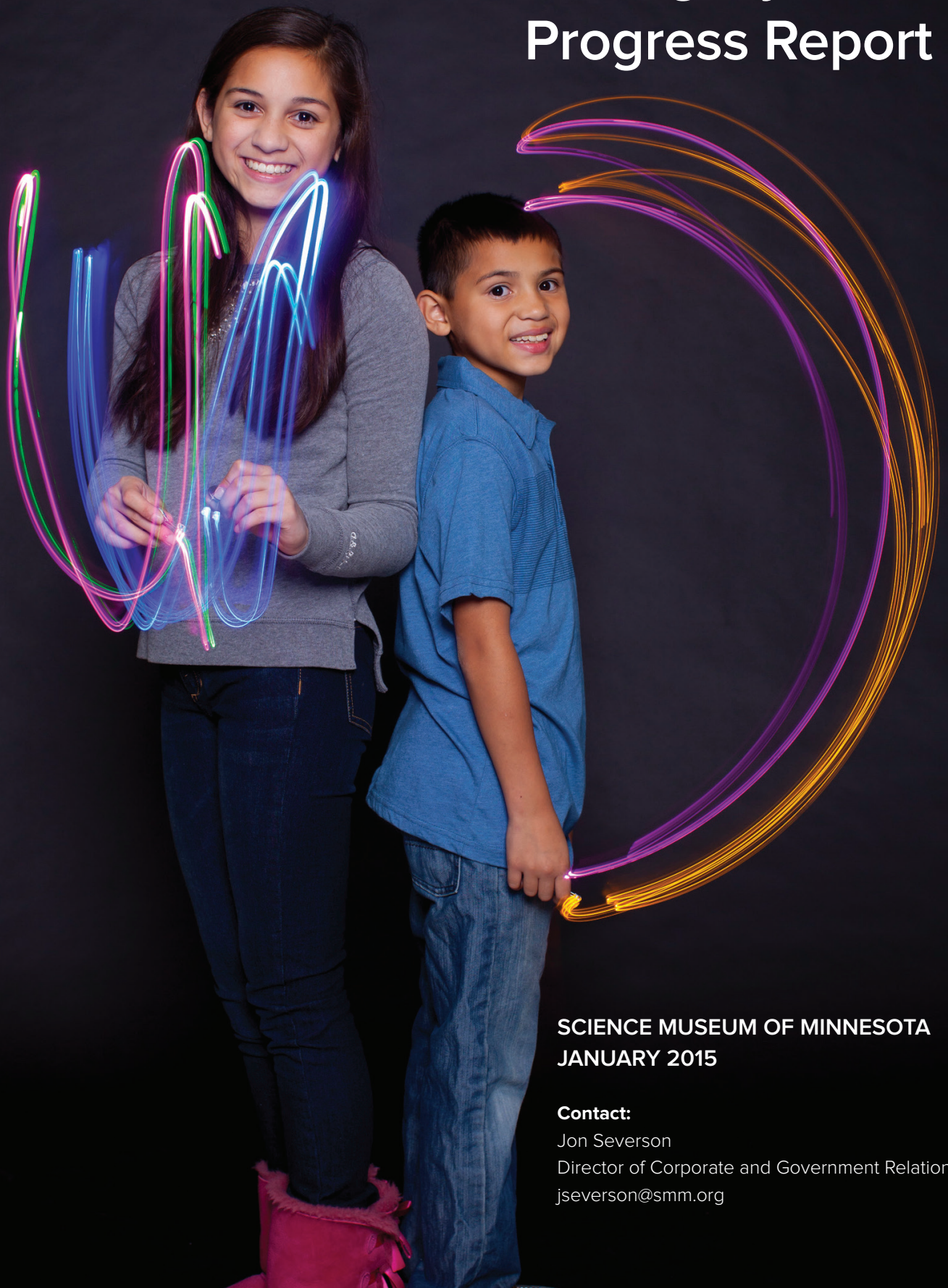




Science
Museum
of Minnesota®

Legacy Fund Progress Report



SCIENCE MUSEUM OF MINNESOTA
JANUARY 2015

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The Science Museum of Minnesota is pleased to submit a current review of our work accomplished with the generous appropriation of \$1.1 million per year for FY14-FY15 from the Arts and Cultural Heritage Fund of the Minnesota Legacy Amendment. The museum is committed to using these funds to create deeper and broader connections with residents throughout the state, and inspire even more enthusiasm in Minnesota for science and its social and cultural impact in the past, present and future. This progress report highlights accomplishments in FY14.

American Indian Collections

The Arts and Cultural Heritage Fund has been instrumental in establishing and expanding the Science Museum's first project, an American Indian Collections exhibition. Previous Legacy funds enabled the purchase of the Bishop Henry Whipple Collection consisting of local and regional American Indian artifacts from the 1850s. With Legacy support, we are developing an American Indian Collections exhibition featuring these artifacts and those from the museum's other American Indian collections. The resulting exhibition tells the story of generations of Dakota and Ojibwe people who have made their home in Minnesota. We relied heavily on our American Indian Advisory Council in shaping this exhibition. They lent their voices and stories to the objects, as this is their story to tell. The pilot exhibition opened in February 2013.



Progress made towards project goals includes:

1. Expanding the pilot exhibition to include more objects, hands-on activities and visitor feedback opportunities

We expanded the area where we are displaying objects and will more than double the footprint of the exhibition. We are currently displaying 90 objects and we will continue to add new objects for viewing in FY15. Accessible, interactive components, including video components, are being developed, built, and installed. The Visible Lab is one component that is now operational. This glass enclosed space allows visitors to observe how exhibition objects are prepared for display and conserved for future generations. Volunteers interpret and explain what is occurring in the Lab. Staff from our Evaluation and Research in Learning Department are conducting formative evaluation. The museum collects visitor input through feedback boards and stations both electronically and via sticky notes. Audience surveys refine future iterations of the exhibition. Examples of comments from visitors include:



"Paintings reflect to me a lot even if I'm a twelve year old, we all can have our wonderful reactions."

"The gender fluidity within cultures is something I don't hear or get the chance to learn about very often. I'd be excited to see this exhibit. Please and thanks!"

2. Initiating community programming that included creating a teen program for American Indian youth

We launched a program for native teens modeled after the museum's other teen programs and the *Funds of Knowledge* model which engages youth in learning about their own community. We recruited 10 teens from Harding High School and Summit Academy OIC. The project supports youth in learning STEM content, science process skills, and critical thinking. As ethnographic researchers, they learned how traditional science knowledge and inquiry can be integrated with lived experiences and cultural perspectives. They learned social science research methods that expanded their understanding of how cultural knowledge informs science learning, and came to recognize and value the science embedded in their everyday lives. This opportunity was a paid job which supported youth in developing employment skills while exploring American Indian experiences.

3. Inventorying and digitizing the museum's American Indian ethnology collections to make them accessible to a larger audience

In May 2014, the Science Museum hired a staff member to begin conducting an inventory and digitization of the American Indian collections. The process entails creating digital images of the objects, and updating records with object descriptions, measurements, locations, and materials. Dedicated staff brings the capacity to: update records with new classifications and object names; add terms to the classification and object name lexicon; identify issues in the database and standardize data fields to improve search capability. Media relating to the objects are cataloged to increase knowledge and understanding of the cultural artifacts.

We hope additional Legacy funds in the FY16-17 biennium will help us to complete the American Indian Collections exhibition; develop a supporting curriculum; continue the work of the Visible Lab; and continue digitization.

School Services

With previous Legacy support, we undertook a museum-wide evaluation of our offerings to schools to determine the best way to serve student and educator audiences. Current Legacy support of our second project has given us the ability to invest in new programs and resources that directly address academic standards and ensure high-quality educational experiences.

Progress made towards project goals includes:

1. Reach every county in Minnesota through our work with schools

It is our goal to provide programming to the entire state of Minnesota, bringing STEM education into the classroom and offering programs at the museum that students and teachers can participate in. **We are excited to announce that during the 2013-2014 school year, for the first time, we served schools in 87 of 87 counties across Minnesota.** If student groups are not able to come to the museum, we send instructors to schools statewide to provide hands-on programs and interactive assemblies. With Legacy support, the Science Museum hired a School Liaison to build and strengthen partnerships with schools across Minnesota.



"Science Museum [outreach] programs are such a valuable science resource for our school. They bring real-life science experiences to the students in a way most classrooms cannot provide."

-Teacher feedback

2. Improve support for 21st century teacher needs through more explicit connections to standards

We launched the Science Museum's Minnesota Academic Standards database in December 2013. This tool allows educators to search the museum's menu of programs to find resources for a specific grade to ensure that specific academic standards are supported. We continue to refine this searchable, web-based database (found at smm.org/standards) so that it is accessible and user-friendly. Since its launch, the database has been accessed over 3,200 times, providing a very valuable resource for educators statewide. We also develop and conduct rigorous program evaluation. Teachers respond to surveys after they book a field trip and after they visit the museum with their students. These surveys provide constant feedback and we revise programs based on results. Evaluative data indicates:

- 94% of teachers said their field trip to the Science Museum met their learning goals.
- 75% of teachers said a Science Museum field trip supported academic standards.

3. Increase our web capacity to support access to museum resources.

Museum staff worked with Tilka Design, a local communication design firm, to rebrand and recreate school materials and our website, ensuring consistent, integrated messaging for all school programs. We are committed to our teachers and want to ensure that our school program information and website resources are easy to access and consolidated in clear, concise messaging. Legacy funds were used to create an excellent new 23-page *SciEd. Teacher Resource Guide* which helps teachers to more effectively plan and take advantage of Science Museum field trips, outreach programs, and additional resources.

We are inspired by these successes, especially the milestone of reaching every county in Minnesota through field trips and school programs, and we hope to continue this work with additional Legacy funding during the FY16-17 biennium.

Omnitheater Upgrade

Since the current William L. McKnight-3M Omnitheater opened in 1999, on average, over 500,000 people have visited per year. The Omnitheater at the Science Museum is a leader in the giant screen film industry: its films have been seen in 148 cities in 31 countries, translated into 14 languages. In 2014, major movie distributors started supplying movies in digital format. 2013 was the last year that commercial movie theaters used film projection technology. The goal for our third project is to implement the technical upgrades necessary to show digital productions. The Science Museum will be the only beta site for this projection technology and the first giant dome screen theater in the world to operate this new technology.



Progress made towards project goals includes:

- A successfully concluded agreement with the IMAX Corporation for the new Laser Dome projection system. Upon signing the agreement in June 2014, the Science Museum made its first payment for the digital projection system in the amount of \$600,000.
- The museum contracted with HGA architects of Minneapolis to do the mechanical, structural, and electrical design work.
- The project remains on schedule with the first major milestone coming up in September 2015 when the theater will shut down for a month to build out a new rear projection booth with the mechanical infrastructure to house the digital system; the new projection system will be installed in early 2016 and beta testing will begin; and it is targeted to go live with audiences in October 2016.

We look forward to showing films with improved image quality using a digital projection system that uses less energy to operate. With support from the Arts and Cultural Heritage Fund, we can provide this one of a kind, immersive learning experience to visitors.

It is our pleasure to submit this progress report. We are proud of the work we have completed so far with the Legacy Amendment funds and are looking forward to continuing these efforts.