

# RESOURCE

A Monthly Publication of the Nebraska Environmental Trust

**July 2018**

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**Executive Director Corner**

Summer is flying by and fall will be here before you know it. Recently I took a ride in the driverless shuttle that the City of Lincoln is thinking of bringing to town. It was set up to run a small route in a parking lot on the Nebraska Innovation Campus (the old State Fairgrounds). The City of Lincoln won a \$100,000 grant from Bloomberg Philanthropies to test the autonomous system. The shuttle was built by the French company Navya. Lincoln was one of the 35 cities to be awarded a grant and they hope to be one of the four cities awarded a larger grant later this year. The shuttle uses cameras, global positioning systems and laser-based sensors designed to orient the shuttle and detect obstacles. The vehicle is 15 feet long and seats 12 with room for few passengers to stand.

The Trust was one of the guests of honor last month at the Fertig Prairie near Schuyler. This was a tract the Trust helped the Wachiska Audubon Society put an easement on and then helped them purchase the tract when it came up for sale.

I was fortunate to attend the City of Superior's solar array dedication recently. They have 3,840 panels on 4.15 acres. They will produce 1.25 MW DC (1.0 MW AC) and is the equivalent to not burning over 85,500 gallons of gasoline per year. The array produces enough electricity to power 122 houses.



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Last month I participated in the Water and Natural Resources Tour of the North Platte River Basin. It was a great opportunity to see how the entire North Platte River system works and hear from the experts that operate the dams and hydro structures. I also participated in the Summer Grazing Tour sponsored by the Nebraska Grazing Lands Coalition and Nebraska Extension. The group got to see the Flying Heart Ranch north of Hay Springs and the Terrell Farm/ Ranch south of Hay Springs. Besides seeing the operations, we got to hear a lot of local history on Crazy Horse, Mari Sandoz and Old Jules.

The Trust was honored to receive the "Partner of the Year" award from the Lower Platte North Natural Resources District at their annual recognition banquet in Prague on June 24th. It is always nice to get recognized by partners. I had the opportunity to give a presentation to staff of the Lottery and it was nice to be able to thank those responsible for generating the funds that the Trust depends on. They were interested in hearing what happens to some of those funds they help collect.

The Trust will have their third quarter meeting in Columbus August 6th and 7th. We will tour some projects we have funded in the Columbus area. The board will elect a new chair at this meeting and approve the next biennial budget.

Everyone is getting excited for Husker football and volleyball this fall. We know the volleyball team will be top notch, but the football team could be on the verge of a major turnaround. The Volleyball Red-White game will be August 18th. The first football game is September 2nd against Akron. Ron Brown has been hired to join the coaching staff. Someone said "things are coming together." Go Big Red.

Enjoy the rest of the summer.

Mark A. Brohman

Sherry Vinton - Whitman

Rodney Christen -  
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Quentin Bowen -  
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**Agency Directors**

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**Trust Staff**

Mark A. Brohman  
Executive Director

Marilyn Tabor  
Grants Administrator

Sheila Johnson

Executive Director

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### **Online Application Portal Updates**

Our on-line application portal for NET grant applications is currently available. If you run into any technical problems, please contact our office general line at 402-471-5409 to resolve issues you may be facing. You are advised to do this as soon as possible. You may also reach Marilyn Tabor on her cell at 402-450-2947 if you are unable to reach her at the office. Please leave a voicemail with your number, if she is unavailable at that time and she will call you back.

A couple important reminders pertaining to the upcoming Grant Cycle:

All applications for 2019 NET funding must be submitted through the online web portal. No other application format will be accepted.

Instructions, Standards of Evaluation, and FAQs are available now at:

[http://www.environmentaltrust.org/grants/application\\_instructions.html](http://www.environmentaltrust.org/grants/application_instructions.html)

Information requirements are the same except the Project Summary has been reduced from 300 words to 200 words and instead of a 5-page narrative, the project must be described in 1200 words. A decision on "Geographic Points" will be made at the August NET Board meeting.

2019 grant applications will be accepted through midnight, September 4, 2018. The online portal will be disabled at that time. We encourage applicants to contact us to discuss draft proposals and ask any questions about the application process.

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## Little Steps. Big Impact.



*Students in the Kids Network program compare ozone readings*

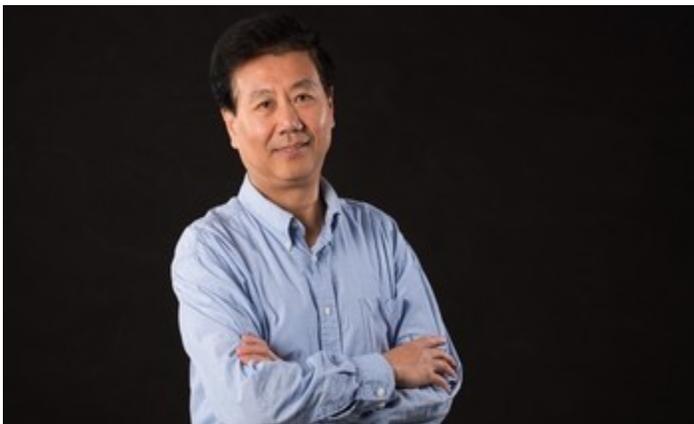
Fifth graders at Reeder Elementary in the Millard School District are among the students who participated in the *Little Steps. Big Impact.* (LSBI) air quality education program. Armed with handheld ozone monitors students across the metro Omaha area are monitoring air quality, tracking the data, and learning about the environmental, health and community impact. In addition, subject experts who are partners of the LSBI program are providing classroom presentations to further engage the students.

Through a grant from the Nebraska Environmental Trust, the *Little Steps. Big Impact.* campaign has been able to expand this important program in 2018. Over the duration of the 2018 grant more than 250 youth will be learning about the effects of ozone on their schools and community. They will also be learning how to change their habits and influence family and friends to be more aware of how to improve air quality.

The air quality program is focused on these efforts:

- 1) To educate our youth through an air quality monitoring science program. In turn, the students can influence family behaviors as well as their own to improve air quality, reduce respiratory impacts, and even reduce traffic around neighborhoods and schools.
  
- 2) To educate the public about the Metro's air quality problem through information about our air quality index, data gathered about the community, the consequences of not meeting air quality standards and stories about what people can do to improve air quality.
  
- 3) To promote activities individuals, families or groups can participate in to help improve the Metro's air quality such as carpooling, walking, bicycling, using biofuels, refueling their vehicles in the evening or early morning during cooler hours and many more ideas.

This year the *Little Steps. Big Impact.* campaign has been able to triple its engagement with youth, engage more science educators and create interest from citizen scientists.



Yiqi Yang

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**Feathers to fibers project earns Environmental Trust grant – submitted by Mr. Bradley Stauffer, Director of External Relations, University of Nebraska–Lincoln**

Yiqi Yang's ongoing research into converting poultry feathers and waste garments into commercially viable textiles received grant support from the Nebraska Environmental Trust recently.

The University of Nebraska–Lincoln professor and his research team are focused on developing a product made from keratin fibers found in feathers and protein fibers in wool. Textiles made from these protein fibers have unparalleled performance properties, including moisture transmission, thermal insulation, soft hand and luster. “Fibers from our research could be used for the textile industry and also have potential in the biomedical industry, especially as tissue engineering scaffolds,” said Yang. “To the best of our knowledge, no efficacious method has been developed to produce regenerated keratin fibers, despite global efforts during the last two decades.”

The Nebraska Environmental Trust recently awarded Yang a \$211,885, two-year pilot-scale production grant to further the study.

Yang's goal is to first produce spinnable fibers on a lab scale, then to improve the process at a pilot scale. With the cooperation of the apparel and fashion industry, Yang hopes to produce enough keratin fibers and yarn to incorporate them into garments.

The regenerated keratin fibers will have performance properties close to wool fibers and appearance close to silk. The researchers are working on a low-cost, efficient water-based solvent that will simultaneously de-crosslink and dissolve keratin from feathers while preserving protein backbones that give the fibers their desirable textile properties.

Yang said developing these fibers from waste materials can create new markets, new small businesses and jobs for Nebraska poultry producers and the broader industry. The project could also result in a viable use for poultry and textile waste.

Nebraska's research is currently using feathers from a "clean feather producer" but in the future Yang would like to work with feathers directly from the poultry production industry in Nebraska.

Yang is a professor of textiles, clothing and fashion design, and biological systems engineering. He holds appointments in Nebraska's College of Education and Human Sciences and the College of Engineering.



**Join the Nebraska Master Naturalist revolution and become part of the legacy!**

The Nebraska Master Naturalist Program is an adult education program, focused on providing volunteers with hands-on experiences in Nebraska's natural resources. The Master Naturalist program offers the opportunity to get up close and personal with Nebraska's natural legacy.

Participants will undergo sixty hours of in-depth training, led by experts in their fields. Learn about Nebraska's Flora and Fauna, native ecosystems, natural resource interpretation, citizen science, and so much more! The Nebraska Master Naturalist Program is supported by funds awarded from the Nebraska Environmental Trust.

**Explore** Nebraska alongside scientists, faculty and natural resource professionals.

**Contribute** your time and expertise through exciting & rewarding volunteer opportunities in habitat conservation, environmental education, citizen science, and more. Most importantly, **connect** with Nebraskans who share your passion for nature.

Become a Certified Master Naturalist and join a dedicated network of conservation volunteers, discover exciting experiences, connect with Nebraska conservation organizations, share your passion for the great outdoors and the Natural Resources of Nebraska!

Master Naturalists have contributed more than 63,000 of hours of service valued at more than \$1,524,000 in areas such as Interpretation and Outreach, Resource Conservation and Management, Outdoor Skills and Recreation, and Citizen Science Research. Apply today at <http://NATURALIST.unl.edu> or call Matt Jones, Program Coordinator 402-937-8601, for more details.

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### Upcoming Events

- August 6-7, 2018, (Monday-Tuesday) - 3rd Quarter Board Meeting, Columbus, NE.
  - August 24 - September 3, 2018, Nebraska State Fair, Grand Island, NE.
  - September 4, 2018 (Tuesday) - Grants Deadline.
  - September 8, 2018 (Saturday) - World O Water, Papio-Missouri NRD, Wehrspann Lake, noon - 4pm.
  - September 11 -13th, 2018 - Husker Harvest Days, Alda NE.
  - September 15 & 16, 2018 (Saturday & Sunday) - Ponca Outdoor Expo, Ponca State Park, NE.
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