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# RESOURCE

A Monthly Publication of the Nebraska Environmental Trust

**June 2016**

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**Executive Director Corner**

The Trust experienced the loss of one of our staff recently. Lori Moore passed away on May 21st. She had been with the Trust since July 2008 and will be missed greatly.

I was able to attend the annual Garden Party at the Lincoln Children's Zoo as a guest of the Nebraska Lottery. The Lottery is one of the main sponsors and they generously share their participation with us each year as one of their beneficiaries. The Trust is able to get information to those attending and receive praise throughout the evening. This event is the Zoo's largest fundraiser.

The Trust had a booth at Lincoln's annual Waterfest held at Holmes Lake. I think I applied well over 400 tattoos and distributed several hundred pencil sharpeners. It was a very family friendly event that was so popular; they ran out of hotdogs before the end of the event.

I had the privilege of attending the 45th Annual Water and Natural Resources Tour to the Front Range and central Colorado. The group included local, state and federal representatives along with UNL, landowners, NRD board members, consultants, irrigation and power district staff and others. It was a great trip and I learned a lot about



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**Agency Directors**

Nebraska's water coming out of the South Platte River and its uses and diversions in Colorado.

We are getting a new roof on the carriage house that is adjacent to the Ferguson House, where the Trust has its offices. The cedar shingles had to come from Canada and their delivery has delayed the project start date, but the project has now begun. A new roof has been needed for several years.

Here's to a great growing season with adequate rains and plenty of sunshine. Have a great summer.

Mark A. Brohman  
Executive Director

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### **In Memory of Lori Moore**

As many of you know, the Nebraska Environmental Trust lost one of our staff members on May 21st.



Lori Moore had worked for the Trust since July of 2008 as the Administrative Assistant and Office Manager. Before that she worked 17 years for the Nebraska Emergency Management Agency (NEMA). Lori is survived by her husband Joel "Joe", nephew Jordan who lived with them, her parents, a brother and additional family. A memorial service was held on June 10th and several Trust friends joined us. The Trust would like to

Jim Douglas, Nebraska Game  
and Parks Comm

thank everyone who has called, e-mailed, send cards or let us know you care. We would also like to thank everyone who has contributed to a memorial in Lori's honor. We plan to commission a bronze wildlife piece, more than likely a crane, that will grace the grand staircase of the Ferguson House.

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**Bats and Wind Energy – protecting Nebraska's natural pest control agents by Michael Whitby, Nebraska Cooperative Fish and Wildlife Research Unit**

Nebraska has a natural ally in its fight against agricultural pests - bats. These creatures eat up to their body weight in insects every night, contributing over 3.7 billions of dollars to agricultural pest control in the US. Unfortunately, bat populations across the country are rapidly declining and may be unable to recover due to their slow reproduction rates (about 1 pup per year).

One major factor that could contribute to bat declines in Nebraska is wind energy development. Each wind turbine in the Great Plains is estimated to kill 4-8 bats per year. Across the US and Canada, an estimated 1 million bats were killed by turbines between 1999 and 2011. As Nebraska positions itself to harness its wind energy, effects on these economically important species must be considered.

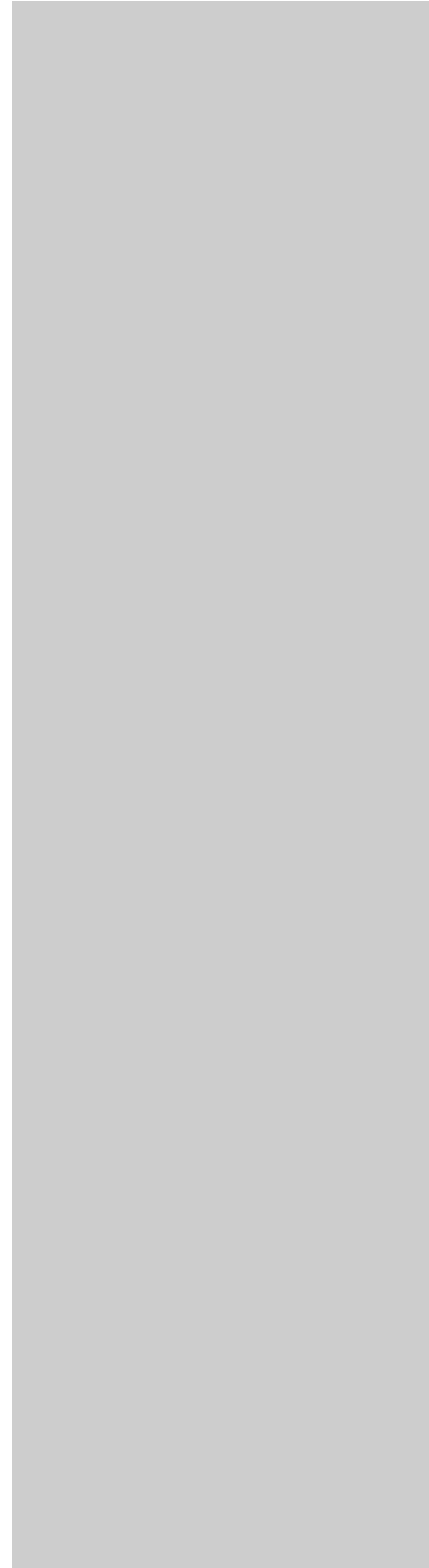
University of Nebraska researchers are looking for ways to balance our energy needs while reducing impacts to Nebraska's bats. Because most bats killed at wind turbines are migratory, the USGS Cooperative Fish and Wildlife Research Unit at UNL is investigating where and when bats migrate in Nebraska. By answering these simple

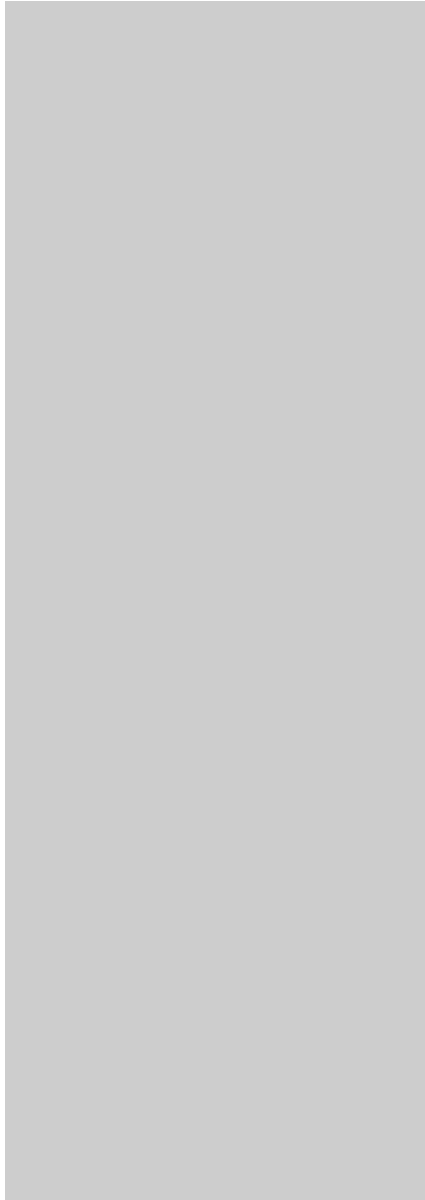
questions, they hope to identify areas where the threats of wind turbines are highest and time periods when proven mitigation techniques (such as shutting down wind turbines) are necessary.

To answer these questions, over 20 bat detectors, devices that listen for the echolocation calls of bats, are placed across east central Nebraska. As a bat passes in front of the detector the sound is recorded to and identified to species. This information is then compiled into hourly and daily activity levels to identify the weather patterns that correspond with high levels of bat activity. We also hope the information will allow us to identify risky and safe areas to place turbines.

Preliminary data from this NET funded project suggests that agricultural areas have higher activity than previously thought. An average of 150 bat calls per night has been recorded across the study area between April and November, indicating that bats provide important pest control services throughout the growing season and in highly agricultural areas. This year, they will analyze the diet of migratory bats from June through October to see if the timing of migration corresponds to abundance in agricultural pests.

See below - Photos of a bat detector microphone overlooking the Platte River at the observation tower at Platte River State Park and Michael Whitby changing the batteries of a bat detector at one of the many privately owned silos that are used as sampling locations. The project would not be possible without the generous support of Nebraska's farmers who have allowed us onto their property.







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**Home Owner Pollinator Workshop, submitted by  
Nebraska Game and Parks Commission**

In an effort to build “grass roots” support for this Nebraska Environmental Trust project, local partnerships will be promoted through active recruitment of volunteers from individual towns in an effort to create “citizen scientists”. Each of the 20 local communities along the developed eastern half of the trail and in towns adjacent to the State Park areas will be enticed, at public meetings and through local news media outlets, to adopt a portion of their trail or park lands and help with the conversion to butterfly habitat.

They will be invited to plant milkweed plugs provided by

Nebraska Game and Parks Commission and assisted by trail managers, park superintendents and Prairie Plains Resource Institute staff in the planting and maintenance of these plants. This component of the project may be the most important from the aspect of creating long-term conservation awareness of the plight of the Monarch butterfly and creating the sense of pride and ownership on the part of local volunteers. Local awareness and ownership will help to insure the long-term sustainability of this project at a nominal cost. School and youth groups will be a major focus of this effort as will civic organizations, church groups and other non-profit associations. Much of this component of the grant involving volunteers is contained in the Cowboy Recreation and Nature Trail 2016 Master Plan.

For more information, click on [Home Owner Pollinator Workshop](#).

Photo below shows a monarch on a golden rod.



**Protecting, Rehabilitating and Restoring Nebraska's  
Pine Forest Ecosystems by John DuPlissis, Nebraska  
Forest Service**

Repeated, increasingly frequent, uncharacteristic megafires are rapidly destroying the ponderosa pine ecosystems in the Niobrara Valley and Pine Ridge. Since 1989, the iconic Pine Ridge of northwest Nebraska has lost 66 percent of its forest cover, from 250,000 acres in 1989 to approximately 80,000 acres today. Thousands of acres of forest that burned in 2006 burned again in the catastrophic fires of 2012, completely eliminating the surviving scattered islands of green pine forest, sterilizing the soil, and destroying for centuries the natural capacity for forest regeneration across vast watersheds. The fires of 2006 and 2012 left enormous numbers of dead trees remaining on nearly 160,000 acres of forest lands in the Niobrara Valley and the Pine Ridge, putting these lands at grave risk of reburning over the next few years.

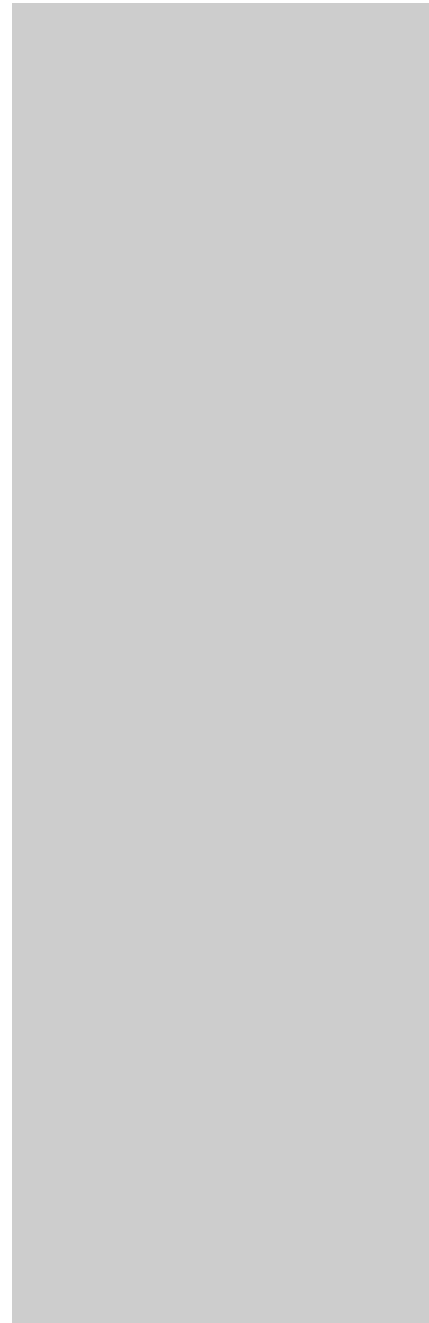
To address this situation the Nebraska Forest Service applied for and received a grant from the Nebraska Environmental Trust to provide cost-share incentives to private and public landowners to thin and remove dead, burned trees around surviving islands of green trees to protect their long-term capacity to regenerate. The goal of this project is to minimize future crown fires, help restore pine forest health and sustain the flora and fauna that depend on this unique ecosystem.

This project essentially began during the summer of 2014. NFS field foresters in both the Pine Ridge and Niobrara Valley engaged forest landowners whose forests were burned in the 2006 and 2012 fires. NFS is currently in the third year of this project and to date has worked with 32 landowners to establish fuels treatment projects to protect green islands of tree. A total of twenty-six projects have been completed to date treating over 1,000 acres with another six project currently in progress treating an additional 300 acres.



A recent development has been the use of a “Roller-Chopper” mounted to a skidder to remove highly degraded trees from the 2006 fires in the Pine Ridge. This machine knocks the high risk trees down and incorporates the material into the soil and/or grinds the material in place. This allows contractor to access areas that were not accessible previously due to the risk associated with operating near these badly degraded trees. The operators work within a safety cage of the machine to protect them from falling trees and branches.

See photos below. The first photo is after treatment and the second photo shows a Green Island prior to treatment with a roller chopper.





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### Upcoming Events

- August 3, 2016 (Wednesday), Environmental Expo, Homestead National Monument, Beatrice, NE
- August 8-9, 2016 (Monday/Tuesday) - 3rd Quarter Board Meeting, Fort Robinson, Crawford, NE
- August 26-September 5, 2016 - Nebraska State Fair, Grand Island
- September 10, 2016 (Saturday), World O' Water, Omaha
- September 16-18, 2016 (Friday - Sunday), Ponca Outdoor Expo, Ponca State Park