20%
<b>Total Master Plan Impacts</b>	<b>43.0%</b>	<b>51.0%</b>	<b>70.6%</b>	<b>72.3%</b>	<b>85.8%</b>	<b>80.8%</b>	<b>78.2%</b>	<b>74.3%</b>					
<b>Construction Impacts <sup>3/</sup></b>	<b>-3%</b>	<b>-5%</b>	<b>-5%</b>	<b>-8%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>					
<b>Total Impacts</b>	<b>40.0%</b>	<b>46.0%</b>	<b>65.6%</b>	<b>64.3%</b>	<b>85.8%</b>	<b>80.8%</b>	<b>78.2%</b>	<b>74.3%</b>					
<b>Mid-Range Attendance Estimates:</b>													
<b>Baseline Attendance</b>	88,694	88,694	88,694	88,694	88,694	88,694	88,694	88,694	88,694	88,694	88,694	88,694	88,694
<b>Estimated Increase Due to Average Market (Resident and Tourism Market) Growth Rate</b>	887	1,277	1,348	1,522	1,537	1,657	1,612	1,589					
<b>Exhibit &amp; Renovation Plan Attendance Impacts Against Baseline</b>													
Phase 1 Attendance Surge	17,385	4,716	-	-	-	-	-	-					
Phase 2 Attendance Surge	-	14,149	7,310	3,579	-	-	-	-					
Phase 3 Attendance Surge	-	-	12,792	8,948	-	-	-	-					
Phase 4 Attendance Surge	-	-	-	3,579	1,658	-	-	-					
Phase 5 Attendance Surge	-	-	-	-	13,264	8,541	5,212	-					
Sustained Attendance Benefit Phase 1	17,385	9,433	7,310	7,158	6,632	6,833	6,949	7,146					
Sustained Attendance Benefit Phase 2	-	16,507	12,792	12,527	11,606	11,958	12,160	12,506					
Sustained Attendance Benefit Phase 3	-	-	21,929	21,475	19,896	20,499	20,846	21,439					
Sustained Attendance Benefit Phase 4	-	-	-	6,263	5,803	5,979	6,080	6,253					
Sustained Attendance Benefit Phase 5	-	-	-	-	16,580	17,082	17,372	17,866					
<b>Total Master Plan Impact</b>	<b>34,769</b>	<b>44,805</b>	<b>62,132</b>	<b>63,530</b>	<b>75,440</b>	<b>70,891</b>	<b>68,618</b>	<b>65,211</b>					
<b>Master Plan Attendance Potential before Construction Impacts</b>	<b>88,694</b>	<b>124,350</b>	<b>134,776</b>	<b>152,173</b>	<b>153,745</b>	<b>165,672</b>	<b>161,242</b>	<b>158,925</b>	<b>155,494</b>				
<b>Construction Impact against Total Attendance</b>	<b>(3,731)</b>	<b>(6,739)</b>	<b>(7,609)</b>	<b>(12,300)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>					
<b>Total Mid-Range Attendance Potential</b>	<b>120,620</b>	<b>128,037</b>	<b>144,565</b>	<b>141,446</b>	<b>165,672</b>	<b>161,242</b>	<b>158,925</b>	<b>155,494</b>					
<b>Percent Change from Previous Year</b>	<b>36.0%</b>	<b>6.1%</b>	<b>12.9%</b>	<b>-2.2%</b>	<b>17.1%</b>	<b>-2.7%</b>	<b>-1.4%</b>	<b>-2.2%</b>					
<b>Percent Change from 2013 Baseline</b>	<b>36.0%</b>	<b>44.4%</b>	<b>63.0%</b>	<b>59.5%</b>	<b>86.8%</b>	<b>81.8%</b>	<b>79.2%</b>	<b>75.3%</b>					

Source: ConsultEcon and Lake Superior Zoo

1/ Capital investment by Phase includes the following: Phase 1- \$1,650,000; Phase II - \$1,750,000; Phase III - \$2,500,000, Phase IV: \$500,000; Phase VI: \$4,000,000

2/ Exhibit and renovation plan impacts will depend on how well the exhibits and renovations are executed and received. Impacts are estimated against the FY13 baseline attendance.

3/ Year prior to opening Year 1 - Phase 1 there would be construction impacts. Construction impacts reflect the partial closing of different areas of the Zoo and visitor interruption due to the renovation and addition of new exhibits. The most severe construction impacts may occur with renovation of main building as this may interrupt parking, visitor flow, etc. However, it is assumed that this main building renovation project could take place during 9 months of non-peak visitation.

# Appendix Tables

**Table A-4**  
**Lake Superior Zoo Master Plan**  
**Long Term Attendance Trend- Scenario 1**

<b>Fiscal Year</b>	<b>Total Attendance</b>	<b>Percent Change from Previous Year</b>
1993	112,591	
1994	139,525	23.9%
1995	135,479	-2.9%
1996	124,919	-7.8%
1997	129,721	3.8%
1998	140,188	8.1%
1999	137,034	-2.2%
2000	134,805	-1.6%
2001	113,250	-16.0%
2002	115,102	1.6%
2003	116,862	1.5%
2004	107,227	-8.2%
2005	107,303	0.1%
2006	102,865	-4.1%
2007	100,139	-2.7%
2008	92,218	-7.9%
2009	91,606	-0.7%
2010	102,986	12.4%
2011	93,798	-8.9%
2012	76,301	-18.7%
2013	88,694	16.2%
<i>Estimated:</i>		
Year 1	92,056	3.8%
Year 2	98,634	7.1%
Year 3	106,310	7.8%
Year 4	103,842	-2.3%
Year 5	119,976	15.5%
Year 6	117,387	-2.2%
Year 7	115,586	-1.5%
Year 8	112,907	-2.3%
<b>Percent Change from 2013 to Stable Year 8</b>		<b>27.3%</b>
<b>Percent Change from Stable Year 8 to 1998</b>		
<b>High</b>		<b>-19.5%</b>

Source: ConsultEcon and Lake Superior Zoo

Source: LSZ and ConsultEcon, Inc.

# Appendix Tables

**Table A-5**  
**Lake Superior Zoo Master Plan**  
**Long Term Attendance Trend- Scenario 2**

<b>Fiscal Year</b>	<b>Total Attendance</b>	<b>Percent Change from Previous Year</b>
1993	112,591	
1994	139,525	23.9%
1995	135,479	-2.9%
1996	124,919	-7.8%
1997	129,721	3.8%
1998	140,188	8.1%
1999	137,034	-2.2%
2000	134,805	-1.6%
2001	113,250	-16.0%
2002	115,102	1.6%
2003	116,862	1.5%
2004	107,227	-8.2%
2005	107,303	0.1%
2006	102,865	-4.1%
2007	100,139	-2.7%
2008	92,218	-7.9%
2009	91,606	-0.7%
2010	102,986	12.4%
2011	93,798	-8.9%
2012	76,301	-18.7%
2013	88,694	16.2%
<i>Estimated:</i>		
Year 1	93,776	5.7%
Year 2	100,336	7.0%
Year 3	113,068	12.7%
Year 4	110,843	-2.0%
Year 5	129,365	16.7%
Year 6	125,906	-2.7%
Year 7	124,096	-1.4%
Year 8	121,418	-2.2%
<b>Percent Change from 2013 to Stable Year 8</b>		<b>36.9%</b>
<b>Percent Change from Stable Year 8 to 1998 High</b>		<b>-13.4%</b>

Source: LSZ and ConsultEcon, Inc.

Source: ConsultEcon and Lake Superior Zoo

# Appendix Tables

**Table A-6**  
**Lake Superior Zoo Master Plan**  
**Long Term Attendance Trend - Scenario 2a**

<u>Fiscal Year</u>	<u>Total Attendance</u>	<u>Percent Change from Previous Year</u>
1993	112,591	
1994	139,525	23.9%
1995	135,479	-2.9%
1996	124,919	-7.8%
1997	129,721	3.8%
1998	140,188	8.1%
1999	137,034	-2.2%
2000	134,805	-1.6%
2001	113,250	-16.0%
2002	115,102	1.6%
2003	116,862	1.5%
2004	107,227	-8.2%
2005	107,303	0.1%
2006	102,865	-4.1%
2007	100,139	-2.7%
2008	92,218	-7.9%
2009	91,606	-0.7%
2010	102,986	12.4%
2011	93,798	-8.9%
2012	76,301	-18.7%
2013	88,694	16.2%
<i>Estimated:</i>		
Year 1	120,620	36.0%
Year 2	128,037	6.1%
Year 3	144,565	12.9%
Year 4	141,446	-2.2%
Year 5	165,672	17.1%
Year 6	161,242	-2.7%
Year 7	158,925	-1.4%
Year 8	155,494	-2.2%
<b>Percent Change from 2013 to Stable Year 8</b>		75.3%
<b>Percent Change from Stable Year 8 to 1998 High</b>		10.9%

Source: ConsultEcon and Lake Superior Zoo

# Appendix Tables

**Table A-7**  
**Lake Superior Zoo Master Plan**  
**Estimated Usage Split of Attraction Components - Scenario 1**

Ticketing Options	Total Attendees By Type															
	Phase 1		Phase 2		Phase 3		Phase 4		Phase 5		Stable Year					
	Percent To Total	Year 1	Percent To Total	Year 2	Percent To Total	Year 3	Percent To Total	Year 4	Percent To Total	Year 5	Percent To Total	Year 6	Percent To Total	Year 7	Percent To Total	Year 8
Zoo Only	100.0%	92,056	83.0%	81,866	83.0%	88,237	83.0%	86,189	83.0%	99,580	83.0%	97,431	83.0%	95,936	83.0%	93,713
Adventure Pass: Zoo + Forest Discovery Zone <sup>1/</sup>			14.0%	13,809	14.0%	14,883	14.0%	14,538	14.0%	16,797	14.0%	16,434	14.0%	16,182	14.0%	15,807
Forest Discovery Zone Only			3.0%	2,959	3.0%	3,189	3.0%	3,115	3.0%	3,599	3.0%	3,522	3.0%	3,468	3.0%	3,387
<b>Total</b>	<b>100.0%</b>	<b>92,056</b>	<b>100.0%</b>	<b>98,634</b>	<b>100.0%</b>	<b>106,310</b>	<b>100.0%</b>	<b>103,842</b>	<b>100.0%</b>	<b>119,976</b>	<b>100.0%</b>	<b>117,387</b>	<b>100.0%</b>	<b>115,586</b>	<b>100.0%</b>	<b>112,907</b>
Zoo Gate <sup>2/</sup>		92,056		95,675		103,121		100,727		116,377		113,865		112,118		109,520
Forest Discovery Zone Gate				16,768		18,073		17,653		20,396		19,956		19,650		19,194
Forest Discovery Capture Rate of Total Attendance				17%		17%		17%		17%		17%		17%		17%

1/ Adventure pass tickets assumed to be a "gate" of two as it includes both Zoo and Forest Discovery Zone. Adventure pass ticket in Scenario 1 and Scenario 2 includes Zoo + Forest Discovery Zone.

2/ Zoo gate includes complimentary, free, special events, Boo at the Zoo, member attendees and other attendees.

Source: ConsultEcon, Inc.

# Appendix Tables

**Table A-8**  
**Lake Superior Zoo Master Plan**  
**Estimated Usage Split of Attraction Components - Scenario 2**

Ticketing Options	Total Attendees By Type															
	Phase 1		Phase 2		Phase 3		Phase 4		Phase 5		Stable Year					
	Percent To Total	Year 1	Percent To Total	Year 2	Percent To Total	Year 3	Percent To Total	Year 4	Percent To Total	Year 5	Percent To Total	Year 6	Percent To Total	Year 7	Percent To Total	Year 8
	Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements./ Forest Discovery Zone Construction		Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits		Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin, Reconfigure Zoo Train Track		Improvements to Primate Conservation Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion Underway		Main Building Renovation/ Expansion Opens							
Zoo Only	100.0%	93,776	83.0%	83,279	83.5%	94,411	83.0%	92,000	83.5%	108,019	83.5%	105,131	83.5%	103,620	83.5%	101,384
Adventure Pass: Zoo + Forest Discovery Zone <sup>1/</sup>			14.0%	14,047	13.5%	15,264	14.0%	15,518	13.5%	17,464	13.5%	16,997	13.5%	16,753	13.5%	16,391
Forest Discovery Zone Only			3.0%	3,010	3.0%	3,392	3.0%	3,325	3.0%	3,881	3.0%	3,777	3.0%	3,723	3.0%	3,643
<b>Total</b>	<b>100.0%</b>	<b>93,776</b>	<b>100.0%</b>	<b>100,336</b>	<b>100.0%</b>	<b>113,068</b>	<b>100.0%</b>	<b>110,843</b>	<b>100.0%</b>	<b>129,365</b>	<b>100.0%</b>	<b>125,906</b>	<b>100.0%</b>	<b>124,096</b>	<b>100.0%</b>	<b>121,418</b>
Zoo Gate <sup>2/</sup>		93,776		97,326		109,676		107,518		125,484		122,128		120,373		117,775
Forest Discovery Zone Gate				17,057		18,656		18,843		21,345		20,774		20,476		20,034
Forest Discovery Capture Rate of Total Attendance				17%		17%		17%		17%		17%		17%		17%

<sup>1/</sup> Adventure pass tickets assumed to be a "gate" of two as it includes both Zoo and Forest Discovery Zone. Adventure pass ticket in Scenario 1 and Scenario 2 includes Zoo + Forest Discovery Zone.

<sup>2/</sup> Zoo gate includes complimentary, free, special events, Boo at the Zoo, member attendees and other attendees.

Source: ConsultEcon, Inc.

# Appendix Tables

**Table A-9**  
**Lake Superior Zoo Master Plan**  
**Estimated Usage Split of Attraction Components - Scenario 2a**

Total Attendees By Type																
Ticketing Options	Phase 1		Phase 2		Phase 3		Phase 4		Phase 5		Stable Year					
	Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements./ Forest Discovery Zone Construction		Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits		Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin, Reconfigure Zoo Train Track		Improvements to Primate Conservation Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion Underway		Main Building Renovation/ Expansion Opens							
	Percent To Total	Year 1	Percent To Total	Year 2	Percent To Total	Year 3	Percent To Total	Year 4	Percent To Total	Year 5	Percent To Total	Year 6	Percent To Total	Year 7	Percent To Total	Year 8
Zoo Only	100.0%	120,620	84.1%	107,662	84.4%	122,028	84.1%	118,936	84.3%	139,617	84.3%	135,884	84.3%	133,931	84.3%	131,040
Adventure Pass: Zoo + Forest Discovery Zone <sup>1/</sup>	0.0%		9.2%	11,729	8.8%	12,746	9.2%	12,958	8.8%	14,583	8.8%	14,193	8.8%	13,989	8.8%	13,687
Forest Discovery Zone Only	0.0%	0	6.8%	8,646	6.8%	9,791	6.8%	9,552	6.9%	11,472	6.9%	11,165	6.9%	11,005	6.9%	10,767
<b>Total</b>	<b>100.0%</b>	<b>120,620</b>	<b>100.0%</b>	<b>128,037</b>	<b>100.0%</b>	<b>144,565</b>	<b>100.0%</b>	<b>141,446</b>	<b>100.0%</b>	<b>165,672</b>	<b>100.0%</b>	<b>161,242</b>	<b>100.0%</b>	<b>158,925</b>	<b>100.0%</b>	<b>155,494</b>
Free Duluth Resident Member Tickets				335		377		370		431		420		414		405
Zoo Gate <sup>2/</sup>		120,620		119,391		134,774		131,894		154,199		150,076		147,920		144,727
Forest Discovery Zone Gate				20,710		22,913		22,879		26,486		25,778		25,408		24,859
Forest Discovery Capture Rate of Total Attendance				16%		16%		16%		16%		16%		16%		16%

<sup>1/</sup> Adventure pass tickets assumed to be a "gate" of two as it includes both Zoo and Forest Discovery Zone. Adventure pass ticket in Scenario 1 and Scenario 2 includes Zoo + Forest Discovery Zone.

<sup>2/</sup> complimentary, free, special

Source: ConsultEcon, Inc.

# Appendix Tables

**Table A-10**  
**Lake Superior Zoo Master Plan**  
**Admissions Analysis - Scenario 1**

	2013 Baseline % of Total Attendance	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Year 6	Year 7	Year 8
		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin	Improvements to Primate Conservation Center, Farm Open/Main Building Renovation/ Expansion Underway	Main Building Renovation/ Expansion Opens			
<b>ATTENDANCE ANALYSIS</b>									
<b>Zoo Only</b>									
Adult	32.6%	32.6%	31.1%	31.6%	31.0%	31.8%	31.8%	31.8%	31.7%
Child (3-12)	14.6%	14.6%	14.0%	14.1%	13.7%	14.2%	14.2%	14.2%	14.0%
Senior (62+)	3.3%	3.3%	3.1%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Group - Adult	2.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Group - Child	5.7%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Public Classes	0.8%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Member	16.9%	17.0%	17.0%	17.0%	17.5%	17.5%	17.5%	17.5%	17.5%
Free Duluth Resident Tickets	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Free	13.1%	12.5%	13.8%	13.0%	13.5%	12.7%	12.5%	12.5%	12.5%
Bulk to Hotels, etc.	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Boo Event	9.3%	9.0%	10.0%	10.0%	10.5%	9.5%	9.7%	9.7%	10.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Adventure Pass: Zoo + Forest Discovery Zone</b>									
Adult			40.0%	40.0%	40.0%	40.3%	40.3%	40.3%	40.3%
Child (3-12)			20.0%	20.0%	20.0%	20.2%	20.2%	20.2%	20.2%
Senior (62+)			4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Group - Adult			3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Group - Child			8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Public Classes			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Member			18.0%	18.0%	18.0%	17.5%	17.5%	17.5%	17.5%
Free Duluth Resident Tickets			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Free			3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Bulk to Hotels, etc.			4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Boo Event			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Forest Discovery Zone Only</b>									
Paid			95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
Free			5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>MID-RANGE ATTENDANCE ESTIMATES</b>									
<b>Zoo Only</b>		<b>Baseline 2013</b>							
Adult	28,892	30,010	25,460	27,883	26,719	31,667	30,983	30,508	29,707
Child (3-12)	12,940	13,440	11,461	12,441	11,808	14,140	13,835	13,623	13,120
Senior (62+)	2,952	3,038	2,538	2,912	2,844	3,286	3,215	3,166	3,093
Group - Adult	2,245	2,762	2,856	2,647	2,586	2,987	2,923	2,878	2,811
Group - Child	5,078	5,523	4,912	5,294	5,171	5,975	5,846	5,756	5,623
Public Classes	718	921	819	882	862	996	974	959	937
Member	15,033	15,649	13,917	15,000	14,652	17,427	17,050	16,789	16,400
Free Duluth Resident Tickets	0	0	0	0	0	0	0	0	0
Other Free	11,620	11,507	11,298	11,471	11,636	12,647	12,179	11,992	11,714
Bulk to Hotels, etc.	953	921	882	882	862	996	974	959	937
Boo Event	8,263	8,285	8,187	8,824	9,050	9,460	9,451	9,306	9,371
Totals	88,694	92,056	81,866	88,237	86,189	99,580	97,431	95,936	93,713
<b>Adventure Pass: Zoo + Forest Discovery Zone</b>									
Adult			5,524	5,953	5,815	6,769	6,623	6,521	6,370
Child (3-12)			2,762	2,977	2,908	3,393	3,320	3,269	3,193
Senior (62+)			552	595	582	672	657	647	632
Group - Adult			414	447	436	504	493	485	474
Group - Child			1,105	1,191	1,163	1,344	1,315	1,295	1,265
Public Classes			0	0	0	0	0	0	0
Member			2,486	2,679	2,617	2,939	2,876	2,832	2,766
Other Free			414	447	436	504	493	485	474
Bulk to Hotels, etc.			552	595	582	672	657	647	632
Boo Event			0	0	0	0	0	0	0
			13,809	14,883	14,538	16,797	16,434	16,182	15,807
<b>Forest Discovery Zone Only</b>									
Paid			2,811	3,030	2,960	3,419	3,346	3,294	3,218
Free			148	159	156	180	176	173	169
			2,959	3,189	3,115	3,599	3,522	3,468	3,387
<b>TOTAL</b>			<b>92,056</b>	<b>98,634</b>	<b>106,310</b>	<b>103,842</b>	<b>119,976</b>	<b>117,387</b>	<b>115,586</b>

Source: ConsultEcon, Inc.

# Appendix Tables

**Table A-11**  
**Lake Superior Zoo Master Plan**  
**Admissions Analysis - Scenario 2**

	2013 Baseline % of Total Attendance	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Year 6	Year 7	Year 8
		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Zoo Train Track	Improvements to Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion Underway	Main Building Renovation/ Expansion Opens			
ATTENDANCE ANALYSIS	% of Total Attendance	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>Zoo Only</b>									
Adult	32.6%	32.3%	30.8%	31.8%	31.8%	31.9%	31.8%	31.7%	31.6%
Child (3-12)	14.6%	14.5%	13.7%	14.1%	14.0%	14.0%	13.9%	13.9%	13.8%
Senior (62+)	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Group - Adult	2.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Group - Child	5.7%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Public Classes	0.8%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Member	16.9%	17.0%	17.0%	17.0%	17.0%	18.0%	18.0%	18.0%	18.0%
Free Duluth Resident Tickets	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Free	11.1%	12.9%	14.2%	13.0%	13.0%	12.5%	12.5%	12.5%	12.5%
Bulk to Hotels, etc.	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Boo Event	9.3%	9.0%	10.0%	9.8%	9.9%	9.3%	9.5%	9.6%	9.8%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Adventure Pass: Zoo + Forest Discovery Zone</b>									
Adult			40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Child (3-12)			20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Senior (62+)			4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Group - Adult			3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Group - Child			8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Public Classes			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Member			18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%
Free Duluth Resident Tickets			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Free			3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Bulk to Hotels, etc.			4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Boo Event			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Forest Discovery Zone Only</b>									
Paid			95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
Free			5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>MID-RANGE ATTENDANCE ESTIMATES</b>									
<b>Zoo Only</b>									
	Baseline 2013								
Adult	28,892	30,290	25,650	30,023	29,256	34,458	33,432	32,848	32,037
Child (3-12)	12,940	13,598	11,409	13,312	12,880	15,123	14,613	14,403	13,991
Senior (62+)	2,952	3,095	2,748	3,116	3,036	3,565	3,469	3,419	3,346
Group - Adult	2,245	2,813	2,498	2,832	2,790	3,241	3,154	3,109	3,042
Group - Child	5,078	5,627	4,997	5,665	5,520	6,481	6,308	6,217	6,083
Public Classes	718	938	833	944	920	1,080	1,051	1,036	1,014
Member	15,033	15,942	14,157	16,050	15,640	19,444	18,924	18,652	18,249
Free Duluth Resident Tickets	0	0	0	0	0	0	0	0	0
Other Free	11,620	12,097	11,826	12,273	11,960	13,502	13,141	12,953	12,673
Bulk to Hotels, etc.	953	938	833	944	920	1,080	1,051	1,036	1,014
Boo Event	8,263	8,440	8,328	9,252	9,108	10,046	9,987	9,948	9,936
Totals	88,694	93,776	83,279	94,411	92,000	108,019	105,131	103,620	101,384
<b>Adventure Pass: Zoo + Forest Discovery Zone</b>									
Adult			5,619	6,106	6,207	6,986	6,799	6,701	6,557
Child (3-12)			2,809	3,053	3,104	3,453	3,399	3,351	3,278
Senior (62+)			562	611	621	699	680	670	656
Group - Adult			421	458	466	524	510	503	492
Group - Child			1,124	1,221	1,241	1,397	1,360	1,340	1,311
Public Classes			0	0	0	0	0	0	0
Member			2,528	2,748	2,793	3,144	3,060	3,016	2,950
Free Duluth Resident Tickets			0	0	0	0	0	0	0
Other Free			421	458	466	524	510	503	492
Bulk to Hotels, etc.			562	611	621	699	680	670	656
Boo Event			0	0	0	0	0	0	0
			14,047	15,264	15,518	17,464	16,997	16,753	16,391
<b>Forest Discovery Zone Only</b>									
Paid			2,860	3,222	3,159	3,687	3,588	3,537	3,460
Free			151	170	166	194	189	186	182
			3,010	3,392	3,325	3,881	3,777	3,723	3,643
<b>TOTAL</b>			<b>93,776</b>	<b>100,336</b>	<b>113,068</b>	<b>110,843</b>	<b>129,365</b>	<b>125,906</b>	<b>124,418</b>

Source: ConsultEcon, Inc.

# Appendix Tables

**Table A-12**  
**Lake Superior Zoo Master Plan**  
**Admissions Analysis - Scenario 2a**

	2013 Baseline % of Total Attendance	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5								
		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Exhibits Open/ Improvements to Primates and Farm Begin, Reconfigure Zoo Train Track	Improvements to Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion Underway	Main Building Renovation/ Expansion	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>ATTENDANCE ANALYSIS</b>														
<b>Zoo Only</b>														
Adult	32.6%	22.0%	21.8%	21.9%	21.9%	21.8%	21.7%	21.7%	21.6%					
Child (3-12)	14.6%	9.9%	9.8%	9.8%	9.8%	9.8%	9.7%	9.7%	9.7%					
Senior (62+)	3.3%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%					
Group - Adult	2.5%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%					
Group - Child	5.7%	3.9%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%					
Public Classes	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%					
Member	16.9%	10.8%	10.7%	10.7%	10.7%	11.2%	11.2%	11.2%	11.2%					
Free Duluth Resident Tickets	0.0%	32.1%	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%					
Other Free	13.1%	8.8%	8.8%	8.8%	8.8%	8.8%	8.7%	8.7%	8.7%					
Bulk to Hotels, etc.	1.1%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%					
Boo Event	9.3%	7.0%	7.7%	7.6%	7.7%	7.2%	7.4%	7.4%	7.6%					
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					
<b>Adventure Pass: Zoo + Forest Discovery Zone</b>														
Adult		39.0%	39.0%	39.0%	39.0%	39.0%	39.0%	39.0%	39.0%					
Child (3-12)		20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%					
Senior (62+)		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%					
Group - Adult		3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%					
Group - Child		8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%					
Public Classes		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Member		18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%					
Free Duluth Member Tickets		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Other Free		3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%					
Bulk to Hotels, etc.		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%					
Boo Event		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					
<b>Forest Discovery Zone Only</b>														
Paid		95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%					
Free		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%					
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					
<b>MID-RANGE ATTENDANCE ESTIMATES</b>														
<b>Zoo Only</b>														
	Baseline 2013													
Adult	28,892	26,538	23,501	26,719	26,004	30,453	29,543	29,072	28,353					
Child (3-12)	12,940	11,886	10,525	11,967	11,646	13,639	13,232	13,021	12,698					
Senior (62+)	2,952	2,711	2,401	2,730	2,657	3,112	3,019	2,970	2,897					
Group - Adult	2,245	2,062	1,826	2,076	2,021	2,366	2,296	2,259	2,203					
Group - Child	5,078	4,664	4,130	4,696	4,570	5,352	5,193	5,110	4,983					
Public Classes	718	938	833	944	920	1,080	1,051	1,036	1,014					
Member	15,033	13,086	11,480	13,008	12,682	15,682	15,263	15,044	14,719					
Free Duluth Resident Tickets	0	38,883	34,353	38,945	37,950	44,558	43,367	42,743	41,821					
Other Free	11,620	10,673	9,452	10,746	10,458	12,248	11,882	11,692	11,403					
Bulk to Hotels, etc.	953	938	833	944	920	1,080	1,051	1,036	1,014					
Boo Event	8,263	8,440	8,328	9,252	9,108	10,046	9,987	9,948	9,936					
Totals	88,694	120,620	107,662	122,028	118,936	139,617	135,884	133,931	131,040					
<b>Adventure Pass: Zoo + Forest Discovery Zone</b>														
Adult		4,574	4,971	5,053	5,687	5,535	5,456	5,338						
Child (3-12)		2,346	2,549	2,592	2,917	2,839	2,798	2,737						
Senior (62+)		469	510	518	583	568	560	547						
Group - Adult		352	382	389	437	426	420	411						
Group - Child		938	1,020	1,037	1,167	1,135	1,119	1,095						
Public Classes		0	0	0	0	0	0	0						
Member		2,111	2,294	2,332	2,625	2,555	2,518	2,464						
Other Free		352	382	389	437	426	420	411						
Bulk to Hotels, etc.		586	637	648	729	710	699	684						
Boo Event		0	0	0	0	0	0	0						
Free Duluth Member Tickets		11,729	12,746	12,958	14,583	14,199	13,989	13,687						
		0	335	377	370	431	420	414						
<b>Forest Discovery Zone Only</b>														
Paid		8,214	9,301	9,074	10,899	10,607	10,455	10,229						
Free		432	490	478	574	558	550	538						
		8,646	9,791	9,552	11,472	11,165	11,005	10,767						
<b>TOTAL</b>		<b>120,620</b>	<b>128,037</b>	<b>144,565</b>	<b>141,446</b>	<b>165,672</b>	<b>161,242</b>	<b>158,925</b>	<b>155,494</b>					
Free Duluth Resident Member Tickets		335	377	370	431	420	414	405						

Source: ConsultEcon, Inc.

# Appendix Tables

**Table A-13**  
**Lake Superior Zoo Master Plan**  
**Ticket Analysis vs Admissions Analysis –**  
**Scenario 1**

2013 Baseline			Phase 1 Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements / Forest Discovery Zone Construction	Phase 2 Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Phase 3 Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin	Phase 4 Improvements to Primate Conservation Center, Farm Open/Main Building Renovation/ Expansion Underway	Phase 5 Main Building Renovation/ Expansion Opens	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Pricing Schedule 1/	Ticket Price	% of Total Attendance													
<b>Zoo Only</b>															
Adult	\$10.00	32.6%	\$10.00	\$11.00	\$12.00	\$12.00	\$13.00	\$13.00	\$14.00	\$14.00					
Child (3-12)	\$5.00	14.6%	\$5.00	\$5.50	\$6.00	\$6.00	\$6.50	\$6.50	\$7.00	\$7.00					
Senior (62+)	\$9.00	3.3%	\$9.00	\$10.00	\$11.00	\$11.00	\$12.00	\$12.00	\$13.00	\$13.00					
Group - Adult	\$9.00	2.5%	\$9.00	\$10.00	\$11.00	\$11.00	\$12.00	\$12.00	\$13.00	\$13.00					
Group - Child	\$4.00	5.7%	\$4.00	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$6.00	\$6.00					
Public Classes	\$0.00	0.8%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00					
Member	\$0.00	16.3%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00					
Free Duluth Resident Tickets	\$0.00	0.0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00					
Other Free	\$0.00	13.7%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00					
<b>Weighted Average Ticket Price</b>	<b>\$4.74</b>	<b>89.6%</b>	<b>\$4.80</b>	<b>\$5.13</b>	<b>\$5.66</b>	<b>\$5.57</b>	<b>\$6.14</b>	<b>\$6.14</b>	<b>\$6.63</b>	<b>\$6.60</b>					
<i>Achieved Per Capital Revenue</i>															
Bulk to Hotels, etc. <sup>2/</sup>	\$3.64	1.1%	\$3.68	\$3.94	\$4.34	\$4.27	\$4.71	\$4.71	\$5.08	\$5.06					
Boo Event <sup>3/</sup>	\$7.93	9.3%	\$8.02	\$8.57	\$9.46	\$9.30	\$10.26	\$10.26	\$11.07	\$11.02					
<b>Total Achieved Per Capita</b>	<b>\$5.52</b>	<b>100.0%</b>	<b>\$5.56</b>	<b>\$6.03</b>	<b>\$6.65</b>	<b>\$6.58</b>	<b>\$7.17</b>	<b>\$7.19</b>	<b>\$7.75</b>	<b>\$7.75</b>					
<b>Forest Discovery Zone Only</b>															
Paid				\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$10.00					
Free				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00					
<b>Weighted Average Ticket Price</b>				<b>\$6.65</b>	<b>\$6.65</b>	<b>\$7.60</b>	<b>\$7.60</b>	<b>\$8.55</b>	<b>\$8.55</b>	<b>\$9.50</b>					
<b>Adventure Pass: Zoo + Forest Discovery Zone 4/</b>															
Adult				\$15.30	\$16.15	\$17.00	\$17.85	\$18.70	\$19.55	\$20.40					
Child (3-12)				\$10.63	\$11.05	\$11.90	\$12.33	\$13.18	\$13.60	\$14.45					
Senior (62+)				\$14.45	\$15.30	\$16.15	\$17.00	\$17.85	\$18.70	\$19.55					
Group - Adult				\$14.45	\$15.30	\$16.15	\$17.00	\$17.85	\$18.70	\$19.55					
Group - Child				\$10.63	\$11.03	\$11.48	\$11.48	\$12.33	\$12.75	\$13.60					
Public Classes				\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$10.00					
Member				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00					
Free Duluth Resident Tickets				\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$10.00					
Other Free				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00					
<b>Weighted Average Ticket Price</b>				<b>\$10.11</b>	<b>\$10.59</b>	<b>\$11.23</b>	<b>\$11.79</b>	<b>\$12.43</b>	<b>\$12.95</b>	<b>\$13.60</b>					
<i>Achieved Per Capital Revenue</i>															
Bulk to Hotels, etc. <sup>2/</sup>				\$7.75	\$8.12	\$8.61	\$9.04	\$9.54	\$9.94	\$10.43					
Boo Event <sup>3/</sup>				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00					
<b>Total Achieved Per Capita</b>				<b>\$10.42</b>	<b>\$10.92</b>	<b>\$11.57</b>	<b>\$12.15</b>	<b>\$12.81</b>	<b>\$13.35</b>	<b>\$14.01</b>					

Source: ConsultEcon

1/ All ticket prices are expressed in current value of the dollar. Depending on future economic conditions actual future prices may also include increases due to overall price inflation.

2/ Bulk Tickets are \$9 for Adult and \$4 for children. Future Bulk Ticket achieved per capita increases are in ratio to per capital ticket price increases.

3/ Boo at the Zoo Tickets are \$10 for Adults/\$9.00 in advance. Boo event admissions revenue in 2013 was \$65,488. Future Boo at the Zoo achieved per capita increases are in ratio to per capital ticket price increases. Bulk to Hotel Adventure Pass Per Caps in Ratio to % difference in Adventure Pass Per Caps and Zoo Only Per Caps.

4/Adventure pass tickets assume 15% savings on individual attraction ticket purchase.

# Appendix Tables

**Table A-14**  
**Lake Superior Zoo Master Plan**  
**Ticket Analysis vs Admissions Analysis –**  
**Scenario 2**

2013 Baseline			Phase 1 Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements / Forest Discovery Zone Construction	Phase 2 Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Phase 3 Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin, Reconfigure Zoo Train Track	Phase 4 Improvements to Primate Conservation Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion Underway	Phase 5 Main Building Renovation/ Expansion Opens			
Pricing Schedule 1/	Ticket Price	% of Total Attendance	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>Zoo Only</b>										
Adult	\$10.00	32.6%	\$10.00	\$11.00	\$12.75	\$12.75	\$13.75	\$13.75	\$14.25	\$14.25
Child (3-12)	\$5.00	14.6%	\$5.00	\$5.50	\$6.60	\$6.60	\$7.60	\$7.60	\$8.00	\$8.00
Senior (62+)	\$9.00	3.3%	\$9.00	\$10.00	\$11.75	\$11.75	\$12.75	\$12.75	\$13.25	\$13.25
Group - Adult	\$9.00	2.5%	\$9.00	\$10.00	\$11.75	\$11.75	\$12.75	\$12.75	\$13.25	\$13.25
Group - Child	\$4.00	5.7%	\$4.00	\$5.50	\$5.50	\$6.00	\$6.00	\$6.50	\$6.50	\$6.50
Public Classes	\$0.00	0.8%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Member	\$0.00	16.3%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Free Duluth Resident Tickets	\$0.00	0.0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other Free	\$0.00	13.7%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Weighted Average Ticket Price</b>	<b>\$4.74</b>	<b>89.6%</b>	<b>\$4.76</b>	<b>\$5.10</b>	<b>\$6.06</b>	<b>\$6.08</b>	<b>\$6.61</b>	<b>\$6.62</b>	<b>\$6.85</b>	<b>\$6.83</b>
<i>Achieved Per Capital Revenue</i>										
Bulk to Hotels, etc. <sup>2/</sup>	\$3.64	1.1%	\$3.65	\$3.91	\$4.64	\$4.66	\$5.07	\$5.08	\$5.26	\$5.24
Boo Event <sup>3/</sup>	\$7.93	9.3%	\$7.96	\$8.52	\$10.12	\$10.16	\$11.05	\$11.06	\$11.45	\$11.41
<b>Total Achieved Per Capita</b>	<b>\$5.52</b>	<b>100.0%</b>	<b>\$5.51</b>	<b>\$5.99</b>	<b>\$7.09</b>	<b>\$7.13</b>	<b>\$7.69</b>	<b>\$7.72</b>	<b>\$8.01</b>	<b>\$8.00</b>
<b>Forest Discovery Zone Only</b>										
Paid				\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$10.00
Free				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Weighted Average Ticket Price</b>				<b>\$6.65</b>	<b>\$6.65</b>	<b>\$7.60</b>	<b>\$7.60</b>	<b>\$8.55</b>	<b>\$8.55</b>	<b>\$9.50</b>
<b>Adventure Pass: Zoo + Forest Discovery Zone 4/</b>										
Adult				\$15.30	\$16.79	\$17.64	\$18.49	\$19.34	\$19.76	\$20.61
Child (3-12)				\$10.63	\$11.56	\$12.41	\$13.26	\$14.11	\$14.45	\$15.30
Senior (62+)				\$14.45	\$15.94	\$16.79	\$17.64	\$18.49	\$18.91	\$19.76
Group - Adult				\$14.45	\$15.94	\$16.79	\$17.64	\$18.49	\$18.91	\$19.76
Group - Child				\$10.63	\$10.63	\$11.90	\$11.90	\$13.18	\$13.18	\$14.03
Public Classes				\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$10.00
Member				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Free Duluth Resident Tickets				\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$10.00
Other Free				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Weighted Average Ticket Price</b>				<b>\$10.11</b>	<b>\$10.99</b>	<b>\$11.66</b>	<b>\$12.23</b>	<b>\$12.91</b>	<b>\$13.17</b>	<b>\$13.81</b>
<i>Achieved Per Capital Revenue</i>										
Bulk to Hotels, etc. <sup>2/</sup>				\$7.75	\$8.43	\$8.95	\$9.38	\$9.90	\$10.10	\$10.59
Boo Event <sup>3/</sup>				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Achieved Per Capita</b>				<b>\$10.42</b>	<b>\$11.33</b>	<b>\$12.02</b>	<b>\$12.61</b>	<b>\$13.30</b>	<b>\$13.58</b>	<b>\$14.23</b>

Source: ConsultEcon

1/ All ticket prices are expressed in current value of the dollar. Depending on future economic conditions actual future prices may also include increases due to overall price inflation.

2/ Bulk Tickets are \$9 for Adult and \$4 for children. Future Bulk Ticket achieved per capita increases are in ratio to per capital ticket price increases.

3/ Boo at the Zoo Tickets are \$10 for Adults/\$9.00 in advance. Boo event admissions revenue in 2013 was \$65,488. Future Boo at the Zoo achieved per capita increases are in ratio to per capital ticket price increases. Bulk to Hotel Adventure Pass Per Caps in Ratio to % difference in Adventure Pass Per Caps and Zoo Only Per Caps.

4/Adventure pass tickets assume 15% savings on individual attraction ticket purchase.

# Appendix Tables

**Table A-15**  
**Lake Superior Zoo Master Plan**  
**Ticket Analysis vs Admissions Analysis –**  
**Scenario 2a**

2013 Baseline			Phase 1	Phase 2	Phase 3	Phase 4	Phase 5			
Pricing Schedule 1/	Ticket Price	% of Total Attendance	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>Zoo Only</b>										
Adult	\$10.00	32.6%	\$10.00	\$11.00	\$12.75	\$12.75	\$13.75	\$13.75	\$14.25	\$14.25
Child (3-12)	\$5.00	14.6%	\$5.00	\$5.50	\$6.60	\$6.60	\$7.60	\$7.60	\$8.00	\$8.00
Senior (62+)	\$9.00	3.3%	\$9.00	\$10.00	\$11.75	\$11.75	\$12.75	\$12.75	\$13.25	\$13.25
Group - Adult	\$9.00	2.5%	\$9.00	\$10.00	\$11.75	\$11.75	\$12.75	\$12.75	\$13.25	\$13.25
Group - Child	\$4.00	5.7%	\$4.00	\$5.50	\$5.50	\$6.00	\$6.00	\$6.50	\$6.50	\$7.00
Public Classes	\$0.00	0.8%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Member	\$0.00	16.3%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Free Duluth Resident Tickets	\$0.00	0.0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other Free	\$0.00	13.7%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Weighted Average Ticket Price</b>	<b>\$4.74</b>	<b>89.6%</b>	<b>\$3.20</b>	<b>\$3.54</b>	<b>\$4.11</b>	<b>\$4.13</b>	<b>\$4.47</b>	<b>\$4.48</b>	<b>\$4.64</b>	<b>\$4.64</b>
<i>Achieved Per Capital Revenue</i>										
Bulk to Hotels, etc. 2/	\$3.64	1.1%	\$2.46	\$2.72	\$3.15	\$3.16	\$3.43	\$3.43	\$3.56	\$3.56
Boo Event 3/	\$7.93	9.3%	\$5.35	\$5.92	\$6.87	\$6.89	\$7.47	\$7.48	\$7.75	\$7.75
<b>Total Achieved Per Capita</b>	<b>\$5.52</b>	<b>100.0%</b>	<b>\$3.60</b>	<b>\$4.02</b>	<b>\$4.66</b>	<b>\$4.68</b>	<b>\$5.04</b>	<b>\$5.05</b>	<b>\$5.24</b>	<b>\$5.26</b>
<b>Forest Discovery Zone Only</b>										
Paid				\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$10.00
Free				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Weighted Average Ticket Price</b>				<b>\$6.65</b>	<b>\$6.65</b>	<b>\$7.60</b>	<b>\$7.60</b>	<b>\$8.55</b>	<b>\$8.55</b>	<b>\$9.50</b>
<b>Adventure Pass: Zoo + Forest Discovery Zone 4/</b>										
Adult				\$15.30	\$16.79	\$17.64	\$18.49	\$19.34	\$19.76	\$20.61
Child (3-12)				\$10.63	\$11.56	\$12.41	\$13.26	\$14.11	\$14.45	\$15.30
Senior (62+)				\$14.45	\$15.94	\$16.79	\$17.64	\$18.49	\$18.91	\$19.76
Group - Adult				\$14.45	\$15.94	\$16.79	\$17.64	\$18.49	\$18.91	\$19.76
Group - Child				\$10.63	\$10.63	\$11.90	\$11.90	\$13.18	\$13.18	\$14.45
Public Classes				\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$10.00
Member				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Free Duluth Resident Tickets				\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$10.00
Other Free				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Weighted Average Ticket Price</b>				<b>\$9.95</b>	<b>\$10.82</b>	<b>\$11.49</b>	<b>\$12.05</b>	<b>\$12.71</b>	<b>\$12.98</b>	<b>\$13.64</b>
<i>Achieved Per Capital Revenue</i>										
Bulk to Hotels, etc. 2/				\$7.63	\$8.30	\$8.81	\$9.24	\$9.75	\$9.95	\$10.46
Boo Event 3/				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Achieved Per Capita</b>				<b>\$10.34</b>	<b>\$11.24</b>	<b>\$11.93</b>	<b>\$12.51</b>	<b>\$13.20</b>	<b>\$13.47</b>	<b>\$14.16</b>

Source: ConsultEcon

1/ All ticket prices are expressed in current value of the dollar. Depending on future economic conditions actual future prices may also include increases due to overall price inflation.

2/ Bulk Tickets are \$9 for Adult and \$4 for children. Future Bulk Ticket achieved per capita increases are in ratio to per capital ticket price increases.

3/ Boo at the Zoo Tickets are \$10 for Adults/\$9.00 in advance. Boo event admissions revenue in 2013 was \$65,488. Future Boo at the Zoo achieved per capita increases are in ratio to per capital ticket price increases. Bulk to Hotel Adventure Pass Per Caps in Ratio to % difference in Adventure Pass Per Caps and Zoo Only Per Caps.

4/Adventure pass tickets assume 15% savings on individual attraction ticket purchase.

# Appendix Tables

**Table A-16**  
**Lake Superior Zoo Master Plan**  
**Summary of Admission Per Caps and Admissions Revenue - Scenario 1**

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>Est. Annual Mid-Range Attendance</b>	<b>92,056</b>	<b>98,634</b>	<b>106,310</b>	<b>103,842</b>	<b>119,976</b>	<b>117,387</b>	<b>115,586</b>	<b>112,907</b>
<b>Attendance by Type</b>								
Zoo Only	92,056	81,866	88,237	86,189	99,580	97,431	95,936	93,713
Forest Discovery Zone Only	0	2,959	3,189	3,115	3,599	3,522	3,468	3,387
<u>Adventure Pass</u> : Zoo + Forest Discovery Zone	0	13,809	14,883	14,538	16,797	16,434	16,182	15,807
<b>Weighted Average Ticket Price By Type</b>								
Zoo Only	\$5.56	\$6.03	\$6.65	\$6.58	\$7.17	\$7.19	\$7.75	\$7.75
Forest Discovery Zone Only	\$0.00	\$6.65	\$6.65	\$7.60	\$7.60	\$8.55	\$8.55	\$9.50
<u>Adventure Pass</u> : Zoo + Forest Discovery Zone	\$0.00	\$10.42	\$10.92	\$11.57	\$12.15	\$12.81	\$13.35	\$14.01
<b>Average Admissions Revenue Per Capita</b>	<b>\$5.56</b>	<b>\$6.66</b>	<b>\$7.25</b>	<b>\$7.31</b>	<b>\$7.88</b>	<b>\$8.01</b>	<b>\$8.56</b>	<b>\$8.68</b>
<b>Total Estimated Ticket Revenue</b>	<b>\$511,382</b>	<b>\$656,980</b>	<b>\$770,478</b>	<b>\$759,392</b>	<b>\$944,998</b>	<b>\$940,814</b>	<b>\$989,179</b>	<b>\$979,959</b>

Source: ConsultEcon, Inc.

# Appendix Tables

**Table A-17**  
**Lake Superior Zoo Master Plan**  
**Summary of Admission Per Caps and Admissions Revenue - Scenario 2**

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>Est. Annual Mid-Range Attendance</b>	<b>93,776</b>	<b>100,336</b>	<b>113,068</b>	<b>110,843</b>	<b>129,365</b>	<b>125,906</b>	<b>124,096</b>	<b>121,418</b>
<b>Attendance by Type</b>								
Zoo Only	93,776	83,279	94,411	92,000	108,019	105,131	103,620	101,384
Forest Discovery Zone Only	0	3,010	3,392	3,325	3,881	3,777	3,723	3,643
<u>Adventure Pass: Zoo + Forest Discovery Zone</u>	0	14,047	15,264	15,518	17,464	16,997	16,753	16,391
<b>Weighted Average Ticket Price By Type</b>								
Zoo Only	\$5.51	\$5.99	\$7.09	\$7.13	\$7.69	\$7.72	\$8.01	\$8.00
Forest Discovery Zone Only		\$6.65	\$6.65	\$7.60	\$7.60	\$8.55	\$8.55	\$9.50
<u>Adventure Pass: Zoo + Forest Discovery Zone</u>		\$10.42	\$11.33	\$12.02	\$12.61	\$13.30	\$13.58	\$14.23
<b>Average Admissions Revenue Per Capita</b>	<b>\$5.51</b>	<b>\$6.63</b>	<b>\$7.65</b>	<b>\$7.83</b>	<b>\$8.35</b>	<b>\$8.50</b>	<b>\$8.77</b>	<b>\$8.89</b>
<b>Total Estimated Ticket Revenue</b>	<b>\$517,140</b>	<b>\$665,430</b>	<b>\$865,188</b>	<b>\$867,872</b>	<b>\$1,080,575</b>	<b>\$1,070,418</b>	<b>\$1,088,867</b>	<b>\$1,079,275</b>

Source: ConsultEcon, Inc.

# Appendix Tables

**Table A-18**  
**Lake Superior Zoo Master Plan**  
**Summary of Admission Per Caps and Admissions Revenue - Scenario 2a**

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>Est. Annual Mid-Range Attendance</b>	<b>120,620</b>	<b>128,037</b>	<b>144,565</b>	<b>141,446</b>	<b>165,672</b>	<b>161,242</b>	<b>158,925</b>	<b>155,494</b>
<b>Attendance by Type</b>								
Zoo Only	120,620	107,662	122,028	118,936	139,617	135,884	133,931	131,040
Forest Discovery Zone Only	0	8,646	9,791	9,552	11,472	11,165	11,005	10,767
<u>Adventure Pass: Zoo + Forest Discovery Zone</u>	0	11,729	12,746	12,958	14,583	14,193	13,989	13,687
<b>Weighted Average Ticket Price By Type</b>								
Zoo Only	\$3.60	\$4.02	\$4.66	\$4.68	\$5.04	\$5.05	\$5.24	\$5.26
Forest Discovery Zone Only		\$6.65	\$6.65	\$7.60	\$7.60	\$8.55	\$8.55	\$9.50
<u>Adventure Pass: Zoo + Forest Discovery Zone</u>	\$0.00	\$10.34	\$11.24	\$11.93	\$12.51	\$13.20	\$13.47	\$14.16
<b>Average Admissions Revenue Per Capita</b>	<b>\$3.60</b>	<b>\$4.78</b>	<b>\$5.37</b>	<b>\$5.54</b>	<b>\$5.87</b>	<b>\$6.01</b>	<b>\$6.19</b>	<b>\$6.33</b>
<b>Total Estimated Ticket Revenue</b>	<b>\$433,912</b>	<b>\$611,667</b>	<b>\$776,894</b>	<b>\$783,659</b>	<b>\$972,739</b>	<b>\$969,402</b>	<b>\$984,247</b>	<b>\$984,823</b>

Source: ConsultEcon, Inc.

# Appendix Tables

**Table A-19**  
**Lake Superior Zoo Master Plan**  
**Earned Revenue Per Cap Analysis- Scenario 1**

		<u>Potential Future Per Capita Revenue in Current Value of the Dollar <sup>1/</sup></u>							
		<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>	<b>Phase 4</b>	<b>Phase 5</b>			
		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin	Improvements to Primate Conservation Center, Farm Open/ Main Building Renovation/ Expansion	Main Building Renovation/ Expansion Opens	Stable Year		
<b>2013</b>		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>
<b>Total Attendance</b>	88,694	92,056	98,634	106,310	103,842	119,976	117,387	115,586	112,907
<b>Earned Revenue Per Capita</b>		<b>Percent Increase from Previous Year</b>							
Gift Shop (Gross)	\$1.40	3.0%	5.0%	5.0%	2.5%	15.0%	2.0%	2.0%	2.0%
Education Program Revenue	\$0.53	8.0%	10.0%	5.0%	5.0%	10.0%	2.0%	2.0%	2.0%
Food Service (Gross)	\$0.65	20.0%	20.0%	2.5%	2.5%	35.0%	2.0%	2.0%	2.0%
Special Event Sales	\$0.02	10.0%	25.0%	5.0%	5.0%	10.0%	2.0%	2.0%	2.0%
Depot Sales (Gross)	\$0.21	2.0%	0.0%	5.0%	5.0%	8.0%	2.0%	2.0%	2.0%
<b>Earned Revenue Per Capita Revenue <sup>1/</sup></b>		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>
Gift Shop (Gross)		\$1.45	\$1.52	\$1.60	\$1.64	\$1.88	\$1.92	\$1.96	\$2.00
Education Program Revenue		\$0.58	\$0.63	\$0.67	\$0.70	\$0.77	\$0.78	\$0.80	\$0.82
Food Service (Gross)		\$0.78	\$0.93	\$0.96	\$0.98	\$1.33	\$1.35	\$1.38	\$1.41
Special Event Sales		\$0.03	\$0.03	\$0.03	\$0.03	\$0.04	\$0.04	\$0.04	\$0.04
Depot Sales (Gross)		\$0.21	\$0.21	\$0.22	\$0.23	\$0.25	\$0.25	\$0.26	\$0.27

Source: ConsultEcon, Inc. and Lake Superior Zoo

<sup>1/</sup> All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

Note: Does not include membership revenues which, are calculated separately. Admissions per caps are against total attendance.

# Appendix Tables

**Table A-20**

**Lake Superior Zoo Master Plan  
Earned Revenue Per Cap Analysis- Scenario 2**

		<u>Potential Future Per Capita Revenue in Current Value of the Dollar <sup>1/</sup></u>							
		Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Stable Year		
		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal In-Fill Exhibits Farm Begin, Reconfigure Zoo Train Track	Improvements to Primate Conservation Center, Farm, Zoo Main Building Renovation/ Expansion Underway	Main Building Renovation/ Expansion Opens			
<b>2013</b>		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>
<b>Total Attendance</b>	88,694	92,056	98,634	106,310	103,842	119,976	117,387	115,586	112,907
<b>Earned Revenue Per Capita</b>		<b>Percent Increase from Previous Year</b>							
Gift Shop (Gross)	\$1.40	5.0%	6.0%	7.0%	3.0%	15.0%	2.0%	2.0%	2.0%
Education Program Revenue	\$0.53	8.0%	10.0%	6.0%	5.0%	10.0%	2.0%	2.0%	2.0%
Food Service (Gross)	\$0.65	20.0%	20.0%	5.0%	3.0%	35.0%	2.0%	2.0%	2.0%
Special Event Sales	\$0.02	10.0%	25.0%	7.0%	6.0%	12.0%	2.0%	2.0%	2.0%
Depot Sales (Gross)	\$0.21	2.0%	0.0%	5.0%	25.0%	5.0%	2.0%	2.0%	2.0%
<b>Earned Revenue Per Capita Revenue <sup>1/</sup></b>		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>
Gift Shop (Gross)		\$1.48	\$1.56	\$1.67	\$1.72	\$1.98	\$2.02	\$2.06	\$2.10
Education Program Revenue		\$0.58	\$0.63	\$0.67	\$0.71	\$0.78	\$0.79	\$0.81	\$0.82
Food Service (Gross)		\$0.78	\$0.93	\$0.98	\$1.01	\$1.36	\$1.39	\$1.42	\$1.45
Special Event Sales		\$0.03	\$0.03	\$0.03	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04
Depot Sales (Gross)		\$0.21	\$0.21	\$0.22	\$0.28	\$0.29	\$0.30	\$0.30	\$0.31

Source: ConsultEcon, Inc. and Lake Superior Zoo

<sup>1/</sup> All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

Note: Does not include membership revenues which, are calculated seperately. Admissions per caps are against total attendance.

# Appendix Tables

**Table A-21**

**Lake Superior Zoo Master Plan  
Earned Revenue Per Cap Analysis- Scenario 2a**

		<u>Potential Future Per Capita Revenue in Current Value of the Dollar <sup>1/</sup></u>							
		Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Stable Year		
		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal In-Fill Primates and Reconfigure Zoo Train Track	Improvements to Center, Farm, Zoo Train Route Open/ Main Building Renovation/	Main Building Renovation/ Expansion Opens			
2013		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>Total Attendance</b>	88,694	120,620	128,037	144,565	141,446	165,672	161,242	158,925	155,494
<b>Earned Revenue Per Capita</b>		<b>Percent Increase from Previous Year</b>							
Gift Shop (Gross)	\$1.40	4.0%	5.0%	6.0%	2.0%	12.0%	2.0%	2.0%	2.0%
Education Program Revenue	\$0.53	6.0%	8.0%	5.0%	4.0%	8.0%	2.0%	2.0%	2.0%
Food Service (Gross)	\$0.65	18.0%	18.0%	4.0%	3.0%	32.0%	2.0%	2.0%	2.0%
Special Event Sales	\$0.02	10.0%	25.0%	7.0%	6.0%	12.0%	2.0%	2.0%	2.0%
Depot Sales (Gross)	\$0.21	2.0%	0.0%	5.0%	25.0%	5.0%	2.0%	2.0%	2.0%
<b>Earned Revenue Per Capita Revenue <sup>1/</sup></b>		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>
Gift Shop (Gross)		\$1.46	\$1.53	\$1.63	\$1.66	\$1.86	\$1.89	\$1.93	\$1.97
Education Program Revenue		\$0.57	\$0.61	\$0.64	\$0.67	\$0.72	\$0.73	\$0.75	\$0.76
Food Service (Gross)		\$0.77	\$0.90	\$0.94	\$0.97	\$1.28	\$1.30	\$1.33	\$1.36
Special Event Sales		\$0.03	\$0.03	\$0.03	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04
Depot Sales (Gross)		\$0.21	\$0.21	\$0.22	\$0.28	\$0.29	\$0.30	\$0.30	\$0.31

Source: ConsultEcon, Inc. and Lake Superior Zoo

<sup>1/</sup> All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

Note: Does not include membership revenues which, are calculated separately. Admissions per caps are against total attendance.

# Appendix Tables

**Table A-22**  
**Lake Superior Zoo Master Plan**  
**Membership Analysis – Scenario 1**

		<u>Potential Future Membership Revenues in Current Value of the Dollar</u>							
		Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Stable Year		
		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin	Improvements to Primate Conservation Center, Farm Open/ Main Building Renovation/ Expansion Underway	Main Building Renovation/ Expansion Opens			
<b>Current Membership <sup>1/</sup></b>	<b>2013</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>
Member Attendance	14,458	15,649	16,403	17,679	17,269	20,366	19,926	19,621	19,166
Number of Memberships <sup>2/</sup>	2,189	2,371	2,485	2,679	2,617	2,909	2,847	2,803	2,738
Average Number of Total Attendances Per Membership	6.6	6.6	6.6	6.6	6.6	7.0	7.0	7.0	7.0
Family Membership Fee	\$65								
Ave. Revenue Per Membership	\$65.32								
Total Membership Revenue	\$142,979								
<b>Estimated Membership Impact</b>									
% Increase in Ave. Revenue Per Membership <sup>2/</sup>		3.0%	8.0%	5.0%	2.0%	7.0%	2.0%	2.0%	2.0%
Ave. Revenue Per Membership <sup>3/</sup>		\$67.28	\$72.66	\$76.29	\$77.82	\$83.26	\$84.93	\$86.63	\$88.36
<b>Total Estimated Membership Revenue</b>		\$159,521	\$180,577	\$204,361	\$203,610	\$242,252	\$241,764	\$242,816	\$241,933

1/ Includes Standard and Corporate memberships combined

2/ Reflects growth in both Standard membership e.g. family and individual and growth of corporate membership program.

3/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

Source: ConsultEcon, Inc. and Lake Superior Zoo

# Appendix Tables

**Table A-23**

**Lake Superior Zoo Master Plan  
Membership Analysis – Scenario 2**

	2013	<u>Potential Future Membership Revenues in Current Value of the Dollar</u>							
		Phase 1 Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Phase 2 Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Phase 3 Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin, Reconfigure Zoo Train Track	Phase 4 Improvements to Primate Conservation Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion Underway	Phase 5 Main Building Renovation/ Expansion Opens	Stable Year		
<b>Current Membership</b> <sup>1/</sup>		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>
Member Attendance	14,458	15,942	16,686	18,797	18,433	22,587	21,983	21,667	21,200
Number of Memberships <sup>1/</sup>	2,189	2,415	2,528	2,848	2,793	3,227	3,140	3,095	3,029
Average Number of Total Attendances Per Membership	6.6	6.6	6.6	6.6	6.6	7.0	7.0	7.0	7.0
Family Membership Fee	\$65								
Ave. Revenue Per Membership	\$65.32								
Total Membership Revenue	\$142,979								
<b>Estimated Membership Impact</b>									
% Increase in Ave. Revenue Per Membership <sup>2/</sup>		3.0%	8.0%	10.0%	2.0%	7.0%	2.0%	2.0%	2.0%
Ave. Revenue Per Membership <sup>3/</sup>		\$67.28	\$72.66	\$79.92	\$81.52	\$87.23	\$88.97	\$90.75	\$92.57
<b>Total Estimated Membership Revenue</b>		\$162,503	\$183,693	\$227,633	\$227,687	\$281,466	\$279,419	\$280,911	\$280,345

1/ Includes Standard and Corporate memberships combined

2/ Reflects growth in both Standard membership e.g. family and individual and growth of corporate membership program.

3/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

Source: ConsultEcon, Inc. and Lake Superior Zoo

# Appendix Tables

**Table A-24**

**Lake Superior Zoo Master Plan  
Membership Analysis – Scenario 2a**

		<u>Potential Future Membership Revenues in Current Value of the Dollar</u>								
		Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Stable Year			
		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal Infill Exhibits	Improvements to Primates and Zoo Train Route	Improvements to Primate Conservation Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion Underway	Main Building Renovation/ Expansion Opens			
<b>Current Membership</b> <sup>1/</sup>	<b>2013</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	
Member Attendance	14,458	13,086	13,591	15,302	15,015	18,307	17,818	17,562	17,182	
Number of Memberships <sup>2/</sup>	2,189	1,983	2,059	2,319	2,275	2,615	2,545	2,509	2,455	
Average Number of Total Attendances Per Membership	6.6	6.6	6.6	6.6	6.6	7.0	7.0	7.0	7.0	
Family Membership Fee	\$65									
Ave. Revenue Per Membership	\$65.32									
Total Membership Revenue	\$142,979									
<b>Estimated Membership Impact</b>										
% Increase in Ave. Revenue Per Membership <sup>2/</sup>		3.0%	8.0%	10.0%	2.0%	7.0%	2.0%	2.0%	2.0%	
Ave. Revenue Per Membership <sup>3/</sup>		\$67.28	\$72.66	\$79.92	\$81.52	\$87.23	\$88.97	\$90.75	\$92.57	
<b>Total Estimated Membership Revenue</b>		<b>\$133,396</b>	<b>\$149,626</b>	<b>\$185,306</b>	<b>\$185,462</b>	<b>\$228,132</b>	<b>\$226,473</b>	<b>\$227,682</b>	<b>\$227,223</b>	

1/ Includes Standard and Corporate memberships combined

2/ Reflects growth in both Standard membership e.g. family and individual and growth of corporate membership program.

3/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

Source: ConsultEcon, Inc. and Lake Superior Zoo

# Appendix Tables

**Table A-25**  
**Lake Superior Zoo Master Plan**  
**Estimated Mid-Range Revenue**  
**Potential – Scenario 1**

	Baseline 2013	Potential Future Revenue in Current Value of the Dollar 1/													
		Phase 1 Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Phase 2 Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Phase 3 Bear Territory + Improvements to Animal Infill Exhibits Open/ Primates and Farm Begin	Phase 4 Improvements to Primate Center, Farm Open/ Main Building Renovation/ Expansion Underway	Phase 5 Main Building Renovation/ Expansion Opens	Stable Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
<b>TOTAL ATTENDANCE</b>	88,694	92,056	98,634	106,310	103,842	119,976	117,387	115,586	112,907						
Per Capita Admissions Revenue	\$5.52	\$5.56	\$6.66	\$7.25	\$7.31	\$7.88	\$8.01	\$8.56	\$8.68						
<b>EARNED REVENUE</b>															
Admissions	\$489,660	\$511,382	\$656,980	\$770,478	\$759,392	\$944,998	\$940,814	\$989,179	\$979,959						
Gift Shop (Gross)	\$124,604	\$133,207	\$149,862	\$169,601	\$169,806	\$225,617	\$225,162	\$226,143	\$225,320						
Education Program Revenue	\$47,308	\$53,029	\$62,500	\$70,732	\$72,545	\$92,198	\$92,012	\$92,412	\$92,076						
Food Service (Gross)	\$57,561	\$71,691	\$92,177	\$101,834	\$101,957	\$159,027	\$158,706	\$159,398	\$158,818						
Special Event Sales	\$2,025	\$2,312	\$3,096	\$3,504	\$3,594	\$4,568	\$4,559	\$4,578	\$4,562						
Depot Sales (Gross)	\$18,254	\$19,324	\$20,705	\$23,433	\$24,033	\$29,988	\$29,928	\$30,058	\$29,949						
Membership	\$142,979	\$159,521	\$180,577	\$204,361	\$203,610	\$242,252	\$241,764	\$242,816	\$241,933						
<b>TOTAL EARNED REVENUE</b>	<b>\$882,390</b>	<b>\$950,466</b>	<b>\$1,165,897</b>	<b>\$1,343,944</b>	<b>\$1,334,937</b>	<b>\$1,698,649</b>	<b>\$1,692,944</b>	<b>\$1,744,584</b>	<b>\$1,732,617</b>						
<b>CONTRIBUTED REVENUES</b>															
City Subsidy	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000						
<b>Percent Increase in Other Contributed Revenue from Previous Year</b>		5.0%	8.0%	2.0%	3.0%	5.0%	2.0%	2.0%	3.0%						
Fundraising Revenue	\$71,710	\$75,296	\$81,319	\$82,946	\$85,434	\$89,706	\$91,500	\$93,330	\$96,130						
Donations Income	\$155,598	\$163,378	\$176,449	\$179,978	\$185,377	\$194,646	\$198,539	\$202,509	\$208,585						
Miscellaneous Income	\$2,644	\$2,776	\$2,998	\$3,058	\$3,150	\$3,308	\$3,374	\$3,441	\$3,544						
Grants	\$159,350	\$167,318	\$180,703	\$184,317	\$189,846	\$199,339	\$203,326	\$207,392	\$213,614						
Subtotal Contributed Revenues	\$389,302	\$408,768	\$441,469	\$450,298	\$463,807	\$486,998	\$496,738	\$506,672	\$521,873						
Subtotal Contributed + City Subsidy	\$1,059,302	\$1,078,768	\$1,111,469	\$1,120,298	\$1,133,807	\$1,156,998	\$1,166,738	\$1,176,672	\$1,191,873						
<b>TOTAL REVENUE</b>	<b>\$1,059,302</b>	<b>\$2,029,233</b>	<b>\$2,277,366</b>	<b>\$2,464,242</b>	<b>\$2,468,744</b>	<b>\$2,855,646</b>	<b>\$2,859,682</b>	<b>\$2,921,257</b>	<b>\$2,924,489</b>						
<b>Percent Earned Revenue of Total Revenue</b>	<b>83.3%</b>	<b>46.8%</b>	<b>51.2%</b>	<b>54.5%</b>	<b>54.1%</b>	<b>59.5%</b>	<b>59.2%</b>	<b>59.7%</b>	<b>59.2%</b>						

Source: ConsultEcon, Inc. and Lake Superior Zoo

1/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

# Appendix Tables

**Table A-26**  
**Lake Superior Zoo Master Plan**  
**Estimated Mid-Range Revenue**  
**Potential – Scenario 2**

	Baseline 2013	Potential Future Revenue in Current Value of the Dollar 1/							
		Phase 1 Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Phase 2 Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Phase 3 Bear Territory + Animal Infill Exhibits Open/ Improvements to Primates and Farm Begin, Reconfigure Zoo Train Track	Phase 4 Improvements to Primate Conservation Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion Underway	Phase 5 Main Building Renovation/ Expansion Opens	Stable Year	Year 6	Year 7
<b>TOTAL ATTENDANCE</b>	88,694	93,776	100,336	113,068	110,843	129,365	125,906	124,096	121,418
Per Capita Admissions Revenue	\$5.52	\$5.51	\$6.63	\$7.65	\$7.83	\$8.35	\$8.50	\$8.77	\$8.89
<b>EARNED REVENUE</b>									
Admissions	\$489,660	\$517,140	\$665,430	\$865,188	\$867,872	\$1,080,575	\$1,070,418	\$1,088,867	\$1,079,275
Gift Shop (Gross)	\$124,604	\$138,331	\$156,888	\$189,172	\$191,014	\$256,371	\$254,506	\$255,866	\$255,350
Education Program Revenue	\$47,308	\$54,020	\$63,578	\$75,945	\$78,173	\$100,359	\$99,629	\$100,161	\$99,959
Food Service (Gross)	\$57,561	\$73,031	\$93,767	\$110,949	\$112,029	\$176,510	\$175,227	\$176,163	\$175,807
Special Event Sales	\$2,025	\$2,355	\$3,150	\$3,798	\$3,947	\$5,159	\$5,121	\$5,149	\$5,138
Depot Sales (Gross)	\$18,254	\$19,686	\$21,063	\$24,922	\$30,540	\$37,425	\$37,153	\$37,351	\$37,276
Membership	\$142,979	\$162,503	\$183,693	\$227,633	\$227,687	\$281,466	\$279,419	\$280,911	\$280,345
<b>TOTAL EARNED REVENUE</b>	<b>\$882,390</b>	<b>\$967,066</b>	<b>\$1,187,570</b>	<b>\$1,497,606</b>	<b>\$1,511,262</b>	<b>\$1,937,865</b>	<b>\$1,921,472</b>	<b>\$1,944,468</b>	<b>\$1,933,150</b>
<b>CONTRIBUTED REVENUES</b>									
City Subsidy	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000
<b>Percent Increase in Other Contributed Revenue from Previous Year</b>		5.0%	8.0%	2.0%	3.0%	5.0%	2.0%	2.0%	3.0%
Fundraising Revenue	\$71,710	\$75,296	\$81,319	\$82,946	\$85,434	\$89,706	\$91,500	\$93,330	\$96,130
Donations Income	\$155,598	\$163,378	\$176,449	\$179,978	\$185,377	\$194,646	\$198,539	\$202,509	\$208,585
Miscellaneous Income	\$2,644	\$2,776	\$2,998	\$3,058	\$3,150	\$3,308	\$3,374	\$3,441	\$3,544
Grants	\$159,350	\$167,318	\$180,703	\$184,317	\$189,846	\$199,339	\$203,326	\$207,392	\$213,614
Subtotal Contributed Revenues	\$389,302	\$408,768	\$441,469	\$450,298	\$463,807	\$486,998	\$496,738	\$506,672	\$521,873
Subtotal Contributed + City Subsidy	\$1,059,302	\$1,078,768	\$1,111,469	\$1,120,298	\$1,133,807	\$1,156,998	\$1,166,738	\$1,176,672	\$1,191,873
<b>TOTAL REVENUE</b>	<b>\$1,059,302</b>	<b>\$2,045,833</b>	<b>\$2,299,039</b>	<b>\$2,617,905</b>	<b>\$2,645,069</b>	<b>\$3,094,863</b>	<b>\$3,088,210</b>	<b>\$3,121,140</b>	<b>\$3,125,023</b>
<b>Percent Earned Revenue of Total Revenue</b>	<b>83.3%</b>	<b>47.3%</b>	<b>51.7%</b>	<b>57.2%</b>	<b>57.1%</b>	<b>62.6%</b>	<b>62.2%</b>	<b>62.3%</b>	<b>61.9%</b>

Source: ConsultEcon, Inc. and Lake Superior Zoo

1/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

# Appendix Tables

**Table A-27**  
**Lake Superior Zoo Master Plan**  
**Estimated Mid-Range Revenue**  
**Potential – Scenario 2a**

	Baseline 2013	Potential Future Revenue in Current Value of the Dollar 1/							
		Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Stable Year		
		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal Infill Exhibits Open/ Primates and Farm Zoo Train Track	Improvements to Primate Conservation Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion Underway	Main Building Renovation/ Expansion Opens	Year 6	Year 7	Year 8
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	
<b>TOTAL ATTENDANCE</b>	88,694	120,620	128,037	144,565	141,446	165,672	161,242	158,925	155,494
Per Capita Admissions Revenue	\$5.52	\$3.60	\$4.78	\$5.37	\$5.54	\$5.87	\$6.01	\$6.19	\$6.33
<b>EARNED REVENUE</b>									
Admissions	\$489,660	\$433,912	\$611,667	\$776,894	\$783,659	\$972,739	\$969,402	\$984,247	\$984,823
Gift Shop (Gross)	\$124,604	\$176,234	\$196,426	\$235,088	\$234,616	\$307,775	\$305,537	\$307,169	\$306,550
Education Program Revenue	\$47,308	\$68,196	\$78,181	\$92,687	\$94,315	\$119,305	\$118,438	\$119,070	\$118,830
Food Service (Gross)	\$57,561	\$92,370	\$115,700	\$135,860	\$136,917	\$211,684	\$210,145	\$211,267	\$210,841
Special Event Sales	\$2,025	\$3,029	\$4,019	\$4,856	\$5,036	\$6,607	\$6,559	\$6,594	\$6,580
Depot Sales (Gross)	\$18,254	\$25,321	\$26,878	\$31,865	\$38,971	\$47,928	\$47,580	\$47,834	\$47,737
Membership	\$142,979	\$133,396	\$149,626	\$185,306	\$185,462	\$228,132	\$226,473	\$227,682	\$227,223
<b>TOTAL EARNED REVENUE</b>	<b>\$882,390</b>	<b>\$932,458</b>	<b>\$1,182,498</b>	<b>\$1,462,554</b>	<b>\$1,478,976</b>	<b>\$1,894,171</b>	<b>\$1,884,132</b>	<b>\$1,903,863</b>	<b>\$1,902,585</b>
<b>CONTRIBUTED REVENUES</b>									
City Subsidy	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000	\$670,000
<b>Percent Increase in Other Contributed Revenue from Previous Year</b>		5.5%	10.0%	2.5%	4.0%	5.0%	2.0%	2.0%	3.0%
Fundraising Revenue	\$71,710	\$75,654	\$83,219	\$85,300	\$88,712	\$93,148	\$95,010	\$96,911	\$99,818
Donations Income	\$155,598	\$164,156	\$180,572	\$185,086	\$192,490	\$202,114	\$206,156	\$210,280	\$216,588
Miscellaneous Income	\$2,644	\$2,789	\$3,068	\$3,145	\$3,271	\$3,434	\$3,503	\$3,573	\$3,680
Grants	\$159,350	\$168,114	\$184,926	\$189,549	\$197,131	\$206,987	\$211,127	\$215,350	\$221,810
Subtotal Contributed Revenues	\$389,302	\$410,714	\$451,786	\$463,080	\$481,603	\$505,684	\$515,797	\$526,113	\$541,897
Subtotal Contributed + City Subsidy	\$1,059,302	\$1,080,714	\$1,121,786	\$1,133,080	\$1,151,603	\$1,175,684	\$1,185,797	\$1,196,113	\$1,211,897
<b>TOTAL REVENUE</b>	<b>\$1,059,302</b>	<b>\$2,013,172</b>	<b>\$2,304,283</b>	<b>\$2,595,635</b>	<b>\$2,630,580</b>	<b>\$3,069,854</b>	<b>\$3,069,929</b>	<b>\$3,099,976</b>	<b>\$3,114,481</b>
<b>Percent Earned Revenue of Total Revenue</b>	<b>83.3%</b>	<b>46.3%</b>	<b>51.3%</b>	<b>56.3%</b>	<b>56.2%</b>	<b>61.7%</b>	<b>61.4%</b>	<b>61.4%</b>	<b>61.1%</b>

Source: ConsultEcon, Inc. and Lake Superior Zoo

1/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

# Appendix Tables

**Table A-28**  
**Lake Superior Zoo Master Plan**  
**Personnel Profile – Scenario 1**

Department	2013			Proposed Additional Positions 1/						
	Full-Time	Part-Time & Seasonal	Full Time Equivalent	Year 1			Year 2			
				Full-Time	Part-Time & Seasonal	Full Time Equivalent	Full-Time	Part-Time & Seasonal	Full Time Equivalent	
Administration and Business Operations	3	0	3	1		1				
Education	3	3	4.5	1	2	2		7	3.5	
Facility/Grounds	3	8	7							
Guest Services	3	22.5	14.25							
Marketing	3	0	3							
Animal Management	11	2	12							
<b>Totals</b>	<b>26</b>	<b>35.5</b>	<b>43.75</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>7</b>	<b>3.5</b>	
<b>Personnel Costs in Current Dollars 2/</b>	<b>\$1,118,070</b>			<b>\$136,752</b>			<b>\$49,533</b>			
<b>Personnel Reduction 3/</b>				<b>FTE</b>	<b>Cost Savings</b>					
Zoo Keeper				1	\$30,888					

Source: ConsultEcon, Inc. and Lake Superior Zoo

1/In Year 1 includes FT Development Director @ \$70,000 salary, 1 FT Educator (\$28,000) and 2 Additional Seasonal Educators (\$10.50 per hour) to develop and offer signature amphitheater and other additional programs. In Year 2 - includes 7 part-time (full time seasonal) to staff Forest Discovery Zone (\$10.50 per hour). Benefits calculated at an average of 25% of salary for FT and 8% for seasonals.

2/ Includes Payroll Expenses, Employee Group Insurance, and Federal/State Taxes.

3/ With fewer animals in Scenario 1, assumes savings of 1 FT Zoo Keeper (\$30,888) - assuming \$13.75/hr and benefits at 8%.

# Appendix Tables

**Table A-29**  
**Lake Superior Zoo Master Plan**  
**Personnel Profile – Scenario 2**

Department	2013			Proposed Additional Positions 1/					
				Year 1			Year 2		
	Full-Time	Part-Time & Seasonal	Full Time Equivalent	Full-Time	Part-Time & Seasonal	Full Time Equivalent	Full-Time	Part-Time & Seasonal	Full Time Equivalent
Administration and Business Operations	3	0	3	1		1			
Education	3	3	4.5	1	2	2		7	3.5
Facility/Grounds	3	8	7						
Guest Services	3	22.5	14.25						
Marketing	3	0	3						
Animal Management	11	2	12						
<b>Totals</b>	<b>26</b>	<b>35.5</b>	<b>43.75</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>7</b>	<b>3.5</b>
<b>Personnel Costs in Current Dollars 2/</b>	<b>\$1,118,070</b>			<b>\$136,752</b>			<b>\$49,533</b>		

Source: ConsultEcon, Inc. and Lake Superior Zoo

1/In Year 1 includes FT Development Director @ \$70,000 salary, 1 FT Educator (\$28,000) and 2 Additional Seasonal Educators (\$10.50 per hour) to develop and offer signature amphitheater and other additional programs. In Year 2 - includes 7 part-time (full time seasonal) to staff Forest Discovery Zone (\$10.50 per hour). Benefits calculated at an average of 25% of salary for FT and 8% for seasonals.

2/ Includes Payroll Expenses, Employee Group Insurance, and Federal/State Taxes.

# Appendix Tables

**Table A-30**  
**Lake Superior Zoo Master Plan**  
**Personnel Profile – Scenario 2a**

Department	2013			Proposed Additional Positions 1/						
	Full-Time	Part-Time & Full Time		Year 1			Year 2			
		Seasonal	Equivalent	Full-Time & Seasonal	Full Time Equivalent	Full-Time & Seasonal	Part-Time	Full Time	Equivalent	
Administration and Business Operations	3	0	3	1		1				
Education	3	3	4.5	1	4	3		7	3.5	
Facility/Grounds	3	8	7							
Guest Services	3	22.5	14.25		4	2				
Marketing	3	0	3							
Animal Management	11	2	12							
<b>Totals</b>	<b>26</b>	<b>35.5</b>	<b>43.75</b>	<b>2</b>	<b>8</b>	<b>6</b>		<b>0</b>	<b>7</b>	<b>3.5</b>
<b>Personnel Costs in Current Dollars 2/</b>	<b>\$1,118,070</b>			<b>\$163,035</b>			<b>\$49,533</b>			

Source: ConsultEcon, Inc. and Lake Superior Zoo

# Appendix Tables

**Table A-31**  
**Lake Superior Zoo Master Plan**  
**Estimated Mid-Range Potential**  
**Expenditures – Scenario 1**

	Baseline 2013	Potential Future Expenses in Current Value of the Dollar <sup>1/</sup>							
		Phase 1 Year 1	Phase 2 Year 2	Phase 3 Year 3	Phase 4 Year 4	Phase 5 Year 5	Year 6	Year 7	Year 8
<b>New Exhibits / Infrastructure Open and Construction</b>		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction to Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal In-Fill Exhibits Begin	Improvements to Primate Conservation Center, Farm Open/ Main Building Renovation/ Expansion Underway	Main Building Renovation/ Expansion Opens			Stable Year
<b>Attendance</b>	88,694	5,322	15,078	23,060	23,947	31,043	28,382	26,608	23,947
<b>New Personnel (Salary and Benefits Costs)</b>									
Director of Development		\$87,500	\$87,500						
Educators		\$49,252	\$49,252						
Forest Discovery Center Staff			\$49,533						
<b>Total</b>		\$136,752	\$186,285						
Personnel Cost Savings		\$30,888							
<b>Percentage Change in Expense Categories Due to Plan</b>									
<i>Personnel and Contract Services</i>									
Payroll Expenses, Employee Insurance and Taxes									
LSZ - Staff Development & Training		10%							
Outside & Contract Services		2%	3%						
Employee Misc Expense			5%			5%			
<i>Non Personnel</i>									
Zoo Services		-3%							
Utilities		-5%	3%	1%				-5%	
Marketing		5%	15%					5%	
Building and Grounds			3%					3%	
Repairs and Maintenance			5%			-5%		3%	
Other Non-Personnel Expenses		3%	2%						
<b>Estimated Expenses by Categories Due to Plan</b>	<b>Baseline <sup>2/</sup></b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>
<i>Personnel and Contract Services</i>									
Payroll Expenses, Employee Insurance and Taxes	1,118,070	1,223,934	1,410,220	1,410,220	1,410,220	1,410,220	1,410,220	1,410,220	1,410,220
LSZ - Staff Devlpmnt & Training	12,235	13,459	13,459	13,459	13,459	13,459	13,459	13,459	13,459
Outside & Contract Services	54,857	55,954	57,633	57,633	57,633	57,633	57,633	57,633	57,633
Employee Misc Expense	100	100	105	105	105	110	110	110	110
<i>Non Personnel</i>									
Zoo Services	111,299	107,960	107,960	107,960	107,960	107,960	107,960	107,960	107,960
Utilities	122,031	115,929	119,407	120,601	120,601	114,571	114,571	114,571	114,571
Marketing	110,150	115,657	133,006	133,006	133,006	139,656	139,656	139,656	139,656
Building and Grounds	6,240	6,240	6,427	6,427	6,427	6,620	6,620	6,620	6,620
Repairs and Maintenance	65,900	65,900	69,195	69,195	65,736	67,708	67,708	67,708	67,708
Other Non-Personnel Expenses	265,777	273,750	279,225	279,225	279,225	279,225	279,225	279,225	279,225
<b>Total Expenses</b>	<b>\$1,866,659</b>	<b>\$1,978,884</b>	<b>\$2,196,637</b>	<b>\$2,197,831</b>	<b>\$2,194,371</b>	<b>\$2,197,162</b>	<b>\$2,197,162</b>	<b>\$2,197,162</b>	<b>\$2,197,162</b>
<b>Capital Improvements/Exhibit Reinvestment</b>	<b>381,919</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>500,000</b>	<b>100,000</b>	<b>575,000</b>	<b>175,000</b>	<b>575,000</b>
<b>Total Expenditures</b>	<b>\$2,248,578</b>	<b>\$2,078,884</b>	<b>\$2,296,637</b>	<b>\$2,297,831</b>	<b>\$2,694,371</b>	<b>\$2,297,162</b>	<b>\$2,772,162</b>	<b>\$2,372,162</b>	<b>\$2,772,162</b>

1/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

2/ Includes expenditures for exhibit refresh/replacement every other year beginning Yr. 4 (\$400,000) + annual changing exhibit budget (\$75,000) - beginning year 6. Although a number of capital improvements will be funded and many of the most needed improvements will be addressed in years 1 through 5, some facilities e.g. Australia will still require maintenance. Further, not all facility needs will be addressed at one time. This budget assumes a general capital improvements budget, beginning Year 1 of \$100,000 annually. Note, the primary changing exhibit space will be in the refurbished main building.

# Appendix Tables

**Table A-32**  
**Lake Superior Zoo Master Plan**  
**Estimated Mid-Range Potential**  
**Expenditures – Scenario 2**

	Potential Future Expenses in Current Value of the Dollar <sup>1/</sup>								
	Baseline 2013	Phase 1 Year 1	Phase 2 Year 2	Phase 3 Year 3	Phase 4 Year 4	Phase 5 Year 5	Year 6	Year 7	Year 8
<b>New Exhibits / Infrastructure Open and Construction</b>		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal Infill Exhibits Open/ Improvements Begin, Reconfigure Zoo Train Track	Improvements to Primate Conservation Center, Farm, Zoo Train Route Open/ Main Building Renovation/ Expansion Underway	Main Building Renovation/ Expansion Opens			Stable Year
<b>Attendance</b>	88,694	93,776	100,336	113,068	110,843	129,365	125,906	124,096	121,418
<b>New Personnel (Salary and Benefits Costs)</b>									
Director of Development		\$87,500	\$87,500						
Educators		\$49,252	\$49,252						
Forest Discovery Center Staff			\$49,533						
<b>Total</b>		\$136,752	\$186,285						
<b>Percentage Change in Expense Categories Due to Plan</b>									
<i>Personnel and Contract Services</i>									
Payroll Expenses, Employee Insurance and Taxes									
LSZ - Staff Development & Training		10%							
Outside & Contract Services		2%	3%						
Employee Misc Expense			5%			5%			
<i>Non Personnel</i>									
Zoo Services									
Utilities		-5%	3%	1%		-5%			
Marketing		5%	15%			5%			
Building and Grounds			3%			3%			
Repairs and Maintenance			5%	2%		3%			
Other Non-Personnel Expenses		3%	2%	2%	-5%	3%			
<b>Estimated Expenses by Categories Due to Plan</b>	<b>Baseline<sup>3/</sup></b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>
<i>Personnel and Contract Services</i>									
Payroll Expenses, Employee Insurance and Taxes	1,118,070	1,254,822	1,441,108	1,441,108	1,441,108	1,441,108	1,441,108	1,441,108	1,441,108
LSZ - Staff Devlpmt & Training	12,235	13,459	13,459	13,459	13,459	13,459	13,459	13,459	13,459
Outside & Contract Services	54,857	55,954	57,633	57,633	57,633	57,633	57,633	57,633	57,633
Employee Misc Expense	100	100	105	105	105	110	110	110	110
<i>Non Personnel</i>									
Zoo Services	111,299	111,299	111,299	111,299	111,299	111,299	111,299	111,299	111,299
Utilities	122,031	115,929	119,407	120,601	120,601	114,571	114,571	114,571	114,571
Marketing	110,150	115,657	133,006	133,006	133,006	139,656	139,656	139,656	139,656
Building and Grounds	6,240	6,240	6,427	6,427	6,427	6,620	6,620	6,620	6,620
Repairs and Maintenance	65,900	65,900	69,195	70,579	67,050	69,062	69,062	69,062	69,062
Other Non-Personnel Expenses	265,777	273,750	279,225	284,810	284,810	284,810	284,810	284,810	284,810
<b>Total Expenses</b>	<b>\$1,866,659</b>	<b>\$2,013,111</b>	<b>\$2,230,864</b>	<b>\$2,239,027</b>	<b>\$2,235,498</b>	<b>\$2,238,327</b>	<b>\$2,238,327</b>	<b>\$2,238,327</b>	<b>\$2,238,327</b>
<b>Capital Improvements/Exhibit Reinvestment 2/</b>	<b>381,919</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>500,000</b>	<b>100,000</b>	<b>575,000</b>	<b>175,000</b>	<b>575,000</b>
<b>Total Expenditures</b>	<b>\$2,248,578</b>	<b>\$2,113,111</b>	<b>\$2,330,864</b>	<b>\$2,339,027</b>	<b>\$2,735,498</b>	<b>\$2,338,327</b>	<b>\$2,813,327</b>	<b>\$2,413,327</b>	<b>\$2,813,327</b>

1/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

2/Includes expenditures for exhibit refresh/replacement every other year beginning Yr. 4 (\$400,000) + annual changing exhibit budget (\$75,000) - beginning year 6. Although a number of capital Improvements will be funded and many of the most needed improvements will be addressed in years 1 through 5, some facilities e.g. Australia will still require maintenance. Further, not all facility needs will be addressed at one time. This budget assumes a general capital Improvements budget, beginning Year 1 of \$100,000 annually. Note, the primary changing exhibit space will be in the refurbished main building.

Source: Lake Superior Zoo and ConsultEcon, Inc.

# Appendix Tables

**Table A-32**  
**Lake Superior Zoo Master Plan**  
**Estimated Mid-Range Potential**  
**Expenditures – Scenario 2a**

	Baseline 2013	Potential Future Expenses in Current Value of the Dollar <sup>1/</sup>							
		Phase 1 Year 1	Phase 2 Year 2	Phase 3 Year 3	Phase 4 Year 4	Phase 5 Year 5	Year 6	Year 7	Year 8
<b>New Exhibits / Infrastructure Open and Construction</b>		Polar Shores Renovation, Amphitheater w/Signature Program, picnic area, seasonal concessions, new playground and entrance improvements/ Forest Discovery Zone Construction	Forest Discovery Zone Opens/ Construction on Bear Territory + Animal In-Fill Exhibits	Bear Territory + Animal Infill Exhibits Open/ Improvements	Improvements to Primate Conservation Center, Farm, Zoo	Main Building Renovation/ Expansion Opens			Stable Year
<b>Attendance</b>	88,694	120,620	128,037	144,565	141,446	165,672	161,242	158,925	155,494
<b>New Personnel (Salary and Benefits Costs)</b>									
Director of Development		\$87,500	\$87,500						
Educators		\$63,405	\$63,405						
Forest Discovery Center Staff			\$49,533						
<b>Total</b>		\$150,905	\$200,438						
<b>Percentage Change in Expense Categories Due to Plan</b>									
<i>Personnel and Contract Services</i>									
Payroll Expenses, Employee Insurance and Taxes									
LSZ - Staff Development & Training		10%							
Outside & Contract Services		4%	5%						
Employee Misc Expense			5%			5%			
<i>Non Personnel</i>									
Zoo Services									
Utilities		-5%	3%	1%		-5%			
Marketing		5%	15%			5%			
Building and Grounds		2%	3%			3%			
Repairs and Maintenance		1%	5%	2%	-5%	3%			
Other Non-Personnel Expenses		4%	2%	2%					
<b>Estimated Expenses by Categories Due to Plan</b>	<b>Baseline <sup>3/</sup></b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>
<i>Personnel and Contract Services</i>									
Payroll Expenses, Employee Insurance and Taxes	1,118,070	1,268,975	1,469,412	1,469,412	1,469,412	1,469,412	1,469,412	1,469,412	1,469,412
LSZ - Staff Devlpmt & Training	12,235	13,459	13,459	13,459	13,459	13,459	13,459	13,459	13,459
Outside & Contract Services	54,857	57,052	59,904	59,904	59,904	59,904	59,904	59,904	59,904
Employee Misc Expense	100	100	105	105	105	110	110	110	110
<i>Non Personnel</i>									
Zoo Services	111,299	111,299	111,299	111,299	111,299	111,299	111,299	111,299	111,299
Utilities	122,031	115,929	119,407	120,601	120,601	114,571	114,571	114,571	114,571
Marketing	110,150	115,657	133,006	133,006	133,006	139,656	139,656	139,656	139,656
Building and Grounds	6,240	6,365	6,556	6,556	6,556	6,753	6,753	6,753	6,753
Repairs and Maintenance	65,900	66,559	69,887	71,285	67,721	69,752	69,752	69,752	69,752
Other Non-Personnel Expenses	265,777	276,408	281,936	287,575	287,575	287,575	287,575	287,575	287,575
<b>Total Expenses</b>	<b>\$1,866,659</b>	<b>\$2,031,802</b>	<b>\$2,264,971</b>	<b>\$2,273,202</b>	<b>\$2,269,638</b>	<b>\$2,272,491</b>	<b>\$2,272,491</b>	<b>\$2,272,491</b>	<b>\$2,272,491</b>
<b>Capital Improvements/Exhibit Reinvestment <sup>2/</sup></b>	<b>381,919</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>500,000</b>	<b>100,000</b>	<b>575,000</b>	<b>175,000</b>	<b>575,000</b>
<b>Total Expenditures</b>	<b>\$2,248,578</b>	<b>\$2,131,802</b>	<b>\$2,364,971</b>	<b>\$2,373,202</b>	<b>\$2,769,638</b>	<b>\$2,372,491</b>	<b>\$2,847,491</b>	<b>\$2,447,491</b>	<b>\$2,847,491</b>

1/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

2/ Includes expenditures for exhibit refresh/replacement every other year beginning Yr. 4 (\$400,000) + annual changing exhibit budget (\$75,000) - beginning year 6. Although a number of capital improvements will be funded and many of the most needed improvements will be addressed in years 1 through 5, some facilities e.g. Australia will still require maintenance. Further, not all facility needs will be addressed at one time. This budget assumes a general capital improvements budget, beginning Year 1 of \$100,000 annually. Note, the primary changing exhibit space will be in the refurbished main building.

Source: Lake Superior Zoo and ConsultEcon, Inc.

# Appendix Tables

**Table A-34**  
**Lake Superior Zoo Master Plan**  
**Estimated Mid-Range Net Income – Scenario 1**

	<i>Baseline 2013</i>	<u>Potential Future Operating Results in Current Value of the Dollar <sup>1/</sup></u>							
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Attendance	88,694	92,056	98,634	106,310	103,842	119,976	117,387	115,586	112,907
Earned Revenue	\$882,390	\$950,466	\$1,165,897	\$1,343,944	\$1,334,937	\$1,698,649	\$1,692,944	\$1,744,584	\$1,732,617
Operating Expenses	\$1,866,659	\$1,978,884	\$2,196,637	\$2,197,831	\$2,194,371	\$2,197,162	\$2,197,162	\$2,197,162	\$2,197,162
Percent Earned Revenue of Operating Expenses	47.3%	48.0%	53.1%	61.1%	60.8%	77.3%	77.1%	79.4%	78.9%
<b>Other Revenue Requirement for Breakeven Operations</b>	<b>\$984,269</b>	<b>\$1,028,418</b>	<b>\$1,030,740</b>	<b>\$853,887</b>	<b>\$859,435</b>	<b>\$498,513</b>	<b>\$504,218</b>	<b>\$452,577</b>	<b>\$464,545</b>
Estimated Philanthropic Revenue	\$389,302	\$408,768	\$441,469	\$450,298	\$463,807	\$486,998	\$496,738	\$506,672	\$521,873
<b>Estimated Operating Subsidy Requirement 2/</b>	<b>\$594,967</b>	<b>\$619,651</b>	<b>\$589,271</b>	<b>\$403,589</b>	<b>\$395,627</b>	<b>\$11,516</b>	<b>\$7,480</b>	<b>(\$54,095)</b>	<b>(\$57,328)</b>
Estimated Capital Improvements/Exhibit Reinvestment	\$381,919	\$100,000	\$100,000	\$100,000	\$500,000	\$100,000	\$575,000	\$175,000	\$575,000
<b>Estimated Total Subsidy Requirement 2/</b>	<b>\$976,886</b>	<b>\$719,651</b>	<b>\$689,271</b>	<b>\$503,589</b>	<b>\$895,627</b>	<b>\$111,516</b>	<b>\$582,480</b>	<b>\$120,905</b>	<b>\$517,672</b>

Source: ConsultEcon, Inc.

1/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

2/ Current City Subsidy is \$670,000 annually to support both operations and capital maintenance.

# Appendix Tables

**Table A-35**  
**Lake Superior Zoo Master Plan**  
**Estimated Mid-Range Net Income – Scenario 2**

	<i>Baseline 2013</i>	<u>Potential Future Operating Results in Current Value of the Dollar <sup>1/</sup></u>							
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Attendance	88,694	93,776	100,336	113,068	110,843	129,365	125,906	124,096	121,418
Earned Revenue	\$882,390	\$967,066	\$1,187,570	\$1,497,606	\$1,511,262	\$1,937,865	\$1,921,472	\$1,944,468	\$1,933,150
Operating Expenses	\$1,866,659	\$2,013,111	\$2,230,864	\$2,239,027	\$2,235,498	\$2,238,327	\$2,238,327	\$2,238,327	\$2,238,327
Percent Earned Revenue of Operating Expenses	47.3%	48.0%	53.2%	66.9%	67.6%	86.6%	85.8%	86.9%	86.4%
<b>Other Revenue Requirement for Breakeven Operations</b>	<b>\$984,269</b>	<b>\$1,046,046</b>	<b>\$1,043,294</b>	<b>\$741,420</b>	<b>\$724,236</b>	<b>\$300,462</b>	<b>\$316,855</b>	<b>\$293,860</b>	<b>\$305,177</b>
Estimated Philanthropic Revenue	\$389,302	\$408,768	\$441,469	\$450,298	\$463,807	\$486,998	\$496,738	\$506,672	\$521,873
<b>Estimated Operating Subsidy Requirement 2/</b>	<b>\$594,967</b>	<b>\$637,278</b>	<b>\$601,825</b>	<b>\$291,122</b>	<b>\$260,429</b>	<b>(\$186,535)</b>	<b>(\$179,883)</b>	<b>(\$212,813)</b>	<b>(\$216,695)</b>
Estimated Capital Improvements/Exhibit Reinvestment	\$381,919	\$100,000	\$100,000	\$100,000	\$500,000	\$100,000	\$575,000	\$175,000	\$575,000
<b>Estimated Total Subsidy Requirement 2/</b>	<b>\$976,886</b>	<b>\$737,278</b>	<b>\$701,825</b>	<b>\$391,122</b>	<b>\$760,429</b>	<b>(\$86,535)</b>	<b>\$395,117</b>	<b>(\$37,813)</b>	<b>\$358,305</b>

Source: ConsultEcon, Inc.

1/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

2/ Current City Subsidy is \$670,000 annually to support both operations and capital maintenance.

# Appendix Tables

**Table A-36**  
**Lake Superior Zoo Master Plan**  
**Estimated Mid-Range Net Income – Scenario 2a**

	<i>Baseline 2013</i>	<u>Potential Future Operating Results in Current Value of the Dollar <sup>1/</sup></u>							
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Attendance	88,694	120,620	128,037	144,565	141,446	165,672	161,242	158,925	155,494
Earned Revenue	\$882,390	\$932,458	\$1,182,498	\$1,462,554	\$1,478,976	\$1,894,171	\$1,884,132	\$1,903,863	\$1,902,585
Operating Expenses	\$1,866,659	\$2,031,802	\$2,264,971	\$2,273,202	\$2,269,638	\$2,272,491	\$2,272,491	\$2,272,491	\$2,272,491
Percent Earned Revenue of Operating Expenses	47.3%	45.9%	52.2%	64.3%	65.2%	83.4%	82.9%	83.8%	83.7%
<b>Other Revenue Requirement for Breakeven Operations</b>	<b>\$984,269</b>	<b>\$1,099,344</b>	<b>\$1,082,473</b>	<b>\$810,647</b>	<b>\$790,661</b>	<b>\$378,320</b>	<b>\$388,359</b>	<b>\$368,628</b>	<b>\$369,906</b>
Estimated Philanthropic Revenue	\$389,302	\$410,714	\$451,786	\$463,080	\$481,603	\$505,684	\$515,797	\$526,113	\$541,897
<b>Estimated Operating Subsidy Requirement 2/</b>	<b>\$594,967</b>	<b>\$688,630</b>	<b>\$630,688</b>	<b>\$347,567</b>	<b>\$309,058</b>	<b>(\$127,363)</b>	<b>(\$127,438)</b>	<b>(\$157,485)</b>	<b>(\$171,990)</b>
Estimated Capital Improvements/Exhibit Reinvestment	\$381,919	\$100,000	\$100,000	\$100,000	\$500,000	\$100,000	\$575,000	\$175,000	\$575,000
<b>Estimated Total Subsidy Requirement 2/</b>	<b>\$976,886</b>	<b>\$788,630</b>	<b>\$730,688</b>	<b>\$447,567</b>	<b>\$809,058</b>	<b>(\$27,363)</b>	<b>\$447,562</b>	<b>\$17,515</b>	<b>\$403,010</b>

Source: ConsultEcon, Inc.

1/ All dollar amounts are expressed in current value of the dollar. Depending on future economic conditions actual future amounts may also include increases due to overall price inflation.

2/ Current City Subsidy is \$670,000 annually to support both operations and capital maintenance.