



The Nebraska
Environmental Trust

preserving NATURAL NEBRASKA™ for future generations

newhorizons

2015 Annual Report

The Nebraska Environmental
Trust is funded by



2015 Nebraska Environmental Trust Board



Front row: (left to right): Jim Douglas, Nebraska Game and Parks Commission; Paul Dunn, Omaha; Robert Krohn, Omaha; Kevin Peterson, Osceola; Jim Macy, Nebraska Department of Environmental Quality;

Second row: Sherry Vinton, Whitman; Henry "Rick" Brandt, Roca.

Back row: Rod Christen, Steinauer; Jim Hellbusch, Columbus; Greg Ibach, Nebraska Department of Agriculture; Gloria Erickson, Holdrege; Gerry Lauritzen, Omaha.; (Not pictured: Jeff Fassett, Nebraska Department of Natural Resources).

Mission Statement:

The Nebraska Environmental Trust is established to conserve, enhance and restore the natural environments of Nebraska. A prosperous future requires a sound natural environment. We must act dynamically, progressively and systematically to ensure bountiful and thriving natural resources.

The Trust is to complement existing activities, stimulate private investment and emphasize long term gain. The Trust is to lead in the development of a vision of Nebraska's future environment. The Trust is to collaborate with public and private efforts to achieve that vision.

Message From Board Chair

Each new day I am privileged with the unobstructed view of a gorgeous horizon. The Sandhills are world renowned for their stark beauty, a sea of grass. Moving to a ranch in the middle of nowhere certainly broadened my horizons and after more than thirty years of experience, challenges and reflection living on the land, my perception of nature has definitely changed.

This year the Trust undertook the task of reevaluating our Funding Categories. As per statute, this is done every five years. Three open public listening sessions were held in the spring in various locations across the state where individuals and groups were given the opportunity to provide input as to what should be included or excluded as a potential Funding Category. Upon review of the meetings, comments and ideas submitted the board concurred that the current Funding Categories would remain intact. The overall sentiment was that the categories were purposely and intentionally broad enough in scope to encompass any project for consideration that might be submitted as a grant request.

Just as biodiversity provides for healthy natural competition, the competitive grants process at the Trust evaluated by a varying group of board members provides a way to let diverse ideas compete. This allows for trial and error and most importantly change and growth. Each year new grants are submitted and grants may be resubmitted after revision and evaluated by a fresh set of eyes every grant cycle.

One of the things that I've observed living on the land is that conservation is not a snapshot vision or trying to preserve a specific moment in time, like a bankrupt Kodak moment. It is more like Snapchat, a fleeting image under specific circumstances, a quasi-stationary state. Which time was actually and objectively the best? Is it even possible to achieve and maintain that vision?



Conservation is the science of surprises! It is complex just like our landscapes and relationships. It is not necessarily linear or predictable. We expect results based on inputs, but there are outcomes that cannot be measured and cannot be bought.

At the end of the day, the director, staff and members of the Trust board work to provide funding to ideas for new horizons and a bright future for our youth, not just a glimpse of the sun setting past. We continue to work to understand that our ecosystems, our social systems and our economic systems are interrelated. We strive to avoid actions which may end up being detrimental to our long-term well-being.

Happy Trails,

Sherry Vinton

"Two roads diverged in a wood and I,
I took the one less traveled by,
and that has made all the difference."
Robert Frost

New Horizons

The Trust has now been in existence for 25 years and accomplished a huge milestone in the last two decades. This year we had several meetings in the three Congressional Districts and sought public input at these meetings about our funding categories. The Board of the Trust concluded that our funding categories have never been a deterrent to anyone wanting to submit a grant. All projects that meet the eligibility criteria, are reviewed carefully by the staff and experts in the field. Subsequently, recommendations are made to the Grants Committee, who then rate the projects accordingly to determine if they receive funding or not.

The 2015 Annual Report will showcase some of the unique applications that have come through the Trust doors, made it through the application process and received funding based on its merits. The impact that it has had on communities in Nebraska is far reaching. The Trust's funding categories are broad enough to enable many applications from all over the state with diverse backgrounds to apply for funding. The funding categories are: Habitat, Surface and Ground Water, Waste Management and Recycling, Soil Management and Air Quality.

Here are some quotes from past grantees on our funding categories:

"At first glance, the funding category, Air Quality, may seem unnecessary. Nebraska seems blessed with clean air. But the five funding categories of the Trust are about preservation and how to keep the natural necessities of life healthy and in balance for future generations. The aftereffects of modern life are forcing improvements and innovations in personal transportation and energy production that are less pollutive and frankly, better. The Trust has positioned itself to be able to fund the most advanced clean energy technologies that save energy, reduce CO2 and cut costs to everyone from the average Nebraskan to the largest commercial enterprise in the state - production agriculture." – Anne McCollister, Nebraska Community Energy Alliance

"The Trust categories are well divided, so a wide range of environmental needs are able to receive attention. The Environmental Trust staff is very approachable and easy to work with!" – Deb Rost, Nebraska State Recycling Association

"One of the great things about the Nebraska Environmental Trust and its grant process is its flexible nature which allows for such a wide-range of creative proposals. Although the application forms require significant forethought and organization from the proposal writer, they're not complicated to understand or fill out. One doesn't have to be a professional writer to get funded. They just have to offer a well-crafted, inspiring and realistic proposal.

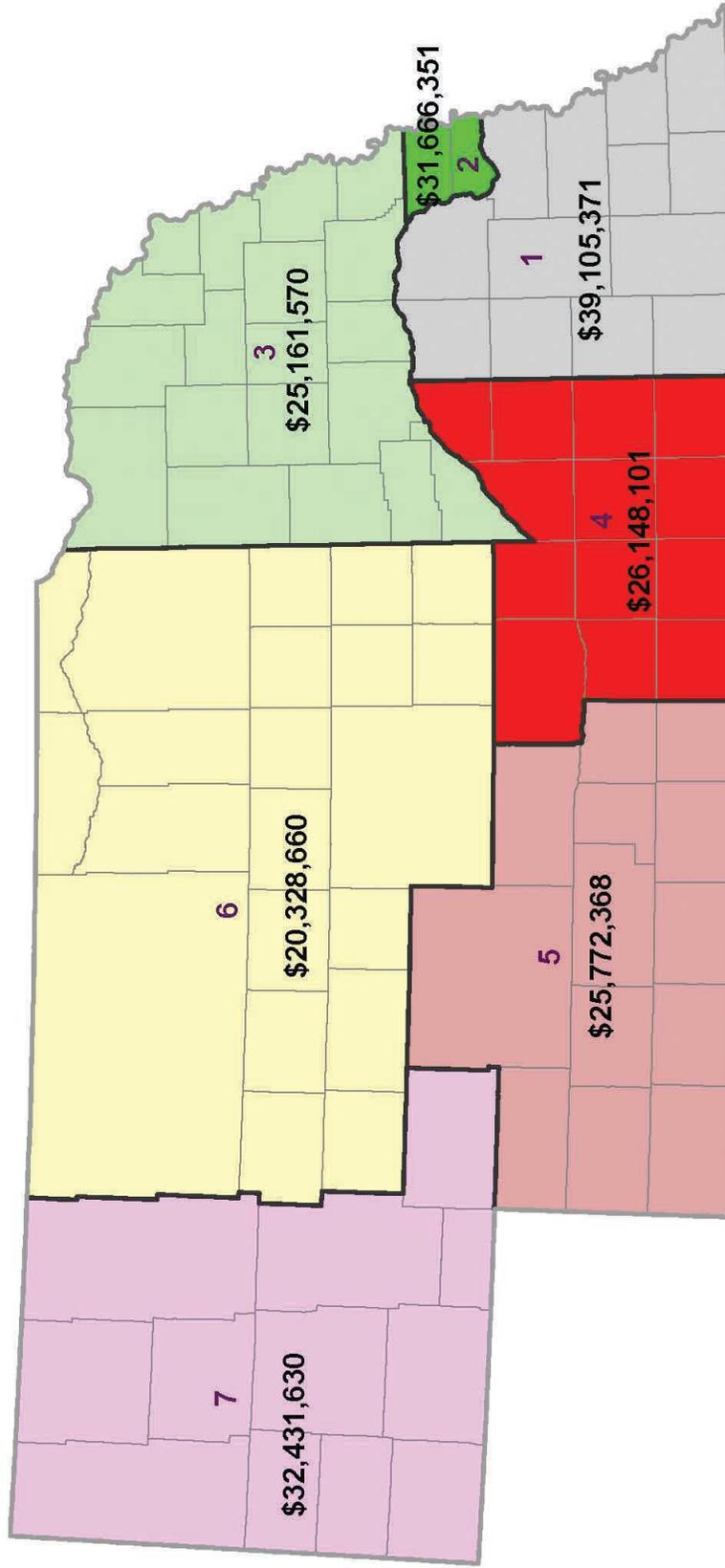
I greatly admire the Trust's willingness to keep the proposal process simple enough that a large number of proposals come in each year, which creates a significant workload for Trust employees and volunteer evaluators. It would be tempting to try and reduce the grant-review and management workload by making the process more cumbersome and/or by awarding fewer grants. NET does not do that and that is a VERY good thing.

The funding categories are all extremely important and for a wide variety of creative projects and proposals. I hate to try and judge any one category as being more important than another since ultimately the long-term comfort and survival of the human species will require that we all work together to maintain habitat and biodiversity, clean abundant water supplies, clean air and healthy/organic soils. The Trust's categories are right on target in that regard." – Justin Evertson, Nebraska Statewide Arboretum

"The very process of the restoring the land to health is the process through which we become attuned to Nature and, through Nature, with ourselves" - Chris Maser, Forest Primeval

Geographic Distribution of Awards 1994 - 2015

Geographic Distribution of Awards (1994 - 2015) Nebraska Environmental Trust



1994-2014 Awards 2015 Awards

\$36,780,143	\$2,325,228
\$29,208,257	\$2,458,094
\$23,309,390	\$1,852,179
\$24,277,646	\$1,870,455
\$22,975,675	\$2,796,693
\$17,574,529	\$2,754,130
\$30,610,463	\$1,821,167
Statewide	\$3,614,010

Figures on the map represent geographic area award totals for 1994 - 2015: \$200,614,051

Awards with Statewide Benefits for 1994-2015 (not included in map figures): \$56,195,243

Total Amount Awarded
1994 - 2015: \$256,809,294



Central Omaha Bus Rapid Transit

Connecting The Dots

With support from the Nebraska Environmental Trust, Metro Transit is building the first Bus Rapid Transit project in Omaha. Bus Rapid Transit, more commonly known as BRT, is designed to look, feel and operate like a rail project using specialized transit buses. The BRT will run every ten minutes on Dodge Street between Westroads Mall and downtown Omaha. This corridor serves as the spine of the transit system in Omaha and connects with nearly every Metro route. It also links major employment, residential and educational centers along the corridor.



BRT includes upscale rail-like stations at limited stops, priority treatment over other vehicles, and a unique brand and identity. It also features a number of amenities for passenger comfort and convenience including technology and signage showing real-time arrival information and improved fare collection systems.

Last year, Metro was awarded a highly competitive \$15 million federal Transportation Investment Generating Economic Recovery (TIGER) grant towards the BRT, one of only 72 in the country out of 797 applications. Since then, the support of local partners such as the Nebraska Environmental Trust has been crucial. Funding from the Trust has helped inspire confidence and trust in the project, and serves as leverage as Metro seeks funding for the local match for the federal grants from other sources. It has also elevated the importance of transit as an environmentally friendly solution for our community. Support from the Trust has resulted in new partnerships with local stakeholders in order to pursue utilizing alternative fuel technology.

WHAT IS BUS RAPID TRANSIT (BRT)?

Bus Rapid Transit is a high-performance transit service that is an investment in our community's future.

BRT offers a fast, streamlined customer experience by deploying a variety of time-saving features.

- Upscale rail-like stations
- Specialized vehicles
- Exclusive transit lanes
- Fewer stops
- Priority treatment over traffic
- Technology and real-time arrival
- Improved fare collection
- Strong brand & unique identity
- Passenger amenities for comfort and convenience

Predicted to reduce harmful emissions at a value of \$2.4 million over 20 years, the BRT will play an important role in improving air quality in the greater Omaha region which is in danger of reaching non-attainment status of federal air quality standards. Emphasis on air quality provides the opportunity to invest in innovative transportation infrastructure such as the BRT, which is also poised to provide numerous other benefits to the community. The BRT will not only reduce emissions from personal vehicles but will help to shape a more sustainable built environment and development patterns in the Omaha region. While the objective of the BRT is to improve mobility, the BRT will also promote economic and infill development, create vibrant and livable communities with public spaces around stations and expand access to employment and educational opportunities.

This project is the first of its kind in Nebraska and it is being implemented under an expedited timeline (the BRT will be open by fall 2018). To overcome these challenges, Metro has worked very closely with numerous partners including the Metropolitan Area Planning Agency, the City of Omaha, the Nebraska Department of Roads, the Federal Transit Administration and a dedicated and involved stakeholder committee. These partnerships have been instrumental in keeping this project on schedule while using best practices from BRT systems around the world to plan for a truly innovative project.



Live Well Omaha

Heartland B-Cycle Expansion

Deteriorating air quality and toughening federal regulations for air quality standards is an important issue facing our community here in Omaha. According to the Metropolitan Area Planning Agency (MAPA) going out of federal air quality standards “would have a number of ramifications, including more paperwork and reporting for businesses, more environmental regulation of industrial activity, and reduced freedom of choice in public infrastructure investments, especially in transportation.” Additionally, there are “health impacts of poor air quality” to consider. Again from MAPA: “In the last decade, clinical research has definitively proven that ozone is harmful to human health at lower concentrations in the atmosphere than previously thought, across both the general population and those already afflicted with chronic respiratory diseases.” Now is the time to take action and funds from the Trust to support air quality projects like Heartland B-cycle are on the forefront of action being taken.



Heartland B-cycle is an Omaha metro area-wide bike share program run by Live Well Omaha. The objective of the program is to provide bikes as an active public transportation option to reduce emissions and obesity. By having bikes widely available members of the public are able to replace high emission trips with more efficient ones. The Nebraska Environmental Trust funded the expansion of Heartland B-cycle which allowed the Omaha metro area bike share program to grow from 8 stations and 43 bikes to 31 stations with 152 bikes.

The next step for Heartland B-cycle is to continue expanding. To help that process they have secured a \$930,000 federal grant to double the size of the system again. The grant will be executed over the next four years to help ensure a stable and successful future for the program.



Omaha residents enjoying the outdoors using the bike share program.

The Trust's focus on air quality allowed Heartland B-cycle to work toward its goal of being a metro wide transportation option. The Trust and 10 other organizations funded the recent expansion which was a complex and difficult process to get permission and approval from local municipalities and property owners. Those hurdles took time and effort to get over, but 2015, the first season with all 31 stations installed has smashed all previous records for usage doubling the number of trips taken in 2014 by mid-October. None of this success would be possible without the significant involvement and support of the Trust.

University of Nebraska - Lincoln

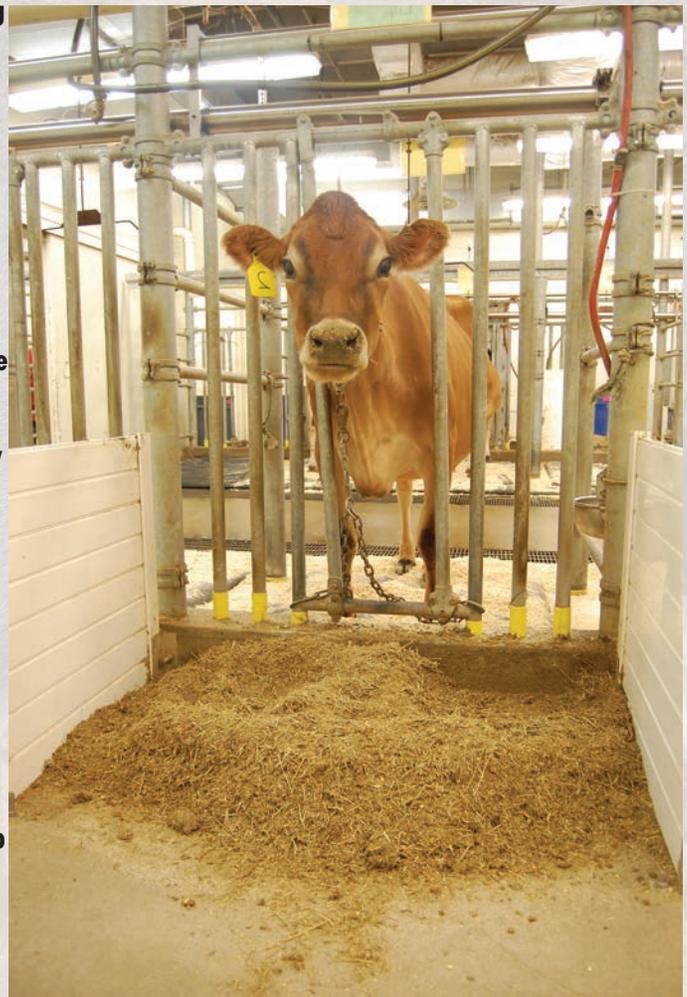
Improving Air Quality by Reducing Methane Emissions from Cattle while Increasing Meat and Milk Production

Methane levels in the atmosphere have tripled since pre-industrial times. The ability of methane to capture heat in the atmosphere 21 times more efficiently than CO₂ has made methane a more potent greenhouse gas. Among the major sources of methane production, ruminants account for a considerable fraction of the anthropogenic methane produced. Scientists at the University of Nebraska – Lincoln are developing dietary intervention strategies to reduce methane emission from cattle to improve air quality. With funding from the Nebraska Environmental Trust, this project seeks to reduce methane emission from cattle and use the energy saved by reducing methane emissions to use for weight gain or milk production that will help the producer improve profitability of their operation.

At the heart of methane production in ruminants is a microbial food chain. The microscale processes of these microbes directly contribute towards methane production in the rumen. However, this microbial community is greatly influenced by the diet. Therefore, understanding the interactions between diet, methane released and the microbial community structure in different cattle production systems will help develop dietary and management strategies towards methane mitigation.

The overarching objective of this project is to develop science-based dietary intervention strategies to reduce greenhouse gas emission from cattle in beef and dairy production systems. To this end, this project investigates the rumen microbial community under different dietary treatments to identify and characterize the complex microbial community and members of the microbial community that influences methane emission. Additionally, this project will simultaneously monitor animal performance and methane emissions in beef and dairy cattle production systems to achieve maximally efficient production.

This research will set the stage for development of new management strategies using diet towards methane mitigation and improving animal performance. Additionally, outreach attempts in this project will result in developing programs that will deliver science-based knowledge and informal educational programs to dairy and beef producers. Such attempts will result in producer friendly extension curricula, which will help translate the results of this research into production systems. This project is currently in its first year of funding.



Fueling Sarpy County with Natural Gas



Fueling Sarpy County with Natural Gas is a collaborative project among Sarpy County and the Cities of La Vista and Papillion. This project improves air quality while developing regional economic opportunities and increasing energy by focusing on the deployment of Natural Gas Vehicles (NGVs) in Sarpy County. Natural gas is the cleanest commercially available fuel for transportation today, reducing greenhouse gas emissions by 20-30 percent when compared to diesel and gasoline fueled vehicles. This project will continue to expand the usage of natural gas vehicles in Nebraska by adding more NGVs to Sarpy County roads and highways.

The Nebraska Environmental Trust funding has proved invaluable in getting this project started. Under current budget constraints it is likely that none of the agencies would have been able to convert or acquire the vehicles in use. Currently, Sarpy County has one vehicle in use by the Sheriff's Department and one being converted for the Public Works Department. La Vista has two on the streets, one in Public Works and one in the Parks Department and Papillion has three in service in their Public Works Department. All three agencies will continue to add more vehicles as appropriate.

Some of the challenges to the project included scheduling conversions and the availability of Compressed Natural Gas (CNG) in the area. Metro area conversion companies experienced backlogs, which were exacerbated by the short-term closing of one for relocation, which created major delays. Having only one fueling station in the immediate area can be problematic. Originally the partners looked at constructing their own station but land and construction costs proved too high for the agencies to undertake. Discussions were held with Black Hills Energy, but they were not able to partner in the construction of a new facility at the time the grant was approved.

The opening of a CNG station in Sarpy County by the Metropolitan Utilities District has been extremely beneficial to this project. Also, as the demand for CNG vehicles has increased, different conversion companies have opened to help alleviate the backlogs in the area.

All three agencies are committed to increasing the number of CNG vehicles in their fleets. The Sarpy County Sheriff's office is considering the purchase of several NGVs for their deputies. Another fueling station would be very beneficial to the Sheriff's office as it is not cost-effective for deputies on one side of the county to drive to the other side to refuel. The City of La Vista ultimately expects to have their entire fleet (approximately 65 vehicles) running on CNG. The City of Papillion expects to continue to improve their fleet with the addition of CNG vehicles.

Without the assistance of the Nebraska Environmental Trust (NET) this project likely would not have occurred. Papillion Director of Public Works Marty Leming noted that "this money allowed us to purchase three vehicles with the CNG option, where otherwise we would not have." La Vista Public Works Director Joe Soucie added that "without the assistance of NET only one to two vehicles a year would be retrofitted to CNG. With their assistance six to eight vehicle a year will be converted."

With funding from the NET, Sarpy County, the City of Papillion and the City of LaVista are improving air quality, reducing greenhouse gases, increasing energy security and saving fuel costs. Sarpy County and its partners will continue to expand the usage of compressed natural gas in Nebraska by adding more NGVs to Sarpy County roads and highways.

Big Ox Energy Siouxland - Converting Biogas from Industrial Waste into Renewable Natural Gas

The past several years have yielded an era of unprecedented change in how individuals think about, manage and regulate solid, organic and high strength waste water streams. Significant drivers behind these changes - including more rigorous environmental legislation - range from a better understanding of the environmental ramifications of waste to the technological advances in utilizing waste streams as a renewable source of energy.

For Big Ox Energy Siouxland, Inc. their fundamental objective for their project, "Converting Biogas from Industrial Waste into Renewable Natural Gas" was to assist the City of South Sioux City in identifying a fiscally and environmentally responsible alternative that would help them to divert organics from the landfill, along with capturing high strength waste water streams in the Roth Industrial Park to help offset waste management costs for local industries, all the while providing a local source of renewable natural gas. Given that the objective of this project aligned well with four of the Nebraska Environmental Trust funding categories: Waste Management, Air Quality, Surface and Ground Water and Soil Management, it provided Big Ox Energy Siouxland, Inc. with a funding opportunity that has enabled them to utilize waste to create a fungible end product that is not only environmentally responsible, but will provide a continual local source of renewable energy.

Although the project sounded like the ideal environmental solution to the growing waste management issues facing the Roth Industrial Park, the biggest challenge for this project came as a result of concern expressed by local industries regarding how effective this project would be in helping them to reduce their waste management costs. To ease concerns, Big Ox Energy Siouxland, Inc. met with each of the industries to answer any questions, address any concerns and to demonstrate how this project offered each industry a viable solution to offset their growing costs related to waste management. Once industries understood the economic benefits, coupled with the environmental benefits offered to them as a result of this project, Big Ox Energy Siouxland, Inc. entered into a long term agreement with the City of South Sioux City to begin the design and construction of this project.



Duke and Ted, a pair of 2,300 lb. oxen, help the Big Ox Energy team break ground during the groundbreaking ceremony for Big Ox Energy Siouxland in South Sioux City, NE.

As a result of funding awarded by the Nebraska Environmental Trust, Big Ox Energy Siouxland, Inc. was able to purchase a gas clean-up system to convert methane captured from processing the organic and high strength waste streams into renewable natural gas.

In the future, Big Ox Energy Siouxland, Inc. seeks to replicate this project in other municipalities across the State of Nebraska and help each Community identify a fiscally and environmentally responsible alternative to waste management.



Construction of the new Big Ox Energy Siouxland Renewable energy project is well underway and is scheduled to be fully operational mid-summer 2016.

Metropolitan Utilities District Driving Omaha Natural



Driving Omaha Natural's overriding goal is to proactively address the reduction of harmful vehicle emissions and improve air quality in the Omaha area. This is the final year of a three year grant.

The Omaha area is uniquely impacted by air quality issues and is at risk of violating the National Ambient Air Quality Standard established by the Environmental Protection Agency. Compressed Natural Gas (CNG) is the cleanest burning alternative fuel commercially available today and represents an environmentally friendly alternative to petroleum based fuels. CNG offers an immediately available solution to make substantial reductions in air pollutants from vehicles. Motorized vehicles are the single largest source of air pollution and are a major contributor to air pollution in Omaha.

One of the main objectives of the grant was the creation of the CNG Fleet Fund. This fund was setup to assist commercial fleets in the incremental costs of converting to natural gas. Since inception, this fund has assisted in the purchase of over 95 commercial vehicles in the Omaha Metro. These 95 vehicles have consumed over 600,000 gasoline gallon equivalents annually. This has resulted in the annual displacement of over 13,636 barrels of oil and reduced CO2 emissions by 1,097 tons.

The growing number of natural gas vehicles in the Omaha metro resulted in the demand for a new CNG fueling station in West Omaha. Metropolitan Utilities District worked with Trillium CNG to build a new fast fill station in West Omaha. The three public stations combined to dispense over 500,000 GGEs in 2014 and are projected to dispense over 1,000,000 GGEs in 2015. This would not be possible without development of the CNG Fleet Fund.

Big Green Q has one of the newest and most unique natural gas vehicles in Omaha. This vehicle is not only unique for the Midwest, but it is one of only a handful of alternatively fueled food trucks in the country. This food truck runs its engine and all of the kitchen equipment including the griddle, oven, fryer and power generator off of natural gas. This environmentally friendly truck also tries to locally source all of its produce, breads and antibiotic/hormone free meats whenever possible. This startup business is available for public events, fundraisers, lunch hour catering and private events.

The Driving Omaha Natural grant has helped reduce the air pollutants produced by vehicles in the Omaha area. This grant continues to give new opportunities to municipalities, non-profits and for profit organizations to address their role of air quality for generations to come.

Nebraska Community Energy Alliance (NCEA) Connecting Nebraska Communities Driving America's Fuel



Two Nissan Leafs are pictured above at the ChargePoint™ charging station at the Ferguson House, Lincoln, NE.

Nebraska Community Energy Alliance's first phase was to build a statewide electric vehicle (EV) fueling infrastructure to enable electrified transportation within and between Nebraska communities. This phase demonstrated the economic and air quality benefits of advanced technology vehicles in nine communities using NET matching funds on a 50/50 basis.

What started as nine in 2013 - South Sioux City, Wayne, Central City, Bellevue, Nebraska City, Seward, Holdrege, Lexington and Gothenburg - has grown in 2015 to include Dakota County, Allen Consolidated Schools, the Metropolitan Area Planning Agency (communities in Douglas, Sarpy and Washington Counties, including the City of Omaha), Omaha Public Power District, the University of Nebraska at Lincoln and Omaha, Metro Community College, the cities of Valley, Gretna, Ashland, Lincoln, Hastings and Kearney.

Electric and compressed natural gas (CNG) vehicles represent advanced technologies in personal and commercial transportation modes because both transportation fuels save energy, reduce CO2 emissions and cut fuel costs for government fleets, fuels derived

from "locally grown" power of wind, solar, coal, nuclear and natural gas.

The Nebraska Environmental Trust funded grant of \$403,000 included a website to document the economic and air quality benefits of electric vehicles: www.engineering.unl.edu/e-vehicle/. Early results indicate that each EV saved its community \$900 to approximately \$2,000 annually over a comparable gas-powered vehicle in fuel and maintenance costs and reduced CO2 emissions by half of what a comparable gas-powered vehicle emits. Electric vehicles emit no pollution or smog at the exhaust pipe.

The grant's objectives were to deploy 13 EVs, four CNG trucks, and 13 ChargePoints™ in nine Nebraska communities to gather and analyze data from each charging event. ChargePoint™ stations report in real time CO2 emissions reductions derived using the energy mix of the Nebraska Public Power District or Omaha Public Power District, gas saved at local prices and the cost and amount of electricity used at local rates.

Public information and Education (PIE) Grants



This year marks the sixth full year that the Nebraska Academy of Sciences (NAS) has administered the Nebraska Environmental Trust (NET) Public Information and Education mini-grant program. The first grants that the Academy reviewed were submitted in the fourth quarter of 2009 and were awarded in 2010. Since then NAS has reviewed and awarded over \$240,000 to numerous recipients all across the state.

In calendar year 2015 NAS received a total of 36 grant applications and a total request of \$91,314. Almost \$42,000 has been awarded to date and the fourth quarter award is yet to be determined. Grant applications for the first quarter of 2016 will be accepted until January 8, 2016.

This past year NAS received applications for numerous types of projects; recycling guides, garden greenhouses and garden projects, many different types of water quality and conservation projects, as well as habitat and environmental education and improvement projects. Grants were awarded to a few research projects and quite a number of grants were given to entities for conference or meeting support in order to bring in special speakers, publish educational materials, or provide activities to help attendees understand environmental concepts. Awards were granted to school groups, private foundations, individuals and government entities such as Natural Resource Districts and city and county governments.

These projects all promise to improve our environment, increase education in environmental areas and touch many of our Nebraska citizens in meaningful ways. Here are just a few grants submitted in 2015:

- Nebraska Farmers Union – Vermi-Composting Education
- Nebraska State Fair – Recycle Informational Signage
- Rainwater Basin Joint Venture – Omaha Youth Path to Passive Solar
- Groundwater Foundation – Education for the Next Generation of Waterfiders
- Tri-Basin NRD – Water Jamboree
- Omaha Children's Museum – Maker Faire

One of the guidelines NAS reviewers use in evaluating grant applications is how many people are reached with the limited funds available and how easy it would be for other groups to use the same materials or process to reach an even wider audience. The groups mentioned do an excellent job of making the best use of grant funds in reaching the widest audience.

The Nebraska Environmental Trust Public Information and Education Mini-Grant Program awards mini-grants of up to \$3,000 each, to support the presentation and dissemination of information and perspectives that will stimulate enhanced environmental stewardship in any category eligible for Nebraska Environmental Trust funding. These categories are habitat, surface and ground water, waste management, air quality and soil management. The grant expands dialogue on important current conservation topics and provides information on emerging or highly useful conservation methods. All Nebraska individuals, private organizations and public entities are eligible to apply for these funds.

For more information on PIE Grants, contact:

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An example of a PIE Grant Project



Project objectives include talking to the students about food waste, worms and alternative methods to dispose of food waste. They presented to new students in each week's learning sessions. Approximately 70 students were in the cafeteria each day. Each week many of the same factors were identified, including that students were unaware of what the worms did with food waste, the alternatives to using the landfill for waste disposal and that worms were overall considered gross. By the end of each week there were always lines of students with leftover food wanting to feed the worms, hold the worms and ask multitudes of questions about worms and what they could and could not eat.

Picture on the left shows Jeremiah Picard of the Nebraska's Farmer's Union teaching Middle School students about the benefits of vermi-composting. It is one of the many projects supported by the Trust through the Nebraska Academy of Sciences.

Facts and Financials of the Trust

The Nebraska Environmental Trust...

...is funded by the Nebraska Lottery. The Lottery has transferred more than \$241 million to the Trust in the last 22 years.

...covers the cost of operations through interest earnings. The Trust has operated with overhead expenditures equaling less than 2.5% of income since it was created.

...has completed 22 grant cycles and will announce the results of the 23rd round of award recommendations in February 2016.

FY 14-15

Income

Interest income	\$ 627,710.40
Lottery proceeds	\$16,290,107.00

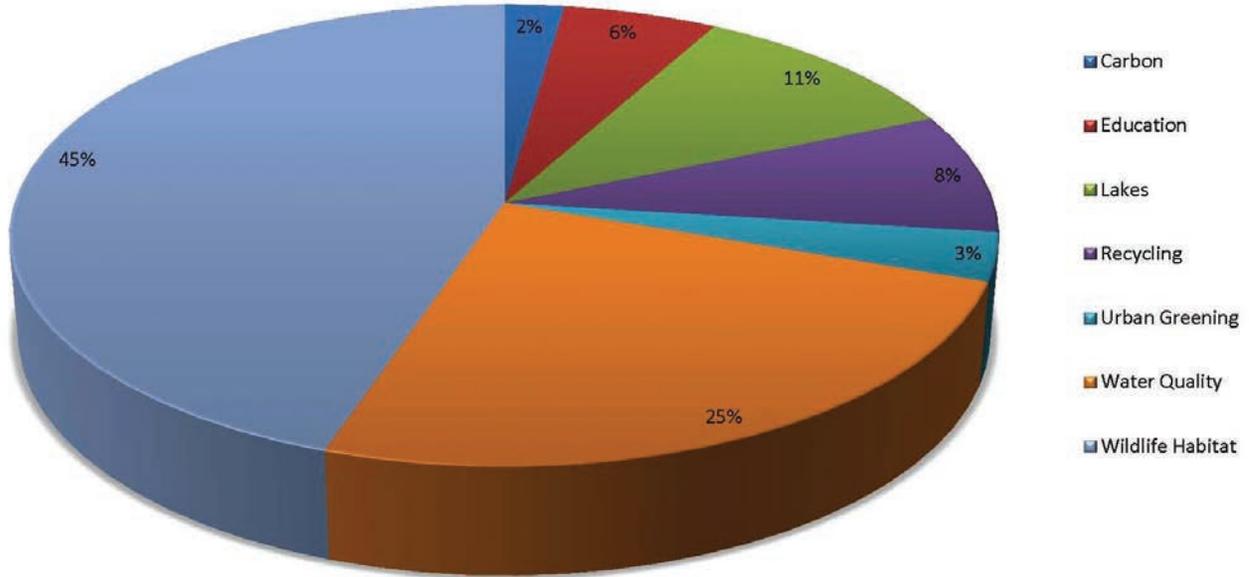
Expenses

Operations	\$ 424,600.02
Grant Awards	\$ 19,491,958.00

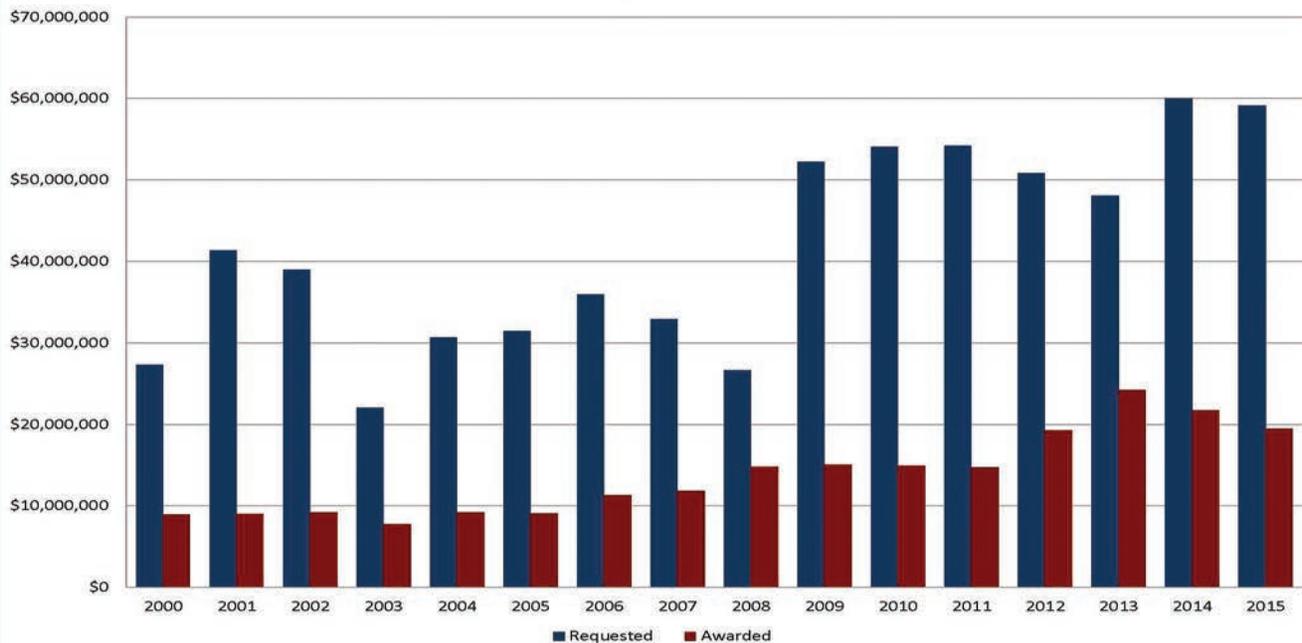
Average Operation expenses to income percentage from 1994-2015 = 2.11%

Distribution of Grants Through The Years

Grant Awards by Category 1994 - 2015



Amount Requested vs Awarded 2000 - 2015



2015 Grant Listing

The following is a listing of the 2015 grants awarded by the Nebraska Environmental Trust. The Trust can provide grants over a three year period and the funding is noted accordingly. Due to space limitations, only the project sponsor and a brief description of the project have been outlined; to find additional project information, contact the Trust office at 402-471-5409 or visit our website at: www.environmentaltrust.org

Angels on Wheels

Grant for the construction of a recycling warehouse. \$270,000 (yr. 1 of 1)

Collection of out of service products that contain metal. \$78, 603 (yr. 1 of 1)

Big Ox Energy Siouxland, LLC

Cost of a pressure swing absorption system that will be utilized to produce a pipeline ready renewal natural gas system. \$500,000 (yr. 1 of 1)

Boy Scouts of America, Longs Peak

Replanting of trees at the Chadron State Park. \$10,000 (yr. 1 of 1)

Cass County

Funding to purchase equipment necessary to build a CNG fueling facility that will be open to the public. \$100,000 (yr. 1 of 3)

Central Nebraska Public Power & Irrigation

Gathering irrigation water use and environmental data to support irrigation water management, water conservation and water quality. \$61,380 (yr. 1 of 3)

Central Platte NRD

Project to reclaim and preserve up to 12,000 acres of crucial habitat involving grasslands. \$259,245 (yr. 1 of 3)

The Nebraska Platte River Cooperative Hydrology Study (COHYST) to effectively monitor water resources. \$20,000 (yr. 3 of 3)

CLEAR Team

Lake rehabilitation and enhancement projects. \$510,000 (yr. 1 of 3)

Ducks Unlimited

Funding assistance to restore the Bettger property, an important "roundout" to the County Line Waterfowl Production Area in Fillmore County. \$17,360 (yr. 2 of 2)

Farwell Irrigation District

Burying of laterals to conserve water described as losses. \$195,187 (yr. 1 of 1)

Five Rivers RC & D

Funding to make invasive weed species control affordable for landowners. \$46,250 (yr. 3 of 3)

Fontenelle Forest Association

Strategic oak and wildlife restoration plan to restore and enhance approximately 1,160 acres of oak woodland/plain forest. \$121,000 (yr. 1 of 1)

Friends of the Heron Haven

Expansion of nature and environmental education programs as well as physical enhancements to the Heron Haven facility. \$5,878 (yr. 3 of 3)

Grand Island Area Clean Community

Revitalizing a Household Hazardous Waste Collection Facility. \$55,000 (yr. 2 of 3)

Green Recycling Enterprises

Providing recycling containers at public events throughout Nebraska. \$150, 800 (yr. 1 of 3)

Groundwater Foundation

Funding for Hydrogeology: Water for the World, a science event that challenges secondary school students to research and identify solutions to eliminate or mitigate groundwater degradation. \$19,128 (yr. 3 of 3)

Expanding the groundwater conservation and protection work to more communities. \$31,029 (yr. 3 of 3)

Hastings Museum

Renovating an environmental education exhibit with the installation of replicated eco-systems and interactive educational elements. \$35,000 (yr. 1 of 1)

Joshyn Castle Institute for Sustainable Communities

To develop an annual series of public lectures, workshops, conferences and distributed information on applied practices with emphasis on Habitat, Surface and Groundwater, Waste Management, Air Quality and Soil Management. \$125,000 (yr. 1 of 2)

Kearney, City of

Building a permanent household hazardous waste collection facility to improve its existing collection program. \$220,000 (yr. 1 of 1)

Keep Alliance Beautiful

Partial funding to retain personnel at recycling transfer center. \$32,749 (yr. 3 of 3)

La Vista, City of

Thompson Creek Watershed restoration to significantly improve water and habitat quality. \$100,000 (yr. 3 of 3)

Lewis and Clark Natural Resources District

Funding to drill test holes, record down hole data, construct monitoring wells and install dedicated water-level readers and two dedicated pumps to establish baseline information about groundwater quality, quantity and aquifer composition. \$86,000 (yr. 3 of 3)

Lexington, City of

Restoration of community lake at Plum Creek Park. \$290,000 (yr. 1 of 1)

Lincoln, City of - Parks and Recreation

Expand prairie and riparian habitat areas, build recreational and educational connections including preservation of tallgrass prairie in and around Lincoln. \$200,000 (yr. 3 of 3)

Little Blue NRD

To manage groundwater and surface water resources as one collaborative effort to strengthen management decisions related to sustainability of water resources over the next 20-30 years. \$30,000 (yr. 2 of 2)

To restore watershed functions of wetlands throughout the Rainwater Basin Region of southcentral Nebraska. \$135,000 (yr. 3 of 3)

Live Well Omaha

Public bike sharing program currently operating in the greater Omaha metro area. \$45,000 (yr. 2 of 3)

Lower Elkhorn Natural Resources District

This project will construct an annual water budget for two drainage basins in different topographic regions, one in the Sandhills and one in the Dissected Plains. \$81,040 (yr. 3 of 3)

Lower Loup Natural Resources District

Cost-share flowmeters for irrigation wells in order to increase awareness of pumping totals occurring in the Lower Loup Natural Resources District. \$48,050 (yr. 2 of 3)

Assistance with renovation and modernization of Pibel Lake Recreation Area in central Nebraska. \$40,000 (yr. 3 of 3)

Lower Platte River Corridor Alliance

Quantifying morphologic and hydraulic conditions that favor high-quality tern and plover sandbar habitat. \$55,600 (yr. 3 of 3)

Metropolitan Utilities District

Project to facilitate the expanded use of Compressed Natural Gas fueled vehicles in the Omaha Metro Area. \$61,250 (yr. 3 of 3)

Middle Niobrara Natural Resources District

Monies will be used to establish the Long Pine Creek Watershed - Phase I Implementation Project for the priority sub watersheds. \$187,400 (yr. 1 of 1)

National Wild Turkey Federation

Forest stand improvement on four Weed Management Areas. \$55,587 (yr. 3 of 3)

Nebraska Association of Resources Districts

Maximizing irrigation inputs, restore wetlands, and recharge the aquifer, while being compatible with landowners' agriculture operations. \$157,500 (yr. 1 of 3)

Restore wetlands and reduce groundwater use, while being compatible with landowner's agriculture operations. \$20,000 (yr. 3 of 3)

Nebraska Department of Health and Human Services

Well decommissioning and rehabilitation project. \$360,000 (yr. 2 of 2)

Nebraska Department of Natural Resources

Funding for the Water Resources Cash fund pursuant to legislative mandate of LB229, 2011. \$3,300,000 (yr. 1 of 3)

Nebraska Academy of Sciences

Administration of the Public Information and Education grant to support the presentation and dissemination of information that will stimulate enhanced environmental stewardship. \$57,200 (yr. 2 of 3)

Nebraska Cattlemen

Project seeks to capture the landowners' ethic in their own words and images, giving the recipients an opportunity to share their story. \$10,000 (yr. 3 of 3)

Nebraska Department of Education

Educating Nebraskans about soil conservation using the Power of Geographic Information Systems. \$29,627 (yr. 2 of 3)

Nebraska Farmers Union

To create a vermicomposting system to re-direct the waste stream from Lincoln Public School's cafeterias. \$169,046 (yr. 1 of 1)

Nebraska Forest Service

To provide critical emergency funding to treat at least 2,000 strategically-located acres of severely burned forest land. \$344,833 (yr. 2 of 3)

Nebraska Game & Parks Commission

Develop a wildfire cache that could be kept in wildfire prone areas. \$9,397 (yr. 1 of 1)

This project will demonstrate how the integration of wise stewardship practices within watersheds and riparian zones, combined with site specific in-stream enhancements can provide long-term benefits to both landowners and sensitive aquatic communities. \$100,000 (yr. 1 of 1)

To enhance wetland and water quality by constructing sediment retention structures, expanding and improving wetland complexes, creating off-channel wetlands, and improving wetland functions at Conestoga Wildlife Management Area while providing educational and interpretive opportunities. \$300,000 (yr. 1 of 3)

The restoration of the 88 acre wetland found on the upper end of the lake at the Memphis Lake State Recreation Area (SRA). \$245,000 (yr. 1 of 1)

The objective of this project is to complete grassland habitat improvements on 25,000 acres of public and private lands. \$300,000 (yr. 1 of 2)

Active management of our state's oak woodlands ecosystem. \$200,000 (yr. 2 of 3)

Funding for the WILD Nebraska program to encourage conservation and wildlife habitat on private lands. \$90,000 (yr. 2 of 3)

Trout in the Classroom is an environmental education program in which students have the opportunity to raise trout and engage in habitat study. \$45,108 (yr. 2 of 3)

The primary goals of "Nebraska's Natural Legacy Project: Restoring Nebraska's Unique Biological Diversity" are to continue and expand implementation of our ongoing conservation actions throughout the state by improving over 100,000 acres of habitat. \$289,500 (yr. 3 of 3)

Incentives to agricultural producers to encourage them to leave their wheat and/or milo stubble taller and standing in place to provide valuable habitat for pheasants, quail and other wildlife. \$500,000 (yr. 3 of 3)

Nebraska Grazing Lands Coalition

Funding of a cooperative program among local rancher working groups and Nebraska Grazing Lands Coalition (NGLC) technicians that will provide Nebraska landowners with technical assistance and equipment to effectively monitor plant communities and soil resources on their lands. \$100,000 (yr. 1 of 3)

Nebraska Land Trust

Pines and Buttes Preservation project with ponderosa pines, towering buttes, deep canyons, clear streams and expansive grasslands, these are two of the most popular and scenic destinations in Nebraska. \$450,000 (yr. 1 of 3)

Nebraska State Irrigation Association

Continued support for the Water Leaders Academy for the growth and aid in good water resources decision-making into the future. \$61,165 (yr. 1 of 3)

Nebraska State Recycling Association

Continuing the "smaller grants" program they have done through NET for 12 out of the last 15 years. (yr. 2 of 2)

Nebraska Statewide Arboretum

Greener Nebraska Towns is a multi-partner, statewide initiative that will improve the resiliency and environmental sustainability of community green spaces. \$247,035. (yr. 1 of 2)

NET Foundation for Television

Development of "Imagining The Platte" a visually compelling new environmental education effort in the Platte Basin. \$31,264 (yr. 2 of 3)

Northeast Nebraska RC & D

This project will properly dispose of and/or recycle approximately 22,500 pounds of household hazardous waste and another 45,000 pounds of electronic waste (E-waste) over a 3-year period. \$20,292 (yr. 1 of 3)

Omaha Children's Museum

The Environmental Exhibit Featuring A Water Table will allow children to learn about the landscape features prevalent in their home state. \$120,000 (yr. 1 of 1)

Omaha, City of

The City of Omaha will rehabilitate a concrete-lined urban stream that is nearly devoid of aquatic habitat. \$150,000 (yr. 3 of 3)

Funding for a multifaceted green infrastructure project in historic Spring Lake Park. \$400,000 (yr. 2 of 2)

Design and construct a bus rapid transit project in Omaha, Nebraska. \$200,000 (yr. 1 of 3)

To procure five Compressed Natural Gas vans in order to provide quality, environmentally friendly paratransit service. \$100,000 (yr. 1 of 1)

Papio-Missouri River NRD

To acquire an estimated 750 acres of floodplain bottomlands, wetlands and riverine habitat at the historic confluence of the Platte and Missouri Rivers. \$500,000 (yr. 2 of 3)

Pheasants Forever

Nemaha Valley - To purchase a no-till grass drill to be used by landowners to establish wildlife habitat. \$29,000 (yr. 1 of 1)

Republican Valley - To purchase a no-till grass drill to be used by landowners to establish wildlife habitat. \$29,000 (yr. 1 of 1)

Seward County - To purchase a no-till grass drill to be used by landowners to establish wildlife habitat. \$29,000 (yr. 1 of 1)

South Central - To purchase a no-till grass drill to be used by landowners to establish wildlife habitat. \$29,000 (yr. 1 of 1)

This program successfully partners money from the Trust, Pheasants Forever, Inc., Pheasants Forever and Quail Forever chapters, Natural Resource Districts, Nebraska Game & Parks Commission and landowners throughout the state to establish permanent wildlife habitat. \$300,000 (yr. 1 of 3)

The 'Habitat Share Partnership' successfully works to improve the wildlife habitat components on public lands. \$150,000 (yr. 1 of 1)

To develop a statewide PollinatorHabitat Program. \$35,024 (yr. 2 of 3)

A unique, proven and successful partnership called the Grassland Improvement Program that has changed the culture of prescribed burning on private lands. \$190,000 (yr. 3 of 3)

Platte Basin River Environments

This partnership's objective is to restore, enhance, and manage the wetland and associated upland habitat values of North Platte River Valley wetlands. \$52,000 (yr. 3 of 3)

Prairie Plains Resource Institute

Purchase of Sherman Ranch which is located within a Biologically Unique Landscape area. \$150,000 (yr. 3 of 3)

PrairieLand RC & D Council

This statewide educational project will build on and expand existing efforts to increase the adoption and sustainable use of Continuous No-till by one million acres. \$100,000 (yr. 3 of 3)

Quail Forever

Supporting prescribed burning on private lands in the state, forming prescribed burn associations, conducting landowner education outreach events, producing landowner education materials, promoting habitat management techniques and increasing the use of prescribed burning on the landscape. \$124,300 (yr. 1 of 1)

Rainwater Basin Joint Venture

Financial assistance to continue the successful Rainwater Basin Joint Venture Working Lands Initiative. \$51,240 (yr. 1 of 3)

Central Loess Hills Prescribed Fire Training Exchange program will assist in compensating landowners by allowing them to rest their pasture prior to prescribed fire to economically increase the effectiveness of the fires. \$84,500 (yr. 2 of 3)

To restore watershed function to Atlanta Waterfowl Production Area located in south-central Nebraska. \$60,375 (yr. 2 of 3)

Project will develop unique opportunities to restore and enhance wetland and associated upland habitats in the Rainwater Basin landscape. \$350,000 (yr. 3 of 3)

Management of aggressive and invasive vegetation negatively affecting wetlands in the Rainwater Basin region of south-central Nebraska that have impacted waterfowl and shorebirds. \$75,000 (yr. 3 of 3)

Rocky Mountain Bird Observatory

Project will address threats to at-risk species and to the shortgrass prairie and ponderosa pine habitats of the Nebraska panhandle. \$105,000 (yr. 3 of 3)

Sandhills Journey Scenic Byway Visitor/Interpretive Center

This project will provide for the development of a comprehensive and educational source of birding opportunities along the 272 miles of the Sandhills Journey Scenic Byway. \$20,300 (yr. 2 of 3)

Sandhills Resource Conservation and Development

To provide landowners in the central Sandhills region with tools needed to control Eastern Red Cedar encroachment and restore the rangeland to productive grazing land acres. \$33,967 (yr. 2 of 3)

Sandhills Task Force

Project will assist private landowners in the restoration of streams, wetlands, and lakes degraded by ditching, channelization, stream erosion, invasive aquatic species, and excessive grazing. \$128,000 (yr. 1 of 3)

Sargent Irrigation District

Constructing a series of jetties above our Milburn Diversion Dam, in an effort to divert waters of the Middle Loup River. \$25,000 (yr. 3 of 3)

Sarpy County

The construction of a compressed natural gas (CNG) fueling station near 96th Street and Portal Road. \$200,000 (yr. 2 of 2)

Shell Creek Watershed Improvement

To increase resource conservation and instill a strong ethic of land stewardship. \$155,000 (yr. 1 of 1)

Sherman County

For restoration of Bowman Lake located 0.5 miles west of Loup City, Nebraska. Bowman Lake which was once an 18 acre lake has approximately 5 acres of permanent standing water. \$258,700 (yr. 1 of 1)

South Platte NRD

The project digitally scans and processes existing oil and gas well geophysical logs to gather information about the aquifer. \$200,000 (yr. 2 of 3)

Spencer Pond Renovation Project

The goal of the project is to rejuvenate the wildlife habitat of a 9.7 acre lake by dredging to a depth that will increase the capacity to sustain fish and other aquatic wildlife and plant species. \$222,895 (yr. 1 of 2)

Stirk Compressed Natural Gas (CNG)

The construction of a fast fill CNG station and the initial transition of the City's vehicles to CNG in North Platte, Nebraska. \$590,000 (yr. 1 of 1)

The Nature Conservancy

Purchased two ranches along a 25-mile stretch of the middle Niobrara River and established the Niobrara Valley Preserve (NVP). \$253,977 (yr. 1 of 2)

To learn about wildlife; to study the impacts of controlled burns on plants and wildlife; to train firefighters; and most importantly, to apply what is learned to transform future management practices across the state. \$64,257 (yr. 3 of 3)

Twin Valley Weed Management Area

The highly successful Eastern Republican and Little Blue Riparian Improvement Project continues ongoing efforts to eradicate invasive species, control vegetation in stream channels, and improve riparian habitat along the Republican and

Little Blue Rivers and their tributaries within six of the Twin Valley Weed Management Area counties. \$328,000 (yr. 1 of 1)

University of Nebraska, Board of Regents

To assess the leaching potential of volatile and non-volatile chemicals. \$90,318 (yr. 1 of 2)

To develop and demonstrate science-based dietary intervention strategies to reduce greenhouse gas emission from cattle in ruminant production systems. \$168,424 (yr. 1 of 3)

To develop and deliver products and educational programming to Nebraska producers that will enable them to assess potential environmental and social risks on their operations, identify relevant practices to address their potential risks, and successfully comply with regulatory requirements. \$100,000 (yr. 1 of 3)

Community as Habitat is a three-year initiative with the primary goal of increasing the types and numbers of insect pollinators in targeted Nebraska communities. \$148,943 (yr. 1 of 2)

Project to train students and work with them to set camera 'traps' on their family lands each spring and fall by surveying swift fox on private lands. \$87,810 (yr. 1 of 3)

Expanding efforts at controlling the eastern redcedar (*Juniperus virginiana*) population on the Cedar Point and shared Central properties. \$55,773 (yr. 1 of 1)

Through on-the-ground volunteer service, Master Naturalists will provide hundreds of thousands of dollars in salary savings through habitat management in Nebraska. \$89,656 (yr. 2 of 3)

Evapotranspiration is one of the most critical variables in agriculture and crop water productivity and in assessing the sustainability of natural ecosystems and agro-ecosystems. \$123,000 (yr. 3 of 3)

Identifying bat migration and movement patterns is necessary to guide recommendations to minimize impacts of wind energy development. \$38,715 (yr. 3 of 3)

Project to improve natural habitats in Nebraska and reduce stresses to native ecosystems through control of invasive species. \$60,456 (yr. 3 of 3)

Upper Elkhorn Natural Resources District

Funding to develop six irrigation management demonstration sites, collect water quality data and soil nutrient data and provide cost share for best management practices (BMPs) to protect and restore groundwater quality. \$27,775 (yr. 2 of 2)

Upper Loup Natural Resources District

To facilitate the collection of airborne thermal infrared data, purchase of additional instrumentation to measure and record groundwater levels and temperature and to oversee a study to enhance the understanding of spatial and temporal characteristics of groundwater/surface-water interaction in the Loup River basin. \$103,000 (yr. 1 of 3)

Upper Republican Natural Resources District (URNRD)

Grant to pay for approximately half the cost of soil-moisture probes and related technology obtained by farmers in the URNRD. \$100,000 (yr. 1 of 1)

Urbe Refuse Service, Inc.

To develop and implement the Nebraska Organic Waste Resources Project. \$424,050 (yr. 1 of 1)



The Nebraska Environmental Trust

preserving NATURAL NEBRASKA™ for future generations

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