

RESOURCE

A Monthly Publication of the Nebraska Environmental Trust

September 2019

Executive Director Corner

I am dedicating my message this month to two incredible ladies who we recently lost in the Nebraska conservation field. I was very fortunate to have worked with both of them over my career.

Cindy Kreifels (pictured below) worked for a number of years for the Groundwater Foundation and then with Lee and Jason Orton at the Nebraska State Irrigation Association in Lincoln. Cindy always had a smile and worked tirelessly on water and environmental issues, as well as promoting the Water Leaders Academy. She passed away at age 58 on September 2, 2019.

Mary Bomberger Brown (pictured below) passed away at age 62 on August 24, 2019. I first met Mary at Cedar Point Biological Field Station at Lake McConaughy in 1983. I actually assisted her in collecting data that summer. She was researching cliff swallows under bridges and on nearby cliffs. Her cliff swallow project is considered the largest data collection project in the world. She authored more than 160 scientific papers, mentored more than 100 student field researchers and personally advised 24



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undergraduate and graduate students. She has received numerous awards and accolades.

In 2007 she became the Project Coordinator for the Tern and Plover Conservation Partnership. She walked into my office to talk about applying for a Trust grant that year. I shared her love of least terns and piping plovers, having worked for John Dinan for two summers in the late 80's collecting data on terns and plovers on the Platte River.

The Husker football team disappointed me with their second half performance in Boulder, but let's see if they can improve. The volleyball team climbed to #1 and then lost to an impressive #2 Stanford. They showed some grit in the 3-1 loss and I think they will be in the hunt at the end of the season. We have an incredibly tough conference, but if you don't play the big dogs, it is tough to be a big dog. Remember, there are no seniors on this year's team, so I think we have some great volleyball coming.

Have a safe harvest and Go Big Red!

Mark A. Brohman
Executive Director



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Cindy Kreifels



Mary Bomberger Brown

Nebraska Environmental Trust Invites Comments on 2020 Grant Applications

The Nebraska Environmental Trust entered the 2020 grant cycle on September 3, 2019, receiving 120 new applications and 46 carry-over projects requesting a total of \$46,328,020 in grants. Last year the Trust received 111 new applications and 32 carry-over projects. The Trust has completed 26 grant cycles and will announce the results of the 27th round of award recommendations in February 2020.

As part of the grant application process, the Trust invites members of the public to review the proposed grants and provide written comments about the projects. A summary of each proposal is currently available on the Trust's web site www.environmentaltrust.org.

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Comments on the grant applications will be accepted until April 1, 2020, at the Nebraska Environmental Trust, 700 S 16th Street, PO Box 94913, Lincoln, NE 68509-4913 or via e-mail to marilyn.tabor@nebraska.gov.

**9th Annual Nebraska Natural Legacy Conference,
October 9-10, 2019, Gering, NE.**

Enjoy this opportunity to learn, collaborate, and build partnerships that foster conservation with researchers, citizen scientists, graduate students, and conservation practitioners.

A Draft Agenda with speakers is [available here](#). There are over 30 presentations on a variety of topics, including environmental education, citizen science, genetics, red cedar, natural resource management, bighorn sheep, and more. The Keynote Presentation will be presented by Dr. Sam Fuhlendorf of Oklahoma State University and Dr. Dirac Twidwell of the University of Nebraska – Lincoln. The Evening Presentation on Wednesday night will be presented by Grant Reiner of Platte Basin Timelapse.

This year, there are three optional field tours for Thursday afternoon:

- 1) Bighorn Sheep Viewing
- 2) Wildcat Hills SRA Immersion
- 3) North Platte River Habitat Restorations

Registration is open until October 4, 2019. Please [register here](#) using Nebraska Game and Parks Commission's Active Net program.

This event is made possible through support from the Nebraska Environmental Trust. Please contact Sarah

Nevison at sarah.nevison@nebraska.gov or 402-471-5708 with questions. [Follow the Nebraska Natural Legacy Project on Facebook](#)



Sustainable Small House Project - Submitted by Bing Chen, Passive Solar Research Group, Electrical and Computer Engineering Department, College of Engineering, University of Nebraska-Lincoln (Omaha Campus)

Thru funding support from the Nebraska Environmental Trust, the **Sustainable Small House** at the University of Nebraska involves multiple departments and campuses working collaboratively as well as Metropolitan Community College which will “manufacture” the sustainable small house. The goal is to demonstrate the technical and practical feasibility of a small home that is sustainable and energy conserving. In essence it is a small house on “steroids” that will produce most of its electricity, collect most of its water and use only a fraction of the energy of a conventional home to heat and cool it. In addition it will be ADA compliant creating a potentially viable solution for those who may have disabilities or have a need for ADA compliant housing.

The small house movement was in a limited number of locations focused primarily on the west coast seven years ago when our project was first conceived. The movement has spread throughout the west coast and rapidly eastwards and now includes Lincoln, Nebraska where a small house is permitted on existing properties expressly for the care of aging parents. .

The Sustainable Small House's photovoltaic solar panels will provide nearly 9 kilowatts of electricity to meet much of the electrical needs. Excess power can be stored in a 10 kilowatt hour battery (specially designed for residential use) for later use and any extra power can be turned over to the local utility. Grouping a number of such homes together could provide a district power solution for utilities to offset peak loads particularly in summer.

The roof water collection system will demonstrate an alternate fresh water source to reduce the need for drawing water from underground aquifers. One inch of rain will produce in excess of 400 gallons of fresh water that will be treated (and tested) before it enters the home to be used. Coupled with water conserving devices such as low flush or composting toilets, on demand faucets, water conserving appliances and low flow shower heads the goal is to reduce the water demand by the occupants. It is expected that testing will demonstrate a significant reduction from the typical 100 gallon per day use per person in Nebraska to a lower figure closer to 20-25 gallons.

The energy footprint of the Sustainable Small House for both heating and cooling will be a fraction of what is typically needed in most conventional homes. With the use of passive solar heating, a high efficiency mini split heat pump and a well insulated and air tight building envelope the goal of the Passive Solar Research Group is to require the heat from "16 candles" to keep it warm on a winter's day.



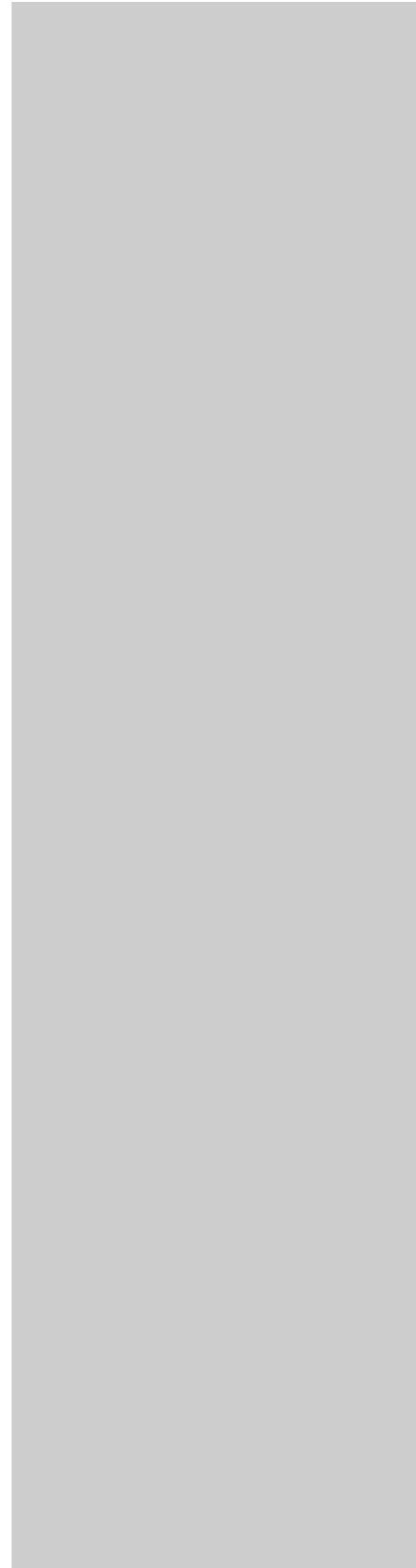
Bedroom, living and dining



Bathroom



Living, dining and kitchen





Top View

Showing and Telling on Solar by The Nature Conservancy

To reduce our greenhouse gas emissions and to protect our lands and waters, we must transition to clean energy – including solar – where we can. From funding derived from the Nebraska Environmental Trust, The Nature Conservancy will be demonstrating the use of solar panels at their most-visited sites: the Niobrara Valley Preserve and Platte River Prairies.

The panels at the Niobrara Valley Preserve are up and running, part of a suite of energy-saving measures taken during the construction of the new Hubbard Training and Holland Visitor Centers. “The panels power both buildings, and we’re producing more energy than we are using, on average,” said Director of Conservation Rich Walters. “They will also power the new long-term researcher housing (which is currently under construction).”

A solar array is also scheduled to be installed at the Platte River Prairies next spring.

Both solar panel projects have been funded through grants from the Nebraska Environmental Trust. The Trust is funded by proceeds from the Nebraska Lottery and has awarded more than \$315 million to more than 2,200 conservation projects across the state of Nebraska since 1994.



The solar array at the Niobrara Valley Preserve. Photo © Randy Schantell/SWT Energy

Upcoming Events

- September 21-22, 2019 - Missouri River Outdoor Expo, Ponca State Park, Ponca NE.
 - October 3, 2019 - Goldenrod Festival, Lauritzen Gardens
 - November 7, 2019 - 4th Quarter Board Meeting, 1:30 pm, Ferguson House.
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