

ML 2014 Project Abstract

For the Period Ending June 30, 2017

PROJECT TITLE: Urban Environmental Education Engaging Students in Local Resources (UEE)

PROJECT MANAGER: Meg Krueger

AFFILIATION: Wilderness Inquiry

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FUNDING SOURCE: Environment and Natural Resources Trust Fund

LEGAL CITATION: M.L. 2014, Chp. 226, Sec. 2, Subd. 09c; M.L. 2015, Chapter 76, Section 2, Subdivision 19

APPROPRIATION AMOUNT: \$1,093,000

AMOUNT SPENT: \$1,062,564

AMOUNT REMAINING: \$30,436

Overall Project Outcomes and Results

Wilderness Inquiry undertook this project of connecting youth to natural spaces in response to an observation that fewer and fewer young people access and enjoy nature than previous generations. With the growth of the urban population, resource management agencies were not in a position to connect young people to the Mississippi River and its surrounding parks and waterways. Through extensive partnerships with land management entities, federal agencies, local non-profit organizations, and school districts, Wilderness Inquiry exceeded the outcomes of this project by serving more than 25,000 Minnesota youth and families in the Twin Cities metro area and across the state.

- Wilderness Inquiry connected more than 21,000 youth to place-based, outdoor learning through single-day events on the Mississippi River, Minnesota State Parks, St. Paul and Minneapolis Regional Parks, and more.
- 2,794 youth engaged in deeper learning by participating in 2-3 day camping experiences as well as yearlong outdoor clubs. These experiences offered students the opportunity to gain comfort and confidence being outdoors. Fire building and shelter building activities were especially popular on these trips.
- 1,207 youth experienced 4-5 day camping trips or 40+ hours of experiential, place-based learning. These trips included paddling in the Boundary Waters Canoe Area or Voyageurs National Park, hiking in Superior National Forest, or multi-day events in the metro area, exploring the history and ecosystem of the Mississippi River.
- 148 students who participated in multi-day overnight exchange experiences introducing urban and rural youth to each other and the natural resources of each respective area. Despite the project ending in June 2017, Wilderness Inquiry will continue this program due to its success and growth over three years.
- Wilderness Inquiry trained and hired over 50 licensed teachers to lead programs and design content for this project. These professional development opportunities for teachers resulted in hundreds of youth learning MN state-standard curricula through place-based outdoor opportunities. The teachers expressed that they will use the skills they learned and the content they designed in their classes for many years. Empowering educators to connect their students to outdoor learning is one of the greatest accomplishments of this project, and its impact is yet to be truly known.

Project Results Use and Dissemination

Wilderness Inquiry successfully evaluated and disseminated the outcomes of this project through partnership with the University of Minnesota Center for Applied Research and Educational Improvement. Final report briefs from 2014-2016 evaluations can be found online for the general public at <https://www.wildernessinquiry.org/current-news/research-results/uwca-evaluations/>. Results have been shared

with the Wilderness Inquiry staff to ensure continued improvements to training and program models. These findings have been shared at conferences and with our local partners including Minnesota Department of Natural Resources, Minnesota Department of Education, Minneapolis Park & Recreation Board, St. Paul Parks and Recreation, and others. Our work continues to be shared by our national partners including Children & Nature Network, City Parks Alliance, National Park Service, and National Summer Learning Association. In July 2017, Wilderness Inquiry was selected from a group of finalists to receive a national education award for excellence and innovation in summer learning programs, read more about the honor at <https://www.wildernessinquiry.org/current-news/news-notes/wilderness-inquiry-wins-major-award-national-summer-learning-association/>.



Environment and Natural Resources Trust Fund (ENRTF) M.L. 2014 Work Plan Final Report

Date of Report: August 15, 2017
Date of Next Status Update Report: Final Report
Date of Work Plan Approval: June 4, 2014
Project Completion Date: June 30, 2017

PROJECT TITLE: Urban Environmental Education Engaging Students in Local Resources (UEE)

Project Manager: Meg Krueger
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Location: Statewide; including Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, Washington

Total ENRTF Project Budget: \$1,093,000	ENRTF Appropriation:	\$1,093,000
	Amount Spent:	\$1,062,564
	Balance:	\$30,436

Legal Citation:

M.L. 2014, Chp. 226, Sec. 2, Subd. 09c;
M.L. 2015, Chapter 76, Section 2, Subdivision 19

Appropriation Language:

\$1,093,000 the second year is from the trust fund to the commissioner of natural resources for an agreement with Wilderness Inquiry for a collaborative partnership, including the National Park Service, Minneapolis Public Schools, and St. Paul Public Schools, to establish a metro-wide system providing place-based environmental education experiences using existing, but underutilized, outdoor environmental resources serving over 15,000 middle and high school students. This appropriation is available until June 30, 2017, by which time the project must be completed and final products delivered.

Carryforward; Extension: (d) The following project may be extended statewide, Laws 2014, chapter 226, section 2, subdivision 9, paragraph (c), Urban Environmental Education Engaging Students in Local Resources.

I. PROJECT TITLE: Urban Environmental Education Engaging Students in Local Resources (UEE)

II. PROJECT STATEMENT:

Urban Environmental Education Engaging Students in Local Resources (UEE) facilitates a variety of high quality, place-based, environmental education programs for 16,150 low-income youth over three years by establishing an environmental education system for disadvantaged middle and high school students in the seven-county metro area. In partnership with Minneapolis and Saint Paul Public Schools, Wilderness Inquiry will conduct a series of teacher professional development workshops generating specific experiential curricula, adherent to state standards, into the districts during the academic year and summer credit recovery programs for middle and high school students. In addition to both metro school districts, UEE will work in partnership with the National Park Service, the Minnesota Department of Natural Resources, Minneapolis and Saint Paul Parks and Recreation, the Minnesota Department of Education, and others, using existing but underutilized environmental resources throughout the metro area as program sites. These include, but are not limited to:

- Kroening Center at North Mississippi Park
- Minnehaha Falls Park
- New Urban Wilderness Youth Camp at FSSP
- Lilydale Regional Park
- Grey Cloud Island
- St. Anthony Falls
- Quaking Bog at Theodore Wirth Park
- Thomas Savage Center and FSSP
- Crosby Farm Regional Park
- Bruce Vento Nature Sanctuary
- Mississippi River Gorge
- Spring Lake Park Reserve near Hastings

With today’s youth increasingly disconnected from the natural world, it is more important than ever to provide opportunities for environmental learning and engagement in local communities. The Twin Cities are home to an abundance of high quality environmental resources, many in connection with the Mississippi River. Unfortunately, most are largely unvisited by low income youth and youth of color—a growing percentage of our urban population. A significant inhibiting factor is that these resources are managed by multiple agencies that do not have a grand plan for connecting youth to environmental resources outside of their jurisdictions, resulting in often redundant, competitive, and small scale outreach efforts and underutilized resources. UEE will directly address this barrier and enhance partners’ individual strengths by facilitating a cross-jurisdictional, interagency partnership consortium. Additional partnering organizations will include the Minnesota Department of Education, the U.S. Forest Service, and the U.S. Fish & Wildlife Service; many partnering organizations will help facilitate educational and interpretive programmatic elements. Additionally, UEE will establish and facilitate Outdoor Clubs in multiple schools throughout the metro districts that utilize this partnership consortium to provide single and multi-day experiential opportunities, many for academic credit.

Through a variety of experiential, place-based educational programs ranging from six to 60 hours in duration, at an average cost of \$70 per student, UEE provides the opportunity for enriching and engaging environmental science and social studies lessons and the development of core personal skills which lead to success in school and life. UEE will implement district-wide, experiential, place-based education in accordance with Minnesota’s K—12 Academic Standards on an unprecedented, metro-wide scale reaching thousands of students and laying the groundwork for future replication and expansion.

To extend its impact statewide, UEE will also include youth from six greater Minnesota school districts on multi-day environmental learning exchange experiences. UEE will conduct ten experiential learning exchanges, serving 100 youth and consisting of two, five-day experiences. One of these will take place in the Twin Cities, at sites listed above. The other experience will take place in outstate locations such as Voyageurs National Park, Superior National Forest, or Chippewa National Forest.

UEE anticipated outcomes include:

- Establishing a metro-wide, integrated system for delivery of cost-effective experiential environmental education
- 12,650 students introduced to experiential, place-based environmental education using local resources
- 2,500 students receive more in-depth exposure via three-day experiences
- 1,000 students participate in five-day experiential, place-based environmental education
- 100 urban and outstate youth participate in environmental learning exchange experiences
- Evaluation of program effectiveness in meeting Minnesota's K—12 Academic Standards

III. PROJECT STATUS UPDATES:

Project Status as of December 1, 2014:

Since launching the UEE program in July of 2014, Wilderness Inquiry has served 650 youth in place-based education experiences. In addition, Wilderness Inquiry worked with youth in after-school programming in 14 Saint Paul Public School classrooms. This fall, Wilderness Inquiry had 1,748 interactions with youth through these after school programs. (The SPPS after-school program meets 4 days a week, serves approximately 100 youth each day, and will continue through May 2015.)

Wilderness Inquiry facilitated several professional development opportunities for teachers. In August, Wilderness Inquiry and partners worked with 17 educators from Saint Paul, Minneapolis, and Greater Minnesota in a week-long teacher professional development course focused on place-based education. During this course, educators developed place-based curriculum to implement in their classes throughout the year. Wilderness Inquiry also held a professional development day event for 5 educators from Saint Paul and hosted a DNR-sponsored professional development in November for 27 educators. These professional development opportunities have resulted in more than 150 youth being directly impacted by educator-developed place-based education this fall. Curricula is posted on Wilderness Inquiry's website and available for further dissemination.

To accommodate continued expansion, Wilderness Inquiry has invested in additional educational and trip equipment for place-based education events, including water quality monitoring equipment and ponchos for youth. In addition, Ashley Pethan was hired as a Program Coordinator, and Alex Sitek as Program Assistant for UEE.

Wilderness Inquiry continues to collaborate with school districts and other partners to initiate learning exchanges for youth. Also, Wilderness Inquiry entered a 3-year contract with University of Minnesota's Center for Applied Research and Educational Improvement to evaluate success and measure impact of the UEE program.

Amendment Request: December 22, 2014

Approved by the LCCMR February 2, 2014

The following changes were made to Activity 1 Description (page 3).

- 2,500 students will participate in 3-day place-based environmental education with or without an overnight experience.
- 1,000 students will experience 5-days or 40 hours of place-based education.
- 1,000 students will engage throughout Minnesota and/or along the Mississippi River corridor.

The following changes were made to the Project Team (page 9).

- Ashley Pethan hired as a Program Coordinator.
- Alex Sitek hired as Program Assistant.

Project Status as of June 1, 2015:

Through strong partnerships with Minneapolis Public Schools, Saint Paul Public Schools, and Greater Minnesota districts, Wilderness Inquiry has served 2,537 students through 6-hour place-based education experiences, 169 students in 20-hour experiences, and 235 students in 40-hour experiences since July of 2014.

During the past few months, we worked with students on school grounds and at local, regional, and state parks to teach environmental education, science, math, history, language arts, outdoor skills, and leadership in a hands-on, engaging manner. Our staff learned strategies to engage students over a longer period of time and across content areas. Students were exposed to their local lands and gained appreciation and greater connection to their public resources.

Wilderness Inquiry has also been planning summer programming that is expected to serve approximately 6,500 youth between June and October through a variety of place-based education opportunities throughout Minnesota. In planning with schools, we have realized a trend towards 2-day and 4-day events. Therefore, many of the upcoming extended trips planned are 4-day experiences (opposed to 5-day) as school districts find that is a sweet spot for recruiting and retaining students. This is the rationale for the additional amendment request. All numbers reported in the current report apply strictly to the 3-day/20 hour and 5-day/40 hour requirement.

Amendment Request: June 1, 2015

Amendment Approved by the LCCMR June 8, 2015

The following changes were made to Activity 1 Description (page 5) and are underlined.

- 2,500 students will participate in a 2-day or 3-day place-based environmental education with or without an overnight experience.
- 1,000 students will experience four-days, five-days or 40 hours of place-based education.

Project Status as of December 1, 2015:

Through work with partner school districts in the metro area and Greater Minnesota, Wilderness Inquiry served a total of 11,726 youth through 6-hour place-based education experiences, 441 youth in 20-hour experiences, and 624 youth in 40-hour experiences since July 2014.

Since the inception of the three-year project, Wilderness Inquiry has nearly met the goal of exposing 12,000 youth to single-day outdoor experiences. Approaching completion of that goal allows us to focus on expanding the 2-day and 4-day events to engage youth and partners in deeper, more enriching outdoor experiences. With strong partnerships, we provide activities and lessons that meet the objectives of district partners and effectively integrate traditional classroom curricula with outdoor place-based education.

The school year opens new opportunities for lengthened engagements with students. We are working with several hundred elementary and middle school students in the Burnsville-Eagan-Savage district to support after school programming. Over the course of the year, we will have exceeded 20 hours of program time with them.

Amendment Request: April 11, 2016

Amendment Approved by the LCCMR April 11, 2016

The following changes are requested for Project Budget and reflected on the attached spreadsheet (Budget A):

- Wilderness Inquiry requests reallocation of \$42,000 from Food to Equipment/Tools/Supplies in Activity I. High food costs are incurred for overnight and extended trips, but most school and youth groups prefer 2-3 consecutive day events without overnight experiences. Many of these groups come to Wilderness Inquiry as part of a summer school credit recovery program. In order to meet the academic objectives of these groups, we intend to purchase additional educational supplies and equipment. Additionally, this reallocation will allow for portable restrooms on site, boat repairs, and extra warm layers for inclement weather on programming days throughout the year.

- Wilderness Inquiry requests reallocation of \$10,000 from Activity I to Activity II in Transportation. These funds are intended to help transport Minnesota youth for Activity II exchange programs within the state. These exchange programs will run again in summer 2016 and currently less than 10% of the Transportation budget remains within Activity II while 80% remains in Activity I. Activity I transportation costs are often covered by school groups and there is less need for Wilderness Inquiry to subsidize.
- Through these budget reallocations, Wilderness Inquiry will increase the number of youth introduced to daylong experiential programming by 650 participants.

The following changes are requested for the Project Team (page 12):

- Meg Krueger will replace Chad Dayton as UEE Project Manager.
- Julie Storck will replace Chad Dayton as Program Director.
- Meg Krueger will replace Julie Storck as Program Manager. This change better reflects Meg Krueger's role within Wilderness Inquiry; 50% of her time will be dedicated to managing the UEE project as reflected in the project strategy.
- Nell Holden received a promotion and will now spend 50% of her time on UEE program coordination.
- Gwen Wilson was hired as Program Outreach Assistant.
- Salaries and FTE have been reconfigured to reflect true personnel time and compensation.

Project Status as of June 1, 2016:

With a little over a year of programming time left in the grant cycle, Wilderness Inquiry is on track to meet activity outcomes and metrics. Along with partner agencies and school districts throughout the metro area, we have served 13,948 students in a single-day introductory experience in the outdoors. 1,117 youth have experienced deepened engagement with the outdoors through 2-3 day or 20-hour exposure. 707 youth have spent 4-5 days with Wilderness Inquiry in the outdoors on extended camping trips and consecutive single-day experiences. During the final year of the project, we are focusing on the deeper engagements and the exchange experiences.

An educator who participated in Wilderness Inquiry's Teacher Professional Development course in August 2015 started an Outdoor Club for her students this school year. Week by week students explored the Powderhorn Park area, noting changes in the environment and learning outdoor skills. In May, students from the club took a 5-day Voyageurs National Park canoe trip with Wilderness Inquiry.

The Outdoor Club programming expanded into Burnsville-Eagan-Savage district this school year. As a result, Wilderness Inquiry will offer outdoor experiences to students enrolled in summer school and community education in the district. Similarly, Lakeville Area Learning Center reached out to Wilderness Inquiry for credit recovery programs and summer school engagement.

Wilderness Inquiry has a full calendar going into the summer season. Students who have completed introductory experiences, such as groups from Minneapolis Public Schools, are deepening engagement and place-based education learning opportunities through overnight and multi-day events.

Amendment Request (10/11/2016):

Amendment Approved by LCCMR 10/12/2016

The following changes are requested for the Project Budget and reflected in the attached excel spreadsheet (Budget A), these are both retroactive amendment requests:

- Wilderness Inquiry requests to increase Travel Expenses in Activity 2 by \$3,860 to \$17,860 total. To cover these costs we reduced food expenses in Activity 2 by \$3,860 to \$3,140 total. We took a group of 8th grade students from Saint Paul Open World Learning Community (OWL) to Itasca State Park for an exchange experience with Bemidji High School students on September 27th-30th. In early September, OWL asked to increase the number of students from 45 to 65, requiring us to provide a second bus. Saint Paul Public Schools does not allow Wilderness Inquiry to transport students in our vehicles and

cannot contribute funding for transportation. Our permits coordinator Cyri reached out to our bus company, but they were unable to provide a second bus due to a driver shortage. Cyri contacted four other bus companies requesting quotes: one of these companies did not have buses available, two did not return her requests, so Cyri worked with Sugarloaf, a company we've worked with in the past that typically offers competitive options. The manager at Sugarloaf told Cyri he was able to provide two buses for our group and asked her to call back in a week when he would provide a quote. When Cyri returned his call the following week he told her he hadn't had time to send a quote and could she call back the following week. On Friday, September 23rd the manager at Sugarloaf told Cyri he was unable to provide two buses and apologized for the inconvenience. Cyri contacted Bemidji Bus Lines at his suggestion and was quoted the \$9,400 quote on Monday, September 26th, the day before the start of the trip. The total invoice was for \$9,250 due to a small discount we received.

- Wilderness Inquiry requests to move money for liability insurance from Activity 1 to Activity 2. The total amount of \$75,000 will not change. We needed \$8,977 more in Activity 2 liability insurance than we anticipated; to cover these costs we moved \$8,977 from Activity 1 liability insurance.

Amendment Approved by LCCMR 10/12/2016

Project Status as of December 1, 2016:

Wilderness Inquiry has connected 17,587 Minnesota youth and their families to introductory single-day outdoor education experiences throughout the state. The LCCMR grant funding allowed us to expand engagement with a portion of these students to offer deepened outdoor experiences. 2,378 youth have participated in 2-3 day and overnight experiences, many of these students started with an introductory experience in the summer of 2014 or 2015. 1,084 youth have had 4-5 day experiences in the Boundary Waters Canoe Area, Voyageurs National Park, and other waterways needing increased protection by this next generation of environmental stewards.

One group of youth from East Side Neighborhood Services came together as an Outdoor Club during the 2015-16 school year, participating in place-based, outdoor education activities facilitated by a Wilderness Inquiry trail guide once per week. This October, the group spent a day on the Mississippi River before an overnight trip to Interstate State Park and a paddle on the St. Croix River. None of the students had previously experienced paddling and were empowered to use the camping skills from their Outdoor Club on their overnight trip.

For the third consecutive summer youth (ages 10-14) from HCMC's program Taking Steps Together had the opportunity to visit Lake Itasca State Park and spend four days hiking, exploring, camping, and canoeing. The youth enrolled in this program each summer are encouraged to adopt healthy lifestyle habits and learn to enjoy the outdoors with a group of their peers.

In the final six months of the grant cycle, Wilderness Inquiry plans to continue its growing partnership with public school districts throughout the metro. Students who have participated in day and outdoor club events have the opportunity to experience an overnight or multi-day trip in 2017 as we engage groups in deeper levels of engagement with remaining funds.

Amendment Request (12/1/2016):

Amendment Approved by LCCMR 12/2/2016

The following changes are requested for the Project Budget and reflected in the attached excel spreadsheet:

- Wilderness Inquiry has completed the outcomes for Activity 2 and wishes to reallocate the remaining Activity 2 funds to support Activity 1 programming. With additional funds, Wilderness Inquiry will have the resources to support introductory day experiences for 5,000 more youth above and beyond the 12,650 youth in Activity 1. The request includes the following reallocation of remaining Activity 2 funds:
 - Of the \$30,054 remaining in Activity 2 Personnel, move \$10,054 to Activity 1 Personnel and \$20,000 to Activity 1 Travel Expenses. Activity 1 Personnel budget will increase by \$10,054 to a total of \$625,554.

- Of the \$10,000 remaining in Activity 2 Professional Service Contracts, move \$10,000 to Activity 1 Travel Expenses. Activity 1 Travel Expenses will increase by \$30,000 to a total of \$64,400.
- Of the \$1,423 remaining in Activity 2 Camping Fees, move \$1,423 to Activity 1 Camping Fees. Camping Fees in Activity 1 will increase by \$1,423 to \$22,453 total.
- Wilderness Inquiry requests to increase Equipment/Tools/Supplies in Activity 1 by \$10,000 to \$80,425 total to cover unanticipated boat repair costs incurred through the season of programming. These funds will come from decreasing Activity 1 Professional Service Contracts by \$10,000.
- Wilderness Inquiry will serve an additional 5,000 youth in Activity 1 programming for a total of more than 20,000 youth in three years.

Amendment Approved by LCCMR 12/2/2016

Amendment Request (3/15/2017):

Wilderness Inquiry will serve approximately 1,000 more students before June 30, 2017 for a project total of more than 22,000 in three years. To accommodate these additional youth, the following change is requested for the Project Budget and reflected in the attached excel spreadsheet:

- Wilderness Inquiry requests to increase Activity 1 Food by \$10,000 to \$55,500 total to cover anticipated costs for multi-day youth trips. These funds will come from decreasing Activity 1 Professional Service Contracts by \$10,000. The outcomes for Activity 1 Professional Service Contracts will be met for less than anticipated, allowing those funds to go towards additional events planned before the end of the project. Youth food costs an average of \$2.5/meal and we anticipate serving an additional 400 meals between day and extended trips.

Amendment Approved by the LCCMR 3/17/2017

Overall Project Outcomes and Results:

Wilderness Inquiry undertook this project of connecting youth to natural spaces in response to an observation that fewer and fewer young people access and enjoy nature than previous generations. With the growth of the urban population, resource management agencies were not in a position to connect young people to the Mississippi River and its surrounding parks and waterways. Through extensive partnerships with land management entities, federal agencies, local non-profit organizations, and school districts, Wilderness Inquiry exceeded the outcomes of this project by serving more than 25,000 Minnesota youth and families in the Twin Cities metro area and across the state.

- Wilderness Inquiry connected more than 21,000 youth to place-based, outdoor learning through single-day events on the Mississippi River, Minnesota State Parks, St. Paul and Minneapolis Regional Parks, and more
- 2,794 youth engaged in deeper learning by participating in 2-3 day camping experiences as well as yearlong outdoor clubs. These experiences offered students the opportunity to gain comfort and confidence being outdoors. Fire building and shelter building activities were especially popular on these trips.
- 1,207 youth experienced 4-5 day camping trips or 40+ hours of experiential, place-based learning. These trips included paddling in the Boundary Waters Canoe Area or Voyageurs National Park, hiking in Superior National Forest, or multi-day events in the metro area, exploring the history and ecosystem of the Mississippi River.
- 148 students who participated in multi-day overnight exchange experiences introducing urban and rural youth to each other and the natural resources of each respective area. Despite the project ending in June 2017, Wilderness Inquiry will continue this program due to its success and growth over three years.
- Wilderness Inquiry trained and hired over 50 licensed teachers to lead programs and design content for this project. These professional development opportunities for teachers resulted in hundreds of youth learning MN state-standard curricula through place-based outdoor opportunities. The teachers expressed that they will use the skills they learned and the content they designed in their classes for many years. Empowering educators to connect their students to outdoor learning is one of the greatest accomplishments of this project, and its impact is yet to be truly known.

IV. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1: Introduce 16,150 students to place-based environmental education

Description: Program staff will coordinate and engage with MPS and SPPS administrators and teachers to develop place-based activities that support the development of student academic, social, and personal skills and meet Minnesota’s K—12 Academic Standards through experiential environmental education. Students from more than 20 middle and high schools will be recruited to participate. Program staff will coordinate school involvement, establish learning objectives, and leverage existing MN State Evaluation processes to determine academic success of students with a focus on progress toward reducing or eliminating the achievement gap. We are allocating \$13,000 in staff time for activity planning and coordination.

Over three-years, 12,650 middle and high school students will participate in one-day environmental education experiences by Voyageur canoeing, hiking, and other means utilizing extraordinary natural sites such as the Quaking Bog at Theodore Wirth Park, the gorge on the Mississippi River, Fort Snelling State Park, etc.
 Cost \$30 X 12,000 students = \$360,000.

2,500 students will participate in a 2-day or 3-day place-based environmental education. This can include overnight camping at sites such as Fort Snelling State Park, North Mississippi Regional Park, Three Rivers Parks, Lake Elmo, and other regional sites. Cost \$108 X 2,500 students = \$270,000.

1,000 students experience four-days, five-days, or 40 hours of place-based education while canoeing, camping, and exploring throughout Minnesota or along the Mississippi River from Anoka to Hastings utilizing existing facilities, such as North Mississippi Regional Park, Fort Snelling State Park, Lilydale Regional Park, and Grey Cloud Island, with an emphasis on exploring ecological features of three Mississippi River ecosystems: prairie, gorge, and flood plain.
 Cost \$300 X 1,000 students = \$300,000.

Summary Budget Information for Activity 1:

ENRTF Budget: \$972,330
Amount Spent: \$941,894
Balance: \$ 30,436

Activity Completion Date: June 30, 2017

Outcome	Completion Date	Budget
1. Select activity sites and learning objectives with MPS and SPPS; engage school partners	October 31, 2016	\$13,000
2. 12,650 students receive 6 hours of place-based learning	June 30, 2017	\$360,000
3. 2,500 students receive total of 20 hours of place-based learning at metro area sites	June 30, 2017	\$270,000
4. 1,000 students receive 40 hours of place-based experiential learning throughout MNRRA and greater Minnesota	June 30, 2017	\$300,000

Activity Status as of December 1, 2014:

- Wilderness Inquiry has met with school leadership and educators to begin outlining activity sites and learning objectives.
 - 17 educators participated in a week-long place-based education professional development.
 - As of December 1, 6 of those educators already implemented their place-based education curriculum into their classroom.
 - Below are a few outcomes from the implemented curriculum:

- 93.3% of high school students on a Mississippi River Day Trip successfully collected water quality measurements and made a graphical distribution and calculated summary statistics of their data.
 - 97% of junior high students successfully met the science standards outlined for a place-based education lesson along the Mississippi River.
 - 91.5% of 9th grade Biology students demonstrated mastery of the unit objectives and state standard during a 13-day Minnehaha Creek study.
- 5 teachers participated in a Mississippi River Day Trip as professional development. They experienced the trip that their students will experience during the spring.
- 27 educators participated in a Project Learning Tree workshop that was hosted at Wilderness Inquiry.
- Wilderness Inquiry served 631 youth during a 6-hour, introductory place-based experience.
 - Program sites included the Mississippi River, Minnehaha Creek, Fort Snelling State Park, Theodore Wirth, North Mississippi Regional Park, Duluth area waterways, and ponds near school sites.
 - Learning objectives focused on science, social studies, language arts, mathematics, and social-emotional growth.
- Wilderness Inquiry met with school leadership in planning 20-hour place-based learning experiences in the metro area. This includes facilitating a 3-day experience for North High School students in mid-December.
- Wilderness Inquiry began planning 5-day experiences for 2015. In addition, Wilderness Inquiry has been working with 13 school sites (14 classrooms) through after-school programming. Through these 13 schools, more than 100 students will have exceeded 40 hours of place-based education by May 2015.

Activity Status as of June 1, 2015:

- Place-based education for 1 day/6 hours:
 - 1,768 youth have received place-based education through day events with Wilderness Inquiry as of May 28, 2015. Events include activities days and workshops, which incorporated canoeing, water quality testing, fishing, environmental education, outdoor skills, and more.
 - 120 students were served through a place-based education after-school program with Saint Paul Public Schools between October and May.
 - 16 students engaged with more than 8 hours of place-based education at Anne Sullivan in Minneapolis. This partnership was between Wilderness Inquiry, Minneapolis educators, and the University of Minnesota.
 - 11 students received 6+ hours of place-based education during the spring session of Nellie Stone Johnson Beacons Outdoor Club.
- Place-based education for 3 days/20 hours:
 - 23 students from North High School engaged in a winter 3-day place-based learning opportunity.
 - 43 students from Harambee Elementary participated in a local 3-day event. Programming integrated middle school science and occurred at Fort Snelling State Park, Coldwater Spring, and green space on the school grounds. Partners included National Park Service, Department of Natural Resources, Minnehaha Creek Watershed District, and American Institute of Professional Geologists.
 - 81 students received between 20 and 38 hours of place-based education through the Saint Paul after-school program.
 - 10 students participated in Edison Outdoor Club's series of place-based education opportunities this winter and spring. The 3-day series included maple syruping with the DNR, cross-country skiing with the Loppet Foundation, and a service project with Friends of the Mississippi River.
 - 12 students received 20 hours of place-based education during the winter session at Nellie Stone Johnson Beacons Outdoor Club.

- Place-based education for 5 days/40 hours:
 - 69 students from Minneapolis Public Schools participated in a local 5-day event in which they earned credits in science, history, language arts, and math. Programming focused on Minnesota's resources from farm to table.
 - 166 students participated in Wilderness Inquiry led after-school programming at their school sites and received between 40 and 180 hours of place-based education.
- The majority of teachers that participated in the August teacher professional development course completed, implemented, and shared their curriculum with Wilderness Inquiry by May. We also had several teachers return for an informal reunion to discuss the impact of their work on their students.
- Minneapolis Public Schools has hired two school staff this summer specifically to work with Urban Wilderness Canoe Adventures programming through a Wilderness Inquiry teacher partnership arrangement.

Activity Status as of December 1, 2015:

- Place-based education for 1 day/6 hours:
 - 9,189 youth received place-based education through day events with Wilderness Inquiry as of November 30, 2015. Events included activities days and workshops, which incorporated canoeing, cultural and natural history, water quality testing, fishing, outdoor skill building, and more.
 - Students were introduced to public lands in their neighborhood including state, regional, county, and city parks. We offered programming to students at Lake Phalen, Theodore Wirth Park, Hidden Falls Regional Park, Elm Creek Park Reserve, and the Mississippi National River and Recreation Area corridor.
- Place-based education for 3 days/20 hours:
 - 211 youth participated in 2 or 3-day overnight experiences throughout Minnesota including Lake Maria, Carver Park Reserve, Interstate State Park, and Fort Snelling State Park. These experiences included canoeing, water quality testing, and ecosystem exploration.
 - We are currently working with 15 extracurricular enrichment programs in Minneapolis, Saint Paul, Roseville, and Burnsville-Eagan-Savage districts on a weekly basis to provide place-based educational programming. Through these school sites, more than 200 students will have exceeded 20 hours of place-based education by May 2016.
 - Wilderness Inquiry is in the initial planning phase with Minneapolis Public Schools to again offer large-scale, multi-day spring break programming to middle and high school students.
- Place-based education for 5 days/40 hours:
 - 185 high school students from Minneapolis Public Schools participated in a local 4-day event to earn academic credits in content areas such as science, math, language, arts, physical education, and social studies. The program focused on the cultural, natural, and historical aspects of the Mississippi River.
 - 69 middle school students from Saint Paul Public Schools participated in a 4-day enrichment event in September. 41 of the students attended the Itasca State Park camping trip to learn paddling and camping skills and test water quality at the headwaters of the Mississippi River. The remaining students spent four consecutive days visiting different locations in the Twin Cities, including the Mississippi River to test water quality. Students reconvened at school the following week to compare data.
- 13 teachers participated in the teacher professional development course offered in August. One of those teachers contracted the 4-day events for his 69 middle school students in September. One of the teachers has established an outdoor club at her school with Wilderness Inquiry. Teachers will be submitting their completed lesson plans by May 2016.

Activity Status as of June 1, 2016:

- Place-based education for 1 day/6 hours:

- 1,551 youth and families participated in single day events highlighting outdoor experiences and place-based education. Events included end-of-year culminating experiences where students used the information from their science and social studies classes while exploring Fort Snelling State Park.
- Families of students who participated in Burnsville-Eagan-Savage Outdoor Club were invited to a celebration at YMCA Camp Streefland where students demonstrated their skills setting up tents, paddling canoes, and cooking over a fire.
- Place-based education for 3 days/20 hours:
 - Wilderness Inquiry Outdoor Clubs around the metro area gave 456 students the opportunity to explore the urban wilderness in their backyard and gain familiarity and comfort in the outdoors over an extended period of time. Many of these students will participate in overnight and multi-day events this summer. These students spent 1.5 hours each week October-April with a Wilderness Inquiry Outdoor Educator, learning about the outdoors near their school grounds.
 - 9 students from Menlo Park Academy, a Minneapolis Public Schools contract alternative site, started an outdoor club in January. At the end of April, they spent a night at Fort Snelling State Park and in July they will spend three days on the Saint Croix River with Wilderness Inquiry. Several students have come to WI events as volunteers since the beginning of the year.
- Place-based education for 5 days/40 hours:
 - 33 students from Jefferson Community School explored the headwaters of the Mississippi River in Itasca State Park this May. Many of those students canoed from Hidden Falls to Harriet Island in September of last year.
 - 50 students from Wellstone International High School spent 5 days in Voyageurs National Park. Many of these students were involved in the Outdoor Club that was started at their school this year, demonstrating the success of progressive experiences in place-based education.
- Overall, in the final year of the project, we are investing additional resources in the extended experiences to more deeply engage youth. We are on track with meeting activity outcomes and metrics.

Activity Status as of December 1, 2016:

- Place-based education for 1 day/6 hours:
 - 3,633 youth and families participated in single day events highlighting outdoor experiences and place-based education. These events included Mississippi and Minnesota River trips as well as activities days at state, local, and regional parks including Theodore Wirth, Fort Snelling, Lake Elmo, and Battle Creek.
 - Community events such as Twin Cities Pride, Aquatennial Family Fun Night, and National Public Lands Day helped engage families of youth who participated in a WI trip with their school, camp, or youth group.
- Place-based education for 3 days/20 hours:
 - Wilderness Inquiry made a deliberate effort to engage more groups in overnight and multi-day programming during this period of the grant. As a result, 1,261 youth had overnight or multi-day experiences in the outdoors.
 - 136 students from MPS GISE & GEMS summer program, taking courses focused on civil engineering, Minnesota culture, and ecosystem restoration, spent three days exploring the Mississippi River learning about human impact and the history of the river.
- Place-based education for 5 days/40 hours:
 - 377 youth participated in 4-5 day events in the Twin Cities Metro Area and around the state.
 - 22 high school students from MPS spent 4 days in Voyageurs National Park recovering academic credit as part of their summer school program. As an example of successful continued engagement, one of the students who participated in 2015 was hired as a WI trail guide and led the trip this year.
- Overall, we anticipate exceeding our goals for the project. In the final year of the project, we are investing additional resources in the extended experiences to more deeply engage youth who have been

exposed to daylong programming. These progressive experiences cultivate curiosity and confidence and teach students about healthy-living habits, how to care for natural resources, and ways to engage more deeply with the outdoor world throughout their lives.

Final Report Summary:

Overall, this project has succeeded in fulfilling all deliverable outcomes and metrics. Since launching the project in July 2014, Wilderness Inquiry has provided place-based, outdoor learning experiences to more than 25,000 Minnesota youth.

- These experiences included day events for more than 21,000 youth introducing them to local waterways through activities such as canoeing, hiking, and fishing. These place-based educational opportunities connected students to their local green spaces and waterways while supporting the educational content they learn in the classroom. These experiences foster stewardship and strengthen the relationship between youth and their environment.
- Nearly 2,800 Minnesota youth participated in 2-3 day experiences throughout the project. Wilderness Inquiry partnered with local public schools to offer 30 Outdoor Club sites. Students enrolled in outdoor club received 20+ hours of place-based experiential education over the school year. Other youth participated in overnight camping trips to metro area parks observing night skies, animal activity, and learning camp set up and technique.
- More than 1,200 youth experienced deepened engagement with outdoor learning through 4-5 day or 40+ hours of programming with Wilderness Inquiry since July 2014.
- Over 100 teachers from Minneapolis and Saint Paul Public Schools attended professional development courses, learning about the best practices and techniques for integrating outdoor, place-based learning into classroom content.

ACTIVITY 2: Provide environmental learning exchange experiences for 100 youth

Description: 100 underserved students, 50 from metro and 50 from greater MN, participate in learning exchanges consisting of two, five-day experiences (one in Twin Cities and one in greater MN) to explore each other’s local natural resources. UEE will collaborate with the Minnesota Department of Education to secure participation of six greater MN school districts. Students from different parts of the state will gain broader understanding of the connection between Minnesota’s urban and outstate environments, fostering a deep connection to the land and to each other. Cost \$900/student for ten-day intensive experiences consisting of five-days in metro and five-days in places like Voyageurs National Park, Superior National Forest, and Chippewa National Forest. 10 days total X 100 students = \$90,000.

Summary Budget Information for Activity 2:

ENRTF Budget: \$60,670
Amount Spent: \$60,670
Balance: \$0

Activity Completion Date: June 30, 2017

Outcome	Completion Date	Budget
1. 50 students receive 5 days of place-based environmental learning in Twin Cities sites	June 30, 2017	\$45,000
2. 50 students receive 5 days of place-based environmental learning in greater MN sites	June 30, 2017	\$45,000

Activity Status as of December 1, 2014:

- Wilderness Inquiry has met with partners to begin planning for youth exchanges. For example, Wilderness Inquiry is planning a 2015 youth exchange in partnership with Voyageurs National Park.

Activity Status as of June 1, 2015:

- In partnership with Voyageurs National Park Association, a total of 30 youth are planning to participate in a 5-day experience at Voyageurs National Park. This is through the National Park Service Teen Ambassador Program and serves youth from the Twin Cities metro and Greater Minnesota.
- All 30 youth are also invited to participate in a 3-day place-based learning exchange at Fort Snelling State Park.
- The exchange program is scheduled for late July and early August.

Activity Status as of December 1, 2015:

- In partnership with Voyageurs National Park Association (VNPA), we served 22 youth from International Falls and the Twin Cities in a 5-day camping experience at Voyageurs National Park in July. In August, those same 22 students participated in a place-based education experience at Fort Snelling State Park.
- As an extension of the program, Wilderness Inquiry is working with Northland College, Rainy River Community College, and Vermilion Community College to offer college credit to students who participate in this exchange experience in the summer of 2016.

Activity Status as of June 1, 2016:

- In partnership with Voyageurs National Park Association (VNPA), 35-40 youth are planning to participate in a 5-day experience at Voyageurs National Park through the National Park Service Teen Ambassador Program that serves youth from the Twin Cities metro and Greater Minnesota during summer 2016.
- All youth who participate are also invited to participate in a 3-day place-based learning exchange at Fort Snelling State Park in August.

Activity Status as of December 1, 2016:

- In partnership with Voyageurs National Park Association (VNPA), 53 youth from Greater Minnesota and the Twin Cities participated in a 5-day camping experience at Voyageurs National Park in July. In August, 38 of those students completed the full exchange with an overnight experience at Fort Snelling State Park.
- In September, 71 8th grade students from Saint Paul Public Schools Open World Learning School spent a week in Itasca State Park. They were joined by 19 local high school students from Bemidji Public Schools JROTC club who facilitated team building games and ice breakers. The group cooked dinner together and shared their common (and not-so-common) experiences. This activity has been completed and the remaining funds are scheduled to be draw down or reallocated to support additional Activity 1 programming.

Final Report Summary:

Since the start of the project 148 students, 55 from Greater MN and 93 from the Twin Cities participated in an exchange experience of overnight camping with youth from a different region of the state. Partnership with Voyageurs National Park Association Teen Ambassador program made some of these exchange programs possible. Students learned about ecosystems and natural resources in different parts of the state as well as learning about and from each other. These exchange experiences foster a deeper understanding of Minnesota's rich cultural and natural makeup.

Activity 3: Evaluate success, measure impact of the UEE program, and disseminate results

Description: Oversee, track, and evaluate the success of the UEE program and curricula providing place-based, experiential educational opportunities, in accordance with Minnesota's K—12 academic standards, for low-income youth throughout the metro and statewide. UEE will work with researchers from the University of Minnesota's Center for Applied Research & Educational Improvement to develop and implement evaluation strategies to measure the impact and effectiveness of the experiential programming and integrated curricula in achieving environmental education outcomes in science, social studies, and language arts, as well as impact on core personal skills and executive function development. We are allocating \$60,000 for data collection, evaluation, and dissemination (\$20,000/year).

Summary Budget Information for Activity 3:

ENRTF Budget: \$60,000
Amount Spent: \$60,000
Balance: \$0

Activity Completion Date: June 30, 2017

Outcome	Completion Date	Budget
1. Evaluation process established and implemented; data collection, evaluation, and reporting	August 1, 2015	\$20,000
2. Data collection, evaluation, and reporting	August 1, 2016	\$20,000
3. Data collection, evaluation, and reporting; evaluation report summary, distribution, dissemination, and publication	June 30, 2017	\$20,000

Activity Status as of December 1, 2014:

- Wilderness Inquiry has signed a 3-year contract with University of Minnesota’s Center for Applied Research and Educational Improvement (CAREI) to design and conduct an evaluation of the UEE program.

Activity Status as of June 1, 2015:

- CAREI is currently working on a five-year summation of evaluation data in addition to a current evaluation for 2015. CAREI and Wilderness Inquiry team members met with the Minneapolis Public Schools evaluation team to discuss changes and improvements in their data sharing process.

Activity Status as of December 1, 2015:

- University of Minnesota’s Center for Applied Research and Educational Improvement (CAREI) continues to evaluate the UWCA. A final report is being finalized. A lead researcher with CAREI visited WI in September to talk about the impact of relationship building through our programming. They have found that one of the most significant factors in youth experiencing the outdoors is the relationship they build with the trail staff leading the group.

Activity Status as of June 1, 2016:

- Wilderness Inquiry continues its partnership with the University of Minnesota’s Center for Applied Research and Educational Improvement (CAREI). The 2015 report is complete and can be found at <https://www.wildernessinquiry.org/current-news/research-results/uwca-evaluations/>. Overall, participation in the program is associated with growth in connection to others, competence to do well and be successful, contribution to society and others, and environmental awareness. To continue collecting crucial data in analyzing the impact and effectiveness, Wilderness Inquiry is administering a CAREI-developed survey instrument for use with 2016 programming.

Activity Status as of December 1, 2016:

- This activity has been completed. CAREI developed a survey instrument in spring 2016 for Wilderness Inquiry to administer during the summer season. From this and existing data, Wilderness Inquiry received a full 2016 Evaluation report that can be found at <https://www.wildernessinquiry.org/current-news/research-results/uwca-evaluations/>.

Final Report Summary:

- Overall, CAREI has been a critical partner in providing evaluative data for this project. These data from student surveys and teacher evaluations revealed key findings indicating that participation in Wilderness Inquiry programs is associated with a strengthened connection to peers and greater interest in academics. Youth were more likely to report growth from a Wilderness Inquiry experience when they connected with an adult staff member or teacher on the trip. Additional highlights of the briefing include:
 - 92% agreed that contributing to their community was important;
 - 91% agreed that they learned new skills;
 - 88% indicated they were more interested in protecting the environment;
 - 87% had a stronger connection to nature;
 - 81% were more aware of their personal strengths; and
 - 76% learned about outdoor jobs.

V. DISSEMINATION:

Description: We will work with our partners at the University of Minnesota, Center for Applied Research & Educational Improvement and the public schools to identify venues for disseminating information, statistical data, and findings summaries about this project. Information such as numbers served, activity types, and partnerships will also be posted at www.wildernessinquiry.org/canoemobile

Status as of December 1, 2014:

- Wilderness Inquiry has been discussing dissemination options with school partners and the University of Minnesota. Currently, teacher created curriculum is posted on Wilderness Inquiry's Urban Wilderness Canoe Adventures page for public access. We continue to meet at the district level to plan for district-wide dissemination at school sites.

Status as of June 1, 2015:

- In addition to teacher curriculum dissemination, the 2014 Urban Wilderness Canoe Adventures evaluation was disseminated to school partners. It is also available to the general public at <https://www.wildernessinquiry.org/current-news/research-results/uwca-evaluations/>

Status as of December 1, 2015:

- After five years of research and data collection, the University of Minnesota published the 2015 Urban Wilderness Canoe Adventures evaluation. It was distributed to school and community partners and is available to the general public at <https://www.wildernessinquiry.org/current-news/research-results/uwca-evaluations/>

Status as of June 1, 2016:

- Evaluations are shared with the general public at <https://www.wildernessinquiry.org/current-news/research-results/uwca-evaluations/>. Results have been shared with the Wilderness Inquiry staff to ensure continued improvements, board of directors for further dissemination, and the general community in the context of impact stories through the Annual Report. In addition, Wilderness Inquiry participated in the Children & Nature Network International Conference in May 2016, including discussions around evaluation and the impact of this program.

Status as of December 1, 2016:

- Evaluations are shared with the general public at <https://www.wildernessinquiry.org/current-news/research-results/uwca-evaluations/>. Results have been shared with the Wilderness Inquiry staff to ensure continued improvements, board of directors for further dissemination, and the general community in the context of impact stories through the Annual Report. Our work has been shared at many conferences including those hosted by Children & Nature Network,

Minnesota Community Education Association, Association for Experiential Education, Urban Waters Federal Partnership, and the Land Trust Alliance.

Final Report Summary:

Final report briefs from 2014-2016 evaluations can be found online for the general public at <https://www.wildernessinquiry.org/current-news/research-results/uwca-evaluations/>. Results have been shared with the Wilderness Inquiry staff to ensure continued improvements to training and program models. These findings have been shared at conferences and with our local partners including Minnesota Department of Natural Resources, Minnesota Department of Education, Minneapolis Park & Recreation Board, St. Paul Parks and Recreation, and others. Our work continues to be shared by our national partners including Children & Nature Network, City Parks Alliance, National Park Service, and National Summer Learning Association. In July 2017, Wilderness Inquiry was selected from a group of finalists to receive a national education award for excellence and innovation in summer learning programs, read more about the honor at <https://www.wildernessinquiry.org/current-news/news-notes/wilderness-inquiry-wins-major-award-national-summer-learning-association/>.

VI. PROJECT BUDGET SUMMARY:

A. ENRTF Budget Overview:

Budget Category	\$ Amount	Explanation
Personnel:	\$671,175	1 Program Director at 34%FTE for 3 years; 1 Program Manager at 50% FTE for 3 years; 1 Program Coordinator at 50% FTE for 3 years; 1 Program Assistant at 95% FTE for 3 years; Trail Guides (to maintain 7:1 student to staff ratio; 3,700 staff days X \$75/8-hour day = 14.23 FTE for 3 years) NOTE: All full-time personnel benefits and taxes are paid for by WI in-kind support (15% X \$225,5000 = \$33,825)
Professional/Technical/Service Contracts:	\$150,000	Teacher stipend for MPS and SPPS administration and faculty liaisons and Teacher-Ranger-Teachers and/or equivalents; project data collection and evaluation
Equipment/Tools/Supplies:	\$73,000	Equipment maintenance and repair (\$12,000 X 3 years); tents, paddles, clothing, sleeping bags, and other overnight camping equipment (\$9,000); restroom rental for program sites (\$9,000); personal floatation devices (average \$40 X 250); day trip supplies and equipment (\$9,000)
Travel Expenses in MN:	\$48,400	Transportation for students to and from program sites (average \$200 X 242 events)
Liability Insurance:	\$75,000	(\$25,000 X 3 years) Students in this program will engage in canoeing, hiking, camping, and other outdoor activities that have inherent risk. While Wilderness Inquiry had an excellent safety record, we must carry liability insurance for this program. We use a standard cost per service day (one person served for one day) to allocate insurance costs. The UEE represents 23% of our projected overall service days. \$25,000

		represents 23% of our annual liability insurance cost.
Camping & Entrance Fees; Permits; Licenses:	\$22,925	(\$94.73 x 242 events)
Food:	\$52,500	(1,000 students X 5 days) + (2,500 students X 3 days) + (100 students X 10 days) X \$7/meal/student/day NOTE: Food is a required item for extended/overnight trips as 65% of MPS and 73% of SPPS students qualify for “free and reduced lunch” through the National School Lunch Program
TOTAL ENRTF BUDGET:	\$1,093,000	

Explanation of Use of Classified Staff: N/A

Explanation of Capital Expenditures Greater Than \$5,000: N/A

Number of Full-time Equivalents (FTE) Directly Funded with this ENRTF Appropriation: 50.5 FTEs
(7.5 FTE project partners + 43 FTE Trail Guides)

Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation: 9 FTEs

B. Other Funds:

Source of Funds	\$ Amount Proposed	\$ Amount Spent	Use of Other Funds
Non-state			
Minneapolis Public Schools	\$300,000	\$300,000	Program fee payments—post program development and implementation
Saint Paul Public Schools	\$300,000	\$300,000	Program fee payments—post program development and implementation
Wilderness Inquiry (In-kind support)	\$305,000	\$305,000	All full-time personnel benefits and taxes; general staff support, including Executive Director, Finance Director, Operation Director, equipment, non-event travel, and facilities
National Park Service (In-kind support)	\$270,000	\$270,000	Program development and implementation
Mississippi River Fund (In-kind support)	\$135,000	\$135,000	Staff support, including Executive Director
State			
Minnesota Department of Education	\$100,000	\$100,000	Program fee payments—post program development and implementation
TOTAL OTHER FUNDS:	\$1,410,000	\$1,410,000	

VII. PROJECT STRATEGY:

A. Project Partners:

Project Team:

UEE Director, Julie Storck (.34 FTE); estimated wages \$75,000—responsible for directing all aspects of the UEE project to ensure timely and high quality delivery of service including oversight of hiring, training, scheduling, and supervising staff and volunteers, coordinating with schools, collecting and maintaining accurate demographic data, and executing all trip logistics. (NOTE: All full-time personnel benefits and taxes are paid for by WI in-kind support: $15\% \times \$70,000 = \$10,500$.)

UEE Manager, Meg Krueger (.50 FTE); estimated wages \$60,000—responsible for managing logistic details for all events statewide. Supervises staff and ensures quality, safety, and cost effectiveness of all events. Oversees the delivery and implementation of educational curricula and timely communication with school and other partners. (NOTE: All full-time personnel benefits and taxes are paid for by WI in-kind support: $15\% \times \$60,000 = \$9,000$.)

UEE Program Coordinator, Nell Holden (.50 FTE); estimated wages \$65,000—coordinates the day-to-day details of the single and multi-day experiential programs, including hiring, training, scheduling, and supervising staff and volunteers conducting the events, coordinating with schools, collecting and maintaining accurate demographic tallies, coordinating all trip logistics including permits and reservations, transportation, gear, and food. (NOTE: All full-time personnel benefits and taxes are paid for by WI in-kind support: $15\% \times \$50,000 = \$7,500$.)

UEE Program Assistant, Gwen Wilson (.95 FTE); estimated wages \$45,500—responsible for entering participant registrations and demographic data and collecting, entering, and coding project receipts. Provides assistance with scheduling and communications correspondence for the project. (NOTE: All full-time personnel benefits and taxes are paid for by WI in-kind support: $15\% \times \$45,500 = \$6,825$.)

Project Partners Not Receiving Funds:

- National Park Service: NPS will provide educational and interpretive curricula content on many day and overnight trips. NPS will broker use agreements to facilitate use of the River with other land management agencies. NPS will provide significant in-kind personnel and funding to the project.
- Minnesota Department of Education: MDE will identify and provide access to outstate Minnesota schools for inclusion in environmental learning exchange experiences. MDE will provide in-kind personnel and funding to the project.
- Minnesota Department of Natural Resources: DNR will provide educational and interpretive curricula content on many day and overnight trips; assist in coordinating access to multiple programming sites throughout the state; and provide significant in-kind personnel and funding to the project.
- Mississippi River Fund: MRF will provide private fundraising support, program promotion, public relations, and evaluation coordination.

Project Partners Receiving Funds:

- Minneapolis Public Schools: \$45,000 for teacher professional development stipends and funding for Teacher-Ranger-Teachers and/or equivalents
- Saint Paul Public Schools: \$45,000 for teacher professional development stipends and funding for Teacher-Ranger-Teachers and/or equivalents
- University of Minnesota, Center for Applied Research & Educational Improvement: \$60,000 for project data collection, evaluation, summary of findings, and dissemination

B. Project Impact and Long-term Strategy: Since 2008, Wilderness Inquiry's Urban Wilderness Canoe Adventures (UWCA) program has provided place-based experiential and educational opportunities for over 53,000 people on more than 900 events. In 2013, UWCA's nationally traveling outreach effort, the Canoemobile, served over 4,100 students in 17 cities nationwide. As this ground-breaking initiative continues to expand its breadth, impact, and scale, it is important to implement in Minnesota statewide and more fully integrate programming in accordance with Minnesota's K—12 Academic Standards. By developing and implementing these academically integrated experiential opportunities, UEE will put Minnesota at the forefront of place-based

experiential education, significantly impacting the achievement and opportunity gaps throughout both Minneapolis and Saint Paul Public Schools and the larger, seven-county metro area, as well as beginning statewide implementation.

UEE identifies four key components to successfully transition this program model to long-term sustainability and self-sufficiency:

- Place-based, experiential curricula integrated district-wide into Minneapolis and Saint Paul Public Schools during both the academic year and summer credit recovery programs will lead to UEE programming incorporated into the districts’ annual budgets.
- District-wide implementation of Outdoor Clubs funded by school districts and subsidized by alternate funding sources.
- UEE integration into outstate school districts through direct programming and learning exchanges demonstrating impact, significance, and success lead to incorporation in the Minnesota Department of Education’s annual budget.
- Demonstrated success, impact, and significance and the dissemination and publication of evaluation results encourage incorporation into school districts’ and the Minnesota Department of Education’s annual budgets subsidized, if necessary, by alternate funding sources.

C. Spending History:

Funding Source	M.L. 2008 or FY09	M.L. 2009 or FY10	M.L. 2010 or FY11	M.L. 2011 or FY12-13	M.L. 2013 or FY14
State:					
ENRTF			\$557,000 Subd. 8(d)		\$450,000 Subd. 7(b)
Non-state:					
Environmental Protection Agency			\$115,000		
National Park Service		\$45,983	\$125,000	\$107,522	
Mississippi River Fund		\$86,391	\$126,700	\$32,500	
Wilderness Inquiry (with funding from various sources)			\$185,750	\$390,190	

VIII. ACQUISITION/RESTORATION LIST: N/A

IX. VISUAL ELEMENT or MAP(S): See attached maps.

X. ACQUISITION/RESTORATION REQUIREMENTS WORKSHEET: N/A

XI. RESEARCH ADDENDUM: N/A

XII. REPORTING REQUIREMENTS:

Periodic work plan status update reports will be submitted no later than December 1, 2014; June 1, 2015; December 1, 2015; June 1, 2016; December 1, 2016.

A final report and associated products will be submitted between: June 30 and August 15, 2017.

Environment and Natural Resources Trust Fund											
M.L. 2014 Project Budget											
Project Title: Urban Environmental Education Engaging Students in Local Resources (UEE)											
Legal Citation: M.L. 2014, Chp. 226, Sec. 2, Subd. 09c; M.L. 2015, Chapter 76, Section 2, Subdivision 19											
Project Manager: Meg Krueger											
Organization: Wilderness Inquiry											
M.L. 2014 ENRTF Appropriation: \$1,093,000											
Project Length and Completion Date: 3 Years, June 30, 2017											
Date of Report: August 15, 2017											
ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Activity 1 Budget	Amount Spent	Activity 1 Balance	Activity 2 Budget	Amount Spent	Activity 2 Balance	Activity 3 Budget	Amount Spent	Activity 3 Balance	TOTAL BUDGET	TOTAL BALANCE
BUDGET ITEM											
Evaluate success and measure impact											
Personnel (Wages and Benefits)	\$625,554	\$625,483	\$71	\$25,621	\$25,621	\$0				\$651,175	\$71
Julie Storck, Program Director \$75,000; 34% FTE for 3 years— 100% salary = \$76,500 total											
Meg Krueger, Program Manager \$60,000; 50% FTE for 3 years— 100% salary = \$90,000 total											
Nell Holden, Program Coordinator \$65,000; 50% FTE for 3 years— 100% salary = \$97,500 total											
Gwen Wilson, Program Outreach Assistant \$45,500; 95% FTE for 3 years— 100% salary = \$129,675 total											
Trail Guides: 3,700 staff days @ \$75/8-hour day = \$277,500											
Professional/Technical/Service Contracts											
Twin Cities Metro Area Districts...											
Minneapolis Public Schools: Professional development & curriculum design/integration	\$24,000	\$22,536	\$1,465	\$0	\$0	\$0				\$24,000	\$1,465
Saint Paul Public Schools: Professional development & curriculum design/integration	\$36,000	\$26,713	\$9,287	\$0	\$0	\$0				\$36,000	\$9,287
University of Minnesota, Center for Applied Research & Educational Improvement: Data processing & evaluation reporting							\$60,000	\$60,000	\$0	\$60,000	\$0
Equipment/Tools/Supplies: Examples of program supplies and equipment for participants and program volunteers are listed below. Please note that the items below are estimates of program supplies and equipment needed. We will bill for actual costs. • \$36,000 for equipment maintenance and repair • \$9,000 for tents, paddles, and sleeping bags for overnight trips (tents @ \$280 X 20 = \$5,600; paddles @ \$12 X 200 = \$2,400; sleeping bags @ \$200 X 5 = \$1,000) • \$9,000 for portable restroom rentals at program sites • \$10,000 for personal flotation devices (\$40 X 250) • \$9,000 for day trip supplies and equipment	\$80,425	\$76,800	\$3,625	\$2,575	\$2,575	\$0				\$83,000	\$3,625
Travel expenses in Minnesota: Vehicle rental, gas, and maintenance to transport staff and equipment to and from program events. For Activities 1 and 2, we are requesting reimbursement of 50% of the cost of one rental vehicle for each result plus gas and maintenance. We are also requesting funds for busing students to and from trip sites. Other partners will provide funding to cover additional vehicle rental and transportation costs not covered through this grant.	\$64,400	\$56,495	\$7,905	\$17,860	\$17,860	\$0				\$82,260	\$7,905
Other											
Liability Insurance Students in this program will engage in canoeing, hiking, camping, and other outdoor activities that have inherent risk. While Wilderness Inquiry had an excellent safety record, we must carry liability insurance for this program. We use a standard cost per service day (one person served for one day) to allocate insurance costs. The UEE represents 23% of our projected service days. \$25,000 represents 23% of our annual liability insurance cost.	\$63,998	\$55,915	\$8,083	\$11,002	\$11,002	\$0				\$75,000	\$8,083
Camping fees, entrance fees, permits and licenses	\$22,453	\$22,451	\$2	\$472	\$472	\$0				\$22,925	\$2
Food Food is a required purchase for extended/overnight trips as 65% of MPS and 73% of SPPS students qualify for "free and reduced lunch" through the National School Lunch Program.	\$55,500	\$55,500	\$0	\$3,140	\$3,140	\$0				\$58,640	\$0
COLUMN TOTAL	\$972,330	\$941,894	\$30,436	\$60,670	\$60,670	\$0	\$60,000	\$60,000	\$0	\$1,093,000	\$30,436



Urban Wilderness Canoe Adventures Program

Brief Evaluation Report 2014

Evaluation Team

Julia Baker

Elyse Farnsworth

Claire Harty

Timothy D. Sheldon, Lead Evaluator



Overview

This brief evaluation report summarizes the findings of a preliminary analysis of the data collected from Minneapolis Public Schools (MPS) middle school students who participated in the Urban Wilderness Canoe Adventures (UWCA) program during summer 2014. It also summarizes the responses of teachers who accompanied youth on those field trips. These are preliminary findings only. A more comprehensive analysis of these data will be presented later in the year.

Student Survey Highlights

SURVEY INSTRUMENT AND PROCEDURE

The student pre-trip survey is an 18-item survey designed to collect middle school students' attitudes about the outdoors, science, their prior outdoor experiences, as well as some demographic data. The pre-trip survey was administered to all students grades 5-7, who were both, enrolled in the MPS summer sessions and were scheduled to participate in a UWCA Mississippi River during the 2014 summer session (about 1,200 youth). Pre-trip surveys were administered as a paper and pencil survey during the first week of summer session.

The post-trip student survey is a 31-item paper survey designed to collect middle school students' attitudes related to a six-hour Mississippi River field trip. The survey also contains four demographic items and three science content items.

PARTICIPANT INFORMATION

Before the program began, the evaluation team printed and distributed 1,200 pre- and post-trip surveys to the four MPS schools participating in the summer UWCA program. At the conclusion of the program over 600 pre-trip surveys (about one-half) and over 400 post-trip surveys (about one-third) were returned for analysis. The tables that follow indicate that the student samples obtained from the pre- and post-trip surveys are quite similar. For example, we observe roughly the same percentages of female and male participants on the pre- and post-trip surveys in *Table 1. Gender*.

Table 1. Gender

Gender	Pre (n=616)	Post (n=364)
Male	312 (54%)	194 (54%)
Female	263 (46%)	170 (47%)

In *Table 2. Ethnicity*, we see the two largest groups participants identified themselves as were African American (28% POST) and Hispanic/Latino (24% POST). The ethnic composition of post-trip and pre-trip survey participants was similar. Some respondents selected more than one ethnicity category. (More than one option was selected by 78 respondents (pre-trip survey) and 47 respondents (post-trip survey)).

Table 2. Ethnicity

Ethnicity	Pre (n=578)	Post (n=368)
African	44 (8%)	29 (8%)
African American	158 (27%)	103 (28%)
American Indian	23 (4%)	12 (3%)
Asian/Asian American	33 (6%)	25 (7%)
Hispanic/Latino	135 (23%)	88 (24%)
White	44 (8%)	26 (7%)
Other/Prefer not to say	63 (11%)	38 (10%)
Multiple	78 (13%)	47 (13%)
No response	35	38

OPINION ITEMS ON BOTH PRE- AND POST- TRIP SURVEYS

The levels of agreement on the 12 Personal Views opinion items also were similar for the pre- and post-trip surveys, varying up or down by only a few percentage points. The eight items that we would expect to have the most agreement (items: 1, 2, 3, 5, 6, 7, 10, & 12) were observed to have the highest level of agreement.

Table 3. Personal Views

Item	n	Pre-Trip Survey Agreement	n	Post-Trip Survey Agreement
1. When I am in school, I feel like I belong.	585	80%	383	78%
2. I like learning in small groups.	580	78%	387	78%
3. I prefer learning through hands-on activities.	575	80%	380	83%
4. Environmental problems are not as bad as most people think.	566	58%	378	59%
5. I feel that I have a number of good qualities.	570	85%	380	83%
6. I like learning about science.	573	75%	380	73%
7. It is important for me to get good grades.	566	89%	376	90%
8. My family doesn't like to do outdoor activities.	567	27%	381	33%
9. I am afraid of getting sick or hurt while canoeing or walking in the woods.	568	39%	381	37%
10. My parents think it is important to learn about nature.	565	75%	375	76%

11. School is harder for me than it is for my classmates.	561	35%	372	37%
12. I am skilled at observing and recording data.	564	69%	377	66%

ONLY POST-SURVEY ITEMS

Opinion Items

Six of every ten youth agreed on 11 of the 13 post-trip items with the highest frequency of agreement (86%) on the item, “Trip leaders were friendly to all students.” Two items with lower levels of agreement—still about half—were: “I studied about the Mississippi River before coming on this trip,” and “This was a new activity for me; I had never done anything like it before.”

Table 4. Post Trip Views

Item	<i>n</i>	Agreement Rate (% responded strongly or slightly agree)
I studied about the Mississippi River before coming on this trip.	364	55%
My teachers prepared me for what would happen on this trip.	366	77%
Because of this trip, I am more interested in the environment.	358	66%
This was a new activity for me; I had never done anything like it before.	355	49%
On the trip I worked with others as a team.	354	84%
Because of the trip, I feel closer to others—even people who weren’t my friends.	359	63%
Trip leaders were friendly to all students.	358	86%
Trip leaders made learning fun.	358	75%
Because of the trip, I feel more connected to my teachers.	358	61%
I have learned things I can do to help protect the environment on this trip.	356	79%
I learned new skills.	356	74%
I want to continue studying about the science, because of the trip.	359	65%
On the trip, I learned the environmental issues that affect the Mississippi River.	351	83%

Knowledge Items

Four of every ten trip-participants answered the post-trip science content questions correctly.

Table 5. Knowledge Items

Item	<i>n</i>	Percent Correct (% of students that answered correctly)
When we see trash near the storm drains that empty into the river...	324	44%
An indicator species is...	319	57%
The presence of high levels of phosphorus in a river...	331	40%

Teacher Survey Highlights

SURVEY INSTRUMENT AND PROCEDURE

The post-trip teacher survey is a short, 15-item survey designed to collect middle school teachers' perceptions and attitudes related to a six-hour Mississippi River field trip. The survey also gathers some teacher demographic data.

The teacher post-trip survey was designed as an online survey and was administered to all 5th through 7th grade teachers who participated in the MPS summer sessions and the UWCA Mississippi River Trip program in 2014 ($N=40$). The evaluation team sent a web link to teacher-participants shortly after the summer session ended. Teachers were informed that those who completed the survey would be entered into a drawing for Wilderness Inquiry clothing and trip discounts to encourage participation. The link to the survey was closed on August 1, 2014.

PARTICIPANT INFORMATION

Twenty-one teachers (53%) completed the survey by the time it closed on August 1, 2014. Each of the summer school program sites and all grade levels were represented by the teacher respondents. Analysis of responses demonstrate that summer teachers held a variety of teaching licensures, including: special education, English as a second language, social studies, language arts, science, and music; notably, only one respondent's teaching licensure was in science. Finally, over half of the teachers reported being "intermediate canoeists."

Table 6. Teacher Demographics

Teacher Demographic	Response Rate
Summer Site (n=21)	
Northeast Middle School	6
Lucy Laney	7
Ramsey	4
Seward	4
Grade Level* (n=21)	
Grade 5	8
Grade 6	15
Grade 7	8
Canoe Ability (n=21)	
First-timer	4
Intermediate canoeist	12
Experienced canoeist	5
Expert Canoeist	0

*Note: Some respondents taught more than one grade level.

BELIEFS AND ATTITUDES ABOUT THE TRIP (N=21)

Teachers' responses to the belief and attitude items from the post-trip survey are categorized into six themes that include how teachers report the trip impacted: student engagement, teamwork, hands-on learning, environmental awareness, participation in a new experience, and trip quality.

Student Engagement

A majority of teachers (19/21) believed their students were engaged in the trip activities, and trip participation improved their students' engagement in learning.

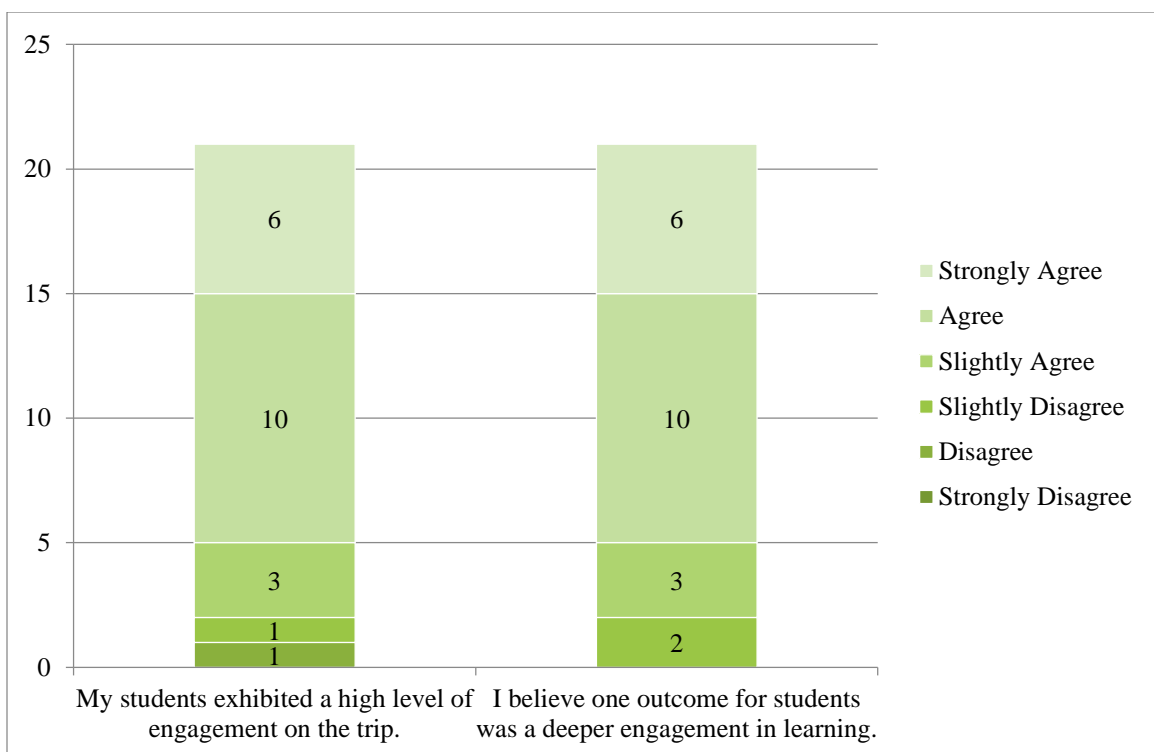


Figure 1. Teacher Perceptions of Student Engagement

Teamwork

Twenty of 21 teachers reported their students effectively worked as members of team during the trip.

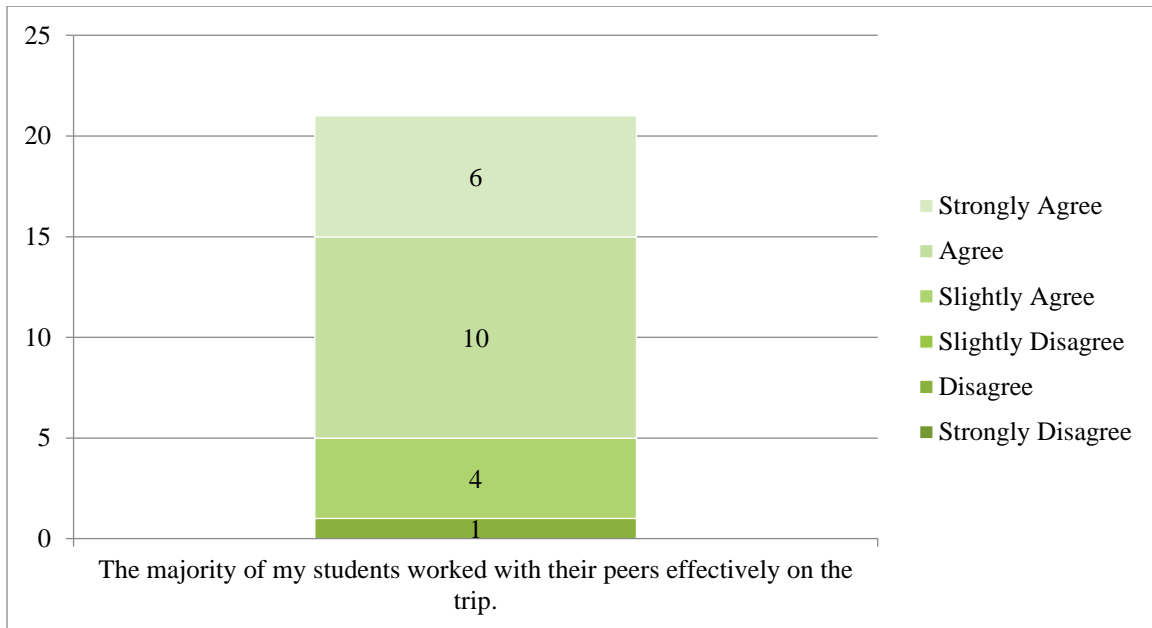


Figure 2. Teacher Perceptions of Student Collaboration

Hands-on Learning

All teachers agreed hands-on learning opportunities like the UWCA river trip are an optimal way to learn about science, with 14 of 21 responding "Strongly Agree."

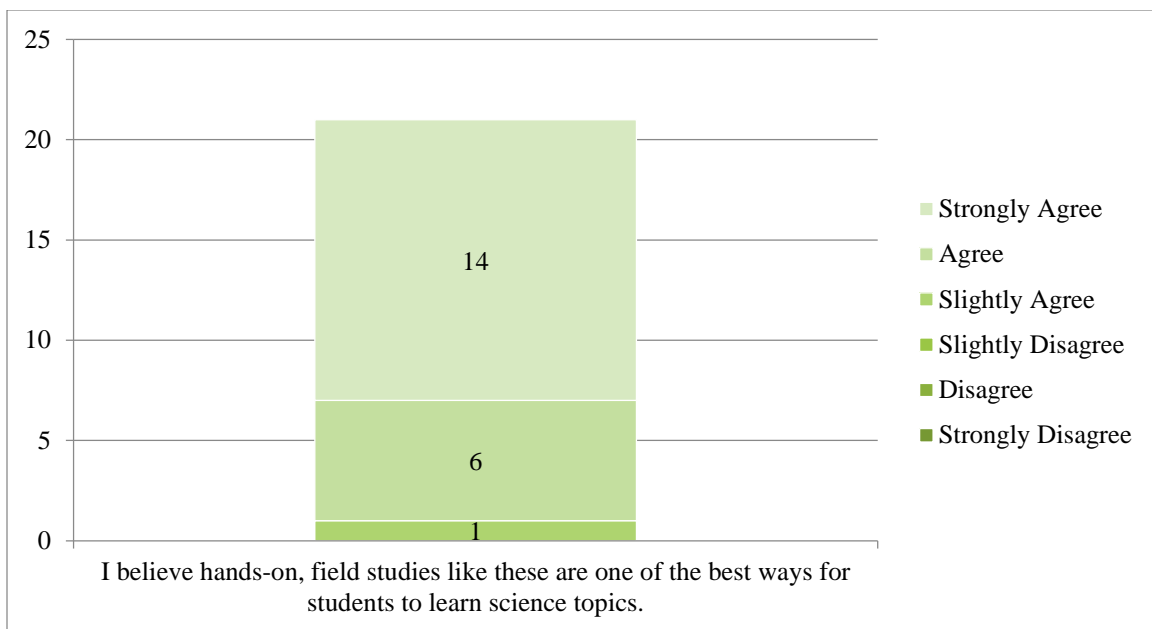


Figure 3. Teacher Perceptions of Hands-on Learning

Environmental Awareness

Overall, teachers (21/21) believed students environmental awareness improved through trip participation.

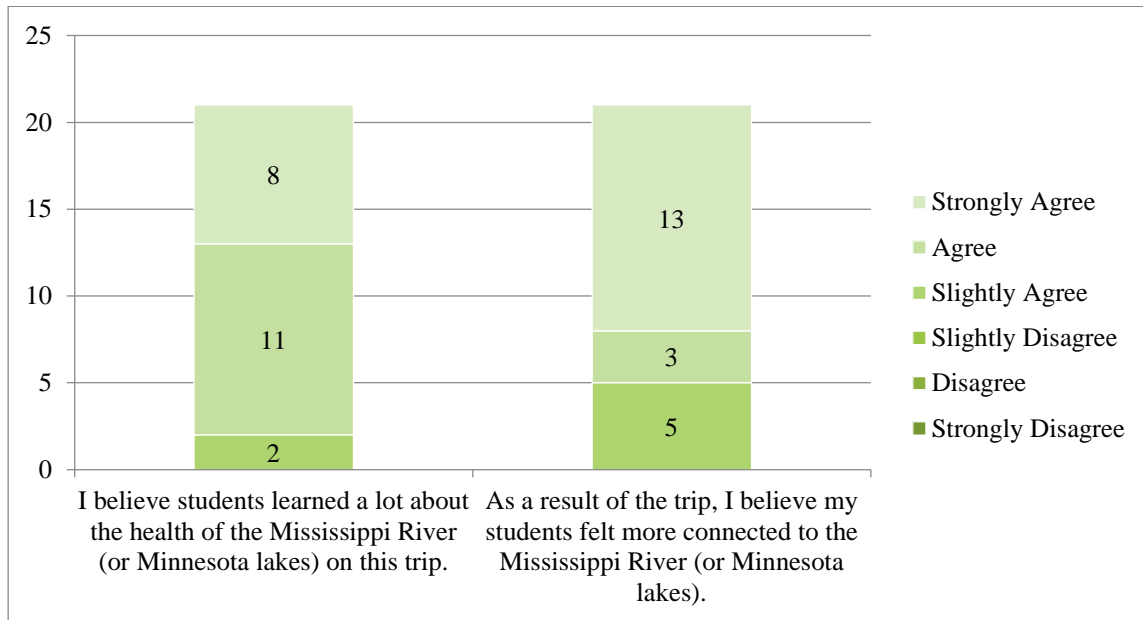


Figure 4. Teacher Perceptions about Environment

Participation in a New Experience

Most teachers (20/21) agreed their students learned new skills while on the river trip, and all (21/21) believed students who had less exposure to outdoor activities benefited the most from the new experiences.

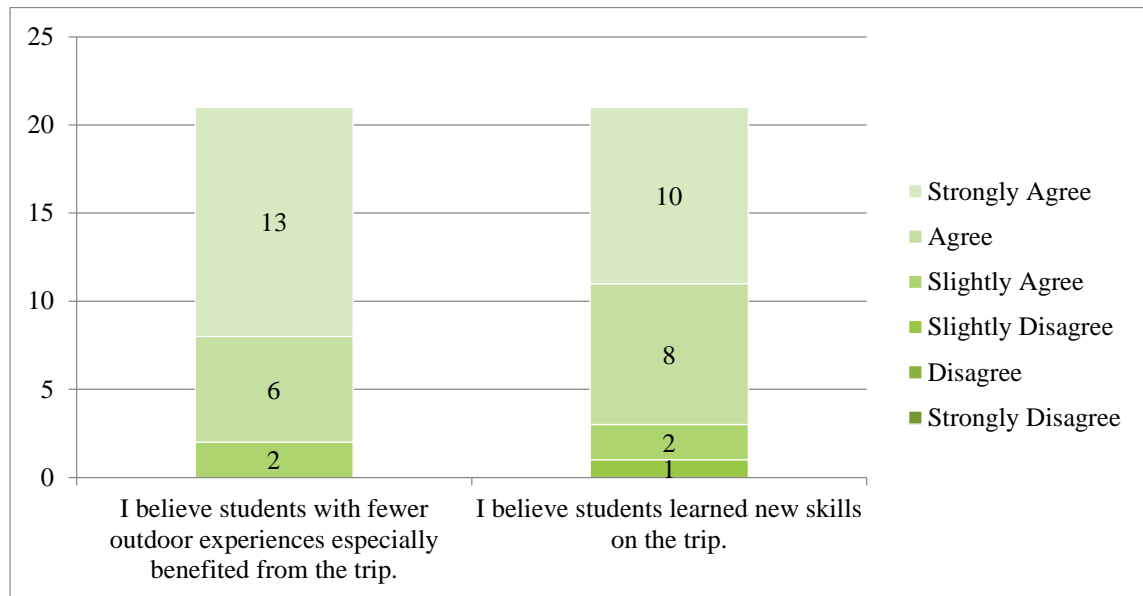


Figure 5. Teacher Perceptions about Student Experiences

Trip Quality

All teachers believed the trip was a valuable experience for students, with 14 of 21 responding “Strongly Agree” when asked about the overall value of trip participation. Teachers also reported the trip leaders were both friendly (19/21) and knowledgeable (20/21), and the trip was well organized (19/20).

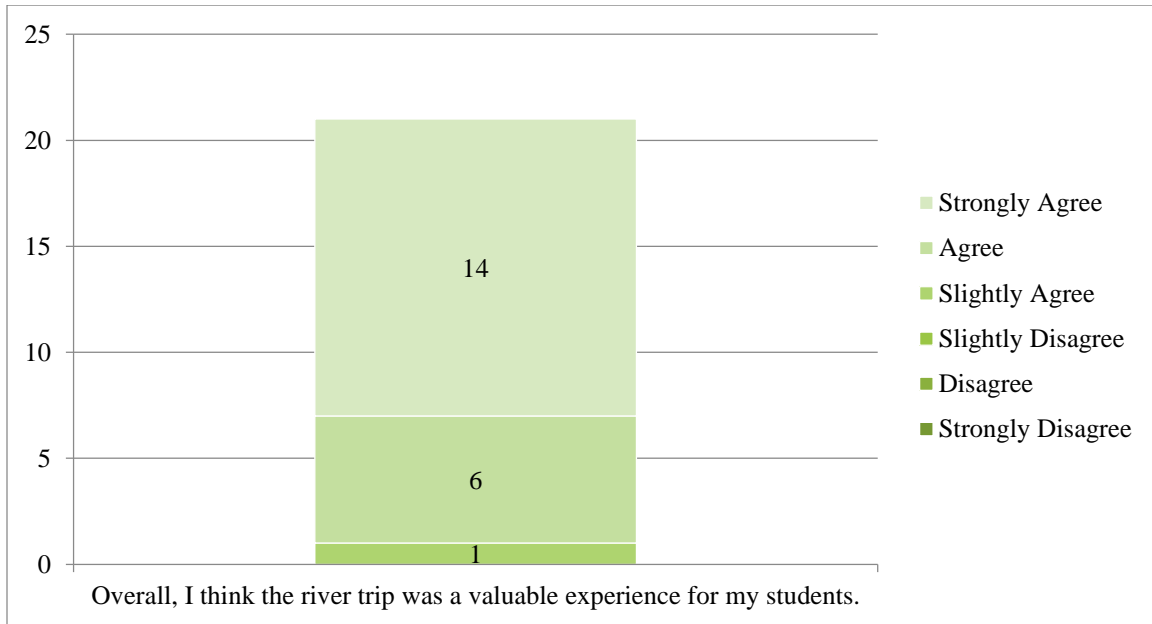


Figure 6. Teachers' Overall Perceptions of Trip

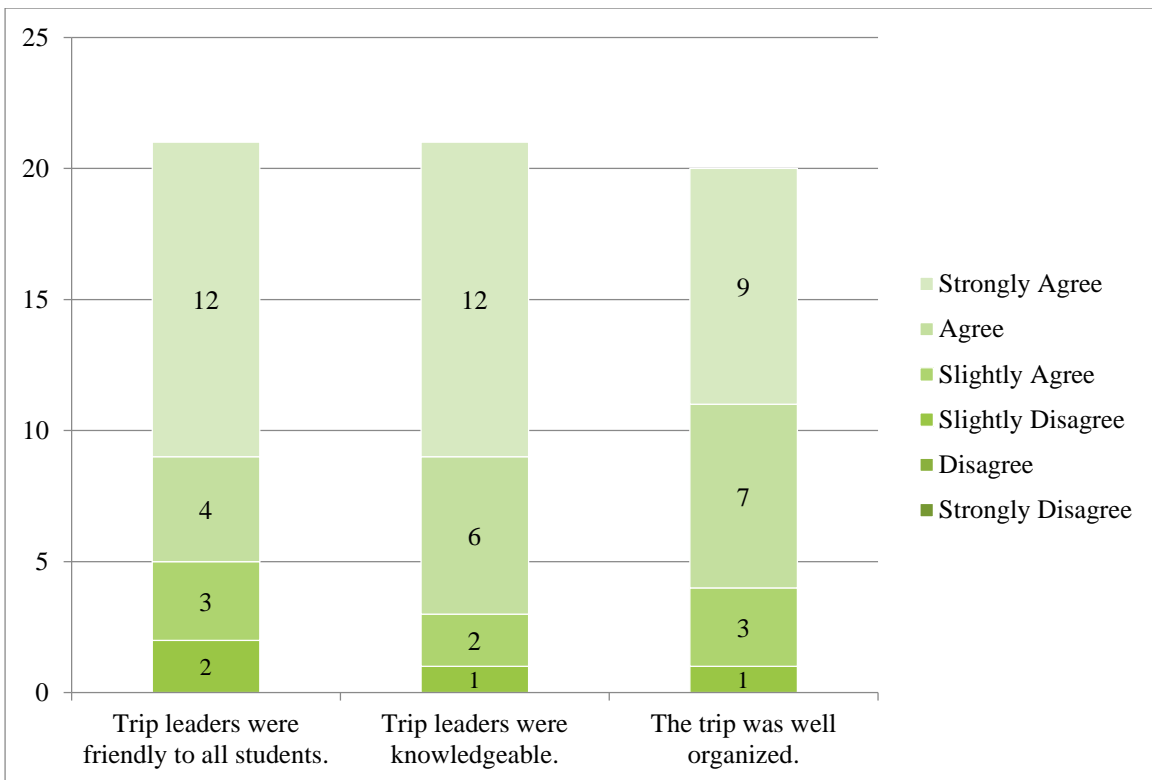


Figure 7. Teachers' Perceptions of Trip Leaders and Logistics

BIGGEST TRIP SURPRISE (N= 14)

One open-ended item addressed what surprised teachers most about the UWCA trip. Fourteen teachers provided a response to this item. When asked to complete the sentence “What surprised me most about the river trip was...,” teachers’ responses fell into the three themes reflected below.

Table 7. Biggest Surprises According to Teachers

Theme	Response Rate	Sample Responses
Student engagement and participation	5 of 14	One teacher completed the sentence with, “...the various activities to keep the students (and me) engaged,” while another noted, “[S]tudents were as willing to participate.”
Reference to ecology	5 of 14	One teacher said, “The quality of the water in Wirth Lake. I expected it to be much worse!” Similarly, another teacher completed the sentence prompt with “the amount of different organisms the students caught in the nets.”
Quality of trip activities	5 of 14	One teacher completed the prompt with “how well organized it [the trip] was,” while another teacher reported “the variety of activities [activities] for the students” was most surprising.

GREATEST BENEFIT OF THE TRIP (N= 15)

Another open-ended item asked teachers to complete the sentence, “I believe that the greatest benefit to students that a trip like this offers is...” The teachers’ responses were categorized into the three themes listed in the table below.

Table 8. Greatest Benefits According to Teachers

Theme	Response Rate	Sample Responses
Trip was a new experience for students	4 of 15	One teacher completed the sentence with, “...outdoor activities they may not have experienced yet,” and another said, “gaining confidence to try new things.”
Accessibility of local parks and outdoor spaces	5 of 15	One teacher said, “...for them [the students] to understand the great things that they can find in their own backyard.” Another teacher completed the sentence prompt with “[G]etting to know [our] parks systems, and that they are accessible to everyone.”
Alignment of hands-on learning with classroom instruction	7 of 15	One teacher completed the prompt with “an opportunity to apply what they [the students] are learning and to connect with the outdoors,” while another teacher reported “[a] chance to explore what they [the students] are learning hands-on and see it in the real world!”

The following responses did not align with the three themes that emerged from the responses to the item regarding the greatest benefit of the trip, but seem to include relevant, helpful information for evaluating the impact of the UWCA trip.

- One teacher noted the greatest benefit of trip participation was seeing students “believing in themselves as learners.”
- Another teacher believed the greatest benefit was that, “[s]tudents were interested in and engaged with their community.”
- Finally, in addition to completing the sentence prompt, one teacher added, “I would like to see a different trip offered for those students attending the trip for the third year in a row.” This comment may be helpful when planning for future experiences.

ADDITIONAL COMMENTS (N= 11)

A final open-ended item instructed teachers to “Please share any final comments about the overall program (lessons and trip).” The responses to this item are organized into the three themes seen below.

Table 9. Additional Teacher Comments

Theme	Response Rate	Sample Responses
Trip was a positive, enjoyable experience	7 of 11	Several teachers made comments like “[h]ad a great time” and “[p]lease keep this connection going for the future.”
Suggestions for changes to future trips	4 of 11	The suggestions included, “[it] would have been beneficial to have smaller groups of students...I also think some of the activities might be more engaging with a smaller group, because then the kids have more accountability to participate!,” have teachers “pre-group the students the day before,” and the trip leaders “need to have more patience.”
Student engagement in a new, outdoor experience	2 of 11	One teacher commented, “It was a nice change for the students to get outside and explore the world around them in a way many of them have never done before.”

Summary and Takeaways

A summary of the main points and takeaways from the student and teacher survey analyses are provided below.

STUDENT SURVEYS

- More than 400 middle school post-trip surveys were analyzed.
 - Approximately half (53% POST) of participants were male.
 - The two largest self-identified groups were African American (33% POST) and Hispanic/Latino (24% POST).
- Response patterns to the 12 opinion items were very similar in pre- and post-trip surveys.
 - Agreement rates were over 50% on both pre- and post-trip surveys for nine of 12 questions.
 - The three items with <50% agreement were:
 - My family doesn't like to do outdoor activities.
 - I am afraid of getting sick or hurt while canoeing or walking in the woods.
 - School is harder for me than it is for my classmates.
- Agreement was above 50% for 11 of the 12 opinion items included only on the post-trip survey
 - The highest agreement rate (86%) was in response to the item “Trip leaders were friendly to all students”
 - The lowest agreement rate (49%) was in response to the item “This was a new activity; I had never done anything like it before.”
 - Nearly three-quarters (74%) of students agreed with the statement “I learned new skills.”
- At least four out of ten students responded to each of the three knowledge items correctly.
 - The item “An indicator species is an organism that may help a scientist know” had the highest proportion of students scoring correctly (57%).
 - The third knowledge item, “the presence of high levels of phosphorus in a river may be a sign of” appeared to be the most difficult of the three, as the percentage of students who answered correctly (40%) was lowest for this knowledge item.

TEACHER SURVEYS

- A total of 21 teachers completed the teacher survey.
 - More grade 6 teachers (n=15) completed the survey than grade 5 (n=8) or grade 7 (n=8) teachers.
 - About half (12 of 21) of teachers considered themselves to be intermediate canoeists.
- All teachers believed that the trip was a valuable experience for students.
- The majority (19 of 21) of teachers believed students were engaged in trip activities, and that trip participation improved student engagement in learning.
- Nearly all (20 of 21) teachers reported that their students collaborated as a team on the trip.
- All teachers agreed that hands-on learning is an optimal way to learn about science.

- Most teachers (20 of 21) agreed that students learned new skills, and all teachers agreed that the experience was particularly beneficial for students with little outdoor experience.
- Teachers were surprised by their students' level of engagement, the ecological aspects of the trip, and the overall quality of the trip activities.
- Teachers made some suggestions for future improvements, such as having smaller groups of students that were pre-determined by the teacher.

2014 MIDDLE SCHOOL UWCA SURVEY MEANS

Average agreement ratings for pre- and post- trip middle school student surveys are provided in *Table 10*. Numerical ratings correspond with agreement designations as follows: 1=*strongly disagree*, 2=*slightly disagree*, 3=*slightly agree*, 4=*strongly agree*. Thus, a rating of 3.5 falls midway between *slightly agree* and *strongly agree*.

Table 10. Pre- and Post-trip survey mean responses for agreement items

Item	<i>n</i>	Mean (Pre)	<i>n</i>	Mean (Post)
When I'm in school I feel like I belong	585	3.07	383	3.03
I like learning in small groups	580	3.12	387	3.10
I prefer learning through hands-on activities	575	3.20	380	3.26
Environmental problems are not as bad as people think	566	2.59	378	2.58
I feel that I have a number of good qualities	570	3.18	380	3.19
I like learning about science	573	3.08	380	3.02
It is important for me to get good grades	566	3.58	376	3.59
My family doesn't like to do outdoor activities	567	1.87	381	2.06
I am afraid of getting sick or hurt while canoeing or walking in the woods	568	2.18	378	2.12
My parents think it is important to learn about nature	565	3.02	375	3.02
School is harder for me than it is for my classmates	561	2.18	372	2.22
I am skilled at observing and recording data	564	2.85	377	2.78
I studied about the Mississippi River before coming on this trip	<i>a</i>	<i>a</i>	364	2.55
My teachers prepared me for what would happen on this trip	<i>a</i>	<i>a</i>	366	3.15
Because of this trip, I am more interested in the environment	<i>a</i>	<i>a</i>	358	2.81
This was a new activity for me, I had never done anything like this before	<i>a</i>	<i>a</i>	355	2.43
On the trip I worked with others as a team	<i>a</i>	<i>a</i>	354	3.25
Because of this trip, I am more interested in the environment	<i>a</i>	<i>a</i>	359	2.72
Trip leaders were friendly to all students	<i>a</i>	<i>a</i>	358	3.41
Trip leaders made learning fun	<i>a</i>	<i>a</i>	358	3.08
Because of this trip, I feel more connected to my teachers	<i>a</i>	<i>a</i>	358	2.65
I have learned things I can do to help protect the environment on this trip	<i>a</i>	<i>a</i>	356	3.09
I learned new skills	<i>a</i>	<i>a</i>	356	3.04
I want to continue studying about science because of the trip	<i>a</i>	<i>a</i>	359	2.79
On the trip I learned about environmental issues that affect the Mississippi River	<i>a</i>	<i>a</i>	351	3.25

Note: An 'a' indicates that the item was administered only on the post-trip survey.

URBAN WILDERNESS CANOE ADVENTURES

Evaluation Brief

SEPTEMBER 2015



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Background and Purpose

UWCA Program Overview

The Urban Wilderness Canoe Adventures (UWCA) provides a continuum of experiences for youth and families that are designed to engage participants in a lifelong relationship with the outdoors, encourage environmental awareness, and foster leadership and skill development.

The UWCA seeks to achieve these goals through efforts and activities designed to reach and engage underserved, low and middle income urban youth and families.

The partnership between Wilderness Inquiry and the Center for Applied Research and Educational Improvement (CAREI) began in 2010. Since that time, CAREI evaluators have collected data from over 3,000 students, primarily in grades 5-8 (Appendix A). Evaluators have also surveyed or interviewed more than 60 teachers whose students participated in UWCA Mississippi River trips.

Past Findings

Findings from all previous evaluations indicated that the UWCA river trips are an effective means of engaging youth with the outdoors and promoting environmental awareness. Our evaluations have found over 70% of participants:

- agreed they are more interested in the environment,
- worked as a member of a team,
- believed trip leaders were friendly,
- learned how to protect the environment , and
- gained new skills as a result of the trip.

Student responses to surveys underscore the importance of preparing students prior to the river trip and the positive impact trip participation has on students' connections to peers and adults, students' attitudes about science and the environment, and students' self-confidence and competence. Our findings also suggest that trip leaders play an important role in participant outcomes. These findings are very consistent with those found in the literature on outdoor and adventure education (Casson & Gillis, 1994; Norton & Watt, 2014; Passarelli, Hall, & Anderson, 2010).

KEY FINDINGS

Our findings indicate that UWCA participation is associated with growth in:

- **Connection** to others
- **Competence** to do well and be successful
- **Contribution** to society and others
- **Environmental awareness**

Students who had positive perceptions about their trip leaders and who received preparation for the trip from their teachers showed more growth in these qualities than their peers.

Teachers' perspectives also corroborated the data collected from students across all five years of evaluation. For instance, over 90% of the teachers who responded to the teacher survey reported that trip activities were age-appropriate, and more than 95% reported that trip leaders were knowledgeable and friendly to all students. Teachers consistently reported that students on the trips worked well in groups, benefited academically as a result of the field experience, and exhibited a high level of engagement on the trip (i.e., paid attention, respected others, participated enthusiastically). One teacher wrote:

This trip really brought students together. They had been bickering in the canoe, but after a while spontaneously began working as a team to paddle faster and they were laughing a lot.

Teachers also said that they believed the students with the fewest outdoor experiences benefitted most from the river trip experiences and reported that students talked about the experience long after the field trip had ended.

Our Current Work

Our aim in this Evaluation Brief is to look across the data we have collected during the past five years. And, since we have a sufficient amount of data, we can look at these data in other ways to more fully understand the impact UWCA has had on participants.

In earlier evaluations, we attempted to measure the effectiveness of UWCA participation using attitudinal, academic, and behavioral outcomes, such as the impact of the program on participants' attitudes, test scores, and school attendance. The research literature and our past findings, however, suggested programs similar to the UWCA may have a greater influence on non-academic outcomes, such as student engagement, self-confidence, and competence, than on academic outcomes (e.g., Passarelli, Hall, & Anderson, 2010).

In 2013, we developed a new conceptual framework to assess the effectiveness of the UWCA river trip program using three important social and emotional factors: connection, competence, and contribution (Sheldon & Farnsworth, 2013). We wanted to see whether or not these factors might be better indicators of UWCA program efficacy. Also, because an important goal of UWCA trips is to increase participants' awareness of the environment, we wanted to determine whether or not trip participation correlated with environmental awareness as another indicator of program effectiveness.

Research Questions

This Evaluation Brief answers four important research questions:

- 1) Do group differences (e.g., gender, culture, or previous outdoor experience) correlate with participants' connection to others, ability to contribute to others and society, feelings of competence, and environmental awareness?
- 2) Do characteristics of trip leaders (e.g., if they are fun and/or friendly) correlate with participants' connection to others, ability to contribute to others and society, feelings of competence, and environmental awareness?
- 3) Does preparation and instruction before the trip correlate with participants' connection to others, ability to contribute to others and society, feelings of competence, and environmental awareness?
- 4) Does interest in science and valuing of nature correlate with participants' environmental awareness?

We used exploratory factor analysis to statistically group responses to questions from the student surveys to represent the constructs of connection, competence, contribution, and environmental awareness (for details, see Appendix B). These groupings as well as our definitions of *connection*, *competence*, *contribution*, and *environmental awareness* are presented below.

CONNECTION

Connection is defined as interpersonal relationships between people (peers, teachers, trip leaders). Survey items that served as indicators of connection include the participants' self-report of connection to teachers and the extent to which they felt closer to others following the trip.

COMPETENCE

Competence is defined as participants' belief that they can do things well and be successful in school and in interactions with others. Survey items that served as indicators of competence include: the participants' sense of belonging, ability to work well in groups, perception of their own good qualities, beliefs regarding the importance of earning good grades, and perception of their success at collecting and using data.

CONTRIBUTION

Contribution is defined as the desire or intention to “give back” to others, including peers, the program, and society. Survey items that served as indicators for contribution include: an ability to work as a member of a team, development of the knowledge necessary to contribute to society by protecting the environment, the development of new skills, and the acquisition of knowledge about issues that affect the Mississippi River which may support a contribution to society.

ENVIRONMENTAL AWARENESS

Environmental awareness is defined as knowledge of environmental issues as well as interest in environmental science. Survey items that served as indicators for environmental awareness include: the participants' interest in science, the environment, and hands-on learning opportunities.

Methods

Exploratory Factor Analysis

To explore our framework more fully, we analyzed the data we collected from a large number of participants ($N=680$) in 2013 and 2014. For this analysis, we created outcome variables that represent connection, contribution, competence, and environmental awareness by grouping survey items together using a method known as Exploratory Factor Analysis (EFA). Additional information about this procedure and the results of the analysis are found in Appendix B.

Regression Analyses

We used a regression analysis to determine whether or not particular youth attributes or characteristics make them more or less likely to exhibit growth in competence, connection, and contribution. We also tested the extent to which the development of environmental awareness was predicted by group differences (e.g., gender, culture, or previous outdoor experience) and other factors such as trip preparation, family attitudes toward the environment, and student interest in science. These analyses were conducted using data from 232 youth who participated in the UWCA river trips in 2013 or 2014 for whom we had a complete dataset (both pre- and post-trip survey). Additional information about the sample used in these analyses and the methodology are found in Appendix B.

Results

Our intentions were to determine whether or not certain youth characteristics correlate with the development of UWCA participants' connection, competence, contribution, and environmental awareness. Results are discussed below. A complete table of results is included in Appendix C.

Group Differences

Group differences (e.g., gender, culture, or previous outdoor experience) were not correlated to the development of connection or contribution. Significant differences were found, however, in the development of competence based on both ethnicity and previous experience. We found that students who identified themselves as African showed more growth in competence when compared to their White, Hispanic, and African American peers. While this relationship is not causal, it is important to consider the role ethnicity and culture may play in students who identify themselves as African.

Further, we observed no significant growth in competence for students who had already participated in three or more outdoor experiences. One possible explanation for this finding is that the participants attained an "experience ceiling" for growth in this quality after two or more experiences. If this is the case, students who have participated more than two times in the river trip may need novel experiences to grow in areas of competence.

Trip Preparation and Trip Leaders

In addition to checking for group differences, we wanted to better understand the role adults play in ensuring positive outcomes for participants. We posit that adults (teachers and trip leaders) play an essential role in developing connection, contribution, and competence in youth participants. We tested whether or not it was important for teachers to have prepared their students for the trip using the pre-trip lessons and whether or not the trip leaders influenced participants' outcomes. We found that pre-trip preparation and engaging trip leaders both correlated strongly with higher participation benefits in connection, contribution, and competence.

We found that participants who believed their trip leaders were “fun” and “friendly” demonstrated significantly greater gains in connection, contribution, and competence. Likewise, participants who were prepared for the UWCA experience prior to the river trip showed more growth in connection, contribution, and competence after the trip as compared to their peers who were not prepared prior to the trip. These results support the need for ensuring that trips are led by high quality leaders and that teachers prepare their students for the trip experience via class lessons.

Environmental Awareness

We found that participant growth in environmental awareness was not strongly correlated with student characteristics (e.g., gender, culture, or previous outdoor experience). However, participants who were interested in science before the trip and whose teachers prepared them for the trip were more likely to show growth in environmental awareness than their peers. Likewise, participants who said their families thought it was important to learn about nature showed more growth in environmental awareness following trip participation. Notably, an interest in participating in hands-on learning experiences did not significantly correlate with the participants' development of environmental awareness.

What we believed before, but now we have strong evidence of...

- Trip leaders and preparation prior to the field experience are clearly key to the overall experience. Together, fun and friendly trip leaders and pre-trip preparation during classroom lessons explain a statistically significant difference in the experience between participants who demonstrated significant growth in connection, contribution, competence, and environmental awareness and their peers who did not show significant growth in these characteristics.
- Students who have been on these or similar trips more than three times experience a tapering off of growth in competence; thus, we infer there may be an “experience ceiling.”
- Student characteristics (i.e., gender and race/ethnicity) do not seem to be significant factors in participants' development of connection, contribution, or environmental awareness. There *is* a slight, statistically significant, correlation with race/ethnicity on competence. Students who identify themselves as African demonstrate a larger growth in competence when compared to their non-African peers.

Discussion and Implications

The results of our more rigorous analyses support conclusions of earlier evaluations. These results suggest UWCA river trip participation has important implications for the development of essential social and emotional competencies.

Below are some considerations and implications of the results of these analyses.

1. **Trip leaders matter.** Impact of the trip leader has the largest influence on all three factors. That is, students who identified the trip leader as fun and friendly reported higher increases in all three factors (connection, competence, contribution), and the trip leader was the largest predictor of gains in competence (26% of the variance), connection (25% of the variance), and contribution (45% of the variance).
2. **Pre-trip preparation.** Student perceptions of how well they were prepared for the trip were also correlated with student gains in competence, connection, and contribution. Pre-trip preparation by teachers explains additional variance above and beyond the impact of trip leader on competence (2.5%), connection (10.7%), and contribution (7.2%).
3. **Together both Trip Leader and Preparation** explained nearly 29% of the variance in competence, 36% of the variance in connection, and 52% of the variance in contribution.
4. **Environmental awareness.** Pre-trip preparation also explained the largest and statistically significant amount of variance in environmental awareness.
5. **The environmental awareness factor increased** for students who indicated higher levels of pre-trip preparation, interest in science, and family interest in nature. This combination of factors predicted the greatest increase in environmental awareness among students who participated on the trip.
6. **Persisting environmental interest.** 80% of students indicated increased environmental interest after the river experience. And over 80% of students reported learning how to protect the environment and learning about issues that affect the Mississippi River.
7. **Enhancing teacher and district buy-in** to prepare students for environmental education experiences is an essential factor in increasing the program's impact on youth participants.
8. **Teamwork.** Nearly 90% of participants reported working with others as a team.
9. **Returning to the Mississippi.** In surveys administered in 2010 and 2012, approximately 70% of the students indicated that they would like to canoe on the Mississippi again.
10. **The General Wilderness Program Assessment Inventory.** Our preliminary statistical analysis suggests that CAREI's survey is a valid and useful instrument. Additional item analysis and possible revisions could further improve its usefulness.

Appendix A. Participant Descriptive Statistics

- a. Participant Data Summary Table 2010-2014
- b. Current Evaluation Sample Summary Table

Appendix B. Expanded Information on Evaluation Methodology

- a. Exploratory Factor Analysis
- b. Regression Analyses

Appendix C. Regression Results

Appendix D. References

Appendix A. Participant Descriptive Statistics

Table 1: UWCA Demographics Frequencies for all students

Demographics	Year 2010		Year 2012			Year 2013			Year 2014			All Observations
	Post (N= 329)	Total (N= 329)	Pre (N= 665)	Post (N= 408)	Total (N= 1073)	Pre (N= 299)	Post (N= 303)	Total (N= 602)	Pre (N= 583)	Post (N= 377)	Total (N= 960)	Grand Total (N= 2964)
Gender												
Female	160	160	311	114	425	131	132	263	261	165	426	1274
Male	147	147	301	106	407	168	171	339	303	186	489	1382
Missing	22	22	53	188	241	0	0	0	19	26	45	308
Ethnicity												
African	--	--	24	8	32	15	18	33	44	28	72	137
African American	--	--	191	59	250	63	63	126	155	103	258	634
American Indian	--	--	25	9	34	9	7	16	20	11	31	81
Asian	--	--	57	29	86	26	27	53	33	24	57	196
Hispanic	--	--	125	50	175	72	90	162	134	84	218	555
White	--	--	63	33	96	17	18	35	42	23	65	196
Other	--	--	84	21	105	30	16	46	62	38	100	251
Multiple Ethnicity	--	--	55	19	74	61	58	119	78	44	122	315
Blank	--	--	41	15	56	6	6	12	15	22	37	105
Missing	329	329	0	165	165	0	0	0	0	0	0	494
Grade Level												
5th	49	49	5	1	6							55
6th	95	95	153	49	202							297
7th	101	101	257	111	368							469
8th	63	63	198	65	263							326
9th	1	1	5	1	6							7
10th	--	--	3	1	4							4
11th	--	--	0	0	0							0
12th	--	--	7	1	8							8

Table 2. Demographic characteristics of sample population used for regression analyses

Variable	2013	2014	Total
Gender			
Female	76	26	102
Male	103	27	130
Race/Ethnicity			
African	15	6	21
African American	50	14	64
Asian	22	2	24
Hispanic	78	22	100
White	14	9	23
Trip Experience			
None	40	7	47
One	105	28	133
Two	21	13	34
Three+	13	5	18

Appendix B. Expanded Information on Evaluation Methodology

Exploratory Factor Analysis

During each year of the evaluation (2010-2014), a student survey was administered before and after the UWCA river trip; however, only the 2013 and 2014 survey versions were identical. Thus, Exploratory Factor Analysis (EFA) was conducted on items contained in the post-trip survey for only the 2013 and 2014 data. We felt this ensured consistency while exceeding the minimum threshold of cases needed to conduct this type of analysis (i.e., sample size $N=500$; Tabachnick & Fidell, 2013).

Students ($N=680$) were presented with 25 statements and asked to indicate the extent to which they agreed or disagreed with each statement on a four-point scale with “1” indicating strongly disagree, “2” indicating slightly disagree, “3” indicating slightly agree, and “4” indicating strongly agree. Twelve of these items seemed to align well with the constructs of competence, connection, and contribution and were included in our analyses to create the outcome variables.

Regression Analyses

Once our outcomes (i.e., competence, connection, and contribution) were created, we ran regression analyses to determine what participant characteristics and other factors (e.g., trip preparation and trip leader qualities) were associated with participants’ development of competence, connection, contribution, and environmental awareness. Because some of the predictors came from the student responses on items in the pre-trip survey, only those students ($N=232$) who responded to both the pre-trip and post-trip surveys and answered all of the questions in both surveys were included in the regression analyses. The predictor variables consisted of a composite variable measuring student perception of the trip leader, a composite measuring student perception of preparedness for the trip, and a family attitude variable measured by the extent to which students reported whether or not their family believed learning about nature is important.

Appendix C. Regression Results

Table 3. Regression Results for Four Factors


Variable	Competence				Connection				Contribution				Environmental Awareness			
	<i>B</i>	<i>SE B</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE B</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE B</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE B</i>	<i>df</i>	<i>p</i>
<i>Intercept</i>	1.71	0.21	221	0.000***	0.42	0.28	221	0.139	0.61	0.22	221	0.006**	0.75	0.22	220	0.001**
<i>Race/Ethnicity (White)</i>																
<i>African</i>	0.22	0.15	221	0.138	-0.19	0.20	221	0.342	0.13	0.15	221	0.390	0.03	0.16	220	0.828
<i>African American</i>	0.14	0.12	221	0.233	-0.05	0.16	221	0.774	0.05	0.12	221	0.670	0.13	0.13	220	0.301
<i>Asian</i>	>0.01	0.14	221	0.980	0.06	0.19	221	0.765	-0.09	0.15	221	0.557	0.05	0.15	220	0.753
<i>Hispanic</i>	0.08	0.11	221	0.467	0.12	0.15	221	0.445	0.02	0.12	221	0.887	0.12	0.12	220	0.303
<i>Gender (Male)</i>																
<i>Female</i>	0.02	0.06	221	0.772	-0.03	0.09	221	0.703	0.08	0.07	221	0.232	0.07	0.07	220	0.300
<i>Previous Experience (None)</i>																
<i>One</i>	-0.02	0.08	221	0.849	-0.04	0.11	221	0.696	0.01	0.09	221	0.914	0.04	0.09	220	0.636
<i>Two</i>	0.17	0.11	221	0.128	0.12	0.15	221	0.434	0.08	0.12	221	0.492	0.02	0.12	220	0.853
<i>Three or more</i>	-0.30	0.14	221	0.028*	0.19	0.18	221	0.302	-0.03	0.14	221	0.837	0.09	0.14	220	0.546
<i>Preparation</i>	0.14	0.05	221	0.005**	0.42	0.07	221	0.000***	0.30	0.05	221	0.000***	0.457	0.05	220	0.000***
<i>Trip Leader</i>	0.29	0.05	221	0.000***	0.36	0.06	221	0.000***	0.50	0.05	221	0.000***				
<i>Pre-trip Science Interest</i>													0.15	0.04	220	0.000***
<i>Family</i>													0.12	0.04	220	0.004**
<i>N</i>				232				232				232				232
<i>R²</i>				0.288***				0.361***				0.519***				0.418***

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: R^2 denotes the explained variance of **Preparation** and **Trip Leader** combined in our final model.

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Outdoor Place-Based Education, Minnesota Canoemobile Fall 2016

Evaluation Brief

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Program Description

Canoemobile provides a continuum of experiences for youth and families. These experiences engage participants in a lifelong relationship with the outdoors, foster leadership and skill development, and encourage environmental awareness. Canoemobile achieves these goals through efforts and activities that intentionally engage underserved low and middle income youth and families.

Canoemobile collaborates with federal, state, and local partners to connect thousands of youth and adults of all backgrounds and abilities to outdoor education on local waterways. The Canoemobile is a fleet of six handmade, 24-foot Voyageur canoes that serve as a floating classroom. Wilderness Inquiry Outdoor Educators lead participants in fun and engaging water-based activities. Topics include water quality, ecosystem health, the geometry of bridges, local history, and more. Canoemobile engages youth to improve school performance, cultivates a stewardship ethic, and creates pathways to pursue educational and career opportunities in the outdoors.

The Canoemobile program seeks to:

- Engage thousands of underserved youth in outdoor education, conservation, and recreation.
- Introduce youth to experiential watershed education through water quality testing, insect netting, and stewardship activities.
- Increase academic achievement through place-based learning.
- Connect youth to educational and career opportunities across the outdoor sector.
- Provide resources, curriculum support, and professional development opportunities for teachers.
- Inspire the next generation of citizens to enjoy, explore, and protect public lands.

KEY FINDINGS

Canoemobile serves as a floating classroom that provides fun and engaging, water-based activities to connect youth of all abilities to the natural world through hands-on outdoor learning on local waterways in cities across America.

- Between September and October 2016, 20 Canoemobile trips occurred in central and northern Minnesota.
- Over 1,000 Canoemobile participants completed a 9-item post-trip survey.

The survey results show high levels of agreement across all survey items, and the most frequent response for all nine items was *strongly agree*. To highlight:

- 93% agreed that trip leaders were knowledgeable;
- 87% agreed that they had learned new skills;
- 86% agreed that contributing to their community is important; and
- 84% indicated they felt like they belonged on the trip.

In addition, respondents agreed that, as a result of the trip, they:

- made stronger connections to nature (82%),
- were more interested in protecting the environment (81%), and
- will think about the environment more often (80%).

Methods

In September and October of 2016, 20 Canoemobile trips occurred in central and northern Minnesota, serving 1,394 participants. Trip length ranged from 1.5 to 6.5 hours and included canoeing, watershed education, and additional experiential stations. The program staff who led the Canoemobile trips administered a post-trip survey to participants near the end of each trip. The survey consisted of nine items that asked participants to reflect on the effects that the experience had on them. Respondents were asked to indicate their level of agreement with each statement using a four-item scale ranging from *strongly disagree* to *strongly agree*. Valid surveys were obtained from 74% of the participants (1,033 of the 1,394 participants).

Findings

Participant Demographic Data

The number of participants on each of the 20 Canoemobile trips that occurred in fall 2016 varied greatly (from 9 to 140 participants), as did the number of survey respondents per trip (from 7 to 96).

As mentioned above, the Fall 2016 Canoemobile trips took place in central and northern Minnesota cities (e.g., Brainerd, St. Cloud, Thief River Falls) located in Congressional districts 6, 7, and 8 (see Figure 1) in addition to metro area schools. Fifty percent (50%) of the participants served were from Congressional district 6; 23% served were from the northern portion of Congressional district 7; and 26% served were from district 8. Based on information provided by the schools, overall 5% of the participants were students with disabilities and 29% were students of color.

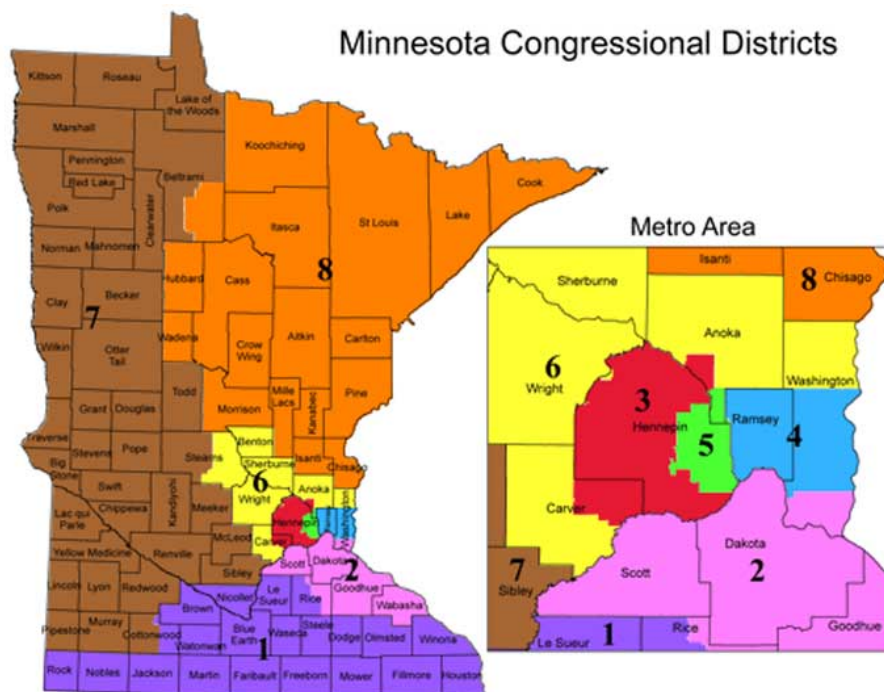


Figure 1. Minnesota Congressional Districts

The majority of survey respondents (73%) were enrolled in grades 5-8, followed by 22% in grades 7-10 and 9-12. Less than 1% of survey respondents were enrolled in grades K-3 (see Table 1).

Table 1. Respondents by Grade Band*

Grade Band (<i>n</i> = 1,033)	Percent
Grades K - 3	<1%
Grades 4 - 8	4%
Grades 5 - 8	73%
Grades 7 - 10	11%
Grades 9 - 12	11%
Total	100%

* Grade levels of students were combined into grade bands unless reported as a specific grade band (e.g., grades 4-8, 7-10).

Trip Outcomes

There were high levels of agreement across all survey items. The most frequent response for all items was *strongly agree*, and more than 75% of the respondents slightly or strongly agreed with all nine items. There was some variation in the percentages and strength of agreement across items. For example, 78% of respondents strongly agreed with Item 9, “Trip leaders were very knowledgeable,” and another 15% selected *slightly agree* (93% agreement). Eighty-seven percent (87%) strongly or slightly agreed that they had learned new skills on the field trip (Item 1). Similarly, 86% agreed that it is important to contribute to their community (Item 7), and 84% felt a sense of belonging on the trip (Item 8). Respondents also indicated that, as a result of the trip, they had made stronger connections to nature (Item 2; 82% *strongly or slightly agree*), and that they were more interested in protecting the environment (Item 5; 81% *strongly or slightly agree*). Eighty percent (80%) of the respondents agreed that the trip made them think of the environment more often (Item 4; for all results see Table 2).

Table 2. Response Frequencies by Item

Survey Items	Strongly Disagree	Slightly Disagree	Slightly Agree	Strongly Agree
1. On this trip, I learned new skills. (<i>n</i> = 1,025)	5%	7%	40%	47%
2. Trip activities helped me make stronger connections to nature. (<i>n</i> = 1,022)	6%	13%	36%	46%
3. Because of this trip, I am more aware of my personal strengths. (<i>n</i> = 1,010)	8%	16%	38%	39%
4. Because of this trip, I will think about the environment more often. (<i>n</i> = 1,019)	7%	14%	39%	41%
5. Because of this trip, I am more interested in protecting the environment. (<i>n</i> = 1,014)	6%	12%	35%	46%
6. During this trip, I learned about jobs in the outdoors. (<i>n</i> = 1,025)	10%	16%	33%	42%
7. It is important to me to contribute to my community. (<i>n</i> = 1,023)	5%	10%	30%	56%
8. On the trip, I felt like I belonged. (<i>n</i> = 1,018)	7%	9%	28%	56%
9. Trip leaders were very knowledgeable. (<i>n</i> = 1,024)	4%	3%	15%	78%

Conclusions

The Canoemobile program serves as a floating classroom that provides fun and engaging, water-based activities to connect youth to the natural world through hands-on, outdoor learning on local waterways in cities across America. Between September and October 2016, 20 Canoemobile trips included an evaluation portion distributed to over 1,300 participants from central and northern Minnesota. Seventy-four percent (74%) of the participants completed a post-trip survey ($n = 1,033$ out of 1,394 participants).

Responses to questions regarding outcomes from Canoemobile events indicated that the program met goals of engaging youth and young adults across the entire range of objectives, and that activities focused on water quality and ecosystem health increased students' conservation ethic. There were high levels of agreement across all survey items, and the most frequent response for all nine items was *strongly agree*. Participants agreed that they had positive outcomes as a result of the trip. For example,

- 93% agreed that trip leaders were knowledgeable;
- 87% agreed that they had learned new skills;
- 82% agreed that trip activities helped them make stronger connections to nature.
- 80% agreed that because of the trip they were more interested in protecting the environment and will think about it more often.

Most participants indicated that, as a result of the trip, they: had made stronger connections to nature (82%), were more interested in protecting the environment (81%), and will think about the environment more often (80%). In addition, 77% of respondents indicated they have become more aware of their personal strengths, and 75% have learned about jobs in the outdoors.

Participants' survey responses strongly suggest that the Canoemobile is reaching a wide range of participants and having a positive impact on those participants. The results suggest that Canoemobile is meeting its primary objectives of engaging thousands of underserved youth in the outdoors; connecting youth to educational and career opportunities across the outdoor sector; and making great strides to inspire the next generation of citizens to enjoy, explore, and protect public lands.