



Environment and Natural Resources Trust Fund

2021 Request for Proposal

General Information

Proposal ID: 2021-374

Proposal Title: Yes! Students Take on Water Quality Challenge II

Project Manager Information

Name: Shelli-Kae Foster

Organization: Prairie Woods Environmental Learning Center

Office Telephone: (320) 354-5894

Email: shelli-kae@yesmn.org

Project Basic Information

Project Summary: Youth Eco Solutions (YES!) teams will mobilize youth in over 20 communities and help fill the urgent need for citizen participation to protect and clean-up Minnesota waters through hands-on projects

Funds Requested: \$199,000

Proposed Project Completion: 2023-06-30

LCCMR Funding Category: Small Projects (H)

Secondary Category: Environmental Education (C)

Project Location

What is the best scale for describing where your work will take place?

Statewide

What is the best scale to describe the area impacted by your work?

Statewide

When will the work impact occur?

During the Project

Narrative

Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.

Youth Eco Solutions (YES!) teams will mobilize local watershed stewardship efforts in over 20 communities and help fill the urgent need for broad citizen participation to protect and clean-up Minnesota waters. Completing over 1,000 ecological action projects since 2007, YES! has empowered youth to be active contributors to real solutions by mobilizing their communities.

Starting in 2018, YES! shifted its experiential learning opportunities to a clear focus on water quality, completing over 50 water related projects. As one student commented, "I learned the power of what just 5 people can do to make a difference in my community." Training more students to engage their communities in water stewardship efforts helps ensure citizens are informed and valuable water quality knowledge and data is acquired to benefit Minnesota's waterways. Student teams will receive hands-on training from local professionals in the areas of aquatic invasive species (AIS), water quality monitoring and water quality improvement projects and extend their skills through real-world projects in their communities. This project was tentatively recommended for funding in 2020 and will be withdrawn if acted upon in 2020-21. We have updated relevant information while maintaining the outcomes and intent of the project.

What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.

PWELC is seeking \$199,700 to implement the 3- Step Water Awareness method developed during Phase I which includes: 1) student and coach orientation to aquatic invasive species (AIS) and training in water quality surveying techniques, 2) student-driven surveying and monitoring of local water bodies, and 3) student organized public education events. This project is a triple win for Minnesota – youth acquire water quality knowledge, skills and career exposure; communities become more engaged and aware; and the state gains valuable data from its waterways.

During Phase I, the number of water quality related projects completed by students more than doubled from 12 to over 50! These projects will serve as models for Phase II including: water quality testing and evaluation, public events and peer education, planting rain gardens, local lakeshore and river restoration and clean-up, storm water awareness, building aquaponics systems, AIS monitoring and reporting, tracking of water usage, and designing and building of solar boats to demonstrate water pollution prevention. Project Guides created by teachers will provide models and resources for projects in Phase II. YES! will work in partnership with Ney Nature Center and Laurentian Environmental Learning Center to engage Minnesota's youth.

What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?

Through this project, YES! seeks to protect, conserve and preserve Minnesota's water quality by achieving the following project outcomes:

- Complete 30 or more new student-driven water quality and citizen science projects and public events.
- Mobilize over 200 youth and 2,000 or more community members from 20 communities in local water quality issues
- Improve over 20 valuable Minnesota water bodies by monitoring, testing, and reporting data. Data will contribute to the DNR EDDMapS.
- Partner with local experts to provide 10 customized water quality workshops and trainings.
- Recognize accomplishments through statewide Water Quality Stewardship competition/award

Activities and Milestones

Activity 1: Recruit, Educate, and Train YES! Students in the 3-step Water Awareness model

Activity Budget: \$81,365

Activity Description:

Building on our past experience, YES! students will learn from local and state water quality experts to complete up to 20 water quality and conservation projects over 2 years. In order to raise community awareness of water quality best practices in the local community, students will participate in the 3-step Water Awareness method and identify challenges in their community.

YES! Coordinators recruit new YES! teams and retain existing teams to complete water quality projects. By partnering with local water quality experts to put on a Fall Summit and up to 2 workshops per region, YES! students will receive training in aquatic invasive species (AIS) testing and reporting, Adopt-A-Drain, citizen science, water stewardship, shoreline and buffer restoration best practices. Training will include hands-on identification of aquatic invasive species, how to correctly use water quality measurements such as a Secchi disk, how to accurately record water temperature, and how to identify what watershed they are located in. After training is completed, students educate community members about water quality issues and select and complete one or more water quality projects. Specific metrics will be developed for each water quality project

Activity Milestones:

| Description | Completion Date |
|---|-----------------|
| Train 20 YES! teams through customized workshops on water stewardship best practices over 2 years | 2022-10-31 |
| Recruit 200 students in over 20 communities to select water quality projects over 2 years | 2022-11-30 |
| Recruit 200 students in over 20 communities to select water quality projects over 2 years | 2023-05-31 |
| Evaluate project impact by number of students, community members and volunteers participating. | 2023-06-30 |

Activity 2: Taking Action – Over 30 New Student Driven, Hands-on Water Quality and Conservation Projects and Public Events Completed in Minnesota

Activity Budget: \$117,635

Activity Description:

YES! will mobilize over 20 YES! students teams in partnership with local watershed experts to implement community awareness and mitigation projects and participate in on-water and shore land activities to protect and improve local water quality over 2 years.

YES! coordinators work with local experts to support YES! teams and their projects, organize community events, supply water crafts for on the water activities. YES! teams assess needs in their communities and schools, evaluate and help find local resources to meet these needs, and create an action plan to implement their projects with the support of their adult coach, YES! staff, and local water experts. Projects topics may include: Adopt-a-Drain, AIS testing and monitoring of local water bodies, citizen science, Secchi disk readings, shoreline restoration, clean up and educational events, visits to water treatment facilities and landfills.

We will recognize the achievements of our youth through the Water Quality Stewardship award. ENRTF funds provide support for YES! staff time, program-related school expenses (allowing teams to participate in YES! events in a cost-effective manner), and project seed funds.

Activity Milestones:

| Description | Completion Date |
|--|-----------------|
| Engage over 20 YES! teams to select local water quality projects over 2 years | 2022-11-30 |
| Recognize student achievements through the annual Water Quality Stewardship award | 2023-06-30 |
| Partner with local watershed experts to implement the 3-Step Water Awareness method 20 communities | 2023-06-30 |
| Mobilize over 200 students to develop action plans and complete over 30 new water over 2 years | 2023-06-30 |

Project Partners and Collaborators

| Name | Organization | Role | Receiving Funds |
|---|--|---|-----------------|
| Brooke Hacker | MN DNR | Hacker is the Clean Water Specialist. MN DNR will be a collaborator as a resource for teams doing projects related to hydrology in southern MN. | No |
| Lee Ganske | MN Pollution Control Agency | Ganske is the Surface Water Monitoring Coordinator. MPCA will be a collaborator by supporting students collecting data to monitor water quality. | No |
| Kimberly Musser | Water Resources Center at Minnesota State University - Mankato | Will be a collaborator for connecting teams to water data and experts in the Minnesota River Basin | No |
| Volunteers | Lake Associations | Lake association may be a collaborator and serve as volunteer support for projects. | No |
| County AIS Coordinators | County Departments | County AIS Coordinators can serve as a water quality expert providing training on aquatic invasive species (AIS), seechi disc reading techniques and water testing for compounds that can be reported to the DNR. | No |
| University of Minnesota | Aquatic Invasive Species Department | Will be a collaborator and provide expertise, resources and training. | No |
| Students and Teachers | School Districts in Minnesota | Will be a partner to support youth in participating in water quality projects. Funds will support project seed funds. | Yes |
| Bill Grantges | Itasca County Soil and Water Conservation District | Grantges serves as the Itasca County Aquatic Invasive Species Program Coordinator. The SWCD will be a collaborator and Grantges may serve as a water quality expert providing training on aquatic invasive species (AIS), seechi disc reading techniques and water testing for compounds that can be reported to the DNR. | No |
| Marte Kitson, Environmental Literacy Extension Educator | Minnesota Sea Grant Program | Sea Grant will be a collaborator and serve as a local expert in water quality and conservation best practices especially as it relates to Lake Superior and its tributaries. Kitson may present at northeast workshops and events to train students so they can do their testing of local waterways. | No |
| Katy Krivanek, Water Technician | Sauk River Watershed District (SRWD) | SRWD will be a collaborator and Krivanek may serve as a water quality expert providing training on aquatic invasive species (AIS), seechi disc reading techniques and water testing for compounds that can be reported to the DNR. | No |
| Jonathan Morales, Water Technician | Middle Fork Crow River Watershed District (MFCRWD) | MFCRWD will be a collaborator and and serve as a local expert in water quality and conservation best practices. Morales may share his expertise at the YES! fall summit and workshops in order to train and prepare students to do water quality testing and to implement conservation practices. | No |
| Karl Brown, Executive Director | Laurentian Environmental Center in Britt, MN | Laurentian Environmental Center will be a program partner to facilitate YES! in the northeast region by serving as a host site for YES! events, providing oversight to the northeast YES! coordinator, processing billing, and to ensure the ENRTF project outcomes are met. | Yes |
| Becky Pollack Executive Director | Ney Nature Center, Henderson, MN | Ney Nature Center will be a program partner to facilitate YES! in the southern region by serving as a host site for YES! events, providing oversight to the southern YES! coordinator, processing billing and to ensure the ENRTF project outcomes are met. | Yes |

Long-Term Implementation and Funding

Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this be funded?

YES! has completed its 13th year by leveraging over \$1.2 million in local support of projects in the form of in-kind contributions, matching funds, major grants, and volunteer hours. In addition, YES! will seek private and public partnerships, fundraisers, and sponsorships. YES! provides teams with a Team Funding Toolkit.

The results from this project will leave a lifetime legacy of improved water ways and informed citizens through the various water quality improvement and conservation projects.

Other past supporters of YES! include McKnight, Bush Foundation, Initiative Foundations, Waste Management, businesses, utilities, corporate sponsorships, and individual donors.

Other ENRTF Appropriations Awarded in the Last Six Years

| Name | Appropriation | Amount Awarded |
|---|--|----------------|
| YES! Students Take on Minnesota Water-Quality Challenge | M.L. 2018, Chp. 214, Art. 4, Sec. 2, Subd. 05b | \$213,000 |
| Youth-Led Sustainability Projects in 50 Minnesota Communities – Phase III | M.L. 2016, Chp. 186, Sec. 2, Subd. 05c | \$400,000 |
| Youth-led Sustainability Initiatives in 40 Greater Minnesota Communities | M.L. 2014, Chp. 226, Sec. 2, Subd. 09b | \$350,000 |

Project Manager and Organization Qualifications

Project Manager Name: Shelli-Kae Foster

Job Title: YES! Program Manager

Provide description of the project manager’s qualifications to manage the proposed project.

Shelli-Kae Foster serves as YES! Program Manager. Foster holds an MBA in Sustainable Business from Marylhurst University in Oregon and a Bachelor of Arts with a major in Communications from Gustavus Adolphus College in St. Peter, MN. Foster has been employed by Prairie Woods Environmental Learning Center since 2011 to manage and direct the YES! program to successfully complete over 800 youth-led projects that protect and improve Minnesota’s natural resources. Duties include providing guidance and oversight to support successful completion of youth-led projects, budget analysis and projections, supporting YES! staff, developing and implementing communication strategies, grant reporting and various daily duties to ensure the program operates efficiently and achieves its mission to empower youth to create solutions to today’s ecological challenges through hands-on community projects. Foster helped YES! earn the Environmental Initiative Award for Environmental Education in 2013. Foster was honored with the Minnesota Women in Energy award by Clean Energy Resource Teams (CERTs) in 2018. Previous to working with the YES! program, Foster worked as Sustainability Manager for School District 206/Alexandria, managed the Green Team at Tastefully Simple, Inc, produced environmental programming for Twin Cities Public Television and other major corporations. Foster has managed 4 LCCMR projects over the past 9 years and 2 LCMR projects for Twin Cities Public Television.

Organization: Prairie Woods Environmental Learning Center

Organization Description:

Prairie Woods Environmental Learning Center (PWELC) is a regional center for environmental education and outdoor recreation located in west central Minnesota. Founded in 1992, PWELC now serves over 30,000 people annually from over 70 school districts and dozens of youth and conservation organizations. With over 500 acres of natural space, an education building with 5 classrooms, a trailhead, a pavilion, an educational shooting sports range, an observatory

building, and a 40-foot indoor climbing wall, PWELC offers numerous opportunities for learning and fun. Unique to many other environmental learning centers are our outreach programs, offering educational experiences in communities. Offerings such as YES!, our mobile climbing wall, kayaks, and 34-foot voyager canoe are unique opportunities for meeting the needs of busy community members and students who are unable to travel to our facilities. In addition, these programs provide extended opportunities to partner with other environmental centers and organizations across the state.

Please note, PWELC's renewable energy production is typically close to net-zero and the facility serves as a model for retro-fitting buildings to renewable energy systems. PWELC also serves as a model for natural resource conservation best practices and for sharing these practices with all who live in west-central Minnesota.

Budget Summary

| Category / Name | Subcategory or Type | Description | Purpose | Gen. Ineligible | % Benefits | # FTE | Classified Staff? | \$ Amount |
|---|---------------------|---|--|-----------------|------------|-------|-------------------|------------------|
| Personnel | | | | | | | | |
| Project Manager | | To manage project budget, reporting and staff to achieve desired project outcomes and lead water quality and conservation projects with youth teams in northwestern/central MN. | | | 25% | 1.3 | | \$84,300 |
| Regional Coordinator | | To coordinate and lead Water Awareness & Water Quality Project initiatives in west central Minnesota. | | | 25% | 0.7 | | \$30,000 |
| Office Manager | | To provide bookkeeping, process payroll, project seed fund distributions and other office duties | | | 25% | 0.24 | | \$10,400 |
| | | | | | | | Sub Total | \$124,700 |
| Contracts and Services | | | | | | | | |
| Ney Nature Center | Sub award | To facilitate Water Awareness Method, connect teams of youth with local water quality experts and support hands-on youth-led water quality and conservation projects in southern Minnesota. | | | | 0.5 | | \$26,000 |
| Laurentian Environmental Center | Sub award | To facilitate Water Awareness Method, connect teams of youth with local water quality experts and support hands-on youth-led water quality and conservation projects in northeastern Minnesota. | | | | 0.5 | | \$26,000 |
| School District/Community Expense allowance | Sub award | To facilitate student participation, funds will be available for reimbursement to support: 1. Substitute teachers to allow YES! coaches/adult advisors to attend YES! events during the school day, and 2. Transportation expenses for buses or vans for students and coaches/adult advisors to travel to events. | | | | 0 | | \$6,500 |
| | | | | | | | Sub Total | \$58,500 |
| Equipment, Tools, and Supplies | | | | | | | | |
| | Tools and Supplies | Supplies for events and workshops. Boat rental as needed in some regions. In many regions, boats will be provided through in-kind support. | To enable water quality testing with students across Minnesota | | | | | \$1,500 |

| | | | | | | | | |
|-------------------------------------|-----------------------|--|--|--|--|--|--------------------|------------------|
| | | | | | | | Sub Total | \$1,500 |
| Capital Expenditures | | | | | | | | |
| | | | | | | | Sub Total | - |
| Acquisitions and Stewardship | | | | | | | | |
| | | | | | | | Sub Total | - |
| Travel In Minnesota | | | | | | | | |
| | Miles/ Meals/ Lodging | Coordinators & Project Manager travel: 500 miles/month x 24 months = 12,000 miles x .58 = \$7,000 Coordinators & Project Manager travel: 500 miles/month x 24 months = 12,000 miles x .58 = \$7,000 | Travel required to support and meet with teams and partners and to coordinate activities in over 20 communities across Minnesota. | | | | | \$6,300 |
| | | | | | | | Sub Total | \$6,300 |
| Travel Outside Minnesota | | | | | | | | |
| | | | | | | | Sub Total | - |
| Printing and Publication | | | | | | | | |
| | | | | | | | Sub Total | - |
| Other Expenses | | | | | | | | |
| | | Project Seed Funds; Up to \$400 per team x 10 teams = \$4,000 x 2 years = \$8,000. | Allows for teams to purchase materials and services necessary to initiate projects for water quality and conservation related projects, events, and event registrations to raise awareness, monitoring, testing and reporting. | | | | | \$8,000 |
| | | | | | | | Sub Total | \$8,000 |
| | | | | | | | Grand Total | \$199,000 |

Classified Staff or Generally Ineligible Expenses

| Category/Name | Subcategory or Type | Description | Justification Ineligible Expense or Classified Staff Request |
|---------------|---------------------|-------------|--|
|---------------|---------------------|-------------|--|

Non ENRTF Funds

| Category | Specific Source | Use | Status | Amount |
|------------------|---|--|----------------------------|------------------|
| State | | | | |
| Cash | YES! is seeking support from the Minnesota Pollution Control Agency (MPCA): Environmental Assistance program for the project "YES! Students Lead Climate Adaptation Projects to Create Resilient MN Communities." This is a 2 year project. | Prairie Woods Environmental Learning Center (PWELC) is seeking to empower the YES! network to engage youth from some of our most vulnerable populations to be part of the solution to today's ecological issues. Our network of schools includes many areas defined as MPCA's Environmental Justice areas of concern. This project will complete 10 or more new student-driven Climate Adaptation Action projects in Minnesota communities. | Pending | \$44,825 |
| | | | State Sub Total | \$44,825 |
| Non-State | | | | |
| Cash | Each participating YES! team pays a fee of \$600. We estimate 20 schools will participate in the school years of 2021-2022 and 2022-2023. These are teams that are specifically participating in water related projects. YES! may have up to 30 teams each year. 20 x 2 years = 40 teams total x \$600 = \$24,000 | Participation fees cover costs not eligible for reimbursement from ENRTF and additional needed support such as staff, travel, food for events, t-shirts, and office supplies. | Potential | \$24,000 |
| Cash | Compeer Financial Foundation has committed \$4,500 Ney Nature Center to support the YES! regional coordinator's time and travel to promote youth-led agriculture related projects in the Compeer service area. | YES! will provide opportunities for students from at least 3 rural communities in the Compeer Financial service area to be part of the solution to today's ecological and agricultural challenges while learning about agriculture related jobs. Building on the successful model of YES!, staff will team up teachers, local experts and community members to support students as they complete local projects to help solve a real-world challenge related to agriculture. Together we will work towards improving the quality of life in rural Minnesota through youth-driven leadership. | Secured | \$4,500 |
| Cash | Aimee and Patrick Butler Family Foundation | To engage Minnesota youth in energy action workshops and support youth-led projects related to land use and preservation of our natural resources. | Pending | \$20,000 |
| In-Kind | In-kind from Prairie Woods Environmental Learning Center and our partners Ney Nature Center and Laurentian Environmental Center. | PWELC \$24,000 + LEC \$5,000 + NNC \$ 10,000 for 2 years = ; Student volunteer time average is 327 hrs per team x 20 teams for 2 yrs at \$13/hr = \$85,400; Teacher volunteer time average is 98 hrs per team x 20 teams for 2 yrs at \$35/hr = \$68,600; Professional/expert volunteer time average is 33 hrs per team x 20 teams at \$45/hr = \$29,700. Above in-kind is based on past history of previously quantified data. | Potential | \$222,700 |
| | | | Non State Sub Total | \$271,200 |

| | | | | |
|--|--|--|------------------------|------------------|
| | | | Funds Total | \$316,025 |
|--|--|--|------------------------|------------------|

Attachments

Required Attachments

Visual Component

File: [2f57e1dc-550.pdf](#)

Alternate Text for Visual Component

The visual illustrates the project's goals to complete 30 new student-driven water quality projects, engage and train over 200 youth in 20 communities about local water related issues and improve 20 or more valuable Minnesota water bodies. The visual includes photos of students in kayaks during a paddling sessions to monitor local lakes for aquatic invasive species (AIS), students during a rain garden planting workshop and students stenciling stormwater drains to educate the public on the importance of keeping storm drains clear and clean of debris. There is a map of Minnesota demonstrating our statewide presence and student quote from a Forest Lake student stating "What's great about storm drain stenciling is that it sends a message that will reach a diverse and large number of community members. I took part in the project because there's value in maintaining a healthy watershed."

Financial Capacity

File: [fc182901-0d2.pdf](#)

Board Resolution or Letter

| Title | File |
|-------------------------------|----------------------------------|
| PWELC Board Resolution Letter | 3b1828ff-d9a.pdf |

Optional Attachments

Support Letter or Other

| Title | File |
|---|----------------------------------|
| Discovery Woods_Letter_of_Support | cb35b658-7c0.pdf |
| DREAM Academy_Letter_of_Support | ee9f2431-a4f.pdf |
| Sleepy_Eye_Letter_of_Support | 34cfeb83-f70.pdf |
| Mankato_West_Letter_of_Support | 74339aa0-b43.pdf |
| New London-Spicer_Letter_of_Support | 8fd2e9e0-d76.pdf |
| Northern_Lights_Community_Letter_of_Support | bc14383e-d3a.pdf |
| New Prague_Letter_of_Support | e19ba73a-d45.pdf |
| Wrenshall_Letter_of_Support | 824363e8-332.pdf |
| LEC Letter of Commitment_2020 | a4db8b66-a7e.pdf |
| NNC Letter of Commitment_2020 | ad4c4d8f-ec4.pdf |
| Forest Lake_Letter of Support | 319c4574-538.pdf |

Administrative Use

Does your project include restoration or acquisition of land rights?

No

Does your project have patent, royalties, or revenue potential?

No

Does your project include research?

No

Does the organization have a fiscal agent for this project?

No

YES! Students Take on Water Quality Challenge – Phase II

Building on the successful YES! model, YES! will bring the 3-Step Water Awareness method to over 200 students to improve over 20 Minnesota water ways while partnering with over 2,000 community members and businesses

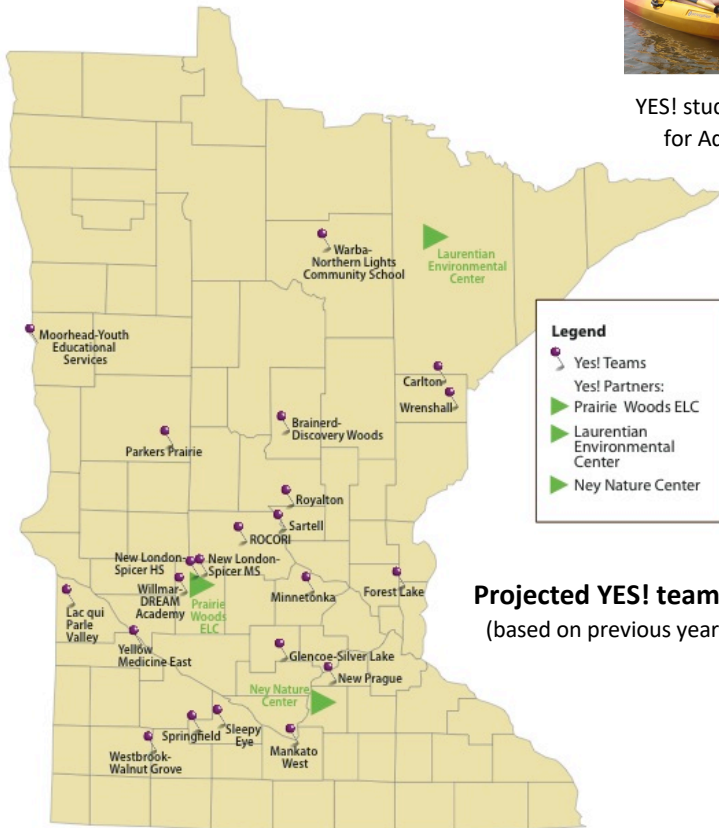


YES! students monitor Lake Ringo for Aquatic Invasive Species



YES! students planting a rain garden in Stearns County

- Complete 30 new student-driven water quality projects
- Engage and train over 200 youth in 20 communities about local water related issues
- Improve 20 or more valuable Minnesota water bodies



YES! students stencil storm drains around Forest Lake community

“What’s great about storm drain stenciling is that it sends a message that will reach a diverse and large number of community members. I took part in the project because there’s value in maintaining a healthy watershed”
-Forest Lake YES! student

Projects Completed During Phase I (Year 1 of 2 year project data)

- 5 water quality testing and evaluation projects
- 4 water-related educational events and peer lessons
- 4 rain gardens designed and planted
- 3+ local lakeshores and rivers cleaned
- 3 storm water collection and reuse projects
- 2 aquaponics systems built
- 2 AIS lake monitoring and reporting projects
- River monitoring and data collection
- Shoreline restoration
- 15 storm drains stenciled
- Water usage tracking
- Adopt-A-Drain awareness
- Native garden & restoration



