



January 2014

Report to the Governor and the Minnesota State Legislature on Funding for Minnesota Zoo Programs supported by the Arts and Cultural Heritage Fund

Introduction

The Minnesota Zoo was established by the State Legislature more than 35 years ago to foster a partnership between the private sector and the state for the purpose of operating a zoological garden. The “New Zoo” opened to the public in 1978 and has grown into a world-leading zoo and recognized leader in family recreation, environmental education, and conservation. Today, more than 4,300 animals representing 400+ species (many of which are endangered or threatened) reside at the Zoo.

The passage of the Clean Water, Land and Legacy Amendment by a vote of the people of the state of Minnesota in 2008 – and subsequent funding for the Minnesota Zoo through Legacy appropriations – has propelled the expansion of the Zoo’s conservation, conservation education, Minnesota farm heritage, and Zoo site habitat and landscape programs for the benefit of the citizens of our state.

Appropriation Summary

This report highlights projects paid for with Legacy appropriations in FY14 and provides updates on projects funded in FY13, for which funds are available through June 30, 2014. The Minnesota Zoo received a Legacy appropriation of \$1.75 million in each year of the FY14-15 biennium. This allocation represents 7% of the Zoo’s \$24.45 million annual operating budget in FY14.

FY14 Budget Revenue Overview

Legacy	\$1,750,000 (7%)
Contributions	\$2,000,000 (8%)
Earned Revenue	\$15,145,217 (62%)
State Appropriation	\$5,585,000 (23%)
Total Zoo Budget:	\$24,480,217 (100%)

Legacy funds are directed toward four core programming areas that serve Minnesota Zoo guests and the citizens of Minnesota through program activities onsite and throughout the State: Conservation in Minnesota, Conservation Education in Minnesota, Zoo Site Habitat and Landscape, and Minnesota’s Farm Heritage. The Zoo’s Legacy-funded programs include new programming and expansion of existing programs. Please note that the budget numbers in this report add up to more than our FY14-15 appropriation of \$1.75 million due to carry forward. The Zoo’s FY12-13 Arts and Cultural Heritage Fund appropriation of \$1.5 million is available to be spent through FY14, and we carried forward \$765 thousand of this appropriation into the current year. For more information about the Minnesota Zoo, including information on Legacy projects, visit www.mnzoo.org.

A Statewide Resource

The Minnesota Zoo is one of two state-run zoos in the country and provides programs and services that reach every corner of the state. Legacy appropriations have provided critical funds that have been used toward programs that expand and enhance this service and bring our conservation efforts into Greater Minnesota. In FY13, the Zoo's service to the state included:

- 1.28 million visitors, including 41,755 member households (176,000 individuals) from 82 Minnesota counties
- Minnesota's #1 environmental education center, serving 306,000 Minnesota students
- 130,000 free admission passes distributed through 87 county agencies and dozens of Head Start programs for economically-disadvantaged families
- Partnerships with libraries, social service agencies, disability service organizations, early childhood family education, and military/veteran service agencies to provide program access and free or reduced admissions year-round
- Field conservation activities in Northwestern, Northeastern and Southwestern Minnesota

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Connie Braziel, Deputy Director
Kevin Willis, Director of Biological Programs
Mary Robison, Chief Financial Officer
Tara Harris, Director of Conservation
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For questions about the enclosed materials contact Mary Robison, Chief Financial Officer, at mary.robison@state.mn.us or by phone at 952-431-9469. The Minnesota Zoo is accredited by the Association of World Zoos and Aquariums and the Alliance of Marine Mammal Parks and Aquariums, and is a member of the World Association of Zoos and Aquariums.

Conservation in Minnesota

Engagement with the outdoors and the animals and plants that are native to Minnesota is a signature part of our heritage. Legacy funds have allowed the Minnesota Zoo to expand its field conservation efforts to focus on two animals closely aligned with Minnesota's cultural identity: prairie butterflies and moose.

Prairie Butterfly Field Conservation

Native prairie once covered 18 million acres of Minnesota (about a third of the state), and this landscape has played a central role in



Minnesota's history and heritage. Today, only 1% of the original native tallgrass prairie remains and many animals and plants that depend on prairie have declined or disappeared.

The Poweshiek skipperling was once one of Minnesota's most abundant prairie butterflies, but it may now be extinct in the state (not been seen in since 2007). The Minnesota Zoo has established the Prairie Butterfly Conservation Program to prevent the extinction of native prairie butterflies, understand the reasons for their declines, and ensure that populations are sustained long-term.

In partnership with other state agencies and organizations, we are creating a conservation breeding program at the Zoo to prevent the extinction of some of Minnesota's most imperiled butterfly species, the Poweshiek skipperling and Dakota skipper. The Zoo is supporting field work to monitor prairie butterfly populations and investigate whether remnant populations of highly threatened butterfly species still exist in Minnesota. We conduct genetics laboratory work to inform captive breeding and investigate which populations of prairie butterflies might be appropriate for eventual reintroductions in Minnesota. We work with our partners to investigate land management practices and identify priority areas of land to target for protection.

Measurable Outcomes

- We have begun to establish the world's first captive population of Dakota skippers at the Minnesota Zoo, with breeding success measurements to come in summer 2014 when individuals reach adulthood.

Program at a Glance: Conservation in Minnesota

Projects:

- Prairie Butterfly Field Conservation
- Moose Conservation Field Research

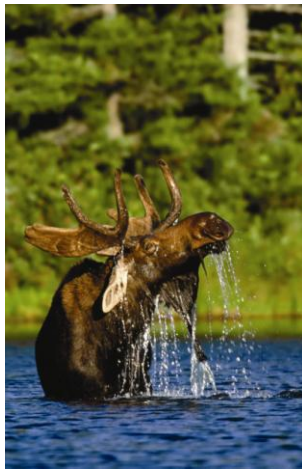
FY13 Actual: \$186,589

FY14 Budgeted: \$524,238

FTE: 4.0

- Research on methodologies and associated required equipment for population and conservation genetics studies on Poweshiek skipperlings and Dakota skippers has been conducted. Formal research will commence in 2014 as a prerequisite for considering reintroduction of individuals into the wild.
- We have raised awareness through public outreach through feature interviews on Minnesota Public Radio, the Nature Conservancy of Canada, and by Mongabay.com. Program manager Dr. Erik Runquist has provided talks for the MN Chapter of the Society for Conservation Biology, Minnesota Master Naturalists, and has provided testimony to state legislators at the House Environment, Natural Resources and Agriculture Finance committee. He has also spoken at the US Fish & Wildlife Service and MN Department of Natural Resources endangered species coordinator's meeting and written an article that appeared in the Winter 2013 issue of *ZooTracks*, the Minnesota Zoo membership magazine.

Moose Conservation Field Research



Moose, one of Minnesota's most prized wildlife species, are declining in Minnesota. In less than 20 years, moose in northwestern Minnesota declined from over 4,000 to fewer than 100. With high levels of adult and calf mortality, the northeastern Minnesota moose population, numbering 2,760 is now declining. Statewide, moose have declined by 79% since its highest point in 1985. The Minnesota Zoo is partnering with moose researcher Dr. Ron Moen of the Natural Resources Research Institute at University of Minnesota Duluth to conduct research that will inform moose management in the state, and that ultimately aims to slow or prevent a decline in the northeastern Minnesota moose population. Our work will investigate moose responses to warm temperatures, moose-wolf interactions, and parasite transmission between deer and moose.

Measurable Outcomes

- Dr. Nick McCann has published one article on his moose research, with a second manuscript complete and under peer review as of January 2014.
- Dr. Nick McCann is contributing to reports for the Minnesota Department of Natural Resources, Superior National Forest, Cook, Lake, and St. Louis County Forestry/Land Departments, and Tribal resource management agencies. Reports will summarize the findings of his project's research and provide science-based management recommendations.
- Research results were presented in December 2013 at the annual Moose Research and Habitat Meeting and have increased understanding of moose response to climate change.
- We are raising awareness for this project and research results through presentations. To date, presentations have taken place at the Wildlife Society Conference (Milwaukee, 2013); University of Minnesota (2013); Minnesota Zoo board of directors meeting (2013); and Minnesota Zoo all staff meeting (2013).

Conservation Education

Educating Minnesotans about conservation issues and how they can engage in conservation activities is critical to the stewardship of our State's heritage and resources. Legacy funds have been used to create new programs and expand existing activities to bring zoo guests and citizens statewide in close contact with animals and the ways in which people can participate in conservation in their own backyard. Program highlights include:

Close Encounters



Close Encounters provide on-site animal experiences for zoo guests. Programs include special animal enrichment, providing guests with one-on-one opportunities to interact with zoo keepers, animal training demonstrations, and a chance to observe and touch fascinating critters, including some that aren't typically exhibited at the Zoo. Close Encounters occur every day in all areas of the zoo. With a growing collection of animals and an average of six presentations daily, this program offers something for all of our guests.

Measurable outcomes:

- 145,200 people attended a Close Encounter in 2013.
- 2,340 scheduled Close Encounter programs took place in 2013. This does not include Zookeeper Chats and spontaneous, unscheduled engagements.

Conservation Interpretation

The Zoo uses interpretive exhibits and programs to further our education and conservation mission and goals. Interpretive exhibits include graphics, interactive elements, audio visual components, sculpture, art, and tactile experiences. Interpretive programs include volunteer-led activities, theatre and music performances, animal demonstrations, animal feeding/training presentations, and tours.

Measurable Outcomes

- Legacy funds were used to create and install the following projects: a rhinoceros sculpture that connects to conservation efforts; shark species database and identification; creation of Close

Program at a Glance: Conservation Education

Projects:

- Close Encounters
- Conservation Interpretation
- Bird Show Conservation Education
- Butterfly Garden
- Enhanced Zoomobile
- Technology in Education
- Zoo Safari
- Our World Speakers Series
- Playground Design
- Big Bugs! Exhibit

FY13 Actual: \$741,855

FY14 Budgeted: \$1,685,085

FTE: 9.9

Encounters program graphics for the Nocturnal Hallway in the Tropics Trail; creation and installation of new graphic interpretation elements in Discovery Bay; and planning for a reading nook in the early childhood Beehive space.

Technology in Education

The Minnesota Zoo education department has developed new curriculum and program offerings that tie zoo animals, habitats, and adaptations to science, technology, engineering and math (STEM) through classroom offerings, distance learning programs, and teacher training.

Measurable Outcomes

- Distance Learning programs reached students in 20 Minnesota counties.
- Distance Learning programs won the Center for Interactive Learning and Collaboration 2013 Pinnacle Award from the nation's largest network of interactive learning content providers.
- Technology program planning began in August 2013, with program expansion planned in 2014.

Bird Show Conservation Education



Soaring hawks, majestic owls, and many more rare and beautiful feathered creatures delight and educate Zoo guests at the World of Birds Show. The show features a variety of birds from around the world demonstrating free-flight natural behavior. We emphasize the natural abilities of birds, the diversity of species on our planet, and

the importance of natural habitats. This program provides one of the Zoo's most tangible ways for guests to connect with the natural world and learn about their potential role in conservation efforts.

Measurable Outcomes

- The World of Birds show is now offered seven days per week from mid-October through April at no additional charge to zoo guests. Legacy funds were used to add bird shows on Tuesdays, thereby making the program available to thousands of zoo guests and school groups who would not otherwise have had the opportunity to experience this conservation education program.

Butterfly Garden

The Aveda Butterfly Garden is an outdoor 3,000 square foot immersion butterfly hoop house that is heavily planted with annual and perennial flowers and stocked with farm-raised North American native and migrant tropical butterflies. It is open daily from 10:00 a.m. to 5:00 p.m. from Father's Day weekend through Labor Day, weather permitting. It is free with Zoo admission and is located on the Tropics Trail.

Measurable Outcomes

- From mid-June to Labor Day, 10 to 15% of the Zoo's daily guests visit the Butterfly Garden (or 56,350 to 84,530 during the 2013 Butterfly Garden season)

- The Butterfly Garden provided program content and curricular focus for more than ten summer zoo camps, serving more than 500 students ages three to 17.

Zoomobile



We have expanded the reach and number of offerings of the Zoomobile program to geographically isolated areas that have not experienced the program in the past. The Zoomobile program exists to break down geographic, financial and transportation barriers by bringing quality environmental education programs to Minnesotans

regardless of where they live. When people have the opportunity to see zoo animals up close they experience the connections between people, animals, and their environments firsthand.

Measurable Outcomes

- Legacy funding allowed the Minnesota Zoo to offer 10 to 30% more programs per quarter than in the same periods for the previous year, resulting in increased numbers of people served ranging from 9% to 43% for the same comparative quarters year to year.

Zoo Safari

This access program provides a free zoo experience to all public 3rd grade students from Fridley, Columbia Heights, Brooklyn Center, St. Anthony and New Brighton and includes zoo admission, transportation, lunch, a Zoo Class and time to visit animal exhibits.

Measurable Outcomes

- All 3rd grade students from Fridley, Columbia Heights, Brooklyn Center, St. Anthony and New Brighton public schools visited the Minnesota Zoo during the 2012-13 academic year.

Our World Speakers Series

The goal of the Our Backyard/Our World Speaker Series is to expose audiences to current environmental and wildlife issues through engaging speakers and hands-on workshops and to provide opportunities for them to take action on behalf of the natural world. The series will also help the Minnesota Zoo build a reputation in Minnesota as a leading voice on environmental and wildlife issues.

Measurable Outcomes

- An average of 85 Minnesotans (mostly adult) attended each of the 2013 Our World Speaker Series events (totaling more than 600 people).
- The Our World Speaker Series was offered free of charge to all attendees, ensuring access for all interested guests.

Playground Design

The Zoo plans to develop a nature-based play area for children ages 2 to 11 years old. The play area will feature elements that encourage children to intuitively learn about nature by experiencing it through play. The area will include many elements that highlight native Minnesota wetlands, trees, rocks, insects, water, sounds, etc. The vast play area will also provide wide open free spaces to allow and encourage creative, unstructured play.

Measurable Outcomes

- Focus groups were held to ensure that the eventual users (primarily Minnesota families) informed the design and development of this play area. Results of the focus group informed the design team and directly affected design decisions and priorities.
- Design and development was completed in November 2013 with construction documents due for completion on January 15, 2014.

Big Bugs! Exhibit



The Minnesota Zoo will offer a first-of-its-kind exhibit in summer 2014—Big Bugs! Thirteen super-sized, animatronic bugs will invade the Zoo's Northern Trail along with a live bug display and several fun, interactive elements. This will be the first FREE exhibit (with paid Zoo admission)

thanks to Legacy funds, and will showcase a bug's life and why bugs are important. The Zoo exhibit shop is developing additional bug displays highlighting insect species native to Minnesota. A live bug exhibit will accompany the Big Bugs and will offer educational program content for thousands of zoo camp students and the general public. Featured insects will include the praying mantis, walking stick, tarantula and more. Interpretive programs featuring these bug adaptations, habitats and conservation concerns are in development.

Finally, Legacy funds will be used to hire a Twin Cities theatre company to create an original, live street theatre performance for Zoo guests on Fridays, Saturdays, Sundays and holidays. These shows will provide an additional means to communicate the interpretive themes of the exhibition.

Measurable Outcomes

- Contracting for Big Bugs! is complete and the installation plan for summer 2014 is set.
- A theatre company was selected through a Request for Proposal process and is in production development.
- Planning and construction for the Live bugs exhibit is underway. Blueprints are complete and staff are in negotiation with the USDA related to quarantine requirements for the live bugs which are non-native species to Minnesota.

Zoo Site Habitat and Landscape

The Minnesota Zoo's site – 485 acres of land in Dakota county – is a state treasure that includes a diverse array of habitats including vernal pools, sedge meadows, oak woodlands, and northern rich fens. More than half of this is undeveloped wildlife habitat which, thanks to Legacy funding, is now being explored by zoo staff and guests in order to educate citizens about the wild animals and wild places native to our state and the importance of caring for and conserving these resources.

BioDiscovery Project

This project aims to discover, document, and monitor the native biodiversity found on the Minnesota Zoo's 485-acre site; share our



discoveries in a fun, engaging, and artistic manner (i.e., through wildlife photography); and provide a format and assistance for others to discover and share, celebrate, and learn about the biodiversity in their own neighborhoods. Using web-based and social media formats, the project will highlight the Zoo's native biodiversity,

educate the public about Minnesota's biodiversity, provide tools to help Minnesotans discover the biodiversity in their own neighborhoods, and provide a format for sharing their discoveries with each other, as well as others worldwide. It will also provide opportunities for zoo members, volunteers, interns, staff, and the general public to participate and receive training in finding, identifying, and documenting native wildlife.

Measurable Outcomes

- Pilot wildlife surveys took place from June to October 2013. Methods used included bird surveys, bird mist netting, insect hand netting, small mammal live trapping, trail cameras, and visual encounter surveys. Monitoring continues on an on-going basis.
- Project participants have included Zoo volunteers, area college students, boy scout troops, young professional associations, and more. In January 2014, the first public education program will take place.
- Public awareness of the program has included five presentations, including a Google+ hangout in partnership with Zoo Atlanta as well as presentations at the Minnesota School of Environmental Studies. Social media pages for the BioDiscovery Project have been launched.

Program at a Glance: Zoo Site Habitat and Landscape

Projects:

- BioDiscovery Project
- Prairie Restoration

FY13 Actual: \$93,538

FY14 Budgeted: \$114,526

FTE: 1.5

Prairie Restoration

Tallgrass prairie once stretched from Oklahoma to the Red River Valley. Today in Minnesota, less than one tenth of one percent of the original prairie is left. Tallgrass prairie is the only functionally extinct



ecosystem on the continent. These grasslands that wildlife depends on provide both habitat as well as a number of ecosystem services. This ecosystem has the potential to remove and store tons of carbon dioxide per acre per year, mitigating climate change. Grasslands also store water, reducing erosion and downstream flooding. The wildflowers in these areas provide habitat for a diversity of pollinators that can pollinate nearby agricultural lands.

The goal of this project is to rehabilitate the mown, dysfunctional parking lot berms at the Zoo site to represent one of the three biomes that covered pre-settlement Minnesota; encourage Zoo guests to interact with the Prairie; and educate visitors about this unique ecosystem.

Measurable Outcomes

- The Zoo prairie was successfully developed in 2013. Featured plants included: black-eyed Susan, long-headed coneflower, pale purple coneflower, prairie phlox, spiderwort, prairie smoke, lobelia, pussy toes, fragrant giant hyssop, prairie onion, rattlesnake master, wild bergamot, white prairie clover, purple prairie clover, stiff tickseed, showy penstemon, hoary vervain, blue grama, side-oats grama, prairie June grass, wild Canada rye, and prairie dropseed.
- In 2013, the Zoo placed graphics adjacent to areas where the visitors congregate as they approach the entrance. Visitors and zoo education program participants frequently visited the project by stopping to read the information. The signs discuss prairie ecology, certain species of plants and animals in the prairie, the status of today's prairie in Minnesota and the Midwest compared to their historical range, as well as discuss modern prairie conservation and the agencies/NGOs that are most active in this work.
- Over 169 hours of volunteer time were contributed to the project in 2013. Presentations were given in the field and classroom to the Minnesota Master Naturalist: Prairies and Potholes course, School of Environmental Studies, Great River Chapter of the American Society of Botanical Arts, Zoo staff, and Zoo Board of Directors. Two classes from the School of Environmental Studies helped seed prairie grasses and plugs in the fall. Seeds were collected from blooming plants and are currently being grown in the greenhouse in preparation for planting in 2014.

Minnesota Farming Heritage

Farming is at the heart of Minnesota's history and development, yet today more than half of all Minnesotans live in urban or suburban settings with little or no exposure to Minnesota's agricultural history or culture. The Wells Fargo Family Farm provides an opportunity for the Zoo's 1.28 million guests to experience a working farm, directly interact with farm staff and animals, and learn to appreciate agricultural food production.

Legacy Farm Program



Thanks to Legacy funding, the Minnesota Zoo was able to extend the season of the Wells Fargo Family Farm beyond its historical May to September season to include full programming and exhibits from April through November.

Measurable Outcomes:

- This program made the Wells Fargo Family Farm experience available to an additional 213,479 zoo guests.

Harvest Festival



The Harvest Festival celebrates autumn in Minnesota and the annual traditions associated with the Midwestern harvest season. The festival is an extension of the current farm programming at the Wells Fargo Family Farm and features an array of artists and

craftspersons from throughout the state. The festival's activities took place on weekends in October and included live music, apple press demonstrations, crafts, face painting, milking demonstrations, blacksmith demonstrations, spinners/weavers and a hay maze.

Measurable Outcomes

- Increased attendance (14,102 attendees in October 2013, a 47% increase over the prior year's corresponding weekends)

Program at a Glance: Minnesota Farming Heritage

Projects:

- Legacy Farm Program
- Harvest Festival
- Farmer's Market

FY13 Actual: \$129,395

FY14 Budgeted: \$121,283

FTE: 1.7

- Positive survey feedback: 90% satisfaction rating of Harvest Festival experience.

Farmer's Market

The objective for the Farmers' Market at the Minnesota Zoo is to support and promote the local farming community while educating people on the importance of sustainability. In addition to providing local farmers with the opportunity to share their work with the public at the Zoo, the Zoo Farmer's Market also features demonstrations on conservation and sustainability, musical artist performances, and general information about Minnesota Zoo programming.

Measurable Outcomes

- During the Summer 2013 season, participation in the Zoo Farmer's Market increased. Approximately 4,500 guests attended the Farmer's Market this season.
- A musical artist was featured in Summer 2013 at each week's Zoo Farmer's Market, an added feature which received consistently positive feedback in surveys.
- Sustainable seafood cooking demonstrations educated guests about increasing worldwide demand for seafood and how to purchase fish caught or farmed using environmentally friendly practices.

Administration

These funds are budgeted for financial monitoring and oversight of the Minnesota Zoo's legacy funds, including regular review of legacy fund expenditures, financial reporting, budget management, and assisting program staff in work planning for legacy projects.

Program at a Glance: Administration

Projects:

- Administration of Legacy Funded Programs

FY13 Actual: \$35,686

FY14 Budgeted: \$69,587

FTE: .35