



The Nebraska Environmental Trust

preserving NATURAL NEBRASKA™ for future generations

2015 PRELIMINARY SUMMARY OF APPLICATIONS

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Dave Heineman, Governor

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September 16, 2014

The Nebraska Environmental Trust entered the 2015 grant cycle receiving 122 applications. Applications were either emailed or postmarked on September 2nd to meet the deadline. Requests in this twenty-second year of grants totaled \$59,148,597. The Trust will announce recommendations for funding these applications in February, 2015, and will award grants in April, 2015.

A summary overview of each proposal, as composed by the applicant, is provided for you. Very few editorial changes were made in this information, which was submitted in the application form in response to the question, "Provide an overview of the project for which you seek funding." Project names were assigned by the applicants. Project numbers are assigned by the Trust to facilitate record keeping.

The summaries are presented in alphabetical order by project sponsor name. The nearest town is also shown to indicate the approximate location of each project in the state.

The amount requested and the proposed term of each project is also noted in each summary. The Trust is authorized to fund a project for up to three years under one application review. The review group to which the application has been assigned is also noted in each summary.

In 2014 the Trust issued statements of intent to 57 projects, indicating continued funding for these projects on the basis of the 2013 and 2014 applications. Those projects are included in these descriptions. The project numbers of these applications begin "13" or "14" and end with a dash 2 (14-101-2) or dash 3 (13-101-3) to indicate the second or third year request.

An index of applications by project number is also included with the materials presented in this booklet.

Sponsor Name: Alliance, City of **Nearest Town:** Alliance
Project Name: Laing Lake Improvement Project **Project No:** 15-108
Amount Requested: \$255,000 **Term of Project Request:** 1 **Review Group:** Lake Rehabilitation

The NET is being requested to fund a portion of a Community Lake Enhancement and Restoration Project on Laing Lake located in Alliance, NE. This project has been designed to address multiple concerns surrounding water quality, water quantity, and aesthetics. Laing Lake was constructed in the 1970s and covers 8.4 surface acres at full pool. Laing Lake suffers from seepage creating low water levels and high nutrient concentrations resulting in summer algal blooms and multiple fish kills. The design of the lake has contributed to water quality problems by providing shallow stagnant areas that are conducive to algal production. Aesthetic issues surround broken concrete on the lakes shoreline. These conditions have greatly impaired the uses of the lake and park. The City of Alliance began addressing water quality issues several years ago by implementing a waterfowl reduction project. The success of efforts to control both migratory and resident waterfowl has been shown by significant reductions in the lakes phosphorus concentrations. In the spring of 2014 the City sought financial support and assistance from the Upper Niobrara White Natural Resources District (UNWNRD), Nebraska Department of Environmental Quality (NDEQ), and private consultants to address the concerns listed above. Funding and staff time were used to collect water quality and physical data, develop water and nutrient budgets, develop and design corrective actions, estimate costs, and develop construction schedules. Primary project components include: 1) re-shaping the current lake, 2) increasing mean depth, 3) improving fill lines, 4) enhancing access, 5) water source acquisition, and 6) shoreline improvements. Funding from the NET would be utilized to partially fund all these components except for the water source.

Sponsor Name: Angels on Wheels, Inc **Nearest Town:** Omaha
Project Name: Recycling Warehouse **Project No:** 15-172
Amount Requested: \$270,000 **Term of Project Request:** 1 **Review Group:** Recycling

The funds from this grant will be used towards the construction of an 11,800 square foot recycling warehouse at our current location. Angels on Wheels, Inc. is a non-profit corporation that operates the Cross Training Center (CTC). CTC provides vocational training and job experience for men and women who are undereducated and live in poverty. Our recycling and refurbishing program provides direct hands-on job experience for these students while providing the community with repaired household appliances and fully refurbished computers. We collect out-of-service products including computers, consumer electronics, large appliances, automobiles and other out-of-service household or industrial equipment. Vehicles, large appliances and personal computers that have useful life are refurbished and sold for nominal prices to the needy. Everything else is remanufactured by hand and the materials are sorted into like commodities and sold to local scrap purchasers. Our program assures that these items do not reach landfills and toxic materials such as mercury, lead, copper and other hazardous substances do not contaminate our ground. This warehouse will improve our current receiving, sorting, recycling, warehousing and distribution processes and allow us to substantially increase our capacity to process large appliances and other electronics.

Sponsor Name: Angels on Wheels, Inc **Nearest Town:** Omaha
Project Name: Electronic Collections Events **Project No:** 15-173
Amount Requested: \$78,603 **Term of Project Request:** 1 **Review Group:** Waste Management

Angels on Wheels, Inc is a non-profit corporation that operates the Cross Training Center (CTC). CTC provides vocational training and job experience for men and women who are undereducated and live in poverty. Our recycling and refurbishing program provides direct hands-on job experience for these students. We collect out-of-service products that contain metals including computers, consumer electronics, large appliances, automobiles and other out-of-service household or industrial equipment. Personal computers that have useful life are refurbished and sold for nominal prices to the needy. Everything else is demanufactured by hand and the materials are sorted into like commodities and sold to local scrap purchasers. Our program assures that these items do not reach landfills and toxic materials such as mercury, lead, copper and other hazardous substances do not contaminate our ground. The funds from this grant will be used towards the cost of managing collection sites and processing collected electronics allowing us to increase the amount of items we collect for recycling.

Sponsor Name: Aqua Systems of Nebraska **Nearest Town:** Multiple
Project Name: Mobile Hydration Services **Project No:** 15-170
Amount Requested: \$471,027 **Term of Project Request:** 3 **Review Group:** Waste Management

Bottled water consumption in the US market continues to grow, and although often portrayed as environmentally friendly, the production and disposal of millions of plastic containers has significant environmental consequences. As consumers have become more aware of the impacts of plastic waste there is an increasing need for environmentally friendly alternatives to bottled water. For years bottleless coolers have provided clean, low cost, low waste water for interior settings, but an environmentally friendly bottle water alternative for outside venues is largely absent. Aqua Systems, a leader in the bottleless cooler market for over 10 years, proposes Mobile Event Water Stations that allow both large and small outdoor events to have the same convenience, quality and service they have come to expect without the bottle and the waste. We designed and built a small scale mobile water cooler system on a bicycle based platform (Aqua Trike) to test our theory, and over the past year we estimate we have saved over 12,000 bottles from the landfill. Building upon the success of this model we propose to develop several trailer style Mobile Event Water Stations (Aqua Trailers) that are capable of easier mobility, higher visibility, larger volume distribution and providing a better educational platform for a wider audience. These trailers will be a public/private resource that allows the public an alternative to single use plastic bottles.

Sponsor Name: Big Ox Energy Siouxland, LLC **Nearest Town:** South Sioux City
Project Name: Converting Biogas from Industrial Waste into Renewable Natural Gas **Project No:** 15-192
Amount Requested: \$750,000 **Term of Project Request:** 1 **Review Group:** Air Quality

Organic waste challenges were at the forefront of issues occurring in the Roth Industrial Park located between South Sioux City and Dakota City, Nebraska. A food processing hub of the region, the Roth Industrial Park is home to companies that utilize meat, soy or oat in their production facilities. Historically, waste streams for all industries traveled under the Missouri River to Sioux City, Iowa's waste water treatment facility. However, Sioux City's treatment facility was struggling to accommodate the volume of waste and individual Pretreatment Programs Permits were reduced significantly. Expansion plans for several industries were curtailed as a result of these limitations. Additionally, industries unable to meet the new limits began incurring fines well over a \$1 million dollars annually. To save money, industries resorted to sending more solids to the landfill, whereby increasing the burdens on the landfill and the environment; One industry even considered relocation outside of the region. To combat this crisis, the City of South Sioux City designed an industrial waste water treatment facility, but struggled with the \$21 million dollar financial commitment required to construct the facility. As alternative options were explored to assist the industries in the Roth Industrial Park to handle their increase in waste volumes, Big Ox Energy Siouxland, LLC (BOES) emerged as a promising alternative to a challenging problem. BOES proposes to construct an estimated \$25M biogas facility in the Roth Industrial Park. The facility will use anaerobic digestion technology to process wastewater and solid organic waste from the industries in the Roth Industrial Park. Big Ox Energy Siouxland is seeking \$750,000 from The Nebraska Environmental Trust to help support the cost of the pressure swing absorption system that will be utilized to produce the pipeline ready renewable natural gas system available for the communities and industries.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Alliance
Project Name: Working with rural students to document swift fox on Nebraska Ranches **Project No:** 15-202
Amount Requested: \$258,757 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The loss and alteration of native grasslands has resulted in significant reductions in habitat availability for grassland obligate species such as the swift fox (*Vulpes velox*). Identified as a Tier 1 at-risk species, swift fox are estimated to occupy 21% of their historic range, but the exact distribution and relative health of swift fox populations in Nebraska remains in question. The Nebraska Game and Parks Commission (NGPC), the Nebraska Department of Roads (NDOR), and the U.S. Forest Service (USFS), in collaboration with the University of Nebraska-Lincoln (UNL) and Chadron State College (CSC) have begun an effort to document the occurrence of swift fox and identify the anthropogenic and ecological factors that limit their distribution. However, in a state which is 97% privately owned, such an endeavor is extremely challenging because access to land ultimately limits inference about swift fox populations and thereby management efficacy. Using a unique approach which incorporates landowners in the conservation process we will send undergraduate students back to their family ranches to survey for swift fox. Many students in range management, wildlife biology, and similar conservation majors at CSC and UNL are from working ranches in Western Nebraska, which presents us with a unique opportunity to allow students to realize their conservation interests on their family lands and assist NGPC, NDOR, and USFS in facilitating the conservation of a Tier I species. Our project will train students and work with them to set camera 'traps' on their family lands each spring and fall. By surveying for swift fox on private lands we will add significantly to our understanding of what is limiting this rare species in Nebraska; moreover, because camera traps attract a multitude of species, we document and thereby aid in the management of other species of conservation concern here in Nebraska.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Lincoln
Project Name: Know Soil Know Life: Curriculum Planning and Development for Nebraska High School Teachers **Project No:** 15-167
Amount Requested: \$27,715 **Term of Project Request:** 1 **Review Group:** Soil Management

This project will develop curriculum, lesson plans, and hands-on activities working plans tied to the Nebraska State Science Standards based on the Know Soil Know Life book and joint collaboration with the Soil Science Society of America. We believe we can broaden the application of soil, as many of the underpinning science concepts can be taught using soil as the model to demonstrate and show how the science applies. As the first step towards this effort, we will form a working group composed of subject matter experts, high school science teachers, high school agricultural science teachers, school administrators, and national soil science society staff. This working group will develop stakeholder driven curricula proposal plans for the 9-12 grade level using the Know Soil, Know Life book, published by the Soil Science Society of America.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Statewide
Project Name: Nebraska Master Naturalist Program: Statewide expansion and specialized training in habitat management **Project No:** 14-158-2
Amount Requested: \$89,656 **Term of Project Request:** 3 **Review Group:** Education

Conservation agencies and organizations manage tens of thousands of acres of land in Nebraska and are tasked with preserving and restoring native habitats, waters, and critical areas while balancing the interests of many stakeholders. They are understaffed and have a significant need for specialized, dedicated volunteers to help them meet the demands of managing publicly and privately owned natural resources. The Nebraska Master Naturalist Program has recruited, trained, and managed 191 certified volunteers in Nebraska, who have educated 300,000 individuals, and saved over \$300,000 in professional staff salaries through our 25 partner organizations. However, most of the benefits have been realized in eastern Nebraska, and we recognize that specialized training is necessary to meet the needs of our conservation partners. In the next phase of our program, we will significantly expand the existing Nebraska Master Naturalist Program by engaging and empowering people statewide to conserve native habitat, critical areas, and waters, with a particular emphasis on the North Central region. Over the next three years we will 1) certify 200 new volunteers throughout Nebraska, 2) provide specialized training to 300 certified volunteers, expand service opportunities, and retain 85% of all volunteers, and 3) impact 30,000 acres, save \$300,000, and educate 300,000 people through volunteer conservation actions throughout Nebraska. We will continue certifying Master Naturalist volunteers through primary trainings, and develop a new online delivery format that supplements components of the primary curriculum. In addition, we will conduct specialized skills trainings in habitat management, conservation outreach, citizen science, and outdoor skills. We will evaluate the impacts of the Nebraska Master Naturalist Program, including extended benefits to the general public. Through on-the-ground volunteer service, Master Naturalists will provide hundreds of thousands of dollars in salary savings through habitat management in Nebraska. THIS PROJECT WAS FUNDED \$87,433 IN 2014 WITH THE INTENT TO FUND UP TO \$89,656 IN YEAR TWO AND \$91,947 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Statewide
Project Name: Nebraska Invasive Species Project; Developing a Network for Outreach and Monitoring **Project No:** 13-126-3
Amount Requested: \$60,456 **Term of Project Request:** 3 **Review Group:** Education

As identified in Nebraska’s Natural Legacy Plan, invasive species represent a growing threat to Nebraska’s environment and economy, and can have widespread impacts for a variety of natural resource users, including: landowners, power industries, municipalities, and recreationalists. Species such as zebra mussels, leafy spurge, and common reed (Phragmites) are devastating ecosystems in Nebraska and neighboring states. To help mitigate these impacts, the Nebraska Invasive Species Projects seeks funding from the Nebraska Environmental Trust for a critical portion of several our projects that improve natural habitats in Nebraska and reduce stresses to native ecosystems. Our project objectives are to: 1) Decrease the risk of invasive species introduction and spread through volunteer training workshops and targeted messaging across multiple user groups; 2) Develop and implement a ‘next generation’ invasive species education strategy; 3) Evaluate the effectiveness of outreach in invasive species prevention through focused inventory and monitoring and through surveys designed to assess awareness; and 4) Increase local and regional collaboration in the prevention and control of invasive species. This grant supports our proposed projects by providing a portion of the funds for outreach materials and activities (including those to support volunteer training workshops and K-12 teaching kits), monitoring and prevention equipment, and a portion of the salary needed for seasonal staff and related travel. The specific projects outlined below will provide a broader capacity for the prevention of invasive species in Nebraska and will be achieved through the collaborative efforts of various agencies and organizations (federal, state, and local), as well as private citizens. Through this three-year project, we estimate that over 20,000 individuals will receive direct beneficial information about invasive species prevention (through workshops, educational tools, surveys, and websites), providing a tremendous effort towards maintaining the health of Nebraska’s natural resources. THIS PROJECT WAS FUNDED \$76,056 IN 2013 WITH THE INTENT TO FUND UP TO \$62,456 IN YEAR TWO AND \$60,456 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Lincoln
Project Name: Bat Movements Across Transforming Landscapes **Project No:** 13-138-3
Amount Requested: \$38,715 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The origin of energy resources in the United States are in a flux. Perennial biofuel feedstocks, solar and especially wind power production are transforming rural landscapes. Wind power is a renewable energy that has been used for more than 30 years in the United States, yet the impacts on wildlife and their habitats are not fully understood and vary greatly upon the location of the wind energy facility. Installed wind power capacity in the United States has increased over 1000% between 1999 and 2011 with an increase in Nebraska from 3 to 337 megawatts during the same period. Nebraska has enormous wind energy potential and is also used year-round or during migration by greater than 600 species of wildlife, several which are considered at-risk and may be sensitive to wind energy development. The Nebraska Natural Legacy Project State Wildlife Action Plan identifies wind energy development as a potential threat to wildlife and their habitats. Thirteen species of bats are found in Nebraska, five of which are classified as either Tier I or Tier II in the Legacy Plan. The seven most common bat species found dead near wind turbines are all either resident or migratory bats found in Nebraska. Potential negative impacts of wind energy development on bats can be avoided or minimized through siting and operation that take into consideration bat presence and activity. Identifying bat migration and movement patterns is necessary to guide recommendations to minimize impacts of wind energy development. Currently, little is known about bat movements within and across Nebraska. Through the deployment of 20+ ultrasonic acoustic detectors throughout eastern Nebraska for two years, we plan to record bat presence and identify migration timing. Information gathered from this project can be used to further sound resource management practices in regards to wind energy development. THIS PROJECT WAS FUNDED \$89,933 IN 2013 WITH THE INTENT TO FUND UP TO \$43,067 IN YEAR TWO AND \$38,715 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** McCook
Project Name: Continuous Evapotranspiration and Consumptive Water Use Measurements **Project No:** 13-146-3
of Various Cropping Systems and Natural Ecosystems
Amount Requested: \$123,000 **Term of Project Request:** 3 **Review Group:** Water

Evapotranspiration (ETa) is one of the most critical variables in agriculture and crop water productivity and in assessing the sustainability of natural ecosystems and agro-ecosystems. With the recent drought conditions and extensive irrigation practices, the quantification of Eta rates of "ALL" vegetation surfaces not only for the growing season, but also for the entire calendar year even during the non-growing (dormant) season became a necessity for complete water balance analyses of watersheds, basins, and eventually for the entire state. Thus, continuous measurements/quantification of water use rates will need to be made for more robust demand-use-transfer-feasibility and sustainability analyses for Nebraska's water resources. Without accurate quantification of Eta for various cropping systems and other natural resources, any efforts to increase crop water productivity to meet ever increasing demand for food and fiber cannot be achieved. Eta is a crucial variable in every water resources-related topic, including agricultural crop water productivity; developing crop yield-water use relationships; assessment of land use impact on water resources availability; planning, development, management, and allocation of water resources on a field, farm, watershed, and regional scales, and many other hydrologic and agro-ecosystem settings. Despite of the important water resources-related challenges in Nebraska, USA, and around the world, a network of comprehensive Eta and plant water productivity measurement infrastructure to provide short and long-term and improved Eta data for water resources policy-makers, planners, regulators, and users on a continuous basis does not exist. With the espousal of the state agency partners, the PI of this proposal has already invested multi-million dollars and significant efforts and time and established the largest and most comprehensive water and energy flux measurement network in the country [Nebraska Water and Energy Flux Measurement, Modeling, and Research Network (NEBFLUX)] that is operated by a single university. With this proposal, the principal investigator is seeking additional funds to enhance personnel resources to maintain the Network and enhance the practical application and scientific capacity and capability of NEBFLUX to address various issues related to determining long-term (historical, e.g., >120 years) trends and magnitudes of crop water productivity, Eta, and consumptive water use of various cropping systems and natural resources in Nebraska. THIS PROJECT WAS FUNDED \$113,000 IN 2013 WITH THE INTENT TO FUND UP TO \$120,000 IN YEAR TWO AND \$123,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Statewide
Project Name: Nebraska High School Interactive Water Education Project **Project No:** 15-117
Amount Requested: \$258,000 **Term of Project Request:** 3 **Review Group:** Education

This project will improve water quality while conserving water resources through a multi-modal approach to water resources monitoring education for high school youth and teachers. A field manual will be developed and provided to each teacher to describe an overall water quality monitoring program, provide information on water quality parameters, the water quality tests, sampling procedures, the analytical procedures for water chemistry and benthic macroinvertebrates studies (a biological indicator of water quality), procedures for interpreting the water quality data, and safety procedures. The field manual will additionally include data sheets that can be used to record activities and water quality results associated with the project. Testing guides and videos will be produced and shared online via the established UNL Extension YouTube site, water.unl.edu, and cropwatch.unl.edu/youth which describe, at a minimum: Temperature\Turbidity\pH\Dissolved Oxygen/Biochemical Oxygen Demand\ Nitrate\ Phosphate\ Coliform Bacteria\ Total Dissolved Solids and Conductivity\ Other developing and emerging issues related to water quality. Lesson plans and PowerPoint presentations will be developed for classroom use by teachers and multiple training sessions will be offered to accompany lesson plans. Lesson plans will incorporate the above topics with information on the history and regulation of freshwater, hydrology, Nebraska water quality assessment data, biological indicators of water quality such as benthic macroinvertebrates, interpreting water quality data, and presenting results to community leaders and decision makers. Training sessions will focus on teacher preparation for participation in the Nebraska High School Interactive Water Education Project. Sampling equipment will be provided for participating teachers. Teachers will be provided training with all equipment during an accompanying training session and video production. Data collected through the Nebraska High School Interactive Water Education Project will be made publicly available through UNL websites and used in education and awareness by the Nebraska Department of Environmental Quality.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Lincoln Mead
Project Name: Improving air quality by reducing methane emissions from cattle **Project No:** 15-116
Amount Requested: \$348,298 **Term of Project Request:** 3 **Review Group:** Air Quality

The ability of methane to capture heat in the atmosphere 21 times more efficiently than CO2 has made methane a more potent greenhouse gas (GHG). Among the major sources of methane production, ruminants account for a considerable fraction of the human related methane produced, where, enteric fermentation by ruminants is considered the single largest source of methane production worldwide. At the heart of methane production is a microbial food chain. The microscale processes of these microbes are greatly influenced by the diet. Therefore understanding the interactions between diet, methane released and the microbial community structure in different cattle production systems is critical towards the mitigation of methane production. In addition, the release of energy as methane from the ruminant animal is an energy loss to the animal. Therefore methane mitigation in ruminant can help retain more energy within the animal towards increasing animal performance while decreasing GHG emissions. Therefore, our goals are to develop and demonstrate science-based dietary intervention strategies to reduce greenhouse gas emission from cattle in ruminant production systems. The technical milestones of this proposal address the practical aspects involved in developing dietary intervention strategies to reduce GHG emissions while increasing animal performance. These include: identification and characterization of complex microbial populations in the rumen; evaluating animal performance; and measuring methane emission in beef and dairy cattle production systems under different dietary treatments to achieve maximally efficient production. As such, this project will discover ways a beef or dairy cow can convert or save some of the energy lost as methane and convert that into weight gain, milk production, etc. allowing the producer to improve the profitability of their operation. Additionally, outreach attempts will result in science-based producer friendly extension curricula, which will help translate the results of this project into the statewide production systems.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Wood River
Project Name: Developing adaptive prairie management using monitoring data **Project No:** 15-134
Amount Requested: \$280,240 **Term of Project Request:** 3 **Review Group:** Rural Habitat

Restoring prairies has been a major conservation focus in Nebraska. However, we still do not know how factors such as soil type, species composition, and land-use history affect restoration results. In addition, little effort has been made to evaluate restorations and prairie management. Over the last four years we have monitored 878 permanent plots in 42 fields. We have found that restored and remnant prairies differ in plant species composition, and that where there is less-fertile soil, vegetation is more diverse. When comparing remnant prairies with restored prairies of the same fertility, the restored prairies had about two species more. However, since many prairie plant species live a long time and change happens slowly, our current four years of data are not enough to provide answers to evaluate management actions such as burning frequency and grazing intensity to inform prairie restoration and management. Over the next three years we will evaluate how grazing and burning change plant species composition. Specifically, we will examine (1) if patch burning differs from whole field burning, (2) how climate variability influences vegetation, (3) if bison grazing differs from cattle grazing, (4) if we can mitigate the negative effect of increased soil nitrogen on plant diversity by changing grazing intensity. In the short-run, we will use this information to adapt the prairie management of The Nature Conservancy and the Crane Trust. We will communicate our approach and results through interpretive displays, workshops, presentations at regional and national meetings, and scientific papers. In the long-run, NET dollars could be leveraged with federal funding to help answer scientific questions that could have global impacts and train students in restoration ecology.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Statewide
Project Name: Know Your Well: A Program for Future Farms of America Students **Project No:** 15-191
Amount Requested: \$199,807 **Term of Project Request:** 2 **Review Group:** Education

“Know Your Well” is a program designed for assessing the quality of drinking water derived from rural domestic wells. We propose a “crowd sourced” study utilizing this program, in which four high school Future Farmers of America (FFA) chapters will be selected to conduct a water sampling program for rural domestic wells in the first year and eight in the second year covering all 12 districts. Each of the chapters will be given a test kit for measuring water parameters and will be trained on how to use them. The collected water samples will be analyzed for Nebraska specific pesticides, nitrate, and coliform bacteria at the University of Nebraska-Lincoln collaborating laboratories. Additionally, the students and the teachers at the FFA chapters will be trained on collecting information about the well and various anthropogenic parameters that might influence the quality of water from those wells. Some of these parameters include type of well, status of the seal of well at land surface, topographic position of the well, distance of the well from cropland, types of crops grown and chemicals applied, past incidences of spills or back siphoning of pesticides during mixing at the well site, presence of animals within the property, etc. This information will be gathered by the students through UNL secure sever using web-based maps (such as Google or Yahoo products). The gathered data and the well testing results will be analyzed by the UNL researchers to determine parameters that seem to have most impact on well water quality. Annual workshops will be conducted at UNL to work with the FFA students and teachers to provide this connection. Once this “crowd source” project is finalized, the potential application of the method to other school districts with verification sampling will be explored in the next phase.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Multiple
Project Name: Large-river fish use of natural and constructed habitats in Platte River **Project No:** 15-162R
Amount Requested: \$12,944 **Term of Project Request:** 1 **Review Group:** Water

Large-river fish species may use different habitats throughout their lives, and, in some instances, move great distances to reach these habitats. Constructed habitats (i.e., chutes and side channels) within rivers may provide additional refuge areas for large-river fishes including catfishes and shovelnose sturgeon. Fish populations in Nebraska’s large-river systems are both a recreational and economic resource across the state and understanding how these populations use and respond to newly constructed habitats is needed to assess the effectiveness of these habitats at maintaining populations. Currently within the lower Platte River near the Nebraska Army National Guard training facility (Camp Ashland), a series of side channels are under construction to mitigate effects of river regulating structures (channelized banks increasing deep fast water habitat) by creating permanent shallow water conditions more typical of the historical Platte River system. We will examine use of newly created riverine habitats and movement patterns of large-river fish species (e.g., channel catfish and shovelnose sturgeon) within the Missouri and Platte rivers using newly devised microchemistry approaches where fish bones provide an environmental history of each individual fish. Using an innovative approach with natural markers (i.e., bone microchemistry) to assess environmental history and movement patterns of large-river fishes will enable protection of critical habitats (i.e., tributary environments) presently available while also providing insight on future habitat creation projects including side channel construction. Nebraska’s fishing resources are rich and treasured by state recreational anglers. In 2006, Nebraska anglers spent more than \$100,000,000 on fishing expenditures and more than 2,000,000 days on the water (USFWS 2007). Therefore, the increased understanding of large-river fish resources provided by this study, particularly the habitat needs and movements of channel catfish and shovelnose sturgeon, can help sustain large-river fish populations for angling and recreational activities for future generations across the State of Nebraska.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** North Platte
Project Name: Managing and Sequestering Carbon with Cover Crops **Project No:** 15-118
Amount Requested: \$373,078 **Term of Project Request:** 3 **Review Group:** Air Quality

Cover cropping and annual forage crops could be one of the potential biological management strategies for the sustainable production of renewable energy. Cover crops can capture atmospheric C (i.e., CO₂) through photosynthesis and sequester C in the soil. Inclusion of cover crops in agricultural systems can: 1) reduce erosion-induced loss of soil C by reducing soil erosion and 2) mitigate atmospheric CO₂ buildup by recapturing C in the soil. Cover crop addition may also offset any adverse impacts of crop residue removal as biofuel feedstock or livestock feed on soil C. Data on the impact of cover crops on C sequestration rates and C fluxes are very limited, particularly in Nebraska. This interdisciplinary project (Agronomy & Horticulture, Animal Science, and Biological Systems Engineering) was designed to fill this gap in information. The project objectives are to measure soil gas fluxes (CO₂, CH₄, and N₂O) and determine C sequestration rates as well as estimate C budget under no-till cover crops across Nebraska. We will use six cover crop experiments with different treatments including main crop residue baling/grazing and control (no grazing/no baling) with and without cover crops (single and mixed species). Cover crops will be managed under continuous corn, corn-soybean, and corn-soybean-wheat rotation. Soil greenhouse fluxes will be measured by the LICOR system and static chamber methods. Soil will be sampled to measure C and N concentrations. Aboveground and belowground (root) biomass and their C concentration will be quantified. Outputs (i.e., C fluxes) and inputs (i.e., biomass) will be used to compute C budget. Data from this timely project will be essential to address C management while contributing to the overall sustainability of Nebraska's biofuel industries. We will develop a robust decision support system to facilitate practical decisions on C management.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Statewide
Project Name: Spatial Index for the Leachability of Chemicals in Nebraska **Project No:** 15-128
Amount Requested: \$180,666 **Term of Project Request:** 2 **Review Group:** Water

A Tier-1 (screening-level) tool is proposed for all of Nebraska to assess the leaching potential of volatile and non-volatile chemicals. The tool will run on a GIS platform and account for soil and chemical properties as well as amount of recharge. Variabilities in data will be accounted for in the tool and determination on a likely or unlikely "leacher" will be made by comparing the predicted behavior of the chemical within the spatial tool to historical monitoring data in the state. Complex vadose zone models (i.e., Tier-2 models or higher level models) best describe fate and transport of chemicals in soils at plot scale, providing better understanding of leaching behavior of contaminants released to soils by human activity. However, Tier-2 models have certain practical limitations on large-scale (e.g., regional) applications due to high data demand, convergence problems, large uncertainties associated with parameters, etc. Other Tier-1 screening tools, e.g., the USEPA's SCI-GROW and the USDA/NRCS' WIN-PST, are designed to assess leaching potential of chemicals through soils to ground water based on simple benchmark properties of soils and pesticides. These models are intentionally conservative by neglecting certain processes. They do not account for some important processes occurring in soils and/or natural variability of benchmark properties. More importantly, these tools neglect the mass loss (i.e., volatilization) of chemicals from soil surface thus limiting wide-spread application. The proposed tool will overcome these limitations by incorporating spatial variabilities in soil/hydrogeologic information and adding mean values and variances to various chemical properties and recharge. The model's development is known to regulatory agencies (USEPA) as well as pesticide manufacturers and both have shown interest in its use. We hope the model can serve both producers and regulatory decision makers.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Ogallala
Project Name: Eastern Redcedar Removal at Cedar Point Biological Station; a program of integrated environmental education and habitat restoration **Project No:** 15-131
Amount Requested: \$55,773 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The UNL Cedar Point Biological Station, partnered with Central Nebraska Public Power and Irrigation District are requesting 3 years of funding to supplement our expanding efforts at controlling the eastern redcedar (*Juniperus virginiana*) population on the Cedar Point and shared Central properties. This is primarily the south shore of Lake Ogallala, Keith County, Nebraska; where about half is property shared with CNPPID. Funding will simultaneously support habitat maintenance and experiential education. This project will support three habitat management internships each year and a small quantity of consumable supplies. While these interns primary responsibility will be to assist Cedar Point and Central in eastern redcedar removal and with the Cedar Point habitat management plan, up to 20% of their time will also be dedicated to outreach and environmental education. Redcedar control requires a long term program and this funding will in process help Cedar Point and Central build our volunteer base for a longer term solution to managing the 900 acres of prairie and canyons that is Cedar Point. We currently host several volunteer events each year that are often focused on redcedar management. The interns and supplies will help to directly facilitate these events, and leverage a substantial work force. Safety and work supplies for these volunteers are included in the proposal. A large aspect of redcedar removal is disposal. The interns will be encouraged to go beyond our current use of cut redcedar for posts, mulch and trail stabilization. For more on CPBS see: <http://lcedarpoint.unl.edu>

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Statewide
Project Name: Community as Habitat: Nebraska Communities Supporting Pollinators and Landscape Diversity Through Native Waterwise Plant Habitats **Project No:** 15-150
Amount Requested: \$700,000 **Term of Project Request:** 3 **Review Group:** Urban Habitat

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. The ecological health of community landscapes will be improved via greater use of native plants, promotion and planting of pollinator-friendly and water-wise habitat, promotion of sustainable management techniques, and through extensive outreach and education. Specific objectives will include: • Grant funds will be used to plan and implement up to 50 publicly-accessible pollinator-friendly landscape projects in partner communities at schools, parks, fairgrounds and other public places. • The initiative will raise public awareness about the benefits of biodiverse and ecologically healthy community green spaces including the importance of pollinators and sound resource management practices. • Project team members will partners with individuals and organizations across the state • The Initiative will be implemented in 20 communities. All partner communities would achieve designation as "Greener Nebraska Towns" requiring ongoing outreach and activities related to ecologically-sound community greening. • Evaluation activities will gauge effectiveness of the work and to inform others about how best to conduct future endeavors. Entomology partners will conduct research on education/outreach strategies for engaging communities in native habitat plantings and the effectiveness of habitats on pollinator diversity and abundance. Measured outcomes: 20 partner communities will be involved and over 8,000 of people of all ages will be reached via education and outreach efforts. Educational materials, including new websites, videos, and educational publications will be created • Pollinator-oriented education and outreach partnership will be established with at least 20 key nurseries and landscape professionals across the state. Up to 50 demonstration landscape projects will be implemented utilizing thousands of native, pollinator-friendly plants. • Strategies to improve the effectiveness of pollinator habitats to promote pollinator diversity and abundance. • 100 volunteers will be identified, trained and utilized to help with local outreach and implementation

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Omaha
Project Name: Green Business Challenge **Project No:** 15-152
Amount Requested: \$170,121 **Term of Project Request:** 2 **Review Group:** Education

The Green Business Challenge imports a successful green business engagement model in use by another regional Chamber of Commerce as a framework to implement measurable sustainability practices among Omaha and Lincoln area businesses. A unique collaboration among chambers of commerce, the University of Nebraska at Omaha College of Business Administration (CBA) and Nebraska Business Development Center, and local electric utilities in the Lincoln and Omaha area is formed to accelerate the adoption of green technologies and practices among business enterprises with low adoption rates. This project seeks to establish a green business engagement program and to utilize local research to hone its ability to accelerate adoption of green technologies and practices (GTP). Data collection and analysis of local norms and of environmental benefits will be used to develop a sophisticated information and education campaign to engage low GTP adopting businesses in the region. Measurable environmental success stories will be captured and used to produce a case study catalogue for use by economic development groups to convey the rate of adoption of green technologies and practices in the business community and enhance the brand of the regional community as actively engaged in pro-environmental behaviors.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Statewide
Project Name: Improving Access to Social & Environmental Sustainability Resources for Nebraska Farmers **Project No:** 15-157
Amount Requested: \$251,739 **Term of Project Request:** 3 **Review Group:** Waste Management

A recent report from the University of Nebraska-Lincoln outlined the potential for significant expansion of the livestock industry in Nebraska in the coming decade, a concept strongly supported by the Nebraska Department of Agriculture. With the exciting prospect of substantial economic and employment growth in our state that would accompany increased agricultural production comes a necessity to provide producers with knowledge and capabilities to expand and establish agricultural production operations in an environmentally and socially responsible manner. Three basic needs exist when considering establishment or expansion of crop and livestock production systems: environmentally and socially responsible site selection; knowledge and ability to assess and manage potential environmental risks; and ability to identify and satisfy applicable local and state regulatory requirements. This project is intended 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. The primary expected outcomes are a significant increase in the number of agricultural producers and associated stakeholders who understand and are equipped to manage environmental and social risks associated with agricultural production systems, a significant improvement in the ability of producers to navigate and comply with required state and local regulations for construction and operation of animal feeding operations in Nebraska, and more efficient delivery of the required land application training required by NDEQ for personnel working on permitted livestock production operations in the state.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Lincoln
Project Name: Develop a Mobile Application to Engage Citizen Science in Nebraska **Project No:** 15-110R
 Atrazine Risk Management
Amount Requested: \$13,636 **Term of Project Request:** 1 **Review Group:** Water

Atrazine is the most heavily used herbicide for corn and soybeans in the US, particularly in Midwest states. Nebraska is one of the most contaminated areas by atrazine that could cause adverse impacts on ecosystem and human health. Although significant governmental efforts have been made in monitoring atrazine, it is inadequate to observe over thousands of vulnerable watersheds at the landscape level. Citizen volunteers are identified as important community resources to characterize and monitor environmental conditions. Successful atrazine risk management relies heavily on public awareness and engagement. The overall goal of this proposed project is to develop an interactive mobile platform ("Atrazine Monitor") that can transfer the existing atrazine information to mobile devices and also allow stakeholders/citizens to report the real-time observation information. Three specific tasks will be conducted in this proposed project: Task 1: Transfer the existing atrazine information (datasets, maps, education materials, etc.) to a mobile platform; Task 2: Develop a real-time reporting system and a virtual library in mobile devices; Task 3: Engage citizen participation in four pilot watersheds and analyze the data reliability. With this project, "Atrazine Monitor" mobile application will have a realtime, reporting system and a virtual library. A regional collaborative network and a technical report will highlight the barrels and potentials of citizen science in atrazine monitoring. A national symposium, conference presentations, and manuscripts will discuss the effectiveness of crowdsourcing environmental monitoring. The mobile information platform also helps facilitate the community engagement by providing the advanced e-engagement tools and scientific crowdsourcing datasets. Lastly, the project can increase citizen awareness and expand electronic communication channels among the existing atrazine stakeholders in Nebraska.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Lincoln
Project Name: University of Nebraska-Lincoln Bioretention Pilot Project **Project No:** 15-193
Amount Requested: \$441,500 **Term of Project Request:** 2 **Review Group:** Waste Management

As part of the "Habitat" and "Surface Water" Trust Board Funding Categories, the University of Nebraska-Lincoln (UNL) proposes to implement one or more bioretention basins on East Campus with the following goals: 1. To serve as a demonstration project to garner support of stakeholders for similar BMPs to be incorporated into a Campus Storm water Master Plan to complement the current Campus Master Plan for development. The current Campus Master Plan for development envisions the addition of buildings, plazas, roadways, malls, drives, paths, quads, and courtyards, which could significantly increase the amount of impervious area absent incorporation of effective BMPs. 2. To achieve a reduction in both volume of run-off and pollutant loading to Deadman's Run . The basins will be designed to reduce pollutant loading from the contributing drainage areas to Deadman's Run, particularly bacterial loading. Exact reductions of pollutant loading to Deadman's Run will depend on the locations and contributing drainage areas for the basins. Through stakeholder coordination, we will attempt to select favorable locations for pollutant removal efficacy. By implementing these basins on East Campus, stakeholders will become educated about the success of this type of BMP and its relevance for inclusion in the broader Campus Master Plan. In addition, these basins can become excellent living laboratories for students of many disciplines and for the citizens of the State of Nebraska. They can demonstrate the natural beauty and environmental benefits of properly designed BMPs of this nature. Not only will these basins serve the UNL, but they also serve the City populous to the south since that drainage flows across East Campus before entering Deadman's Run.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Multiple
Project Name: Tern and Plover Conservation Partnership: Protecting and Conserving Birds in Nebraska **Project No:** 15-103
Amount Requested: \$179,187 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The Tern and Plover Conservation Partnership (TPCP) protects state and federally threatened Piping Plovers (*Charadrius melodus*) and endangered Interior Least Terns (*Sternula antillarum athalassos*) across the state of Nebraska. The birds' habit of placing their nests on bare, open sand, historically river sandbars, but now most often sand and gravel mines and lakeshore housing developments, places them in situations where bird-people conflicts may develop. We work cooperatively with an array of partners to prevent and resolve these conflicts. In essence, we help everyone 'share the sand' so these imperiled birds can nest successfully while people live, work and play nearby. Our partners include the sand and gravel mining industry, private and business property owners, recreationists, NGOs, local, state and federal agencies, and policy makers. Our goals are elementary, 1) increase the amount of productive nesting habitat for the birds in the state, 2) integrate our common sense conservation actions into statewide and range-wide protection efforts, and 3) expand our outreach and education programs to improve Nebraska's environmental literacy and commitment to conservation. We are asking NET to support our continuing efforts to 1) renovate and maintain nesting sandbars and other habitats, 2) implement a program at Lake McConaughy to help nesting birds and people share those beaches, 3) protect birds and people at sand and gravel mines and lakeshore housing developments, 4) encourage people to be good stewards of their land and the birds through outreach, education and mentoring, and 5) better understand the birds through research, so we can provide the best informed management. The TPCP has matured into a valuable and integral member of the conservation community in our state. We believe there is an on-going need for the presence, productivity and success of the TPCP in protecting terns, plovers, people and their habitats in Nebraska.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Lincoln
Project Name: University of Nebraska-Lincoln Stormwater Master Plan **Project No:** 15-194
Amount Requested: \$185,500 **Term of Project Request:** 2 **Review Group:** Water

The University of Nebraska-Lincoln (UNL) proposes to develop a comprehensive stormwater master plan to be used in conjunction with the UNL Campus Master Plan. The main focus of the comprehensive stormwater master plan is to incorporate water quality features into the City Campus and East Campus watersheds as a key component of proposed infrastructure improvements developed for the UNL Campus Master Plan. Water quality features which will be considered include bioretention areas (a general term used in this application for bioretention cells, constructed wetlands, or extended detention basins) with stair-step bioswales in proposed green spaces, and low impact development (LID) design concepts for proposed roads, malls, drives, paths, courtyards, quads and plazas. If implemented throughout both the City and East Campus, the proposed water quality measures will showcase the benefits of effective flood prevention and stormwater management practices. Through development and integration of these stormwater strategies into the campuses comes the opportunity to transform the flagship educational institution for the State of Nebraska into a national leader in stormwater management.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Statewide
Project Name: Youth Water Education: Building Informed and Empowered Nebraskans **Project No:** 15-199
Amount Requested: \$88,272 **Term of Project Request:** 2 **Review Group:** Education

Water resources in Nebraska have traditionally been abundant and of high quality. However, increasing demands from agricultural and urban growth, changing climate, and increasing pressures on water quality require efficient and effective management of water resources. The foundation upon which sound water management decisions must be made is the basic understanding of water resources, natural and anthropogenic influences, how to address changing and emerging threats, and a holistic perspective of how local water management influences a world dependent on a safe, potable supply of water. Evidence suggests many Nebraskans currently lack these foundational components. The goal of this project is to develop web-based water curriculum for use by middle school teachers in Nebraska's 5th and 6th grade classes. Curriculum will use advanced digital interactive learning opportunities and hands-on experiences to complement and leverage existing classroom programs and festivals. Curriculum will be hosted on the University of Nebraska - Lincoln Extension web site <http://water.unl.edu>. Web-based delivery will maximize financial and human resources, resulting in the broadest application possible while facilitating timely and immediate updates as necessary. The project will be developed by a highly qualified team of University of Nebraska- Lincoln Extension Educators. The existing network of University of Nebraska - Lincoln Extension Educators serving all counties throughout Nebraska will introduce and promote use of the curriculum in Nebraska's classrooms. Team members will work with staff at the Nebraska Department of Education and in Educational Service Units to promote use of the curriculum by middle school teachers. Evaluation will occur through beta pre and post-tests. Additional evaluation will be collected from teachers who pilot test the curriculum in their classrooms. The long-term, primary impact of this project will be the development and empowerment of an adult population capable of making science/research-based water management decisions at a personal, corporate, state-wide level, and world-wide level.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Statewide
Project Name: Identifying suitable and vulnerable habitats for bats across Nebraska **Project No:** 15-165
Amount Requested: \$196,624 **Term of Project Request:** 3 **Review Group:** Rural Habitat

Bats are of increasing conservation importance and concern in the United States and in Nebraska. Long standing threats such as habitat loss and degradation and emerging threats like wind turbines and white-nose syndrome threaten once stable populations with potentially drastic declines. Nebraska has a diverse mix of 13 resident and migratory bat species, seven of which are listed by the Nebraska Natural Legacy Project State Wildlife Action Plan as either Tier I or Tier II At-Risk Species. The Legacy Plan identifies the rapidly developing wind energy sector in Nebraska as a potential threat to wildlife and their habitats. The potential negative impacts of wind energy development on bats can be avoided or minimized through siting and operation that accounts for bat presence and habitat use; however these patterns are poorly understood in Nebraska. We propose to develop a decision support tool that helps evaluate potential bat habitats and vulnerability across the state. This tool can then be used for conservation actions such as habitat restoration and wind energy siting. This project will use a statistically robust design established by the new North American Bat Monitoring Program, an international effort to monitor bat populations, allowing us to also contribute to this larger bat monitoring effort. Sampling will be conducted across Nebraska by a network of technicians and citizen scientists equipped with ultrasonic acoustic detectors. We will use both stationary and mobile techniques for a minimum of 60 transects and 240 stationary sampling nights each year of the project. Information gathered will help understand bat habitat use and distribution patterns throughout the state and inform sound resource management practices and continued Legacy Plan conservation actions.

Sponsor Name: Board of Regents, University of Nebraska **Nearest Town:** Grand Island
Project Name: Raising Nebraska - The Science of Nebraska Agriculture: Engaging consumers and learners about production agriculture, natural resource management and environmental stewardship **Project No:** 15-163
Amount Requested: \$250,000 **Term of Project Request:** 1 **Review Group:** Education

Consumers knowledgeable about agriculture and natural resources and who know where their food comes from are critical to Nebraska. This understanding is key to improving the financial, social and environmental longevity of modern farming and livestock production, but also to strengthen the relationship between producers and consumers. To meet this goal, the University of Nebraska-Lincoln Institute of Agriculture & Natural Resources is providing educational, research-based experiences to help consumers (especially youth) better understand their food supply and the sustainable practices employed by farmers and ranchers. We are seeking funding to enhance an interactive, engaging agriculture and natural resources educational experience housed in the Nebraska Building at the Nebraska State Fair (opened August 22). This 25,000 sq.ft. interactive educational experience will teach agricultural and natural resource concepts including water, food, energy, crops, and the sustainable use of resources. In addition to being a showcase to over 300,000 fairgoers annually, UNL Extension is committed to providing year-round educational programming to engage students, 4-H members, FFA Chapters, consumers, visitors, civic organizations, businesses leaders and others interested in learning more about agriculture, natural resources and environmental stewardship. This venue will enhance the public's understanding of natural resource management in production agriculture with openness and transparency. Current learning exhibits focus on production agriculture and food. The missing link is natural resources with a specific focus on soil and water conservation as well as the productive cohabitation of production agriculture and natural resource management in the context of key issues such as wildlife habitat. The total cost of this project is \$5,000,000. To date, \$3,805,000 is committed by Nebraska's commodity groups, industry partners and UNL Extension. We have been unsuccessful in funding the natural resources component of this project. We request \$250,000 from the Nebraska Environmental Trust to enhance the natural resources educational experience.

Sponsor Name: Board of Regents, University of Nebraska - Omaha **Nearest Town:** Bennington
Project Name: Glacier Creek North Conservation Area Initiative-Phase II **Project No:** 15-127
Amount Requested: \$1,178,000 **Term of Project Request:** 2 **Review Group:** Rural Habitat

The Glacier Creek North Conservation Area Initiative – Phase II is a \$1,178,000 proposal over two years to assist in the purchase of 101 acres that (1) expands preserve habitat diversity to include additional lowland and slope wetland sites, (2) provides a sustainable buffer against development, (3) improves general soil and water quality, (4) protects slope springs, and (5) facilitates acquiring the remaining upper Glacier Creek drainage. This submission supplements NET's 2013 Grant (No. 14-140), which provided 1/3 of the funding needed for land purchase. Critical to this proposal is a change since 2013 in which the land owner recalculated the size of the parcel (now 101 acres) but increased the price to \$35,000 per acre to be more consistent with current land values. The land owner intends to sell the 206 acres in their entirety (101 acres of this proposal plus the 105 acres of the 2012 Grant No. 12-122) so as not to be left with unsalable remnants. While these changes increase funds needed to acquire the complete watershed, the objective of the umbrella Glacier Creek Project, they also bring additional benefits including enhancing the diversity and extent of native habitats that is the environmental foundation for use of the Glacier Creek Preserve. The acquisition of the North Conservation Area meets all five of the NET's Feature Program points and is also the final property needed to complete acquisition of the watershed to the west. A 2012 donation of \$1.2 million for construction of the newly completed educational facility and the 2013 purchase of 76 acres of land to the north have greatly expanded use of Glacier Creek Preserve as an important regional environmental resource and a symbol of the significant contributions of the Trust and others towards native habitat conservation and environmental education.

Sponsor Name: Boy Scouts of America - Longs Peak Council**Nearest Town:** Chadron**Project Name:** Chadron State Park Tree Plant**Project No:** 15-104R**Amount Requested:** \$10,000**Term of Project Request:** 1**Review Group:** Rural Habitat

The Boy Scouts of America, Longs Peak Council will provide the manpower and program to educate youth and volunteers in the replanting of trees to areas of Chadron State Park which sustained damage and loss to the trees due to a forest fire in the summer of 2012. Our goal is to plant 3000 trees each year for five years.

Sponsor Name: Bredthauer, Eugene**Nearest Town:** Ord**Project Name:** Eugene Bredthauer Mira Creek Dam Project**Project No:** 15-204**Amount Requested:** \$110,000**Term of Project Request:** 1**Review Group:** Lake Rehabilitation

We seek to restore Wildlife Reserve and habitat to cranes, ducks, geese, pelicans and fish, protect soil erosion from approximately 69 sq mile area drain basin through rebuilding the Bredthauer Dam. This will create a 50 acre lake with approximately 380-450 acre ft of water.

Sponsor Name: Cass County **Nearest Town:** Plattsmouth
Project Name: Cass County Compressed Natural Gas (CNG) Motor Vehicle Fuel Project **Project No:** 15-139
Amount Requested: \$750,000 **Term of Project Request:** 3 **Review Group:** Air Quality

The Cass County Compressed Natural Gas (CNG) Motor Vehicle Fuel Project will facilitate the use of Natural Gas Vehicles (NGVs) in the county, city of Plattsmouth and surrounding communities. CNG offers an immediately available fuel solution to make substantial reductions in air pollutants from commercial and personal vehicles. CNG is by far the most abundant and cost effective commercially viable fuel option on the market today. Cass County will sponsor this project. OFC / Schmidt Liquid Trucking will partner in funding the project. The two entities will focus on constructing a public CNG fuel facility on the OFC property that is located just off of Highway 75 north of Plattsmouth. This location is also just 6 miles southwest of the new I-29 bridge that will open in 2015. OFC successfully operates 14 NGVs to date with the intention of converting its entire fleet of 175 class 8 semi trucks to NGVs over the course of the next several years. Cass County intends to purchase 10 NGVs as well. In addition to local vehicles, Cass County has gained commitments from several fleets across the country to use this facility regularly as they pass through the area on dedicated routes. The Nebraska Environmental Trust will provide a positive environmental impact with its support of this project. In addition to environmental benefits, all entities surrounding the county will be provided an opportunity to save fuel costs immediately following the completion of this project. Cass County is requesting \$750,000 from Nebraska Environmental Trust Fund to aid in the purchase of equipment necessary to build a CNG fueling facility that will be open to the public. The total costs for the project will be \$1,656,519. OFC will provide all additional funding necessary to complete and insure the success of the project.

Sponsor Name: Central City, City of **Nearest Town:** Central City
Project Name: South Lake Excavation Project **Project No:** 15-197
Amount Requested: \$150,000 **Term of Project Request:** 1 **Review Group:** Lake Rehabilitation

In 2008 the City dug a new groundwater-fed lake as the centerpiece of our new South Recreation Complex. This included a new aquatic center, walking trails, soccer fields and open spaces. Unfortunately, the lake contractor went bankrupt during the project and did a poor job. As water levels fell during the drought, numerous islands and high spots emerged from the water. We also found that water depths were insufficient to support the fish that Game and Parks provided for us. This grant request would propose to dewater the pond, remove approximately 36,000 yards of material to eliminate high points and increase depth, haul the material to another site, place some rip-rap bank stabilization and restore the damage done during project. This effort is one step of a multi-phase renovation of the lake. The other phases are being performed with City funds. Upon completion of this project the appearance of the lake will dramatically improve and the lake will support fish more successfully. We have worked with state officials and a local citizen group to develop the plan and advocate for implementation. With the nearest State Park being an hour drive away, our residents don't have easy access to fishing and outdoor recreation opportunities that are more readily available in other parts of the state. Our new lake has been heavily utilized, provides a recreational opportunity for residents in the region, and is in desperate need of rehabilitation.

Sponsor Name: Central Nebraska Public Power & Irrigation District **Nearest Town:** Lexington
Project Name: Centralized Water Use Database for Irrigation Water Management in CNPPID **Project No:** 15-155
Amount Requested: \$194,100 **Term of Project Request:** 3 **Review Group:** Water

This project has the goal of gathering irrigation water use and environmental data to support the irrigation water management, water conservation and water quality goals of the Central Nebraska Public Power and Irrigation District. This will require education and promotion of on-farm precision management practices of irrigation water with producers to sustain water availability and maintain or improve water quality. The project would collect irrigation water use data directly from irrigation flow meters and weather monitoring sensors crucial to irrigation management. Data will be collected using UHF radio technology and be delivered to the Central district offices and individual irrigators through digital means including e-mail, text messaging or cell phone applications which will help water users make sound irrigation management decisions. Irrigation management software will be used by cooperating producers to manage plant available soil moisture and match irrigation water application to crop water use (ETc). The project will partner with UNL Extension to deliver a portion of the educational component and the McCrometer Company for the technical expertise to train equipment installers and accomplish data collection. This project fits in the Trust Board funding categories of Surface and Groundwater and Habitat. It will foster best management practices; efficient and effective management of water use. As the demand for irrigation water is reduced; aquatic and shoreline habitat is enhanced at Lake McConaughy. Many native species inhabit the waters or shores of the lake and water conservation is beneficial to recovery efforts for the threatened piping plovers and endangered interior least terns nesting on the sand beaches.

Sponsor Name: Central Platte Natural Resources District **Nearest Town:** Grand Island
Project Name: Groundwater Recharge, Central Platte River Basin **Project No:** 13-122-3
Amount Requested: \$20,000 **Term of Project Request:** 3 **Review Group:** Water

To help maintain critical flows in the Platte River and more effectively manage water resources in Nebraska, the Nebraska Platte River Cooperative Hydrology Study (COHYST) built a groundwater flow model to simulate current and future groundwater and surface-water interactions within the Central Platte River basin (CPRB). As a priority to improve the predictive accuracy of the model, COHYST identified the need for more accurate measurements of groundwater recharge. Therefore, the overarching goal of the proposed project is to obtain more accurate and long-term measurements and understanding of groundwater recharge rates and water quality beneath rangeland, irrigated, and non-irrigated (dryland) agricultural lands and the east to west precipitation gradient across the CPRB. Successful completion of this project will result in improved COHYST models, thereby providing improved estimates of groundwater and surface-water conditions that will lead to better informed decision-making by water resource regulators and planners. To begin meeting the overarching project goals, a cooperative partnership was started in 2008 between the Central Platte Natural Resources District (CPNRD), U.S. Geological Survey (USGS) Nebraska Water Science Center (NWSC), and San Francisco State University (SFSU) to establish 8 new recharge assessments sites strategically located across the CPRB. Construction of the last 3 of 8 recharge sites was completed in June 2010, and all sites now have instrumentation that remotely and continuously track meteorological events and corresponding sub-surface water movement that becomes recharge. The requested 3-year funding will support the continued monitoring at the 8 recharge sites, which will provide valuable, long-term information about groundwater recharge and climate gradients and benefit future water management in Nebraska. Also, these sites will provide valuable information about the effect of land-use practices on the migration of agricultural chemicals and groundwater quality, which will help decisions about best management practices in the CPNRD and Nebraska. THIS PROJECT WAS FUNDED \$70,000 IN 2013 WITH THE INTENT TO FUND UP TO \$40,000 IN YEAR TWO AND \$20,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: CLEAR Team **Nearest Town:** statewide
Project Name: Community Lakes Enhancement and Restoration (CLEAR) Team **Project No:** 15-189
Amount Requested: \$1,020,000 **Term of Project Request:** 3 **Review Group:** Lake Rehabilitation

The CLEAR program has received three previous grants from NETF for community lake rehabilitation and enhancement projects. Thirty-five community lakes have already been rehabilitated under the CLEAR program. Currently, numerous communities are seeking funding and technical assistance to complete lake improvement projects. The CLEAR program, comprised of individuals representing NDEQ and NGPC is seeking funding for three years to complete four additional lake improvement projects in Nebraska communities. NDEQ has identified 3 potential communities that would be ready to start as soon as funds are available with at least one additional project that could start within 2 years. Additional projects will be considered if funds are available.

Sponsor Name: Community CROPS **Nearest Town:** Lincoln
Project Name: Sustainable Agriculture Education Program **Project No:** 15-158
Amount Requested: \$68,262 **Term of Project Request:** 1 **Review Group:** Education

The Community Crops Growing Farmers Training Program has provided educational opportunities in sustainable agriculture production and marketing for ten years. This project will build on that success to reach even more beginning farmers with sustainable agriculture education. NET will provide 56% of the proposed cost of the project, covering necessary costs such as staff time to work with beginning farmers, workshop supplies and farm supplies. We teach a holistic approach to agriculture that recognizes the linkages between the soil, vegetation, air and water. Topic covered include integrated pest management, cover crops, water conservation and soil health. In collaboration with the University of Nebraska-Lincoln, this program also offers those participants without access to land an incubator farm on which to begin growing. These farmers have access to one-on-one mentoring on the practical and profitable ways to protect natural resources while creating a successful business. In 2015 and 2016, additional educational opportunities will be provided through upgrades at the training farm and on-site visits to program graduates. We project that 60 farmers will learn about and adapt conservation practices during the grant. An additional 1,000 people will learn about sustainable agriculture and resource conservation through outreach events, creating a ripple effect whereby residents of Southeast Nebraska conserve resources, create habitat and support local farmers.

Sponsor Name: D&D Refuse Inc **Nearest Town:** Lincoln
Project Name: Go Green Lincoln **Project No:** 15-220
Amount Requested: \$35,000 **Term of Project Request:** 1 **Review Group:** Recycling

The purpose of Go Green Lincoln is to provide expanded recycling service to D&D Refuse's customers in Lancaster County. D&D Refuse is committed to reducing the amount of waste going into the Bluff Road Landfill in Lancaster County and to increasing the percentage of recyclables diverted from the waste stream. The Go Green Lincoln project will allow D&D Refuse to provide a recycling cart free of charge to all its residential and/or commercial customers who wish to add recycling service. In addition to providing recycling carts, D&D Refuse aims to encourage customer participation by keeping the added monthly cost to the consumer to a minimum. D&D Refuse's goal is to get at least 25% of its customer base participating in recycling within one year. In order to meet this goal, D&D Refuse will need to purchase 1,000 new recycling carts. D&D Refuse is seeking funding for 500 (half) of the 1,000 carts needed. D&D Refuse will commit to purchasing the other 500 carts needed and will pay for all operating expenses involved in servicing these recycling customers.

Sponsor Name: Ducks Unlimited, Inc. **Nearest Town:** Maxwell
Project Name: Maxwell South Channel Wetland Restoration **Project No:** 15-120
Amount Requested: \$280,000 **Term of Project Request:** 2 **Review Group:** Rural Habitat

Ducks Unlimited (DU) and its partners will conduct a habitat restoration project on a property acquired by DU consisting of over 164 acres of Platte River accretion and wet meadow habitat in Lincoln County, Nebraska as well as another 30 acres of wetland accretion habitat on an adjoining private property known as the Smith tract. The goal of restoration will be to restore important Platte River habitat in support of migrating waterfowl and other wildlife. The parcel consists of degraded riparian sloughs and wet meadow habitat that is currently being farmed or is badly invaded by invasive trees, particularly dense eastern red cedars. There is also a channel of the Platte River that is badly invaded by undesirable vegetation including phragmites and cattail. To restore the property, the wetlands will be made functional by shallow excavations, the planting of native upland buffers, tree removal, and the installation of water control structures to promote management of water levels for desirable plant species on a total of 194 acres. Livestock fencing and watering facilities will be installed around the project. While being highly beneficial to wildlife on the property itself, conservation activities on the Maxwell properties will add further benefit to the large and contiguous Platte River habitat complex composed of both public and private landholdings.

Sponsor Name: Ducks Unlimited, Inc. **Nearest Town:** Ohiowa
Project Name: Restoration of Whiskey Flats **Project No:** 15-121
Amount Requested: \$136,462 **Term of Project Request:** 1 **Review Group:** Rural Habitat

Ducks Unlimited (DU) and its partners will facilitate the restoration of approximately 112 acres of Rainwater Basin wetlands and native prairie uplands on a recently acquired DU property in Fillmore County. It lies in the heart of the Rainwater Basin, which is recognized as providing critical habitat to millions of migrating birds, particularly during the spring migration period when forage and resting areas are most limited. This is the first project within a greater 1,000 acre basin known as “Whiskey Flats”. This tract lies in the center of the larger wetland, and future restoration efforts on neighboring lands are completely dependent on the success of this tract’s restoration. The end goal of this project will be to restore habitat to benefit wetland and upland species of wildlife at a local and continental scale, and produce a sustainable project by restoring wetland hydrologic processes, reducing soil erosion, limiting encroachment of undesirable plant species, improving native plant communities, and protecting the property from future degradation.

To restore the property, DU and its partners will restore hydrologic function of the wetland areas to the greatest extent possible by removing sediment, filling concentration pits built for irrigation and drainage, filling or plugging ditches, restructuring the soil surface to a natural grade, and promoting native plant species. DU and partners will also restore the uplands by removing nonnative plant species and promoting native species of grasses, forbs, and shrubs. Grazing is a desirable management tool in this region of Nebraska that helps to keep native grasslands and wetlands healthy. To promote grazing, fencing and livestock watering facilities will be installed. DU and its partners need the Trust’s assistance with funding the aforementioned aspects of the restoration process. The property will also receive long-term protection to ensure this work is beneficial to wildlife into the future.

Sponsor Name: Ducks Unlimited, Inc. **Nearest Town:** Bridgeport
Project Name: Anest Habitat Restoration **Project No:** 15-123
Amount Requested: \$98,013 **Term of Project Request:** 1 **Review Group:** Rural Habitat

The Anest Habitat Restoration proposal seeks funding from the Nebraska Environmental Trust to help restore an alkaline wetland complex and associated grassland on 520 acres along the North Platte River west of Bridgeport, Nebraska. The Anest property is owned by Ducks Unlimited and was purchased partially with Trust funds. It offers a rare opportunity to restore a large complex of alkaline wetlands and grasslands in western Nebraska. The wetlands on this property will not only provide habitat to thousands of waterfowl, wading birds, shorebirds and other wildlife, but the alkaline wetlands found here are also home to rare and unique plant and animal species such as Alkali sacaton, foxtail barley, inland saltgrass, spearscale, poverty weed, and sea blite. Alkaline wetlands provide exceptionally rich foraging habitat to shorebirds because they produce huge quantities of brine flies and other invertebrates that thrive in these wetlands. Most of the wetlands on the property were drained by the previous owners using shallow surface ditches. These drains will be filled and water control structures will be installed to restore the hydrology of ~185 acres of wetlands while allowing for better wetland vegetation management. Additionally, the grassland habitat will be enhanced through chemical and mechanical treatment of undesirable, invasive species. Upon completion of the restoration, the property will be transferred to the Platte River Basin Environments, Inc. to provide long-term ownership and management of the site. The property will be open to a variety of public uses such as hunting, bird watching, and hiking.

Sponsor Name: Ducks Unlimited, Inc. **Nearest Town:** Mitchell
Project Name: Spring Creek Conservation Partnership Phase II **Project No:** 15-125
Amount Requested: \$88,730 **Term of Project Request:** 1 **Review Group:** Rural Habitat

Wetland habitat in the North Platte River watershed has been drastically impacted by extensive water diversions, invasive plant species, wetland drainage activities, and reduced groundwater levels along streams and floodplains. Floodplain wetlands have essentially been eliminated in the North Platte River drainage, which greatly reduces diverse habitat for wetland dependent species. It is imperative to conserve key complexes that will remain intact and provide resources long-term. With greater than 97% of the land base in Nebraska being privately owned, habitat programs must be available to landowners in order to sustain and improve wetland habitat within the North Platte River watershed. In response to the rapid decline of critical wildlife habitat, Ducks Unlimited initiated a project to protect and restore a vital habitat complex in Scotts Bluff County through the Spring Creek Conservation Partnership proposal funded by the NET in 2013. Conservation of these key tracts will result in the protection and restoration on over 762 acres of critical contiguous habitat in the Spring Creek watershed on the North Platte River. Through a community approach, landowners of the Spring Creek Complex have all agreed to work individually with Ducks Unlimited for a common cause, “conserve habitat for wildlife and open space long-term.” The conservation easements on two of the properties will protect the complex from future development and subdivision to ensure the invested conservation dollars by the NET provide long-term benefits. The Spring Creek Conservation Partnership is a prime example of working with communities to achieve conservation success at a landscape-scale. Ducks Unlimited is requesting that the NET fund Year Two of the original proposal to ensure this work is fully accomplished and the communities involved see their conservation efforts rewarded.

Sponsor Name: Ducks Unlimited, Inc. **Nearest Town:** Fairmont
Project Name: County Line Waterfowl Production Area Roundout **Project No:** 14-197-2
Amount Requested: \$17,360 **Term of Project Request:** 2 **Review Group:** Rural Habitat

The County Line Waterfowl Production Area Roundout proposal seeks funding assistance from the Nebraska Environmental Trust to acquire and restore the Bettger property, an important “roundout” to the County Line Waterfowl Production Area in Fillmore County, Nebraska’s Rainwater Basin. The 5 acre Bettger property lies adjacent to the 406 acre County line Waterfowl Production Area. The two properties share a common 289 acre wetland. Approximately 8 acres of the 289 acre wetland lies on the Bettger property. A large, excavated “pit” on the Bettger property partially drains the wetland and intercepts natural runoff. Acquisition of the Bettger property will allow hydrology of the entire wetland to be improved and better managed, providing significant habitat benefits to waterfowl, shorebirds, wading birds, resident wildlife, and many other species. Ducks Unlimited will acquire the property and hold the tract for several years before transferring the property to the U.S. Fish and Wildlife Service. The Fillmore County Board of Supervisors supports this proposal (see attached letter). Prior to transfer to the Service, the wetland on the tract will be restored by placing compacted fill material into the pit and restoring the natural surface of the wetland basin. THIS PROJECT WAS FUNDED \$12,000 IN 2014 WITH THE INTENT TO FUND UP TO \$17,360 IN YEAR TWO PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Ducks Unlimited, Inc.**Nearest Town:** McGrew**Project Name:** Summers Habitat Restoration**Project No:** 15-124**Amount Requested:** \$93,150**Term of Project Request:** 1**Review Group:** Rural Habitat

Ducks Unlimited, Inc. conserves, restores, and manages wetlands and its associated habitats for waterfowl in North America. In order to carry out this mission, DU is requesting funding from the Nebraska Environmental Trust (NET) to assist with the Summers property river channel and wetland restoration project along the North Platte River. Located in Western Nebraska, the 698 acre property was acquired as a conservation easement in 2013 to protect valuable wetlands and waterfowl habitat. We are now requesting funding to conduct a restoration on approximately 40 acres which will restore wetland habitat and hydrology to the wetlands on this property. This property protects nearly two miles of habitat along the North Platte River that is utilized and depended on during the spring and fall migration by over 250 species of migrating waterfowl, wading birds, and neo-tropical migrant songbirds. The conservation easement on the property protects this valuable habitat from future development and subdivision, ensuring the invested conservation dollars by the Trust provides long-term benefits. These restoration efforts will further ensure that this property is able to provide critical wildlife habitat into the future for a relatively small investment. This project also provides an important opportunity to increase restored acres along the North Platte River and further build these habitat complexes in this stretch of the North Platte River. The project will contribute to this effort tremendously and increase connectivity of protected habitats along the River's corridor

Sponsor Name: Farwell Irrigation District**Nearest Town:** Farwell**Project Name:** Project Improvement 2015**Project No:** 15-105**Amount Requested:** \$233,212**Term of Project Request:** 1**Review Group:** Water

This project is proposing to bury 3.3 miles of open lateral, known as lateral 20.8-1.7, within our irrigation works, into PVC pipe. Since the early 1970's we have been burying laterals in our project and have seen a water savings of 30 to 35 percent since that time. It's been a goal of the District to continue burying laterals until the final section is done. The 20.8-1.7 lateral is 3.6 miles long, and 3.3 miles will be buried. The top third of a mile will be left open because of elevation and pipe size reasons. Instead, an automated Rubicon gate will be used at the top of the lateral to regulate the amount of water that is diverted into this section. This same design was used on our last project because of similar reasons, and has been successful. By burying this lateral, it will conserve water that is described as "losses" and will keep that water in the Middle Loup River which can then be used for other purposes downstream such as Endangered Species (River Otter, Whooping Crane, and Pallid Sturgeon), domestic uses, other irrigation, recreation, and hydropower. Additional benefits include the savings on chemicals used for treating marine vegetation, which also reduces environmental impacts, and allows for more habitat where the lateral once was and has the potential for other endangered species in the area to flourish (Small White Lady Slippers and Western Prairie Fringed Orchids). In this era of drought conditions, we all must find ways to use what resources we have in the most efficient and effective ways possible. We need grant assistance to accomplish our goal of burying every lateral we can before water supplies deplete anymore or endangered species become extinct.

Sponsor Name: Five Rivers Resource Conservation and Development, Inc. (RC&D) **Nearest Town:** Tecumseh

Project Name: Native Grassland Protection Against Invasive Weeds II **Project No:** 13-192-3

Amount Requested: \$46,250 **Term of Project Request:** 3 **Review Group:** Rural Habitat

Native Prairies are the most threatened ecosystem in North America. With the increase of invasive species present in the area we see its negative impacts on these remaining landscapes and losses to our other grazing lands and native habitat. The lack of control reduces the production, profitability and sustainability of grasslands and causes economic hardships. This has resulted in some grasslands being converted to row crop production because of difficulties and costs of controlling invasive weeds. Losing native prairies, oak woodlands, and plant diversity is resulting in significant impacts to our valuable native wildlife habitat, soil quality, water quality, and economic sustainability. In 2011 the Five Rivers WMA received a total of sixteen applications from landowners in four different counties requesting aid in controlling the invasive species. Due to the higher than expected volume of applications from landowners seeking assistance, Five Rivers Weed Management Area had to request to reallocate funding from the Nebraska Environmental Trust Fund – Project Number 11-133, to include an increased amount dedicated to conservation implementation and a decreased amount of funding for education in order to meet the needs of local landowners and managers, which displays the interest and need for the cost share program in the designated region. The WMA continues to educate landowners and managers and continually receives inquiries along with new applicants seeking aid in controlling the invasive weed species. Therefore, the Weed Management Area seeks a continuation request, extending the program for an additional three years. The WMA is seeking \$90,000 for a three year cost share program that would assist in making effective invasive weed species control affordable for landowners, land managers, and other entities. Seventy-five percent of the fees for the chemical and application would be funded through this grant. This program would be available on a rating basis; dependent on severity of invasion, type of invasive weed(s), native prairie in an identified Biologically Unique Landscape, and in kind or cash match (minimum requirement of 25%). A five year maintenance agreement will be required on any entity acquiring grant funds. An additional \$21,000.00 is requested to fund three project promotional workshops (speakers, lunch, mailings, building rental, supplies) throughout the WMA area, totaling \$7,000 per year for three years, and \$27,750.00 for project/grant administration, divided into equal payments of \$9,250.00 a year for three years. THIS PROJECT WAS FUNDED \$46,250 IN 2013 WITH THE INTENT TO FUND UP TO \$46,250 IN YEAR TWO AND \$46,250 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Fontenelle Forest Association **Nearest Town:** Bellevue

Project Name: Oak Woodland and Wildlife Habitat Restoration **Project No:** 15-168

Amount Requested: \$328,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The lands owned and managed by Fontenelle Forest include Neale Woods, Fontenelle Forest, and the Andrews tract, in all totaling approximately 2,053 acres. These parcels are comprised of three ecological communities including oak-hickory-basswood uplands, deciduous wooded floodplain, and wetlands. Oak woodlands and prairies support a variety of unique biodiversity. These lands are crucial habitats for migratory birds, small mammals, invertebrates, and a range of woodland-dependent plant species, as well as several species in need of conservation. Fontenelle Forest, Neal Woods, and our Andrews tract, three of the unique remaining oak woodlands within the Missouri Valley, are being severely degraded by an increasing shade-tolerant canopy, sub-canopy and understory, invasion by exotic plants, such as garlic mustard, autumn olive and honeysuckle, lack of fire, and no natural oak regeneration. Fontenelle Forest has created a strategic oak woodland and wildlife restoration plan to restore and enhance approximately 1160 acres of oak woodland/floodplain forest, and prairie, by conducting prescribed fire, controlling invasive species, and thinning shade-tolerant shrubs and trees. We plan to enhance and expand recreational opportunities within our borders and with our neighbors, as well as create a public awareness campaign highlighting the importance and relevance to the community of sustaining a healthy, fully functioning oak woodland/prairie ecosystem. We will conduct our planning, preparation (constructing fire breaks, thinning), and burning using contractors, seasonal and permanent staff. We will partner with the Bellevue City Fire Department to reduce our fuel load and plan our fire breaks. Partner funds from FWS and NGPC will be used for on-the-ground habitat management and manipulation. This restoration project will reduce soil erosion in woodlands and riparian areas and enhance groundwater quantity and quality. This project will fulfill several Nebraska Natural Legacy conservation objectives within the Missouri River Biologically Unique Landscape.

Sponsor Name: Friends of Heron Haven, Inc.**Nearest Town:** Omaha**Project Name:** Educational Program and Wetland Facility Enhancements**Project No:** 13-175-3**Amount Requested:** \$5,878**Term of Project Request:** 3**Review Group:** Education

The recent completion of a \$0.5 million USACE/Papio-Missouri NRD wetland restoration project greatly enhanced Heron Haven's unique wetland habitat. As a timely and mission-appropriate next step, Friends of Heron Haven requests funding for 9 projects that, in partnership with the NRD, will expand our nature and environmental education programs and accomplish a series of improvements to our physical facilities that will enhance its educational potential, provide greater access for the disabled, improve public safety, and facilitate maintenance of the property by volunteers.

Project 1 supports visits by school groups to participate in a combination of indoor and outdoor environmental education programs. Project 2 funds the annual Heron Haven Wetland Festival, which involves families in a variety of educational nature-related activities. Project 3 installs a series of full color, interpretive signs for our major attractions that will offer guidance in identifying common flora and fauna. Project 4 requests recycled plastic lumber for a post and rail security fence around a Dragonfly Pond. Project 5 replaces a worn cedar fence surrounding the Nature Center patio. This patio contains a bird-feeding station that provides opportunities for year-round bird observation and provides space for the annual Wetland Festival. Project 6 installs an irrigation system for the Butterfly Garden, Nature Center planters and patio garden. These gardens, which attract numerous visitors, provide opportunities for the study of native perennials and butterflies. Project 7 proposes to replace an obsolete utility shed that houses equipment and supplies used by volunteers to maintain the property. Project 8 installs a video security system for the area around the Nature Center. Finally, Project 9, which begins in Year 2, requests crushed rock to upgrade 600 feet of unimproved trail to provide access for the disabled to the viewing/photography blind, with installation to be provided by the NRD. THIS PROJECT WAS FUNDED \$30,231 IN 2013 WITH THE INTENT TO FUND UP TO \$6,197 IN YEAR TWO AND \$5,878 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Friends of The Nebraska 150 Sesquicentennial**Nearest Town:** Statewide**Project Name:** Planning and Development for Historic Community Environmental and Educational Program**Project No:** 15-190**Amount Requested:** \$20,000**Term of Project Request:** 1**Review Group:** Education

The State of Nebraska will commemorate and celebrate its 150th year of statehood in 2017. Plans are now underway to make this a very meaningful event by implementing "Legacy" projects that will have a lasting positive impact on the state as well as "Signature" Events that will be remembered for years to come. It is the desire of the planning committee to develop a number of major "Legacy" projects that will represent the proud past of the state as well as be an investment in the future. Education and economic development will play key roles, but there is also a great desire to embrace environmental projects that will involve and educate the public on the importance of planting and protecting trees, water resources and especially in extraordinary heritage and pride in preserving native grass areas. This grant application proposal is provided as a request for the Nebraska Environmental Trust to underwrite the planning and development phase to determine the feasibility of a major "Legacy Project" aimed at involving at least 150 communities across the state in an historic effort to recognize and protect native grasslands, establish arboretums, preserve water resources and creatively recognize other environmentally sensitive subjects as part of their local tribute to the 150th year of Nebraska statehood.

Sponsor Name: Green Recycling Enterprises, LLC dba Second Nature Public Recycling **Nearest Town:** Omaha
Project Name: Recycling on the Go! **Project No:** 15-217
Amount Requested: \$471,205 **Term of Project Request:** 3 **Review Group:** Recycling

Second Nature Public Recycling, Inc. is a newly formed non-profit providing recycling containers at public events throughout Nebraska. During the four years Green Recycling has been providing recycling for events, municipalities and other locations in Nebraska. We have concluded this business model is better served as a non-profit and have created Second Nature as a non-profit. We have proven the demand for public recycling containers at over 90 events in 2013 and we should hit 100 in 2014 with multi event locations. Some events we conducted include: 1) College World Series; 2) State Fair; (3) Lincoln marathon and the (4) Apple Jack and Arbor Day. Second Nature wants to continue providing events for Recycling on the Go campaign for years to come as a Non-profit with support from Green Recycling Enterprises, LLC. Second Nature will secure additional funding from sponsors as a non-profit for the Recycling on the Go campaign by providing a promotional opportunity via a full-color graphic display located on each side of the recycling containers. The program was extremely successful in 2011 through 2014. People were aware of the containers from previous years and used them to recycle more products. The event coordinators, staff and patrons were expecting the containers this year and were more open to our program. NET's financial support will provide the stimulus to ensure the successful continuation of our campaign. These messages will educate over 1.5 million event participants about recycling. The NET can use these displays to promote its' mission and accomplishments. The support of the NET will enable Second Nature to provide a turnkey recycling campaign for the State of Nebraska. Without the NET and private sponsors, Second Nature would not be able to provide this successful and proven program.

Sponsor Name: Groundwater Foundation, The **Nearest Town:** Multiple
Project Name: Growing Groundwater Awareness in Nebraska Phase II **Project No:** 13-150-3
Amount Requested: \$31,029 **Term of Project Request:** 3 **Review Group:** Education

Groundwater is Nebraska's most important natural resource; a clean sustainable supply is critical to continued prosperity in our state. Yet there is much misunderstanding about the resource and how our actions impact its availability to sustain life, livelihood and the natural environment. The Groundwater Foundation is requesting funding for phase II of the Growing Groundwater Awareness in Nebraska (GGAN) program to effectively expand the groundwater conservation and protection work to more communities. During phase one the program has done much more than generate awareness in the ten target communities, it has generated awareness across the state and it has positioned the target communities to continue long-term protection efforts. Phase II of the program will continue the statewide awareness building and bring long-term protection and conservation work to 10 additional Nebraska communities. What is especially advantageous is that the tools and resources have already been developed; therefore the continued work will not have costs associated with development. Additionally, the Groundwater Foundation has had numerous communities recognize how the program would further their efforts to protect their water. These communities are dealing with non-point source pollution, point resource pollution or quantity issues. Funding from the Nebraska Environmental Trust will enable the GGAN program to take place in 10 communities. It will assist them to engage the public and set up the structure to implement long-term protection and conservation efforts well past the time frame of the grant. (These desired outcomes have been verified by the work of the target communities in phase I of the program). The Groundwater Foundation has secured the continued support of its media partners (KOLN-KGIN 10/11, KRVN and Nebraska Educational Television and Radio), and has requested matching funds from the Nebraska Department of Environmental Quality. THIS PROJECT WAS FUNDED \$147,726 IN 2013 WITH THE INTENT TO FUND UP TO \$41,245 IN YEAR TWO AND \$31,029 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Groundwater Foundation, The **Nearest Town:** Statewide
Project Name: Recharging Groundwater **Project No:** 15-136
Amount Requested: \$228,000 **Term of Project Request:** 3 **Review Group:** Education

We Nebraskans rely on groundwater to sustain our lives and livelihood; and groundwater relies on us. The majority of groundwater depletion and degradation is due to human actions. The demands on groundwater supplies will increase as the population grows and societal demands evolve. In order to meet these demands we need an educated populace and an inspired new generation, prepared to seek the solutions to meet these demands. The project "Recharging Groundwater: Tools for Engagement and Action" will do just this. The project utilizes education about groundwater as a catalyst to action. The audience is both youth and adults; as such, the project will include a variety of activities to reach the two audiences. The 3-year project will achieve two primary goals: 1. Increase awareness and participation in conservation and protection efforts across the state, by creating cohesive messaging and a coordinated approach to widespread distribution of information and promotion of events and activities. 2. Foster a new generation of environmentally-educated people, by providing educators with tools and resources to educate their students. This project fulfills the Trust's priority of actions to inform and educate about preserving our state's primary water supply, groundwater, from degradation or depletion. It intrinsically fosters best management practices by utilizing action-based education. For example, instead of just providing information about water conservation, the project will use interactive water tracking tools that challenge people to adopt better practices and reduce their water consumption. The project will be implemented by the Groundwater Foundation (GF) which has 29 years of experience educating and inspiring action to benefit groundwater. The GF will work with a variety of partners (both private and public). The GF received funding from the Robert B. Daugherty Foundation for its work in groundwater education and protection which will match funding from NET.

Sponsor Name: Groundwater Foundation, The **Nearest Town:** Multiple
Project Name: Hydrogeology: Water for the World **Project No:** 13-151-3
Amount Requested: \$19,128 **Term of Project Request:** 3 **Review Group:** Education

The Groundwater Foundation is seeking 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. The launch of Hydrogeology: Water for the World will be through the Science Olympiad program (a national science competition for secondary students). The timing is especially exciting since the University of Nebraska, Lincoln will be hosting the 2015 national tournament. As such, Hydrogeology: Water for the World will be developed and piloted in secondary schools in Nebraska. The experience gained by Nebraska students will serve to promote implementation of the event by students across the nation. This will set the stage for it to be a widely competed and successful event at the 2015 national tournament. This is an excellent opportunity to engage local secondary students in investigative learning about groundwater, have them apply the knowledge in order to seek solutions to pollution and other threats and gain an understanding of further academic and career opportunities. Therefore the project will effectively reach tomorrow's decision-makers, with needed education about groundwater and the impacts our actions have on its quality and quantity. NET funds will be used for the development of the science competition event, piloting of the event in up to 30 teams in Nebraska, developing training materials and resources for coaches as needed to ensure the event is widely competed at the national tournament in Nebraska and remains in the lineup for tournaments well beyond the timeframe of the grant. The Groundwater Foundation has proposals for additional funding into NDEQ (319 funds), Lincoln Community Foundation to cover work done in Nebraska. The Robert B. Daugherty Foundation is interested in the project and has requested a grant proposal; this funding would be used primarily for work outside of the state. THIS PROJECT WAS FUNDED \$79,277 IN 2013 WITH THE INTENT TO FUND UP TO \$17,845 IN YEAR TWO AND \$19,128 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Hastings Museum **Nearest Town:** Hastings
Project Name: The Nature Nook: Interactive Environmental Education Exhibit **Project No:** 15-185
Amount Requested: \$35,000 **Term of Project Request:** 1 **Review Group:** Education

The goal of our project is the renovation of our permanent, interactive, environmental education exhibit, which has traditionally been one of the most popular areas of the Hastings Museum. The new space will be called the Nature Nook. The project will provide a hands-on, indoor, year-round educational experience, featuring 6 eco-systems of Nebraska. At the heart of our project is the fulfillment of the Hastings Museum's mission to connect Nebraska to the world and the universe through educational programs that enhance our understanding of the importance of the symbiotic relationships that exist within each ecosystem, and the ways we can maintain these ecosystems through sustainable practices as we use natural resources in our daily lives. Specifically, Nebraska Environmental Trust funds will be used for the final installation of replicated eco-systems and interactive educational elements of the Nature Nook exhibition.

Sponsor Name: Joslyn Castle Institute for Sustainable Communities **Nearest Town:** Statewide
Project Name: Sustaining the Conservation of Nebraska Environmental Resources (SCNER) **Project No:** 15-126
Amount Requested: \$300,000 **Term of Project Request:** 2 **Review Group:** Education

The Joslyn Institute for Sustainable Communities proposes to develop an annual series of public lectures, workshops, conferences, and distributed information on applied practices with emphases on the following priority categories of the NET: Habitat, Surface and Ground Water, Waste Management, Air Quality, and Soil Management. This "strategic communications design for conservation and sustainable development" can be applied throughout Nebraska on any and all environmental issues. By "communications" we mean the complex processes of human interaction(s) necessary to address a problem-opportunity that is embedded in the interdependent systems of nature, public policy, economics, technology and local culture. By "design" we mean intentional and creative intervention and innovation in the making of something that was once problematic, needing conservation, or underutilized into something that efficiently and effectively serves the public good. The proposed annual events will focus on the following objectives: 1) Scheduling of at least two public lectures by national and Internationally recognized specialists, in partnership with an existing endowed lecture series at the University of Nebraska-Lincoln (Hyde Lecture Series, College of Architecture); 2) Partnership collaboration with Central Community College and Metropolitan Community College, Omaha, for annual statewide broadcasts of web-based presentations on "The Sustainability Leadership Presentation Series (SLPS)" (the already planned 2014-2015 series will schedule nine presentations); 3) Production Design of one annual "Nebraska Ecospheres Conference" to focus on barriers, issues, and potential progress across the state with a focus on conservation and sustainable development; 4) Establishment of an annual public awards and recognition program for successful applications of conservation and sustainable development practices; 5) Production Design of a web-based, and hard copy library of transformative and transferable information on statewide resources for conservation and sustainable development.

Sponsor Name: Kearney, City of **Nearest Town:** Kearney
Project Name: Household Hazardous Waste Collection Facility **Project No:** 15-196
Amount Requested: \$268,284 **Term of Project Request:** 1 **Review Group:** Waste Management

The City of Kearney is requesting grant funding to assist in the building of a permanent Household Hazardous Waste (HHW) Collection Facility to improve its existing collection program. This facility will serve the residents of Buffalo County, over 45,000 people, and will give the residents access to a safe and environmentally responsible way to dispose of unwanted household chemicals. The City has collected HHW from Buffalo County residents for approximately 15 years. Over this time, people are becoming more environmentally conscientious and are thinking in a more "earth-friendly" way. With this in consideration, the HHW program has grown, and the need for a larger facility has become very apparent. The new building will not only provide room for safely processing and sorting HHW, but it will also include a "Re-Store" area that will offer residents the opportunity to acquire paint and select household chemicals to use at no charge. Reusing and properly recycling these chemicals keeps them out of our landfill, soil and groundwater and also gives people the opportunity to prevent illegal dumping. This HHW building will be located on the property of the Kearney Area Recycling Center and Sanitation Division, conveniently making this a "one-stop-shop" for recyclers. In addition, building a new facility that residents can visit will increase the visibility of our HHW program in the community and offer additional opportunities for educating residents about Household Hazardous Waste. This facility will help us to reach a wider base of people and promote participation from more Buffalo County residents.

Sponsor Name: Keep Alliance Beautiful **Nearest Town:** Alliance
Project Name: Recycling Education and Center Support **Project No:** 13-183-3
Amount Requested: \$32,749 **Term of Project Request:** 3 **Review Group:** Waste Management

Keep Alliance Beautiful, Inc. is requesting partial funding to retain personnel at the recycling transfer center and for educational personnel for 3 years to help promote recycling in the community of Alliance and Box Butte County. The recycling program falls within the Waste Management section of the Nebraska Environmental Trust category areas. The Center was opened three years ago through a prior Nebraska Environmental Trust grant (#10-132). Keep Alliance Beautiful, Inc. received \$15,858 in the sale of recycling commodities in 2011-12. The Alliance City Council instituted 50 cents of a 1% landfill fee increase in 2011 for recycling expenses. KAB is slated to receive \$6,000 a quarter for the recycling services provided in 2012-2013 budget year. Recycling has become a service that people and businesses in Box Butte County are becoming accustomed to. Environmental programs operating in the schools and for the benefit of the community and county have been part of the success of the program. KAB will continue educational programming through the three year period. As KAB's recycling transfer center needs grow, keeping the program operational is necessary. Expectations are that the City of Alliance will play a larger role in meeting those needs. Currently the recycling center is housed in a small 18" x 75' (1350 sq. ft.) building. We are now beyond subsistence and ready to grow but need help to make that happen. Financial assistance is necessary for KAB's recycling program to move forward. During the next three year period, we expect to move to a larger building with storage and be able to secure additional funding locally. KAB must also continue waste management education focusing on reduction, reusing, repurposing, and recycling. Additional programs on "closing the loop" and purchasing recycled goods are also important. THIS PROJECT WAS FUNDED \$32,749 IN 2013 WITH THE INTENT TO FUND UP TO \$32,749 IN YEAR TWO AND \$32,749 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: La Vista, City of **Nearest Town:** La Vista
Project Name: Thompson Creek Watershed Restoration **Project No:** 13-110-3
Amount Requested: \$100,000 **Term of Project Request:** 3 **Review Group:** Bank Stabilization

Urban streams greatly improve the quality of life for communities, but they usually are too damaged to be an asset. Urban streams experience eroding banks, poor water quality, and poor habitat for aquatic life. The City of La Vista intends to restore Thompson Creek, an urban stream at the center of its community. Future park and other development plans will make Thompson Creek a recreation destination. The Thompson Creek Watershed Restoration implements this vision with a holistic watershed restoration approach phased over three years (with two additional years of monitoring). Implementing the 1,250-acre Watershed Restoration require \$2,689,750, with funding by the City, NDEQ 319 Grant, Papio-Missouri River Natural Resource District, and the Environmental Trust Fund. NET's contribution represents 41% of the total amount over three years. Planned activities are: 1. Pre- and post-construction monitoring of water quality, stream stage, stream habitat and biota. Data will largely be collected by teacher and students, guided by contracted professionals. 2 Education and outreach through web and print-based communications, open houses, and volunteer activities, including engaging students and teachers in the Papillion-La Vista School District. 3. Cost-sharing and demonstration projects, targeting homes and apartments for runoff reduction and larger projects in commercial areas and public open space. 4. Reconstruction largely using bioengineering of 4,757 linear feet of eroding Thompson Creek, with engineered storm sewer outlet structures and created wetlands for pre-treatment. The Watershed Restoration is expected to significantly improve water and habitat quality in Thompson Creek: 1. In-stream habitat conditions will significantly improve based on the USEPA's Rapid Bioassessment Protocol 2. The first polluted stormwater flush will be treated for a significant portion of the watershed (with 100% in 10 years). 3. Peak flows for the 2-year, 24-hour event are expected to decrease by 25%. 4. Eroding banks will be reduced by 80%. THIS PROJECT WAS FUNDED \$525,000 IN 2013 WITH THE INTENT TO FUND UP TO \$375,000 IN YEAR TWO AND \$100,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Lewis & Clark Natural Resources District **Nearest Town:** Hartington
Project Name: Upper Missouri Tributaries Hydrogeologic Framework and Groundwater Monitoring Network **Project No:** 13-193-3
Amount Requested: \$86,000 **Term of Project Request:** 3 **Review Group:** Water

The Lewis and Clark Natural Resources District (LCNRD) located in the northeast corner of Nebraska has a complex assemblage of aquifers which supply most of the water used for irrigation and drinking. The LCNRD is looking to the Trust for 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. At this time the LCNRD has only a limited number of monitoring wells, located in a Groundwater Management Area in Knox County. The establishment of a monitoring network will allow for year-round monitoring, providing a more complete picture of the groundwater resource, now and over the long-term. To develop a reliable groundwater management tool in Northeast Nebraska, it is first necessary to develop a complete regional hydrogeologic overview. The first step is establishing the hydrogeologic framework through test hole drilling and down-hole geophysical logs. From that data, a groundwater monitoring program will be developed, to support planning and management. Drilling test holes and analyzing geophysical logs provides a geologic basis to design and construct monitoring wells in the aquifers of current irrigation development and secondary aquifers where potential for development is high. With the information gathered from this research, the District will have the tools necessary to assess the current groundwater condition, identify areas which may require regulation, and identify areas of concern which will benefit from further monitoring or additional research. Water quality data is an important function of the District and dedicated monitoring wells provide unaltered samples from distinct zones in the aquifer. Hydrogeologic characterization from test holes, stratigraphic analysis, water chemistry, and water-level information will be a great advancement for the District in improving the water management plan and protecting water resources. THIS PROJECT WAS FUNDED \$103,500 IN 2013 WITH THE INTENT TO FUND UP TO \$86,000 IN YEAR TWO AND \$86,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Lexington, City of **Nearest Town:** Lexington
Project Name: Plum Creek Park Lake Restoration Project **Project No:** 15-215
Amount Requested: \$290,000 **Term of Project Request:** 1 **Review Group:** Lake Rehabilitation

NET funds, combined with local and NDEQ CLEAR monies, will help restore the community lake at Plum Creek Park in Lexington, Nebraska. The rehabilitation plan calls for lake dredging to optimize aquatic vegetation growth and sustainable fish habitat, and shoreline stabilization to minimize the amount of sediment entering the lake, promoting greater water clarity. Other non-lake improvements are being planned to improve the functional, educational, and recreational utility of the lake. Aquatic vegetation is an issue at the lake. During the summer it becomes overgrown with algae and other vegetation, rendering a much of the lake unsuitable for proper fish habitat. Vegetation blooms make recreational uses difficult and inhibits proper aquatic habitat. Aquatic vegetation is an issue at the lake. During the summer months it becomes overgrown with algae and other vegetation, rendering a significant portion of the lake unsuitable for proper fish habitat. The vegetation blooms make recreational uses at the lake difficult, and inhibits proper aquatic habitat. In general, a pond or lake should have a significant portion of the water at least 12-14 feet deep to prevent fish kills and support proper types of aquatic vegetation growth. Several portions of Plum Creek Park Lake are less than five feet deep. Areas most in need of dredging are the narrow portions around the peninsula which prevents proper water circulation in the lake. Widespread fish kills are not a regular occurrence; however, the lack of suitable habitat prohibits proper fish spawning and natural repopulation. The planned restoration project will create sustainable habitat for several fish species. Eroding shorelines are also an issue at the lake. Several areas have steep and muddy banks. Wave action deteriorates the banks, and draws sediment and pollutants into the water; reducing water clarity, and eventually settling to the bottom to further reduce lake depth. Several trees along the shoreline have fallen due to the erosion, which accelerates the erosion process and makes access difficult. Eroded banks are becoming a safety hazard to fishermen.

Sponsor Name: Lincoln, City of - Parks and Recreation Department **Nearest Town:** Lincoln
Project Name: Prairie Corridor on Haines Branch Implementation Project **Project No:** 13-116-3
Amount Requested: \$200,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

BACKGROUND: The project vision is to expand prairie and riparian habitat areas, build recreational and educational connections, and promote enhancement and preservation of one of southeast Nebraska's most valuable resources - tallgrass prairie - in and around Lincoln and Lancaster County. Through local grants, the City of Lincoln was able to complete the Salt Valley Greenway and Prairie Corridor Master Plan, July 31, 2012, that details the steps to achieve this vision. The next step is phased implementation of the master plan. This proposal focuses on Phase I of implementation. **PURPOSE:** The Salt Valley Greenway is a ribbon of open space and greenway links within the Salt Valley drainage basin within Lincoln and Lancaster County. One of the key greenway links is the Prairie Corridor on Haines Branch, connecting Pioneers Park and Spring Creek Prairie, valuable parcels of tallgrass prairie and key resources for environmental education. Implementation of the master plan will begin with the Prairie Corridor to provide early protection and enhancement of this high priority area while serving as a model for implementation of the entire Salt Valley Greenway master plan. The City of Lincoln will serve as the lead agency. Partners include the Lincoln Parks Foundation, Lancaster County, Lower Platte South Natural Resources District, Spring Creek Prairie Audubon Center, Nebraska Game & Parks Commission, and others. The City will pursue a series of grants, including this application requesting \$300,000 per year for three years to fund land acquisition, conservation and habitat development of prairie, riparian habitat, saline wetlands, and related areas that comprise the Prairie Corridor. Matching funds will assist with these activities and the installation of a trail and trail corridor. The NET grant will be used to leverage additional grants to fully fund the Prairie Corridor. The first phase of implementation will cost approximately \$1.84 million. THIS PROJECT WAS FUNDED \$500,000 IN 2013 WITH THE INTENT TO FUND UP TO \$200,000 IN YEAR TWO AND \$200,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Little Blue Natural Resources District **Nearest Town:** Edgar
Project Name: Skinner Family Wetland Conservation Project **Project No:** 15-218
Amount Requested: \$298,000 **Term of Project Request:** 2 **Review Group:** Rural Habitat

The land on which the proposed Skinner Family Wetland Conservation Project lies is within the Rainwater Basin of Nebraska, just two miles west of Edgar, Nebraska. Under this project proposal, approximately 35 acres of upland irrigated and dry cropland will be retired and restored to diverse upland prairie grasslands, while an additional 25 acre wetland basin will be protected and enhanced. The plan calls for seeding existing cropland to native grasses and forbs, permanent perimeter fencing of the entire area, and establishing a pipeline from an existing water well to the wetland for the purpose of supplemental water in dry periods and providing a livestock water supply for controlled flash grazing of the wetland. This proposed easement will protect the 60 acres of wetlands and associated upland grasslands for the 30-year term of the easement. The proposal will have many benefits, including: protection of an important wildlife habitat for migratory birds and resident wildlife, retirement of an odd-shaped field of irrigated cropland and subsequent groundwater use reduction, improvement of water quality, soil conservation, improvement of air quality, and a potential increase in wildlife-dependent recreation. The tract will remain in private ownership and will be used for haying and grazing purposes, thus continuing to provide local property tax resources and economic activity for the area. Funds from the Nebraska Environmental Trust Fund are requested to assist with the land appraisal, the purchase of the conservation easement and establishment of an escrow fund for future defense of the easement if necessary, and the implementation of the habitat enhancement plans.

Sponsor Name: Little Blue Natural Resources District **Nearest Town:** Davenport
Project Name: Little Blue Basin Water Management Plan **Project No:** 14-112-2
Amount Requested: \$30,000 **Term of Project Request:** 2 **Review Group:** Water

The NET is being requested to fund a portion of the Little Blue Basin Water Management Plan (Plan) which is being led by the Little Blue River Natural Resources District (LBNRD). The intent of the Plan is 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. The Plan is proactive and a first of its kind in Nebraska. The Plan is not related to Integrated Management Planning or water rights, but instead will help assess existing management activities and prioritize practices and projects to improve water quality, watershed health, and protect public health, safety, and welfare throughout the Little Blue River Basin. The plan will address specific issues related to non-point source pollution by targeting Nebraska's Section 303(d) list of impaired waters, evaluating nitrate contamination of source water aquifers, evaluating quantity issues for surface water and groundwater, and lastly providing watershed residents and stakeholders an education on the importance of sustainable water resources, pollutant reduction, and an opportunity to provide feedback to the planning process. The plan has been organized into four components for planning purposes including; 1) Vadose Zone Assessment, 2) Surface and Groundwater Quantity, 3) Surface and Groundwater Quality, and 4) Public and Technical Input. The NET is being requested to support a portion of the Vadose Zone Assessment and Groundwater and Surface Water Quantity Planning. Ultimately the Plan will provide a road map for the LBNRD Board of Directors and staff to establish basin-wide management goals, manage surface water and groundwater quality/quantity collaboratively, identify short and long-term water needs and priorities, leverage local funds, and save the NRD and other agencies money by focusing resources to specific prioritized needs. The plan timeline is May 2014 until December 2015. THIS PROJECT WAS FUNDED \$110,000 IN 2014 WITH THE INTENT TO FUND UP TO \$30,000 IN YEAR TWO PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Little Blue Natural Resources District **Nearest Town:** Seward, York, Geneva,
Project Name: Watershed Restoration to Enhance Rainwater Basin Wetlands **Project No:** 13-119-3
Amount Requested: \$135,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The Little Blue Natural Resources District, Nebraska Game and Parks Commission, U.S. Fish and Wildlife Service, and Ducks Unlimited together as part of the Rainwater Basin Joint Venture Partnership are applying for this Nebraska Environmental Trust grant to restore watershed functions of wetlands throughout the Rainwater Basin Region of south-central Nebraska. The primary objective is to fill at least 60 irrigation reuse pits in priority watersheds. Emphasis will be placed on irrigation reuse pits in close proximity to the wetlands and irrigation reuse pits with a large storage capacity. Filling pits provides a “win-win” situation for the producer and wetland dependent wildlife. Many irrigation systems in past years have been converted from gravity, where water is recycled using the irrigation reuse pits, to more efficient center pivot irrigation where the pits are no longer needed. This grant will enable producers to eliminate pits thereby acquiring additional farmable acres while allowing natural runoff to flow to the wetlands on a more regular basis. These activities will not only increase wetland function and provide reliable wildlife habitat, but will also benefit local residents and area producers as a result of the groundwater recharge that naturally occurs through Rainwater Basin wetlands. Functional Rainwater Basin Wetlands are critical especially during spring migration when an estimated 8.6 million waterfowl stage in this area to rest and replenish nutrient reserves before continuing migration. The Little Blue Natural Resources District is submitting this grant on behalf of the Rainwater Basin Joint Venture Partnership the RWBJV is a conservation partnership of state, federal, and local agencies, conservation organizations, and private landowners who have joined together to direct wetland habitat conservation in Nebraska’s 6,100 square mile Rainwater Basin landscape. THIS PROJECT WAS FUNDED \$135,000 IN 2013 WITH THE INTENT TO FUND UP TO \$135,000 IN YEAR TWO AND \$135,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Live Well Omaha **Nearest Town:** Omaha
Project Name: Omaha B-cycle Expansion **Project No:** 14-169-2
Amount Requested: \$45,000 **Term of Project Request:** 3 **Review Group:** Air Quality

Live Well Omaha is respectfully requesting philanthropic investment from the Nebraska Environmental Trust for the expansion of its Omaha B-cycle program. Omaha B-cycle is a public bike sharing program currently operating in the greater Omaha metro area. Similar to other programs in cities such as New York City, Madison, and Denver, the public at large can check out a bike from any station, ride it, and return it to that station or any other station in the area. Currently, we have 8 stations and 43 B-cycles concentrated in Aksarben Village, the University of Nebraska-Omaha campus, and Downtown Omaha. Starting in late 2013, we are launching a silent fundraising campaign to cultivate financial support for an additional 60 stations and 300 B-cycles to be placed throughout the Omaha metro area. A system this size acts successfully as a useful alternative transportation option for residents and visitors, effectively reducing vehicle miles travelled as well as increasing the physical fitness of the population. By reducing vehicle miles travelled and increasing the use of alternative modes Omaha B-cycle will help reduce the emissions of harmful pollutants into the atmosphere and assist the Omaha metro area in remaining within attainment goals for air quality. Live Well Omaha is seeking \$600,000 over three years to purchase stations in year one, and support operations and evaluation in years one, two, and three. THIS PROJECT WAS FUNDED \$275,000 IN 2014 WITH THE INTENT TO FUND UP TO \$45,000 IN YEAR TWO AND \$30,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Lower Big Blue Natural Resources District **Nearest Town:** Jansen
Project Name: Cub Creek 12A Reservoir Water Quality Project **Project No:** 15-111
Amount Requested: \$298,577 **Term of Project Request:** 2 **Review Group:** Lake Rehabilitation

This water quality improvement project will be conducted on Cub Creek 12A Reservoir, located in Jefferson County, Nebraska. The reservoir is owned and operated by the Lower Big Blue Natural Resources District (LBBNRD). Cub Creek 12A Reservoir is listed as "impaired" from E. coli bacteria on Nebraska's 2014 Section 303(d) List and has been on this list since high concentrations were documented in 2005. In 2011 the LBBNRD concentrated efforts to improve watershed conditions with a goal of reducing bacteria and nutrient loading by 30 percent. Increased cost-share and incentives were provided through a combination of funding from the USDA, NDEQ, and the LBBNRD. Landowner participation in land treatment program has been tremendous resulting in a bacteria loading reduction of 47 percent. With the accomplishment of major watershed improvements the LBBNRD will now focus on improving reservoir conditions. Reservoir alternative selection and project design was based on results and conclusions from watershed and reservoir assessments. Reservoir design and construction cost estimates, funded by the LBBNRD and NDEQ, are nearing 100 percent completion. This project is identified as a " high priority" in the Lower Big Blue River Basin Nonpoint Source Watershed Plan and is listed as a "Nonpoint Source Area of Interest" in the 2014 Nonpoint Source Request for Proposals by NDEQ. The LBBNRD proposes to utilize a combination of funding sources including NET for reservoir deepening, installation of jetties, the creation of wetland areas, and shoreline stabilization.

Sponsor Name: Lower Elkhorn Natural Resources District **Nearest Town:** Amelia/Arnold/Chamber
Project Name: New Approach to Detailed, Integrated Water Budgets in East-central Nebraska Drainage Basins **Project No:** 13-167-3
Amount Requested: \$81,040 **Term of Project Request:** 3 **Review Group:** Water

This project will construct an annual water budget for two drainage basins in different topographic regions, one in the Sand Hills and one in the Dissected Plains, and includes a quantitative analysis of the most important components of the water budget – groundwater recharge and stream base flow. Numeric models will be used to analyze the integrated water budget on a local scale to determine the components of the budget and how it relates to the regional flow system. A detailed annual water budget is vital for effective integrated water management, particularly in river valleys where streamflow and crop demands are key components. This project will provide a new approach to water budget analysis by 1) quantifying groundwater recharge and stream base flow, and relating these to soil type, land use, and hydrogeology, and 2) separating the contribution of local base flow from regional base flow. This detailed approach will enhance our understanding of the interaction between groundwater and surface water and will improve our ability to develop water budget analyses. The results of the project will be used to redefine the methodology used in new areas by determining which methods work best and are most economical for completing a water budget that will help protect water and ecosystem resources. The project will take three years, with recharge point measurements made during the first year, streamflow and groundwater measurements taken during the first two years, and numerical model development and analyses over all three years. The Lower Elkhorn NRD, in cooperation with the Lower Loup, Upper Loup, Upper Elkhorn and Lower Platte North NRDs, the USGS, NDNR and UNL, requests funds in the amount of \$185,380 over three years to complete this project. THIS PROJECT WAS FUNDED \$64,410 IN 2013 WITH THE INTENT TO FUND UP TO \$39,930 IN YEAR TWO AND \$81,040 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Lower Loup Natural Resources District**Nearest Town:** Multiple**Project Name:** Irrigation Monitoring Program**Project No:** 14-150-2**Amount Requested:** \$48,050**Term of Project Request:** 3**Review Group:** Water

Funding is being sought from the Environmental Trust Fund to cost-share flowmeters for irrigation wells in order to increase awareness of pumping totals occurring in the Lower Loup Natural Resources District (LLNRD). The LLNRD would continue to match Environmental Trust funds with NRD funds towards the purchase of flowmeters to a maximum of \$1,500 per approved site. Installation of purchased flowmeters would be paid for by the cooperating landowners. Additionally, the LLNRD would also use Trust funds to assist with the purchasing for soil moisture probes for the cooperating landowners and acquiring pressure transducers and data loggers for deployment at some of the cost-shared flowmeter sites in order to continue to expand the District's monitoring program. Pressure transducers would be used to determine the long-term impact of pumping on the water level in each of the well casings. Previously deployed transducers have proven to be invaluable when monitoring the impact of irrigation on static water levels. Data loggers would be used to further clarify exact irrigation amounts throughout the season and compare data to the pressure transducers. The addition of soil moisture sensors to this study will allow irrigators to track available moisture at varying root depths in their fields and to help justify irrigation at the flowmeter sites. This is a continuation of a project originally funded by the Environmental Trust which has been considered extremely successful. There is interest in this program and, with the modification, will provide better data and give irrigators a better perspective on their irrigation program. Additionally, data on the amount of water withdrawn from the aquifer used in combination with changes in static water levels will continue to provide the LLNRD Board of Directors and other management entities with a key piece of information when developing groundwater management policy. THIS PROJECT WAS FUNDED \$49,400 IN 2014 WITH THE INTENT TO FUND UP TO \$48,050 IN YEAR TWO AND \$57,050 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Lower Loup Natural Resources District**Nearest Town:** Albion**Project Name:** Pibel Lake Renovation Project**Project No:** 13-194-3**Amount Requested:** \$40,000**Term of Project Request:** 3**Review Group:** Lake Rehabilitation

The Lower Loup Natural Resources District (LLNRD) is seeking funding from the Environmental Trust Fund to assist with renovation and modernization of Pibel Lake Recreation Area in central Nebraska. Pibel Lake is a 53-acre recreation area now under ownership of the LLNRD. The LLNRD will be partnering with the Nebraska Game and Parks Commission and the Pibel Lake Bible Camp to renovate critical portions of the lake and improve accessibility. The lake comprises 24 acres and is formed from an impoundment structure on Clear Creek, located in the eastern portion of the Sandhills. Pibel Lake is highly susceptible to sedimentation and nutrient inflow from the Clear Creek drainage and the current design of the spillway is insufficient to safely handle flood events and is contributing to erosion problems downstream. The LLNRD is seeking a multi-year Environmental Trust Grant to assist with the renovations and improvements to Pibel Lake. The renovation will feature a sediment control structure located on the inflow of Clear Creek to Pibel Lake in order to control nutrient inflow and sedimentation. The spillway system at Pibel Dam will also be renovated, the outflow culverts redesigned, and armored with riprap in order to prevent stream-bank erosion to Clear Creek. Funding is also being sought for improvements to the picnic and parking areas and a portion of the funds would go to improving accessibility to the lake for those with disabilities through installation of a fishing platform and pier and construction of handicap parking areas. During the later portions of this work, the entire Clear Creek watershed would be integrated into a Watershed Management Plan with further financial assistance sought from the Department of Environmental Quality (NDEQ) through a 319 Grant. THIS PROJECT WAS FUNDED \$60,000 IN 2013 WITH THE INTENT TO FUND UP TO \$140,000 IN YEAR TWO AND \$40,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Lower Platte River Corridor Alliance **Nearest Town:** Gretna
Project Name: Agriculture BMP Effectiveness and Assessment Tool **Project No:** 15-207
Amount Requested: \$150,000 **Term of Project Request:** 2 **Review Group:** Water

This is Phase II of a two Phase project. The overall goal of Phase II is to develop a universal (user friendly) tool with information on agriculture best management practices (ag BMPs) for agriculture producers and conservationists to use to address nonpoint source pollution and water quality. Phase I will complete a literature review of ag BMPs that calculate/estimate pollutant load reductions for sediment, phosphorus and nitrogen. The outcome of Phase I will be a database and report that summarizes the literature review. The database will contain general information on ag BMPs including: the associated NRCS practice code, the expected life span of a BMP, and potential hindrances to applying the practice. Additionally, the database will contain comprehensive information that: quantifies ag BMP effectiveness at reducing surface water load and focus on performance of single BMPs, not BMP suites. The information in the database could then be used to identify research gaps in Nebraska, guide funding and to inform different stakeholders on BMP effectiveness to set priorities for future research. Phase II will utilize the information in the database to develop a BMP assessment tool that can be used to aid in water quality implementation plans and evaluation. The outcome of Phase II will be a tool that allows a user to place a BMP on the landscape and evaluate the effectiveness of implementation scenarios for water quality benefits. This tool will allow natural resource managers to prioritize BMPs on the landscape and maximize the pollutant load reduction. 319 Funds are being requested for Phase I of this project and NET funds are being requested for Phase II.

Sponsor Name: Lower Platte South Natural Resources District **Nearest Town:**
Project Name: Eastern Nebraska Aquifer Mapping **Project No:** 15-140
Amount Requested: \$195,000 **Term of Project Request:** 3 **Review Group:** Water

The Eastern Nebraska Water Resource Assessment (ENWRA), a coalition of six Nebraska Natural Resources Districts (NRDs) in the glaciated portion (eastern third) of Nebraska, is teaming with the Nebraska Department of Natural Resources (NDNR) to map the aquifers along 1,380 miles of transects crossing 200 river/stream segments and 27 counties. Unlike the areas of Nebraska served by the High Plains Aquifer system, the complex geology of the glaciated region (home to 70% of Nebraskans) poses a unique challenge to water managers who need to know: how much useable water is available, where it is located, and will it be sustainable for the future considering increasing demand. Mapping the poorly understood, diverse ground water aquifer settings of eastern Nebraska will substantially improve our ability to answer these critical questions, the importance of which was underscored by the effects of the 2012 drought and subsequent ground water moratoriums/restrictions enacted by Nebraska NRDs. The mapping will be conducted using airborne electromagnetic (AEM) survey and will build up on previous grant work (NET# 09-112) and other airborne surveys conducted by ENWRA NRDs (Attachment A). ENWRA is requesting Trust funding for the test hole drilling (subsurface ground truthing/control points) and hydrogeologic interpretation (products/publications to make the data useful) project components which will provide both local scale details (>60 municipalities/water suppliers are located along the transects) and a “big picture” understanding of the various aquifer settings (surficial, buried glacial, bedrock) encountered in the region. The survey will cover the majority of the region in a short amount of time and the new regional/local understandings will be used to efficiently and economically prioritize the current backlog of NRD ground water management areas with ongoing quality/quantity issues awaiting assessment, furthering ENWRA’s ongoing mission of assessing the hydrogeologic framework for sound planning and management of eastern Nebraska’s ground water resources.

Sponsor Name: Metropolitan Utilities District **Nearest Town:** Omaha
Project Name: Driving Omaha Natural **Project No:** 13-196-3
Amount Requested: \$61,250 **Term of Project Request:** 3 **Review Group:** Air Quality

Driving Omaha Natural will facilitate the expanded use of Compressed Natural Gas (CNG) fueled vehicles in the Omaha Metro Area. The Metropolitan Utilities District of Omaha (MUD) will sponsor and coordinate this project. 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. The Omaha area is uniquely impacted by air quality issues and is at risk of violating the National Ambient Air Quality Standard (NAAQS) established by the Environmental Protection Agency. The project will create a CNG Fleet Fund to offset the initial vehicle costs for Omaha area fleet operators establishing or expanding their use of CNG fueled vehicles. Several public and private organizations including the City of Omaha, Douglas County, University of Nebraska at Omaha and Backlund Plumbing will partner in this project by purchasing and deploying CNG vehicles in their fleets. Additional partners including Eastern Nebraska Human Services, Eastern Nebraska Office on Aging and Creighton University plan to apply for vehicle funding assistance through the project's CNG Fleet Fund. Adding CNG vehicles and fueling stations is a sound strategy which will have a positive impact on the effort to reduce our region's ozone-forming emissions and there is strong multi-agency support for this effort. This project will establish a new CNG fueling station to supplement the two existing stations MUD opened in 2011. MUD will be responsible for financing the station. The project will also include a Fleet Education & Outreach Campaign designed to inform fleet operators of the opportunities and challenges involved in utilizing CNG vehicles. Through a combined and coordinated effort this project will enable fleets in and around Omaha to drive forward using a clean alternative fuel. THIS PROJECT WAS FUNDED \$497,000 IN 2013 WITH THE INTENT TO FUND UP TO \$191,250 IN YEAR TWO AND \$61,250 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Middle Niobrara Natural Resources District **Nearest Town:** Ainsworth
Project Name: Long Pine Creek Watershed- Phase I Implementation Project **Project No:** 15-216
Amount Requested: \$250,000 **Term of Project Request:** 2 **Review Group:** Rural Habitat

NET, Section 319, and project sponsors' monies will be used to establish the Long Pine Creek Watershed - Phase I Implementation Project for the priority sub watersheds. The specific activities will involve: design and permitting of eight grade control structures to address stream instability and aquatic habitat issues; identify specific location for implementing up to 12 Best Management Practices (BMPs) to manage irrigation and surface water runoff; hire a watershed coordinator to work closely with the landowners to implement BMPs; and implement numerous structural and agricultural BMPs (e.g., 8000 LF of stream bank stabilization, 160 acres of cover crop, 8,000 LF of fencing, 10,000 SF of composting/chips/manure; 75 acres of mulching) to correct land use deficiencies contributing to pollution of surface water and groundwater, instability of streams and degradation of aquatic and terrestrial habitat. The Long Pine Creek Watershed Water Quality Management Plan (WQMP) and associated Sand Draw Stream Restoration Plan evaluated 13 sub-watersheds to identify and prioritize management actions to address water quality and aquatic habitat issues throughout the area. Four of those watersheds: Sand Draw, Middle Bone Creek, Lower Bone Creek, and Lower Long Pine Creek were identified as high priority. The structural and agricultural BMPs will be implemented in these four priority watershed. The WQMP also outlines the restoration plan for lower reach of the Sand Draw Creek and identifies over 25 BMPs (grade control structures and other management actions) to stream bank stability, down cutting, and erosion problems. Approximately six to eight grade control structures will be deigned and permitted as part of this project. Project sponsors will implement these structures after the design and permitting is completed and appropriate funding is secured. The ultimate goal of this Phase I Implementation Project is to remove the Long Pine Creek Watershed from the 303(d) list of impaired watersheds.

Sponsor Name: Nebraska Academy of Sciences, Inc., The **Nearest Town:** Lincoln
Project Name: Nebraska Environmental Public Information and Education MiniGrant Program **Project No:** 14-101-2
Amount Requested: \$57,200 **Term of Project Request:** 3 **Review Group:** Education

The Nebraska Environmental Public Information and Education MiniGrant Program will award a total of \$51,000 each year for the next three years, in MiniGrants 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 (NET) funding. These categories are habitat, surface and ground water, waste management, air quality, and soil management. The grants seek to expand dialogue on important current conservation topics and to provide information on emerging or highly useful conservation methods. All Nebraska individuals, private organizations, and public entities are eligible to apply for these funds. This program will be administered by the Nebraska Academy of Sciences. THIS PROJECT WAS FUNDED \$57,200 IN 2014 WITH THE INTENT TO FUND UP TO \$57,200 IN YEAR TWO AND \$57,200 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST. THIS PROJECT WAS FUNDED \$57,200 IN 2014 WITH THE INTENT TO FUND UP TO \$57,200 IN YEAR TWO AND \$57,200 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Nebraska Association of Resources Districts **Nearest Town:** Minden
Project Name: Divots in the Pivots **Project No:** 15-208
Amount Requested: \$525,000 **Term of Project Request:** 3 **Review Group:** Water

The project elements outlined in this grant will maximize irrigation inputs, restore wetlands, and recharge the aquifer, while being compatible with landowners' agriculture operations. Grant funds will provide critical non-federal match to support a Regional Conservation Partnership Program (RCPP) Initiative in the Rainwater Basin Wetland Complex. As part of the 2014 Farm Bill the RCPP was introduced. The goal of this program is to support locally led, public-private partnerships that implement innovative approaches to address pressing resource concerns. This year the Rainwater Basin Joint Venture (RWBJV) was awarded a RCPP. The broad goals of this RCPP are to implement field management solutions to optimize irrigation inputs and facilitate groundwater recharge. These objectives will be achieved through enhanced irrigation practices (variable rate pivot irrigation and/or subsurface drip), increased soil water capacity (non-till farming practices, soil water monitoring, implementation of a water budget), and increased groundwater recharge (restoration of playa wetlands) in 11 fields, thereby positively impacting 1,760 acres (11 fields @ 160 acres). The funds requested through this application will be leveraged with \$4.2 million in partner match to complete these projects, an 8:1 leverage of Nebraska Environmental Trust funds. The traditional RWBJV partners will support this project with both technical and financial contributions. In addition, landowner contributions and match from non-traditional partners including pivot manufactures (Lindsay, Reinke, and Valmont) and precision agriculture companies (Lindsay, Cropmetrics) has been committed to support this project.

Sponsor Name: Nebraska Cattlemen **Nearest Town:** Statewide
Project Name: Leopold Conservation Award Video Project **Project No:** 13-130-3
Amount Requested: \$10,000 **Term of Project Request:** 3 **Review Group:** Education

In his influential book, A Sand County Almanac, Aldo Leopold called for an ethical relationship between people and the land they own and manage. This land ethic lives on in farmers and ranchers across Nebraska and nationwide who are committed to the enhancement of the land, water and wildlife in their care. Since 2006, Nebraska Cattlemen and Sand County Foundation have presented the Leopold Conservation Award to families who internalize this land ethic and are dedicated to leaving their land better than they found it. Since 2010, the Leopold Conservation Award Program has benefited from Nebraska Governor Dave Heineman’s Earth Day Announcement of the award recipient at the State Capitol. Governor Heineman’s involvement brings increased media interests to the award program, including three Nebraska television stations, both major Nebraska Newspapers, and numerous other print and online publications. The Associated Press picked up the Omaha World Herald’s story both years, vastly expanding its reach to media outlets as far away as The Boston Globe. The Nebraska Leopold Conservation Award Video Project seeks to capture the landowners’ ethic in their own words and images, giving the recipients an opportunity to share their story. Visual media are essential for not only archival purposes but are also important for educating the general public on the types of innovative conservation practices occurring every day on Nebraska’s agricultural lands. Aside from actually setting foot on these operations, we view these video profiles as the next best way to experience the exceptional efforts of these families. The project involves a full day of crew time interviewing the landowner and filming the conservation features they have put in place. The video will be professionally produced first as a stand-alone piece to be shown during speaking engagements, conventions, and trade shows, and second as a piece to be placed on Sand County Foundation’s YouTube channel, award partner and sponsor websites, and other online video outlets, as appropriate. THIS PROJECT WAS FUNDED \$10,000 IN 2013 WITH THE INTENT TO FUND UP TO \$10,000 IN YEAR TWO AND \$10,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Nebraska Community Energy Alliance **Nearest Town:** Lincoln
Project Name: Community Energy: Clean. Modern. Comfortable. **Project No:** 15-205
Amount Requested: \$711,248 **Term of Project Request:** 3 **Review Group:** Air Quality

The economic and environmental price tag to conventionally heat, cool, and light housing and to fuel transportation keeps rising because housing and transportation are the two largest consumers of globally competitive fossil fuel-based energy fuels, the result being both also responsible for the majority of CO2 (carbon dioxide) pollution. The exhaust from coal-fired power generation and the internal combustion of gasoline is commonly understood to be the primary contributor to global climate change. Therefore, how to power housing and transportation with less polluting fuels is subject to close scrutiny to find innovative technologies that deliver the greatest promise to reduce CO2 emissions in the short and long-term at the least cost. This project helps fund University of Nebraska (UN) research to approach, incrementally, barriers to EV market penetration, document ongoing economic and air quality benefits, accessing 21 additional public ChargePoints™ for UNO and Lincoln, and four electric vehicles - three for Lincoln and one for Wayne- provide a living lab for University of Nebraska students and researchers, connecting communities and the general public with information derived from UN research. The Nebraska Community Energy Alliance (NCEA) is a consortium of Nebraska municipalities, academic research and training institutions, regional planning agencies, private sustainable community development companies, and others organized to track, research and spread strategies to build, promote and help fund incremental actions statewide for those clean energy technologies with the greatest ability to help Nebraska communities retain their energy value and reduce CO2 emissions. Retained energy value occurs when wealth and local resources currently leaving a community to pay for conventional power for heating, lighting, cooling and transport remain in the community to be spent on the community.

Sponsor Name: Nebraska Department of Education **Nearest Town:** Statewide
Project Name: Educating the Next Generation of Nebraskans About Soil Conservation Using the Power Of Geographic Information Systems (GIS) **Project No:** 14-153-2
Amount Requested: \$29,627 **Term of Project Request:** 3 **Review Group:** Education

The Dust Bowl was a tragic and difficult time for people living in Nebraska and large parts of the Great Plains. Mental images of great clouds of dust that destroyed crops and bankrupted families are part of our national memory of the Dust Bowl. What is often missing in the classroom are the changes in land use practices that utilized soil and water conservation techniques to restore the productivity of the land. Understanding how people can positively impact the environment is an important part of the Dust Bowl story that needs to be taught to the next generation of young people in order for them to understand the need for sustainable land use practices. The purpose of this grant application is to help sponsor a series of workshops across the state that will train teachers to teach about soil conservation practices. During three consecutive summers, teachers at five locations across the state will attend two-day workshops where they will learn about soil conservation and will visit rural and urban sites that employ successful soil conservation techniques. The teachers will take photos and gather information first-hand about soil conservation. The workshop will teach teachers how to take the information from the field and utilize Geographic Information Systems (GIS) software to create a computer document called a story map. Each story map will link photos of soil conservation to an interactive map and narrative about conservation practices. During the next school year, the process of creating story maps will then be taught by the workshop's teachers in classrooms across the state. The end result will be classrooms visiting sites in their local community and creating story maps that help young people to understand the successful soil conservation practices that are used to safeguard one of the nation's most valuable resources-soil. THIS PROJECT WAS FUNDED \$29,672 IN 2014 WITH THE INTENT TO FUND UP TO \$29,627 IN YEAR TWO AND \$29,627 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Nebraska Department of Health and Human Services **Nearest Town:** Multiple
Project Name: Nebraska Well Rehabilitation and Decommissioning Project **Project No:** 14-206-2
Amount Requested: \$360,000 **Term of Project Request:** 2 **Review Group:** Water

Nebraska's older public water supply wells and its 94,000 plus active irrigation wells are constructed with gravel fill in the area between the well borehole wall and the well casing potentially compromising the natural protection provided by existing clay layers in Nebraska's geology. Recent research has confirmed that the gravel fill serves as a direct pathway for contaminants to enter Nebraska's groundwater aquifer. Many of these contaminants cause health related problems to Nebraskans obtaining their drinking water from domestic or public water supply wells causing them to spend millions of dollars to react to the problem by obtaining safe drinking water in the form of constructing a new drinking water well, installing water treatment or connecting to another safe water supply. The Nebraska Department of Health and Human Services' proposed two (2) year research grant would take a pro-active approach by researching different methods to insert sealants into the gravel fill adjacent to the existing natural clay layers; thus, making the clay layers effective again in protecting Nebraska's groundwater from surface contaminants. In partnership with six (6) Natural Resources Districts, these techniques will be utilized in various geological formations in eastern Nebraska. In summary, the Department's proposed research grant is designed to find and confirm methodologies for inserting sealant material into Nebraska's existing gravel-packed water wells resulting in rehabilitated water wells that provide equivalent groundwater and public health protection as newly constructed public water supply wells. This same methodology would also be applicable in the sealing of gravel fill when decommissioning a water well that is no longer in use. Currently, water well decommissioning consists of only filling the well casing and placing a cap over the well; thus preventing someone from falling into the well but not protecting the groundwater from surface contaminants. THIS PROJECT WAS FUNDED \$355,000 IN 2014 WITH THE INTENT TO FUND UP TO \$360,000 IN YEAR TWO PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Nebraska Farmers Union **Nearest Town:** Lincoln
Project Name: Food Waste Reduction through Vermicomposting and Composting **Project No:** 15-161
Amount Requested: \$169,046 **Term of Project Request:** 1 **Review Group:** Waste Management

The Nebraska Farmers Union seeks funding to create a vermicomposting system to re-direct the waste stream from Lincoln Public School's cafeterias. This project will utilize onsite worm bins and pre-composting to supply the school gardens with ample vermicompost for fertilizer and provide for educational opportunities for students. Excess materials unable to be processed onsite will be transported to a larger offsite facility. This offsite facility will incorporate animal compost from the Lincoln Children's Zoo to utilize even more waste product that would otherwise be destined for landfills. The first year of this project will evaluate the reactions of worms with foodstuffs available, creating working plans and manuals all while incorporating education for students. The following year will be expansion to additional schools and other facilities that generate food waste. The funds from this grant will also allow us to evaluate the compost through growing trials and determine how we can increase the capacity of the project. Field trials will consist of growing crops from seed to production to determine yield gains and pest resistance. Our partners in this project are Lincoln Public Schools, Community Crops, and the Lincoln Children's Zoo.

Sponsor Name: Nebraska Forest Service **Nearest Town:** Valentine, Chadron
Project Name: Protecting, Rehabilitating and Restoring Nebraska's Pine Forest Ecosystems **Project No:** 14-111-2
Amount Requested: \$344,833 **Term of Project Request:** 3 **Review Group:** Rural Habitat

This NET grant will provide critical emergency funding to treat at least 2,000 strategically located acres of severely burned forest land to protect the surviving green trees and thus the regenerative potential of the ponderosa pine ecosystems in the Niobrara Valley and Pine Ridge. Repeated, increasingly frequent, uncharacteristic megafires are rapidly eradicating these forests across vast watersheds. Since 1989, the iconic Pine Ridge of northwest Nebraska has lost 66% of its forest cover to repeated, unprecedented megafires, reducing forest acres from 250,000 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. At this point, the very existence of Nebraska's pine forest ecosystems is at risk. Repeated, unnaturally intense wildfire wipes out the social, ecological and economic services and benefits that forest ecosystems provide. Recent megafires have decimated prime habitat of the at-risk pygmy nuthatch and Lewis's woodpecker, along with the habitat of many other wildlife species, severely damaged the ability of entire watersheds to absorb water, and created a huge risk of massive soil erosion. This project will provide cost-share incentives for thinning and removal of dead burned trees around surviving islands of green trees to protect their long-term capacity to regenerate. This targeted, strategic effort will deter future crown fires, help restore pine forest health and sustain the flora and fauna that depend on this unique ecosystem. THIS PROJECT WAS FUNDED \$300,000 IN 2014 WITH THE INTENT TO FUND UP TO \$344,833 IN YEAR TWO AND \$344,834 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Nebraska Grazing Lands Coalition **Nearest Town:** Statewide
Project Name: Soil Health and Water Conservation Through Grazing Cover Crops **Project No:** 15-141
Amount Requested: \$297,198 **Term of Project Request:** 3 **Review Group:** Education

Based on the theory of “Teach a man to fish,” this project focuses on grazing cover crops on highly erosive row crop acres that are part of routine row crop plant rotations and/or targeted for reseeding to pasture and range grasses for grazing purposes. On row crop acres that are part of routine crop rotations, grazing cover crops enhances soil health and conserves water through reduced wind and rain erosion. On row crop acres targeted for cool season or native grass reestablishment, the use of cover crops is a logical first step to enhance soil health. This is a three-year project, with the goal of conducting a cover crop grazing demonstration each year in each of the eight NGLC districts statewide. However, the scope of the Soil Health and Water Conservation Through Grazing Cover Crops Project has potential for greater awareness of the importance of soil health and water conservation throughout Nebraska.

Sponsor Name: Nebraska Grazing Lands Coalition **Nearest Town:** Statewide
Project Name: Rangeland Monitoring Program Enhancement of Soil Health and Water Conservation **Project No:** 15-142
Amount Requested: \$300,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The Rangeland Monitoring Program Enhancement of Soil Health and Water Conservation Project (henceforth abbreviated as Rangeland Monitoring Program (RMP) is 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. Most landowners are aware of existing systems designed to monitor land health. However, the application of these programs is often unpractical, cost-prohibitive and complicated, and they are not utilized. The RMP provides the next step for ranchers — on-site technical assistance and data analysis — so they can implement a scientific monitoring program. The innovative and unique approach of this project is in the design of a simple range and soil quality monitoring program that ranchers can replicate and utilize to make informed grazing management decisions, which will improve ecosystem processes as well as economic stability of their enterprises. Based on the theory of “Teach a man to fish,” the RMP will provide, for a reasonable fee, an initial training session and assistance in establishing one monitoring site. This session will include: Complete monitoring equipment kit/On-site assistance of a trained technician/Potential assistance from a local rancher working group/Scientific data analysis of plant and soil samples. The goal of this training session is to provide the landowner with the equipment and skills to replicate monitoring on additional sites, and eventually train other landowners through their local working group. This is a three-year project, with the goal of conducting 60 training sessions each year. However, the scope of the RMP is exponential — with potential for establishing continual, practical plant and soil monitoring programs throughout Nebraska through simplification and sharing. In addition, this grant is requesting continued funding of two NGLC “signature” events- the Summer Grazing Tour and the Traveling Road Show as well as continued financial support for the SRM Youth Range Camp.

Sponsor Name: Nebraska Land Trust **Nearest Town:** Scottsbluff
Project Name: Pines and Buttes Preservation Project **Project No:** 15-201
Amount Requested: \$1,000,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

Nebraska doesn't have mountains, but the Wildcat Hills and Pine Ridge come close. With ponderosa pines, towering buttes, deep canyons, clear streams and expansive grasslands, these are two of the most popular and scenic destinations in Nebraska. They are also two of our most Biologically Unique Landscapes with western wildlife on the edge of its range, from mountain bluebirds to bighorn sheep. Ranching has largely preserved the integrity of these ecosystems by maintaining wide-open spaces. Unfortunately, ranches are increasingly being sold for recreational use. When recreation replaces ranching, there can be immediate impacts to the land and long-term, the land may be viewed as just one more investment to be maximized which makes eventual development much more likely, especially with 4.5 million people in the Front Range Urban Corridor a half-day drive away. Fortunately, the new Farm Bill offers significant federal funding for conservation easements that preserve working ranches, wide-open spaces, and the ecosystem integrity that comes with it. NRCS programs can fund 50% or 75% of a qualifying easement's value, but only if the matching funds can be confirmed prior to application! This is a 180 degree change from the past and a challenging new requirement, creating a critical need for this grant.

Sponsor Name: Nebraska State Irrigation Association **Nearest Town:** Lincoln
Project Name: Water Leaders Academy **Project No:** 15-195
Amount Requested: \$191,716 **Term of Project Request:** 3 **Review Group:** Education

In the spring of 2011, the Nebraska State Irrigation Association assembled the first class of participants in the Nebraska Water Leaders Academy. Designed to offer an educational experience for early to mid-career professionals, the Academy curriculum explores the increasingly complex matter of managing water in Nebraska. The curriculum draws upon experts from technical and social disciplines and includes a strong leadership development component. The goal of the Academy is simple: "teach future water resources decision makers to work together to solve problems." The NSIA selected academy participants from statewide geographic locations and with a wide range of water and natural resources interests. Support from the School of Natural Resources at the University of Nebraska- Lincoln has been critical in the initial planning as well as ongoing faculty support of the Academy. In addition, the Water Futures Partnership-Nebraska, a 501(c)(3) organization was formed in 2013 to accept grants and tax-deductible donations to extend support of the Academy. The Academy offers participants six one an da half day sessions at locations across the State. Sessions include field trips and discussions ranging from urban water systems that provide water, waste water and flood control works, to irrigation development, management and integrated operations used in crop production, to fish, wildlife, ecotourism and recreation activities. We are grateful that The Nebraska Environmental Trust has been an active partner in the preparation of tomorrow's leaders in Nebraska water and environmental policy decisions. This grant request for the continuation and growth of the Academy is an opportunity for the NET to aid in good water resources decision-making into the future.

Sponsor Name: Nebraska State Recycling Association **Nearest Town:** Statewide
Project Name: Recycling Equipment Grant **Project No:** 14-108-2
Amount Requested: \$265,000 **Term of Project Request:** 2 **Review Group:** Equipment

This recycling equipment grant will help NET build our recycling infrastructure across Nebraska by continuing the "smaller grants" program we have done through NET for 12 out of the last 15 years. Eligible applicants are municipalities, other government entities, non-profits, and for-profit organizations such as waste haulers who do or will handle recycling as part of their regular business. Eligible equipment can include pickup-towable recycling trailers with compartments, semi-trailers, balers, recycling carts, utility trailers, forklifts, skid-steer loaders, trucks, lift-gates for pickups or straight trucks, glass crushers, dumpsters, recycling carts, indoor & outdoor bins, compactors, cart tippers and the like. New or used equipment. Sometimes we can fund refurbishing equipment rather than replacement. While there are recycling programs across Nebraska there are still many communities who have no recycling program or have a limited program they wish to expand. Some communities quit some years ago and now wish to restart. Even in Nebraska's large urban areas there are still those, for instance, apartment dwellers, who do not have easy, convenient access to recycling. Municipalities and recycling processors across Nebraska tell us regularly that without grants they would have no recycling program, or it would be limited. They have aging equipment for handling recyclables that is worn out and can no longer be fixed or used safely. Budget constraints for municipalities, non-profit organizations and recycling processors often make it difficult or impossible to buy needed recycling equipment. Ours is a quick-turnaround grant program where application-to-approval can be accomplished in under a month. THIS PROJECT WAS FUNDED \$265,000 IN 2014 WITH THE INTENT TO FUND UP TO \$265,000 IN YEAR TWO PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Nebraska Statewide Arboretum **Nearest Town:** Statewide
Project Name: Greener Nebraska Towns: Resilient, Sustainable, Biodiverse and Waterwise **Project No:** 15-132
Amount Requested: \$524,116 **Term of Project Request:** 2 **Review Group:** Urban Habitat

Greener Nebraska Towns (GNT) is a multi-partner, statewide initiative that will improve the resiliency and environmental sustainability of community green spaces. The initiative will address several key environmental issues now impacting communities including high landscape water use, storm water mismanagement, a lack of biodiversity, fossil-fuel intensive maintenance, invasive plant species, degraded soils, a changing climate and looming insect threats. The Nebraska Statewide Arboretum is requesting NET funds to help make Nebraska communities greener and more resilient through the implementation of sustainable landscape projects that demonstrate water conservation, storm water bioretention, greater use of native plants, improved habitat and better soil management. In addition, the initiative will educate and inform Nebraskans about landscape stewardship and how sustainable practices can be implemented at the homeowner scale. The initiative will advance NET's priority of Habitat by greatly expanding the use of native and ecologically appropriate plantings that provide food and shelter for important insects, birds and other community wildlife. The initiative will also advance the Trust's priority of Surface and Ground Water by demonstrating and promoting horticultural practices that measurably conserve water, reduce storm water runoff and which help keep lawn and landscape pollutants out of local water supplies. The initiative will also advance the NET priorities of waste management, air quality and soil management.

Sponsor Name: Nemaha Natural Resources District **Nearest Town:** Tecumseh
Project Name: Nemaha River Basin Planning and Implementation Project **Project No:** 15-112
Amount Requested: \$100,000 **Term of Project Request:** 2 **Review Group:** Water

The Nemaha Natural Resources District (NNRD) carries out a multitude of resource responsibilities, including the management of complex water quality and quantity issues. With a strong commitment from the Board of Directors, NNRD staff is ready to move forward with a new endeavor aimed at improving water quality throughout the NRD. This unique project includes 1) the development of a Non point Source Watershed Plan for the Nemaha District and 2) the initiation of a water quality project on Kirkmans Cove Reservoir. The two main goals of the Management Plan are to provide a concise summary of the condition of water resources in the Nemaha River Basin and to provide direction and a coordinated approach for addressing nonpoint source pollution. The plan will allow NNRD to more effectively leverage and allocate resources on high priority waterbodies for on-the-ground actions. Kirkmans Cove Reservoir is located in Richardson County and is one of the most heavily used recreation areas in the NNRD. It was designed and developed as a multipurpose, flood control/public use area. Current water quality conditions and landowner/producer interest in applying land management measures facilitated the development of this project component. In addition to reducing watershed loads of sediment, nutrients, pesticides, and bacteria through land treatment; the NNRD will complete engineering and design work on a new sediment basin/wetland above the reservoir. Kirkmans Cove is listed on the 2014 Section 303(d) List of Impaired Waters and is a NDEQ priority for nonpoint source implementation measures. The NNRD is requesting financial assistance from the NET to support Basin Wide Management Planning, sediment basin design, and land treatment in the Kirkmans Cove Watershed.

Sponsor Name: NET Foundation for Television, Inc. **Nearest Town:** Lincoln
Project Name: Imagining the Platte **Project No:** 14-117-2
Amount Requested: \$31,264 **Term of Project Request:** 3 **Review Group:** Education

The NET Foundation for Television requests Nebraska Environmental Trust support of \$100,000 for the development of Imagining the Platte. This visually compelling new environmental education effort will use media learning objects to increase Nebraska students' and the public's understanding of what is at stake today in the Platte Basin. The comprehensive environmental educational effort to be developed by this project will reach middle through high school learners through targeted STEM (Science-Technology-Engineering-Math) curriculum development that will create lesson plans and accompanying material available free of charge for use in Nebraska schools and after school programs. Project outputs will also be available to the general public via the web, and the partners will raise awareness of the project through direct community engagement. Educational efforts will conform to Nebraska science curriculum standards. This project will offer an opportunity to highlight the work of Nebraska environmentalists, scientists, and researchers, and to incorporate information about conservation projects supported by the Nebraska Environmental Trust into the state's science curriculum. This application is for support of the STEM related curriculum development and production often electronically delivered learning objects. Planning for this project has been informed by the needs outlined in the Nebraska Natural Legacy Project State Wildlife Action Plan. THIS PROJECT WAS FUNDED \$19,868 IN 2014 WITH THE INTENT TO FUND UP TO \$31,264 IN YEAR TWO AND \$40,868 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST

Sponsor Name: Niobrara Council **Nearest Town:** Ainsworth
Project Name: Niobrara Valley Ecosystem Restoration Cost-Share Program **Project No:** 15-221
Amount Requested: \$250,000 **Term of Project Request:** 1 **Review Group:** Rural Habitat

The Niobrara Valley in North Central Nebraska has an unmet need. We have Firewise programs to deal with high-value structures, fuels reduction programs, pasture and range management programs, but nothing to deal with larger and broader landscape issues that don't fall into any of these other programs. We need to address cedar encroachment and other undesirable invasive species disruptions to implement a healthy ecosystem along the Niobrara river and restore a healthy native forest that supports the outstandingly remarkable values (ORV) which Niobrara National Scenic River and the Niobrara Council (Council) are entrusted to sustain. The Council is seeking money to develop and implement a cost-share program for landowners to promote ecosystem management along the Niobrara River in Brown, Cherry, Keya Paha and Rock counties. The proposed program would help to offset landowners restoration expenses and provide greater opportunities to enhance the ecosystem. The Council would expand their educational opportunities to the landowners and the public about proper ecosystem management while enhancing wildlife habitat, improving water quality and forestry health.

Sponsor Name: No More Empty Pots **Nearest Town:** Omaha
Project Name: Organic Food Waste Compost Project **Project No:** 15-159
Amount Requested: \$257,300 **Term of Project Request:** 2 **Review Group:** Waste Management

This request seeks funding for a two-year Food Waste Composting Pilot Project coordinated by a partnership between the non-profit organizations No More Empty Pots (NMEP), WasteCap NE, Benson Plant Rescue/Community Produce Rescue (BPR/CPR); public agencies Douglas County Environmental Services (DCES) and the Nebraska Forest Service (NFS); and private businesses: weCompost, and Massena Farms. Food waste from area businesses that generate organics will be collected and delivered to a dedicated compost site owned by Douglas County. Year (1) - Spring of 2015-2016; has four (4) interlocking components including 1) develop and implement a replicable research model for measuring and processing the inedible portion of the food waste stream from a range of businesses within Douglas County, by type; 2) design, operate and evaluate a pilot demonstration of composting and vermiculture techniques for technical and economic efficiencies; 3) create a network of currently operating edible food reclamation programs for communications and data-sharing purposes; and 4) compile a "Managing Organics" Best Practices Manual based on the tools used in this demonstration. Year (2) - Spring of 2016 -2017; will focus on a business plan for a sustainable enterprise that will create jobs and value-added products for urban and rural consumers. Data from Year One (1) will facilitate measurement of inputs and outputs, from source to end-products and estimate expenses and revenue accurately when calculating the feasibility of future projects. A two (2) day regional conference on "Managing Organics" is also planned as a major outcome in Year Two (2) using the data collected and lessons learned throughout the pilot. This proposal requests \$257,300 and includes \$128,706 in combined cash and in-kind match which represents 33% match.

Sponsor Name: Northeast Nebraska RC&D **Nearest Town:** Plainview
Project Name: Proper Recycling of HHW and E-Waste **Project No:** 15-133
Amount Requested: \$63,407 **Term of Project Request:** 3 **Review Group:** Waste Management

This project will properly disposal 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. Citizens are continually asking for help with proper disposal and recycling of these types of materials. Keeping hazardous materials out of landfills, road ditches, and from being burned is a priority. From three to six collection events will be held annually with in the Northeast Nebraska Resource Conservation and Development (RC&D) Council’s area of Antelope, Cedar, Dixon, Knox, Pierce and Wayne counties. Targeted groups are individual citizens, tribal members, businesses, local governments, and agencies.

Sponsor Name: Notre Dame Sisters **Nearest Town:** Omaha
Project Name: Water Quality Management Demonstration Project-Notre Dame Sisters **Project No:** 15-114
Amount Requested: \$379,116 **Term of Project Request:** 1 **Review Group:** Water

The Notre Dame Sisters is requesting funding from the Nebraska Environmental Trust to assist with solving water runoff and erosion problems by instituting quality water management practices. These practices will effectively divert water runoff away from city sewers to rain gardens and greenspace and capture water for irrigation. The completed project will serve as a model for other communities and organizations that face similar problems. The Nebraska Environmental Trust funds will support the removal of asphalt from 20,100 sq. ft. of parking lots and driveways and the installation of pervious pavers. Construction of rain gardens of approximately 3,400 sq. ft., an irrigation system and replacement of retaining walls will be completed. The project will include the planting of native grasses and adaptive vegetation, installation of interpretative signage and site preparation. Over 80% of the water runoff that now enters the sewer system from this property will be diverted to support vegetation. The irrigation system will use captured water runoff. A steep bank will be stabilized with the rain gardens. Water from the roof drains that currently flows unrestrained to a hillside, approximately 3,300 gallons per year, will be collected in cisterns reducing erosion and improving irrigation. Native grasses, trees, shrubbery and flowers that are low maintenance will be planted in the lawn area bordering a walking path. During the site preparation, underground cellars and hillsides which are failing and present a safety hazard will be removed and community access to the area will be improved. Signage, internal and external messaging, media exposure and public presentations will recognize the Nebraska Environmental Trust for their contribution.

Sponsor Name: Omaha Children's Museum **Nearest Town:** Omaha
Project Name: Environmental Exhibit Featuring A Water Table **Project No:** 15-122
Amount Requested: \$120,000 **Term of Project Request:** 1 **Review Group:** Education

The Environmental Exhibit Featuring A Water Table will allow children to learn about the landscape features prevalent in their home state, including: Raining Cloud: Water will fall at the head of a river and flow downward. Wetland Creation Area: Children will use LEGO bricks to create wetlands. Migrating Fish: Kids can put fish into the river and watch as they migrate. Beaver Dams: Children can create dams and see how changes in the elevation can create habitat. Water tubes and Wind Turbines: Children can use tubes to direct the flow of water. Wind turbines will spin when water is poured into it. Educational Signage will be integrated throughout the exhibit. They will be located at each activity and educate children on the unique environment of Nebraska and ways that they can help preserve and protect it.

Sponsor Name: Omaha, City of **Nearest Town:** Omaha
Project Name: Adams Park Wetlands and Educational Facility **Project No:** 15-115
Amount Requested: \$1,890,000 **Term of Project Request:** 3 **Review Group:** Water

The Adams Park Wetlands and Education Facility is an outgrowth of the community-based Adams Park Master Plan, developed in 2012. This undertaking is not a single project or facility, but is a collaborative effort that includes constructed wetlands, an indoor educational facility, and an interpretive trail. The constructed wetlands are part of a larger Combined Sewer Overflow (CSO) project designed to improve the water quality in the Missouri River. The wetlands will receive flow from storm sewers at the south end of the park. They will consist of permanent pools and emergent and upland wetlands providing habitat for diverse flora and fauna. The indoor educational facility will feature greenhouse demonstration wetlands, providing a setting for a wide variety of premier educational activities. Through display, presentation, interpretive signage and tours, visitors to the center will learn about environmentally responsible stormwater management and water reclamation. The Facility will become a dynamic, living and breathing demonstration of how interconnected we all are with the communities and environments in which we live. Visitors to the Wetlands Facility will be able to explore the outdoor constructed wetlands firsthand. A 3/4-mile interpretive trail will provide connectivity from the Facility down to the constructed wetlands and will wind throughout the area. A series of interpretive exhibits will feature wetland-related subjects. Locating the facility in North Omaha, one of the most impoverished minority communities in the country, will improve the economic growth potential of the surrounding community. The City of Omaha and its partners request funding for the design and construction of a wetlands educational facility, pervious pavement for the new parking lot and design and installation of an interpretive trail connecting the educational facility to the constructed wetlands.

Sponsor Name: Omaha, City of **Nearest Town:** Omaha
Project Name: Hell Creek Rehabilitation Project **Project No:** 13-118-3
Amount Requested: \$150,000 **Term of Project Request:** 3 **Review Group:** Bank Stabilization

The City of Omaha (City) will rehabilitate a concrete-lined urban stream that is nearly devoid of aquatic habitat. These actions will result in a sustainable community amenity that can support aquatic life. The project includes rehabilitating a 3,300-foot reach of Hell Creek (about a mile west of the I-80 and I-680 interchange), creating a more natural state by removing a failing concrete liner with threatened structural integrity, compromised functionality, and minimal capacity to support aquatic life—this reach also provides no environmental benefit and is a general eyesore. The channel will be rehabilitated using bio-engineering principles that incorporate a combination of vegetation and low profile rock grade control structures to promote channel stability. Significant site constraints, including the presence of 75 nearby homes and critical utility infrastructure (overhead power and sanitary sewer utilities), limit rehabilitation options and increase costs to design and construct the project. The aesthetically pleasing improvements will provide environmental enhancements to restore aquatic life habitat and improve water quality while creating a community amenity. This project wouldn't be possible without the City's commitment to implementation of green infrastructure. The City worked proactively with the developer working upstream to incorporate improvements along Hell Creek, improving the channel's connection to the flood plain and reducing peak flows. Doing so accommodates rehabilitating the channel with vegetation while not adversely impacting the flood elevations or increasing risk to area residents. The improvements will be similar to those implemented on the Whitted Creek Stream Restoration project, a Nebraska Environmental Trust (NET) grant-funded project in Sarpy County and a tour location during the July 2011 NET board meeting. While the Whitted and Hell Creek projects drain watersheds of similar sizes, the Hell Creek project will be constructed within a more developed area that has less than half the width of the Whitted Creek corridor. THIS PROJECT WAS FUNDED \$500,000 IN 2013 WITH THE INTENT TO FUND UP TO \$350,000 IN YEAR TWO AND \$150,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Omaha, City of - Public Works Department **Nearest Town:** Omaha
Project Name: Spring Lake Park Pond Restoration Phase 5 **Project No:** 14-141-2
Amount Requested: \$400,000 **Term of Project Request:** 2 **Review Group:** Water

The City of Omaha is requesting continued support from the Nebraska Environmental Trust for a multifaceted green infrastructure project in historic Spring Lake Park. The project has developed over the last decade from a dream of a dedicated neighborhood group to the reality of construction-ready plans incorporating natural storm water quality treatment processes into amenities for the community. Collaboration with a diverse stakeholder group has proven that public involvement can lead to projects that meet multiple goals. Project features include: • State of the art, easy to maintain "pre-treatment" systems capturing trash and pollution from the urban runoff before it enters the new natural water features, • A series of natural treatment systems including dry detention, rain gardens, infiltration basins and wetlands, that improves water quality and reduces peak flows to the Missouri River, which is listed as impaired water downstream of Omaha, • Clean groundwater from existing springs feeding into a 1.5 acre pond that supports an urban fishery instead into the combined sewers, and • Installation of almost 800 trees in several parks to enhance habitat diversity. Previous grant requests awarded by the Nebraska Environmental Trust have helped make this project possible. Design will be complete in the fall of 2013, with construction planned to begin in 2014. Design components go above and beyond the basic requirements of the CSO Program, which requires separation of sanitary and storm sewers in the project area. Through collaboration efforts, the City will be constructing a project that reduces the need for "grey" infrastructure by maximizing the use of "green" infrastructure, which is not required by regulators. The City of Omaha believes this project will showcase a variety of green infrastructure technologies that can be incorporated on other projects in the future. THIS PROJECT WAS FUNDED \$10,000 IN 2014 WITH THE INTENT TO FUND UP TO \$400,000 IN YEAR TWO AND PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Omaha, The Transit Authority of the City of Omaha d/b/a Metro **Nearest Town:** Omaha

Project Name: Introduction of CNG Transit Vehicles - Omaha **Project No:** 15-171

Amount Requested: \$190,000 **Term of Project Request:** 1 **Review Group:** Air Quality

The Americans with Disabilities Act (ADA) mandates federally funded public transportation systems operate complementary paratransit service for persons who cannot independently use fixed route transit service because of a disability. Metro intends to procure (5) Compressed Natural Gas (CNG) vans in order to provide, quality, environmentally friendly paratransit service for our clients. MOBY is an advanced reservation curb-to-curb transportation service for residents of the metropolitan area and ADA eligible persons visiting within Omaha’s city limits, who, as a result of their disabilities are unable to use conventional fixed route service. Metro currently operates (26) cutaway paratransit vans and (4) hybrid sedans. This project would be the first introduction of CNG vehicles into Metro’s fleet and will help leverage recent facility improvements. Metro’s facility is currently undergoing renovations and upgrades in part to comply with requirements necessary to accommodate CNG vehicles. Construction of this project is anticipated to be complete in January 2015. This project will be joint funded with formula capital grant funds from the Federal Transit Administration (FTA).

Sponsor Name: Omaha, The Transit Authority of the City of Omaha d/b/a Metro **Nearest Town:** Omaha

Project Name: Central Omaha Bus Rapid Transit: Connecting the Dots **Project No:** 15-177

Amount Requested: \$2,000,000 **Term of Project Request:** 3 **Review Group:** Air Quality

Funding is requested to help design and construct a bus rapid transit (BRT) project in Omaha, Nebraska. This project is nearly 8 miles in length and will provide a valuable east/west connection through the City. A BRT mimics the convenience, frequency and reliability of a rail transit system for a fraction of the cost and will serve as the central spine of the transit network. The Central Omaha BRT will provide 2,740 daily trips on opening day and will continue to grow, providing many benefits to the region including improvements to air quality, reduced damage to water quality, community development, job creation, and public health. This project has been developed through an extensive community involvement process and enjoys widespread public and political support. For the first year of the project, funding is requested for engineering/design. The request for years 2 and 3 are for construction costs. Funding amounts are scalable.

Sponsor Name: Pheasants Forever - Nemaha Valley Chapter

Nearest Town: Auburn

Project Name: No-Till Grass Drill

Project No: 15-183

Amount Requested: \$29,000

Term of Project Request: 1

Review Group: Rural Habitat

This grant application seeks funding from the NET to purchase a no-till grass drill to be used by landowners to establish wildlife habitat. Currently, there are few no-till drills available in the area and those that are available are owned and rented out by private businesses. A no-till grass drill made available to interested landowners would increase both the quantity and quality of wildlife habitat established. Significant increases in wildlife habitat plantings in the area through programs like: Conservation Reserve Program, Conservation Reserve Enhancement Program, Continuous Conservation Reserve Program, Corners For Wildlife, Open Fields and Waters, Environmental Quality Incentives Program, etc., have greatly increased the need for this type of specialized equipment. Matching NET moneys with that of the Nemaha Valley Pheasants Forever chapter would purchase the no-till drill. The purchase price of a no-till grass drill is approximately \$39,000. Tim Brewer of Humboldt, NE will oversee the operation, maintenance and rental of the drill. A fund will be set up to pay for routine maintenance of the drill as well as any repairs needed to keep the drill in top operating condition. The drill will be available for any landowner in the area to use at a nominal fee. A no-till grass drill is needed to handle the fluffy seeds associated with many warm-season grasses, wildflowers and legumes. These fluffy seeds are not effectively or efficiently planted with conventional drills. By increasing the amount of habitat and enhancing the quality of habitat provided by these seed mixtures, wildlife will benefit.

Sponsor Name: Pheasants Forever - Republican Valley Chapter

Nearest Town: Arapahoe

Project Name: No-Till Grass Drill

Project No: 15-175

Amount Requested: \$29,000

Term of Project Request: 1

Review Group: Rural Habitat

This grant application seeks funding from the NET to purchase a no-till grass drill to be used by landowners to establish wildlife habitat. Currently, there are few no-till drills available in the area and those that are available are owned and rented out by private businesses. A no-till grass drill made available to interested landowners would increase both the quantity and quality of wildlife habitat established. Significant increases in wildlife habitat plantings in the area through programs like: Conservation Reserve Program, Conservation Reserve Enhancement Program, Continuous Conservation Reserve Program, Corners For Wildlife, Open Fields and Waters, Environmental Quality Incentives Program, etc, have greatly increased the need for this type of specialized equipment. Matching NET moneys with that of the Republican Valley Pheasants Forever chapter would purchase the no-till drill. The purchase price of a no-till grass drill is approximately \$39,000. LandMark Implement of Arapahoe, NE will oversee the operation, maintenance, and rental of the drill. A fund will be set up to pay for routine maintenance of the drill as well as any repairs needed to keep the drill in top operating condition. The drill will be available for any landowner in the area to use at a nominal fee. A no-till grass drill is needed to handle the fluffy seeds associated with many warm-season grasses, wildflowers and legumes. These fluffy seeds are not effectively or efficiently planted with conventional drills. By increasing the amount of habitat and enhancing the quality of habitat provided by these seed mixtures, wildlife will benefit

Sponsor Name: Pheasants Forever - Seward County

Nearest Town: Seward

Project Name: No-Till Grass Drill

Project No: 15-184

Amount Requested: \$29,000

Term of Project Request: 1

Review Group: Rural Habitat

This grant application seeks funding from the NET to purchase a no-till grass drill to be used by landowners to establish wildlife habitat. Currently, there are few no-till drills available in the area and those that are available are owned and rented out by private businesses. A no-till grass drill made available to interested landowners would increase both the quantity and quality of wildlife habitat established. Significant increases in wildlife habitat plantings in the area through programs like: Conservation Reserve Program, Conservation Reserve Enhancement Program, Continuous Conservation Reserve Program, Corners For Wildlife, Open Fields and Waters, Environmental Quality Incentives Program, etc., have greatly increased the need for this type of specialized equipment. Matching NET moneys with that of the Seward County Pheasants Forever chapter would purchase the no-till drill. The purchase price of a no-till grass drill is approximately \$39,000. Merlyn Nielsen of Seward, NE will oversee the operation, maintenance and rental of the drill. A fund will be set up to pay for routine maintenance of the drill as well as any repairs needed to keep the drill in top operating condition. The drill will be available for any landowner in the area to use at a nominal fee. A no-till grass drill is needed to handle the fluffy seeds associated with many warm-season grasses, wildflowers and legumes. These fluffy seeds are not effectively or efficiently planted with conventional drills. By increasing the amount of habitat and enhancing the quality of habitat provided by these seed mixtures, wildlife will benefit.

Sponsor Name: Pheasants Forever - South Central Nebraska Chapter

Nearest Town: Alma

Project Name: No-Till Grass Drill

Project No: 15-186

Amount Requested: \$29,000

Term of Project Request: 1

Review Group: Rural Habitat

This grant application seeks funding from the NET to purchase a no-till grass drill to be used by landowners to establish wildlife habitat. Currently, there are few no-till drills available in the area and those that are available are owned and rented out by private businesses. A no-till grass drill made available to interested landowners would increase both the quantity and quality of wildlife habitat established. Significant increases in wildlife habitat plantings in the area through programs like: Conservation Reserve Program, Conservation Reserve Enhancement Program, Continuous Conservation Reserve Program, Corners For Wildlife, Open Fields and Waters, Environmental Quality Incentives Program, etc., have greatly increased the need for this type of specialized equipment. Matching NET moneys with that of the South Central Pheasants Forever chapter would purchase the no-till drill. The purchase price of a no-till grass drill is approximately \$39,000. Alpo Custom Ag of Republican City, NE will oversee the operation, maintenance and rental of the drill. A fund will be set up to pay for routine maintenance of the drill as well as any repairs needed to keep the drill in top operating condition. The drill will be available for any landowner in the area to use at a nominal fee. A no-till grass drill is needed to handle the fluffy seeds associated with many warm-season grasses, wildflowers and legumes. These fluffy seeds are not effectively or efficiently planted with conventional drills. By increasing the amount of habitat and enhancing the quality of habitat provided by these seed mixtures, wildlife will benefit.

Sponsor Name: Pheasants Forever, Inc. **Nearest Town:** Statewide
Project Name: Grassland Improvement Program **Project No:** 13-159-3
Amount Requested: \$190,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

This application seeks to continue a unique, proven and successful partnership called the Grassland Improvement Program that has changed the culture of prescribed burning on private lands in the areas it has been offered in the past. The program works to improve grassland health and vigor by creating a synergy that overcomes these limiting factors and increases the use of prescribed burning on the landscape of Nebraska. A lynch pin to being able to conduct prescribed burns on grasslands that is capable of controlling invasive tree and cool-season grasses is the ability to have a high enough fuel load. Adequate fuel loads are only attainable if the grassland is deferred from grazing for at least one full season. The Grassland Improvement Program will offer landowner grazing deferment incentives, access to prescribed burn equipment, biologists to write burn plans, landowner prescribed burn training, guide the formation of local prescribed burn associations, help provide assistance to conduct prescribed burns, experience conducting prescribed burns and follow-up with a monitor and evaluation program on projects. The unique synergy created through this partnership will help develop additional biologically important regions of the state where prescribed burning is increasingly used on the landscape, significant environmental benefits are obtained and the objectives of the Nebraska Natural Legacy Project are implemented. THIS PROJECT WAS FUNDED \$310,000 IN 2013 WITH THE INTENT TO FUND UP TO \$250,000 IN YEAR TWO AND \$190,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Pheasants Forever, Inc. **Nearest Town:** Statewide
Project Name: Corners for Wildlife **Project No:** 15-181
Amount Requested: \$900,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

This application continues a partnership funded by the Trust from 1995 to 2014. The program successfully partners money from the Trust, Pheasants Forever, Inc., Pheasants Forever (PF) and Quail Forever (QF) chapters, Natural Resource Districts, Nebraska Game & Parks Commission and landowners throughout the state to establish permanent wildlife habitat. In the 19 years the program has been offered, Trust funds have been partnered with over \$1.7 million for materials from 45 Pheasants Forever chapters, 15 Natural Resource Districts, the Nebraska Game & Parks Commission and private landowners on 1,572 projects throughout the state. With “in-kind” contributions included, the level of financial partnership being combined with Trust funds currently exceeds \$6.5 million. Landowners receive a rental payment for a five-year contract to establish and maintain high diversity wildlife habitat on center pivot field corners. Materials to establish cover practices are cost-shared 75% by PF and QF chapters with landowners responsible for 25% of the material costs. In some cases, the cover practices are established with a 100% cost share by the participating Natural Resource Districts. This program is very successful at establishing permanent wildlife habitat as landowners have averaged 435 wildlife shrubs and/or trees per corner. Every year the program has been offered, there has been more interest in enrollment than the program can fund. Projects are established to cover practices that promote high quality nesting, brood-rearing and/or pollinator habitat for native wildlife species of concern. The habitat established on projects is specifically designed to meet the goals of the Nebraska Natural Legacy Project and many of the species and habitat types of concern identified in the statewide wildlife plan. By establishing and managing for highly diverse native habitat, the needs of native wildlife that are imperiled by the loss of diverse and undisturbed grasslands is being addressed.

Sponsor Name: Pheasants Forever, Inc. **Nearest Town:** Statewide
Project Name: Pollinator Habitat Program **Project No:** 14-185-2
Amount Requested: \$35,024 **Term of Project Request:** 3 **Review Group:** Education

Pheasants Forever (PF) seeks funding from the Nebraska Environmental Trust (NET) to develop a statewide Pollinator Habitat Program. The Pollinator Habitat Program aims to educate and engage youth, families and communities across Nebraska in establishing, maintaining and monitoring pollinator habitat projects. As populations of native and managed pollinating insects continue to decline, more must be done to provide habitat for these important species as well as educating the general public on their value to agriculture and the global food supply. Working with the Nebraska Game and Parks Commission (NGPC), Prairie Plains Resource Institute and local community partners, PF will use their expertise, equipment and networks to create pollinator habitat projects on public and private property. PF chapters will enlist the help of classrooms and youth groups (i.e. 4H, FFA, Boy Scouts, and Girl Scouts) in every aspect of the project (establishment, maintenance, & monitoring). The University of Nebraska will work with PF to design a monitoring program to evaluate the success of the program. Project sites will also serve as outdoor classrooms for many schools where students can assist with monitoring activities and learn about various life science topics. The results of this program will benefit many species of pollinator insects and ground nesting birds by providing much needed foraging and nesting habitat. In addition, the program will serve as a model for land managers and others interested in providing habitat for native pollinators. While these projects sites will provide quality habitat for many species of wildlife, the larger benefit comes in making communities and youth groups more aware of conservation issues like the plight of the pollinators and educating Nebraskans on the importance and value of sound conservation practices. THIS PROJECT WAS FUNDED \$24,496 IN 2014 WITH THE INTENT TO FUND UP TO \$35,024 IN YEAR TWO AND \$39,815 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Pheasants Forever, Inc. **Nearest Town:** Multiple
Project Name: Habitat Share Partnership **Project No:** 15-169
Amount Requested: \$150,000 **Term of Project Request:** 1 **Review Group:** Rural Habitat

This application seeks funding to continue and expand a successful partnership between Pheasants Forever and the Nebraska Game & Parks Commission (NGPC). The 'Habitat Share Partnership' successfully works to improve the wildlife habitat components on public lands throughout the state by hiring contractors to perform specific habitat improvements on selected Wildlife Management Areas (WMA). All of the projects completed in the Habitat Share partnership are an addition to the number of projects completed by NGPC staff on an annual basis. Most state agencies find it challenging to manage public lands to the degree they would like due to limitations associated with man-power, funding, habitat equipment and available days during specific seasons. NGPC manages 288 Wildlife Management Areas throughout the state totaling 190,000 acres. They have 33 full time staff in charge of completing these management activities. That calculates out to nearly 6,000 acres per year for one full time person to manage with invasive species control being top priority. This partnership has successfully bridged many of those limitations by hiring contractors to perform some of the critical habitat improvement activities that NGPC staff cannot always complete with the time restraints. By assigning some of the management activities to contractors for completion, the NGPC staff can accomplish the day to day activities such as invasive species control, depredation calls, and public interest activities as well as complete habitat management and focused wildlife objectives on an increased number of WMA's across the state. Formed in 2010, the Habitat Share partnership has already performed habitat improvement activities on 74 different WMA's impacting 13,045.2 acres. The management activities typically contracted through the Habitat Share Partnership include tree clearing, disking, planting grass mixtures, planting food plots, and spraying. The advantages of using contractors for these services include: completing more habitat projects within a year, impacting more WMA's than could be impacted otherwise, completing habitat projects without the investment in expensive machinery and completing the habitat projects in a more cost-effective manner.

Sponsor Name: Platte River Basin Environments, Inc. **Nearest Town:** Multiple
Project Name: North Platte River Valley Habitat Restoration and Enhancement Partnership **Project No:** 13-189-3
Amount Requested: \$52,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The North Platte River has long been the lifeblood for a large portion of Western Nebraska. Dozens of communities, thousands of farmers, ranchers, and recreationists; and millions of individual plants and animals depend on and utilize the river and its waters and habitats. Unfortunately the wetland and upland habitats of the North Platte River have become degraded over time, making them of drastically reduced quality and availability to wildlife and private landowners alike. A partnership has been forged between the Platte River Basin Environments, Inc. (PRBE), the Nebraska Game and Parks Commission; and the U.S. Fish and Wildlife Service to address the degrading factors impacting North Platte River Valley habitats. Targeted specifically on private and non-profit conservation entity owned lands, this effort will implement habitat projects to address the species and habitat stressors of the area. The conservation actions to be implemented will not only address habitat needs, but will have important water, soil, economic, private lands, and public benefits. This partnership's objective is to restore, enhance, and manage the wetland and associated upland habitat values of North Platte River Valley wetlands and to find win-win solutions for integrating wildlife habitat into land management operations. This will be achieved by (1) providing financial assistance for restoring, enhancing, and managing wetlands and associated uplands on private lands and privately owned conservation entity properties, (2) providing education and high quality technical assistance to private landowners in the restoration and long-term management of their habitats and integration of habitat into their land management operations, and (3) using demonstration sites to exhibit the numerous environmental, wildlife, and economic benefits of wetlands. Utilizing NET grant funds, PRBE will offer cost-share to landowners in addition to funds available from conservation entities to expand the scope and quantity of restoration projects. THIS PROJECT WAS FUNDED \$51,000 IN 2013 WITH THE INTENT TO FUND UP TO \$51,000 IN YEAR TWO AND \$52,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Platte River Basin Environments, Inc. **Nearest Town:** Bridgeport
Project Name: Weber Property Acquisition **Project No:** 15-187
Amount Requested: \$1,244,000 **Term of Project Request:** 1 **Review Group:** Rural Habitat

The Platte River Basin Environments, Inc. (PRBE) is requesting funding from the Nebraska Environmental Trust (NET) to assist with the acquisition of the Weber property near Bridgeport, Nebraska. The Weber tract will be an addition to the PRBE properties along the North Platte River. The Weber property is a 313-acre tract located northwest of Bridgeport and will add an additional one mile of Platte River frontage to PRBE-managed, wetland complexes. The acquisition of the Weber tract is urgently needed. The property offers a wonderful opportunity to manage restored wetlands, backwater sloughs, and native grasslands on this site. The NET and other project partners recently completed an expansive habitat restoration and enhancement project on this property. Funding is now being requested from the NET to assist with the acquisition of the tract. The landowner is very interested in selling the property to a conservation organization and wishes to see the property's important wildlife habitat managed efficiently and available to the public, especially youth, for various public recreational activities including: hiking, bird watching, wildlife photography, hunting, and fishing. This reach of the Platte River has very few properties that are open to public use. PRBE will provide long-term ownership and management of the site. The acquisition of this property will help address that need.

Sponsor Name: Prairie Plains Resource Institute **Nearest Town:** Marquette
Project Name: Sherman Land Acquisition, Hamilton County **Project No:** 13-132-3
Amount Requested: \$150,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The Sherman Ranch contains an unusual Platte River landscape in northern Hamilton County. Its 650 acres include a mile of Platte River frontage, ecologically diverse wet meadow bottomland and prairie-covered loess hills and canyons. Such ecological, topographic and scenic attributes are rare in a large single ownership tract in eastern Nebraska. The Sherman Ranch is located within a Biologically Unique Landscape area (Central Platte BUL, Nebraska Legacy Plan). It also has exceptional potential for public recreation. Prairie Plains Resource Institute (PPRI) will develop access for hunting, fishing, birdwatching, hiking, biking, camping, canoeing and trail riding compatible with prairie and wildlife management. The land will remain in agricultural use as native hay and rangeland. Purchase of the Sherman Ranch is urgent. Most likely it will end up subdivided into acreages if PPRI cannot raise necessary funds. No other entity will have the opportunity for undivided purchase. If not acquired by PPRI, huge public benefit will be lost. Nearly 1.2 million people live within two hours of this property and could benefit from its recreational potential. There are few parks or wildlife areas between Grand Island and Ashland, a river distance of 130 miles. Nothing in that stretch is as striking and diverse or offers as much public value as the Sherman Ranch. PPRI is requesting \$450,000 from NET to assist in the acquisition of the Sherman Ranch - approximately 20-25% of estimated \$2 million total price. Substantial match will be required from other sources yet-to-be-determined. DU will partner on the wetland portion, contingent on NAWCA funding; USFWS will assist in restoration and stewardship. Future opportunity may exist to connect Sherman Ranch to Griffith Prairie (NET-funded in 2002) located a mile west, creating a block of recreational prairie land greater than 1,700 acres situated along 2.7 miles of Platte frontage. THIS PROJECT WAS FUNDED \$150,000 IN 2013 WITH THE INTENT TO FUND UP TO \$150,000 IN YEAR TWO AND \$150,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: PrairieLand RC&D Council **Nearest Town:** Multiple
Project Name: Continuous No-till and Soil Health Education **Project No:** 13-179-3
Amount Requested: \$100,000 **Term of Project Request:** 3 **Review Group:** Education

This statewide educational project will build on and expand existing efforts to increase the adoption and sustainable use of Continuous No-till (CNT) by one million acres. More than a dozen partners will combine and coordinate their efforts to deliver educational programs to inform producers and the public about the benefits of CNT, cover crops, and improved soil health. CNT is the single best practice for producers to reduce risks to the environment and improve profitability. Adding cover crops helps protect the soil, builds soil structure, feeds soil biological life, provides wildlife habitat, improves water quality and management, and can provide livestock grazing. Improved crop rotations, cover crops, and biological diversity improve the soil system and minimize pest problems, greatly reducing pesticide use and nutrient losses. With improved soil health, crop production becomes more sustainable and the resulting crops are healthier. This project will be extremely cost-effective, about \$0.62/acre for the million acre goal, or about \$25/producer if half of Nebraska's producers adopt or increase their use of CNT, saving them \$50/acre or more. Five to 12 inches of water can be saved per acre, reducing irrigation needs and greatly improving dryland yields. Soil erosion by wind and water are greatly decreased, reducing blowing dirt, surface water pollution, and erosion below the allowable soil loss level. CNT can sequester large amounts of carbon, especially when used with cover crops and livestock manure management. CNT, residue cover, and cover crops increase wildlife habitat, numbers, and diversity. NET funds will be used to fund all or part of the following: an Extension No-till Specialist, a Western Nebraska No-till Specialist, and a project administrator; many in-state educational programs, networking activities, opportunities for producers to attend key out-of-state no-till events; and the development and distribution of I&E materials. THIS PROJECT WAS FUNDED \$100,000 IN 2013 WITH THE INTENT TO FUND UP TO \$100,000 IN YEAR TWO AND \$100,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Quail Forever **Nearest Town:** Statewide
Project Name: Mobile Prescribed Burn Unit & Education Outreach **Project No:** 15-174
Amount Requested: \$124,300 **Term of Project Request:** 1 **Review Group:** Rural Habitat

This application seeks to continue the process of 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. Nearly every wildlife partnership and management plan in the state calls for the increased use of prescribed burns and expanded education regarding conservation programs to reach management and partnership goals. Despite those management plans, prescribed burning continues to be a difficult management option to apply. Quail Forever is working closely with the Nebraska Natural Legacy Project (NNLP) to implement its management goals and employs 20 Biologists in the state with Pheasants Forever that are working directly with the plan. The creation of Mobile Prescribed Burn Units (MPBU) and expanding educational outreach is directly benefiting the NNLP by creating a set of tools and events that can be quickly directed to whichever NNLP Biologically Unique Landscape was the focus. The unique aspect of MPBU's is that the necessary prescribed burn equipment could be available in any region of the state in less than a day. Quail Forever has begun the process of identifying the limitations of prescribed burning on private lands and is working to overcome them. Six different scenarios are outlined in this continuing partnership that are specifically working to expand outreach education to private landowners and increase the use of prescribed burning on the landscape. The requested funds will be matched with those of Quail Forever, Pheasants Forever, Nebraska Game & Parks Commission, Natural Resources Conservation Service, Farm Service Agency and the US Fish & Wildlife Service to purchase, maintain and administer MPBU's and Continuing Education equipment in strategic locations, develop prescribed burn associations and provide expanded landowner educational events and materials across the state.

Sponsor Name: Rainwater Basin Joint Venture **Nearest Town:** Minden
Project Name: Development of Grazing Infrastructure to Support the Rainwater Basin Working Lands Initiative **Project No:** 15-149
Amount Requested: \$256,200 **Term of Project Request:** 3 **Review Group:** Rural Habitat

If funded, this grant will provide financial assistance to continue the successful Rainwater Basin Joint Venture Working Lands Initiative. These funds will be leveraged with partner funds, including landowner contributions, to work with local producers to develop infrastructure that will facilitate grazing on abandoned wetlands throughout the Rainwater Basin Landscape. As agriculture production increased throughout the Rainwater Basin, many of the remaining wetlands under private ownership were abandoned. With the lack of disturbance these sites transitioned to monocultures of invasive/exotic vegetation (reed canary grass, river bulrush, and hybrid cattail). Once these vegetation communities are established, waterfowl, waterbird, and shorebird use is negligible. Successful implementation of this project will require four stages: 1) producers with abandoned wetlands will be contacted about integrating grazing back into their operation, 2) grant funds will be matched with partner and landowner dollars to construct necessary infrastructure (perimeter fence, cross fence, and livestock watering), 3) University of Nebraska Lincoln Extension will evaluate forage production and generate fact sheets describing economics of grazing wetlands, and 4) landowner tours will be conducted at several demonstration sites. These tours will be coordinated by Nebraska Cattlemen, Sand County Foundation, University of Nebraska Lincoln, and Natural Resource Conservation Service to ensure an open dialogue between landowners and natural resource professionals. This dialogue will help both natural resource professionals and producers develop better projects, and understand the win-win for production agriculture and wildlife. Developing infrastructure at these sites will ensure cost effective long-term management of these sites through prescribed grazing. This management will significantly increase the habitat value of these wetlands for the estimated 8.6 million waterfowl that depend on these wetlands during spring migration, as well as provide optimal habitat for Whooping Cranes, Buff-breasted Sandpipers, King Rails, and nearly 20 other priority species identified in Nebraska's Natural Legacy Plan.

Sponsor Name: Rainwater Basin Joint Venture **Nearest Town:** Multiple
Project Name: Wetland Habitat Enhancement and Restoration in Nebraska's Rainwater Basin **Project No:** 13-125-3
Amount Requested: \$350,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The "Wetland Habitat Enhancement and Restoration in Nebraska's Rainwater Basin" project will develop unique opportunities to restore and enhance wetland and associated upland habitats in the Rainwater Basin landscape. On private lands, this project will result in implementation of conservation programs that allow producers to integrate these restored wetlands into their operations through haying and grazing. The drought of 2012 has demonstrated the importance of diversified farm operations and the need for additional forage to maintain Nebraska's cattle industry. In addition to providing cattle forage, these wetlands will contain desired habitat conditions for the millions of wetland dependent migratory birds and resident species that rely on this region since grazing and haying are extremely effective wetland management techniques. On public lands, project funds will be used to maximize habitat conditions on these unique and highly valued lands. A recent assessment by Nebraska Game and Parks Commission highlighted the recreational value of these lands. This assessment suggested over 80,000 hunter days in the RWB by migratory waterfowl and upland bird hunters. In addition to game species, RWB wetlands provide optimal habitat for Whooping Cranes, Buff-breasted Sandpipers, King Rails, and nearly 20 other priority species and vegetation communities identified in Nebraska's Natural Legacy Plan. The Rainwater Basin wetlands and associated uplands do not just provide habitat and recreational opportunities. These wetlands benefit all Nebraskans through the numerous ecosystem services provided by playa wetlands. Research by the University of Nebraska Lincoln and Oklahoma State University has documented groundwater recharge, nutrient cycling, carbon sequestration, and flood storage. Actions funded through this grant will help ensure that, as Nebraskans, we will continue to have reliable groundwater for both agricultural and municipal uses. To successfully implement this project, Rainwater Basin Joint Venture partners have leveraged over \$2.38 million dollars in matching funds. THIS PROJECT WAS FUNDED \$350,000 IN 2013 WITH THE INTENT TO FUND UP TO \$350,000 IN YEAR TWO AND \$350,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Rainwater Basin Joint Venture **Nearest Town:** Kearney
Project Name: Platte River Management and Enhancement **Project No:** 15-148
Amount Requested: \$1,290,450 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The Platte River is world famous for its diverse assemblage of flora and fauna, and is home to many species of concern. Not only does the Platte River provide habitat for wildlife, its braided channels allow water from upstream reservoirs to flow into irrigation diversions and ultimately reach the Lower Platte River, where it provides drinking water for the residents of Lincoln. This partnership will focus on two critical elements of Platte River function: channel hydrology and vegetation composition over the 336 mile stretch of River from Ogallala to Columbus. Channel hydrology focuses on increasing flow conveyance, decreasing water consumption by invasive vegetation, and increasing wildlife habitat availability. This grant will continue the work accomplished over the past five years, by the Weed Management Areas. These groups led an exhaustive effort to control invasive vegetation within active channels and remove herbaceous vegetation that was causing choke points and using water. This project will use a coordinated partnership approach to leverage resources and maximize impacted acres. This partnership will be science based, transparent, and focused on mutually defined and accepted standards. It will be system scale with understandable metrics; outcome based and short-term success will be used to build long-term sustainability. Working on a large landscape with multiple partners requires a high level of coordination. To achieve this goal a full time project coordinator will be hired to work with the different partners as well as area landowners to implement grant objectives. All aspects of the grant will be monitored and evaluated by numerous techniques. Information gained will be utilized to assist developing a long-term management philosophy that will focus on maintaining work accomplished and expanding on areas where control is needed. Information will be accessible by partners and distributed to landowners.

Sponsor Name: Rainwater Basin Joint Venture **Nearest Town:** Seward, York, Geneva,
Project Name: Rainwater Basin Wetland Management for Improved Migratory Bird Habitat **Project No:** 13-120-3
Amount Requested: \$75,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

This project will address the management of aggressive and invasive vegetation negatively effecting wetlands in the Rainwater Basin region of south-central Nebraska. Waterfowl and shorebird habitat are negatively impacted by dense, monotypic stands of vegetation including reed canary grass, river bulrush, hybrid cattail, and phragmites. In addition wetland invasion by wood species like cottonwood, willow, and green ash is also negatively impacting habitat. A shortage of funds to pay for needed materials and equipment and to hire contractors for management such as disking, herbicide spraying, prescribed burning, mechanical tree removal, installation of fences, and roto-tilling are limiting these actions on both private and public wetlands resulting in a significant degradation of migratory bird habitat. THIS PROJECT WAS FUNDED \$75,000 IN 2013 WITH THE INTENT TO FUND UP TO \$75,000 IN YEAR TWO AND \$75,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Rainwater Basin Joint Venture **Nearest Town:** Holdrege
Project Name: Watershed Restoration of Atlanta Waterfowl Production Area **Project No:** 14-143-2
Amount Requested: \$60,375 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The Rainwater Basin Joint Venture Partnership is applying for this Nebraska Environmental Trust grant to restore watershed function to Atlanta Waterfowl Production Area located in south-central Nebraska. The primary objective is to fill at least 20 irrigation reuse pits in this priority wetland's watershed. Atlanta Waterfowl Production Area was selected for restoration since this wetland contains both the local and landscape features selected for by the endangered whooping crane. Decision Support Tools designed by the Rainwater Basin Joint Venture will be used to guide conservation actions to those irrigation reuse pits that are most negatively impacting wetland function. These pits are generally closer to the wetland and have a large volumetric storage capacity. Filling pits provides a "win-win" situation for the producer and wetland dependent wildlife. Recently many fields have been converted from gravity irrigation to more efficient center pivot irrigation systems. As a result many of the irrigation reuse pits in the watersheds of priority wetlands are no longer needed. This grant will enable producers to eliminate irrigation reuse pits thereby acquiring additional farmable acres while allowing natural runoff to flow to the wetlands on a more regular basis. These activities will not only increase wetland function and provide reliable wildlife habitat, but will also benefit local residents and area producers as a result of the groundwater recharge that naturally occurs through Rainwater Basin wetlands. The RWBJV is a conservation partnership of state, federal, and local agencies, conservation organizations, and private landowners who have joined together to direct wetland habitat conservation in Nebraska's 6,100 square mile Rainwater Basin landscape. THIS PROJECT WAS FUNDED \$50,375 IN 2014 WITH THE INTENT TO FUND UP TO \$60,375 IN YEAR TWO AND \$60,375 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Rainwater Basin Joint Venture **Nearest Town:** Ord
Project Name: Central Loess Hills Prescribed Fire Training Exchange Program **Project No:** 14-145-2
Amount Requested: \$84,500 **Term of Project Request:** 3 **Review Group:** Rural Habitat

Within the past century and a half, strong sentiments regarding wildfires led to the suppression and prevention of naturally occurring fires across Nebraska. The consequent absence of fire as a regular part of Nebraska's grassland ecosystems has significantly altered habitat for native wildlife and has undermined the productivity of the livestock economy in Nebraska. At 1.4 million acres, the Central Loess Hills Biologically Unique Landscape is the largest BUL in the Mixedgrass Prairie Ecoregion. Currently, over 11 percent of the Central Loess Hills BUL grasslands are currently invaded by eastern red cedar and without intervention, this invasion is expected to grow exponentially. Even though prescribed fire has been one of the most rapidly adopted contemporary grassland management tools in Nebraska, most prescribed fires are less than one hundred acres in size. Larger prescribed fires will be needed to mitigate tree invasion and limit future tree encroachment in order to secure grassland habitat for at-risk wildlife and a strong livestock economy in the Central Loess Hills BUL. The Fire Learning Network's Prescribed Fire Training Exchange Program has been operating in the Central Loess Hills BUL since 2010 and provides training to wildland firefighters during live prescribed fire scenarios on private land. With professional wildland firefighters, prescribed fires can be held on a more ecologically relevant scale. Since 2010, we have performed 15,000 acres of prescribed fire in the Central Loess Hills BUL. Up to this point, our program has operated without funds to augment the costs for grazing deferment and mechanical tree removal. As a result, even though we have successfully delivered prescribed fire to thousands of acres, the ecological potential and habitat response of these prescribed fires has not been fully realized. We will deliver 12,000 acres of large-scale prescribed fires within three years. With the assistance of the Nebraska Environmental Trust, the Central Loess Hills Prescribed Fire Training Exchange program will be able to assist in compensating landowners to rest their pasture prior to the prescribed fire in order to economically increase the effectiveness of our fires. NET assistance will also augment our equipment for our prescribed fires by providing a UTV equipped for prescribed fire, fireline equipment, and an enclosed trailer to house and transport the equipment. THIS PROJECT WAS FUNDED \$133,500 IN 2014 WITH THE INTENT TO FUND UP TO \$84,500 IN YEAR TWO AND \$84,500 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Rocky Mountain Bird Observatory **Nearest Town:** Scottsbluff
Project Name: Enhancing Habitat Management in the Nebraska Panhandle Through Conservation Education **Project No:** 13-191-3
Amount Requested: \$105,000 **Term of Project Request:** 3 **Review Group:** Education

Nebraska Prairie Partners (NPP), a partnership between the Rocky Mountain Bird Observatory (RMBO) and the Nebraska Game and Parks Commission (NGPC), has outlined conservation goals that, through outreach and education programs, will address threats to at-risk species and to the shortgrass prairie and ponderosa pine habitats of the Nebraska panhandle. With support from the Nebraska Environmental Trust, NPP will continue to support a full-time Wildlife Education Coordinator who will plan and implement education and outreach activities focused on at-risk wildlife and their habitat needs for long-term ecosystem viability. Building on the education work that NPP has achieved over past years, we will continue to implement successful education programs while introducing new programs to augment those already in existence. By continuing and expanding NPP's experiential and placed-based education program, students of all ages will continue to develop awareness of, appreciation for, and decision making skills regarding the biologically unique communities and landscapes in western Nebraska as identified by the Nebraska Natural Legacy Plan. Thirty percent of students in the panhandle are reached biennially through NPP with many receiving multiple environmental education experiences. We will also continue NPP's efforts in outreach to landowners and resource professionals through conservation and education workshops that address current issues in the panhandle. With support from the Nebraska Environmental Trust we anticipate reaching 2,000 students and 150 landowners, resource professionals, and educators in western Nebraska each year. We will continue our successful activities, including educator and landowner workshops, educational bird banding stations, PEEP, nature clubs, family nature programs, an Earth Day Festival, and add new programs: "Pennies for Plovers", RMBO Naturalists and a citizen science project focusing on swift fox. We believe that life-long conservation education curricula targeting K-12 students, resource professionals, and area landowners and ranchers is an integral part of conserving Nebraska's biologically unique landscapes. THIS PROJECT WAS FUNDED \$105,000 IN 2013 WITH THE INTENT TO FUND UP TO \$105,000 IN YEAR TWO AND \$105,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Rocky Mountain Bird Observatory **Nearest Town:** Kimball
Project Name: Sustaining Grassland Bird Conservation for a Rural Community in Southwestern Nebraska **Project No:** 15-147
Amount Requested: \$523,683 **Term of Project Request:** 3 **Review Group:** Rural Habitat

Nebraska Prairie Partners (NPP), a partnership between Rocky Mountain Bird Observatory and Nebraska Game and Parks Commission has been conserving grassland and cropland bird species in western Nebraska, and fostering community support for more than 10 years. Private landowner involvement has been vital to successful conservation efforts. In other areas of the U.S., conservation and management have been halted for Greater Sage- Grouse and Lesser Prairie-Chicken, due to disagreements among landowner and land-managers. However NPP and landowners have cooperated to implement conservation for Mountain Plover and many other grassland species, which have led to direct conservation outcomes on private lands. Decade-long efforts have included: Mountain Plover (Tier 1, at-risk species) nest-protection on croplands, Ferruginous Hawk (Tier 1, at-risk species) nest-platform construction, 1,000 stock tank ladders distributed to prevent wildlife drowning, Burrowing Owl and Golden Eagle surveys, and development of the Kimball County Conservation Cooperative which reaches 200 residents and landowners. To keep this momentum sustainable, NPP proposes to; 1) Increase the number of landowners participating in the Mountain Plover nest marking program by increasing NPP capacity, and examine other potential incentive options, 2) Implement a Mountain Plover population survey to update estimates for guiding conservation, 3) Improve methods of locating plover nests through use of a thermal imaging camera, 4) Evaluate Golden Eagle nesting productivity in western Nebraska, 5) Purchase and distribute 100 polyethylene stock tank ladders to ranchers and, 6) Promote conservation outreach to Kimball residents and students. Support from the Nebraska Environmental Trust will protect more than 175 Mountain Plover hatchlings from accidental tillage operations, benefit 500 Kimball residents and school children through educational programming, increase NPP capacity to enroll an additional 15 landowners and 60,000 acres in our plover nestmarking program, and install 100 durable stock tank ladders to reduce threats to grassland birds.

Sponsor Name: Sandhills Journey Scenic Byway Visitor/Interpretive Center **Nearest Town:** Mullen
Project Name: Sandhills Journey Scenic Byway Birding Trail **Project No:** 14-181-2
Amount Requested: \$20,300 **Term of Project Request:** 3 **Review Group:** Education

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 – Nebraska Highway 2 between Alliance and Grand Island. This will be accomplished through a byway specific website similar to the southwest Nebraska “Chicken Dance Trail” website including educational information on the unique natural qualities of this area; monthly email newsletters; bird identification sound clips and guides; a blog with current sightings, birding opportunities and educational content; development of a birding trail guide; educational birding workshops; and landowner meetings to encourage the development of birding sites on private lands. With over 400 bird species, Nebraska has long been known as one of the top birding states in North America. Birding trails are scattered across the state, but none specifically designed for this wonderfully unique region home to a rich variety of birds and waterfowl. According to Bill Shepard (from an article that appeared in the October 2001 issue of Birding), birding trails create ‘gateways to conservation and adventure’. The Sandhills Journey Scenic Byway is exceptional in that four unique attractions form the ‘backbone’ for the development of the birding trail. These four capstones are the Crescent Lake National Wildlife Refuge, the Valentine National Wildlife Refuge, the Nebraska National Forest, and the Platte River Valley, all within the corridor of the Sandhills Journey Scenic Byway. This grant application will educate visitors and locals alike on the importance of the natural ecological features that are so unique to this region and which provide the habitat for the wide diversity of bird species. THIS PROJECT WAS FUNDED \$35,300 IN 2014 WITH THE INTENT TO FUND UP TO \$20,300 IN YEAR TWO AND \$20,300 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Sandhills Resource Conservation and Development **Nearest Town:** Mullen
Project Name: Cedar Control in the Sandhills Region **Project No:** 14-182-2
Amount Requested: \$33,967 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The Sandhills Resource Conservation and Development Council (RC&D) is planning to work cooperatively with the Upper Loup Natural Resource District (Upper Loup NRD) on a three year project 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. First year grant funds will be used to purchase a tree shear mounted on a skid loaded capable of mechanical removal of trees up to 20" in diameter as well as a small wheeled trailer to move the equipment from place to place. In addition to the purchase of this equipment, funds in all years will be used to host at least eight public meetings to provide landowners with information on options available to assist in cedar tree control. Second year funds will be used to purchase a tow behind chipper/shredder. This equipment will be available for rent to area landowners wishing to address the issue of cedar tree encroachment and loss of productive grazing lands. This grant application meets a critical need in this area as there are currently no local private businesses within a 200 mile radius providing this type of rental service. THIS PROJECT WAS FUNDED \$84,967 IN 2014 WITH THE INTENT TO FUND UP TO \$33,967 IN YEAR TWO AND \$16,966 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Sandhills Task Force **Nearest Town:** Multiple
Project Name: Sandhills Wetland/Grassland Conservation Partnerships **Project No:** 15-145
Amount Requested: \$320,000 **Term of Project Request:** 3 **Review Group:** Rural Habitat

Over the course of the last twenty years, the Sandhills Task Force (STF) has matured into a successful organization that models how a small group can think large and act locally. Peer organizations have studied the STF model and continue to emulate the STF on many levels. The STF is quick to point out the value of long lasting relationships with partner organizations such as NET. As a result of the STF's commitment to conservation, NET has been able to positively impact thousands of acres throughout the Sandhills and play a large role in this ongoing success story. Presently, the STF is uniquely positioned as an organization to provide a leadership role to find innovative solutions to complex ecological concerns. It appears future conservation opportunities will become increasingly complex and require a more proactive approach to address threats such as changes in land use and landscape fragmentation, energy development, and invasive species. The Sandhills Wetland/Grassland Conservation Partnership 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. As part of our ecosystem approach, the STF will continue to support landowners whose goals include improving grassland health and diversity and controlling invasive trees. Work will be done to complete about 30 projects during the three year cycle of this grant. To accomplish this work, each project will be field inspected and evaluated according to its resource value and feasibility. Qualifying projects will be surveyed, designed, and completed using matching partnership funds from landowners, Federal and State agencies, and nonprofit organizations. Each project will have a 10-year contract with the landowner and other participating partners. In addition the STF and matching partners remain committed to monitoring the biological effects of each project.

Sponsor Name: Sargent Irrigation District **Nearest Town:** Milburn
Project Name: Erosion Management and Recovery **Project No:** 13-103-3
Amount Requested: \$25,000 **Term of Project Request:** 3 **Review Group:** Bank Stabilization

The proposed project would involve constructing a series of Jetties above our Milburn Diversion Dam, in an effort to divert waters of the Middle Loup River, away from a seriously eroding bank and back towards the gates of the Dam. The erosion of the west bank, upstream of our Diversion Dam is becoming closer every year to our Diversion Dam. This is alarming because of the location in which the bank is cutting away, is outside of the original construction of our Dam and any rip rap. If it were to continue, the River would breach our Dam, creating a new path for the River and not allow for our facility to be able to provide irrigation to farmland for over 14,287 acres in Custer and Valley Counties. Furthermore, on the west side of the Dam, is also a Fish-way bypass that was constructed in 2005 by the Nebraska Game and Parks Commission. Sargent Irrigation District received funding through a grant from the Nebraska Environmental Trust in 2006 to stabilize the bank in which this Fish-way exists. This structure allows fish to migrate upstream and enhance fish and wildlife as well as recreation. If action is not taken, the ability for the Fish-way to operate as intended could also be in jeopardy. For these reasons, we feel that this project needs to be a priority, in which we are requesting funding, because it is threatening to the operation of our irrigation project of the Fish-way bypass. In addition, we have contacted Game and Parks as well as the Army Corps of Engineers to receive suggestions, information and permits as needed. With the help of the Nebraska Environmental Trust, we can assure that this project will be complete as needed. THIS PROJECT WAS FUNDED \$40,000 IN 2013 WITH THE INTENT TO FUND UP TO \$25,000 IN YEAR TWO AND \$25,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: Sarpy County **Nearest Town:** Papillion
Project Name: Fueling Sarpy County with Natural Gas **Project No:** 14-211-2
Amount Requested: \$200,000 **Term of Project Request:** 3 **Review Group:** Air Quality

This multi-partner project will focus on the construction of a compressed natural gas (CNG) fueling station near 96th Street and Portal Road. Additionally, the project will focus on the deployment of natural gas vehicles (NGVs) in Sarpy County, and the education of Nebraskans on the numerous health and environmental benefits of CNG and NGVs. The application seeks funding for the costs associated with converting fleet vehicles from Sarpy County, the City of LaVista, OFC-Schmidt Liquid Trucking, and an additional Sarpy County partner to NGVs. A compressed natural gas fueling station will be constructed which will open up the opportunity for Sarpy County, LaVista, and OFC-Schmidt Liquid Trucking to convert vehicles to compressed natural gas. The grant will request \$750,000 from Nebraska Environmental Trust for costs associated with converting county and city vehicles to NGVs and for the partial construction of a compressed natural gas (CNG) fueling station which will include the canopy, paving work, dispenser, and fuel management system. Depending on the cost of conversion kits, NET will fund the conversion of approximately fifty (50) vehicles to NGVs. Black Hills Energy will contribute up to \$800,000 for the costs associated with producing CNG, including, storage vessel(s), compressor(s), dryer, priority panel, and all gas main and service work. Sarpy County, LaVista, and an additional partner to be determined will contribute a combined total of \$100,000 toward civil site design work and will contribute the land for the CNG fueling station which is appraised at \$250,000. Additionally, the partners will provide fleet vehicles for conversion to NGVs. 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. Domestic reserves of natural gas are abundant, costs are affordable, and 98 percent of all natural gas consumed in America is produced in North America. This project will continue to expand the usage of natural gas vehicles in Nebraska by constructing a new natural gas fueling station and adding more natural gas vehicles to Nebraska's highways. THIS PROJECT WAS FUNDED \$200,000 IN 2014 WITH THE INTENT TO FUND UP TO \$200,000 IN YEAR TWO AND \$200,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Sidney, City of **Nearest Town:** Sidney
Project Name: East Sidney Watershed Project **Project No:** 15-203
Amount Requested: \$673,000 **Term of Project Request:** 3 **Review Group:** Water

The City of Sidney, along with the South Platte NRD, are proposing to implement water quality measures in East Sidney, NE. The City of Sidney and the South Platte NRD are requesting funding from NET for a portion of the anticipated cost of the proposed water quality measures (bioswales and bioretention areas). The project is described in more detail in the narrative section.

Sponsor Name: South Platte Natural Resources District **Nearest Town:** Multiple
Project Name: Hydrogeology of Western Nebraska **Project No:** 14-172-2
Amount Requested: \$200,000 **Term of Project Request:** 3 **Review Group:** Water

The project digitally scans and processes existing oil and gas well geophysical logs to gather information about the aquifer. There are 20,814 oil and gas wells in Nebraska and we estimate that 2,300 wells have geologic and hydrogeologic data that is readily available to provide for a greater understanding of the aquifer configuration within the project area, especially in fully and overappropriated designated areas. This is approximately 10% of total oil and gas wells within Nebraska and represents a large amount of available data which when interpreted will greatly enhance the applicants' and NET's investment in the current geologic and hydrogeologic interpretation for use in ground water and surface water management. This scope of work will provide a significant amount of data that will benefit the regional modeling efforts of the Western Water Use Management Model and the COHYST model. Confidence in these models will be greatly enhanced by this additional geologic and hydrogeologic information contained in the oil and gas geophysical log data. The project method will analyze the information contained in the scanned oil and gas geophysical logs which will improve the current geologic and hydrogeologic interpretation that is based on available data collected and interpreted by project sponsors during previously completed work on the High Plains Aquifer system in the area. The total project cost is \$815,000. The applicants are requesting \$480,000 or 59% of the total cost from NET to pay for data interpretation. The project sponsors and their partners, the University of Nebraska-Lincoln Conservation and Survey Division (UNL CSD) and the Nebraska Oil and Gas Conservation Commission (NOGCC), will provide cash and in-kind services totaling \$335,000 or 41% of the total cost. The contribution by the partners will include the scanning of oil and gas logs, data interpretation, and production of maps. THIS PROJECT WAS APPROVED IN 2014 WITH THE INTENT TO FUND UP TO \$200,000 IN YEAR TWO AND \$200,000 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Spencer Area Development Corporation **Nearest Town:** Spencer
Project Name: Spencer Pond Renovation Project **Project No:** 15-130
Amount Requested: \$445,789 **Term of Project Request:** 2 **Review Group:** Lake Rehabilitation

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. Grant funding of \$445,789 is sought over 2 years. Total future project costs are \$1,416,011 with significant contribution by Boyd County and Spencer Area Development Corporation. There has been \$212,915 invested by the various stakeholders to date including NET funds of \$33,050. The cost for dam and spillway repairs that are Boyd County’s responsibility are \$878,376 based upon most recent cost estimates. An inter-local agreement between Boyd County, Spencer Area Development Corporation, and the Village of Spencer entered in 2012 affirms their agreement to work together. The lake renovation cost is \$537,635. The total project including lake renovation, dam and spillway repair is estimated to cost \$1,416,011 and will be completed in 2015 and 2016. Long term benefits include: Recreational opportunities for local residents as well as visitors to the area. Spencer is located on the Hwy 281 and Hwy 12 corridor in north central Nebraska which is the gateway to the Sandhills. Many canoeists, hunters, campers and fisherman travel through this area on their way to recreational areas on the Niobrara River. This project will provide another recreational amenity along the way. The Spencer Area Development Corporation transferred ownership of 45.4 acres to the Village of Spencer in September of 2013. In addition SADC through its fundraising efforts to date which includes an alumni mailing to Spencer High School graduates have raised \$31,590 which is being held by the Spencer Area Community Foundation. A letter is included in this submission. The total investment to date of Spencer Area Development Corporation is \$160,630.

Sponsor Name: Star City Recycling **Nearest Town:** Lincoln
Project Name: Residential & Commercial Growth **Project No:** 15-109R
Amount Requested: \$15,000 **Term of Project Request:** 1 **Review Group:** Recycling

Star City Recycling is a family owned business in our 12th year. We have gone from running the routes ourselves with one truck to having multiple employees and trucks running routes daily. We specialize in curbside, residential recycling and small commercial accounts. Our focus has always been on providing the best customer service possible. As we continue to have growth in our residential and commercial recycling routes, in the Lincoln area, we find ourselves in need of new recycling bins and lids. Since we are now the only recycling company in Lincoln to hand separate everything at the curb we have found that the bin sized totes are the best fit for our customers and drivers. As part of our service, these bins are provided for our customers use and then are cleaned and reused when a customer discontinues their service. The bins are a great source of advertisement and make a great first impression when a customer begins our service. This grant will allow us to purchase more bins and lids to service a larger customer base and allow our recycling efforts to expand- not only in the amount of customers we service, but also in tonnage of recycling. This will allow us to assist local recycling efforts to increase the recycling efforts in the Lincoln area, as well as increase the sheer amount of items that are recycled since we offer the recycling of many items not handled by other local companies.

Sponsor Name: Stirk Compressed Natural Gas **Nearest Town:** North Platte
Project Name: Fueling North Platte with Cleaner Natural Gas **Project No:** 15-153
Amount Requested: \$770,000 **Term of Project Request:** 1 **Review Group:** Air Quality

The City of North Platte, Stirk CNG, Ag Valley Coop, and Schmidt Liquid Trucking (Anchor fleet), have partnered to compose a joint application for the construction of a fast fill CNG station and the initial transition of the City's vehicles to CNG in North Platte, Nebraska. Grant funds will be divided between Stirk CNG and Ag Valley Coop for the construction of the fast fill station and for the City to purchase dedicated CNG vehicles or convert their existing fleet vehicles to CNG. The City of North Platte will be able to continue to expand its CNG fleet well beyond the initial grant funds by participating in the unique revenue sharing program the grant funded station would offer. The Anchor fleets are included as supporters of the project but will not receive grant funds. A station in North Platte will provide the necessary CNG infrastructure to western Nebraska along 1-80, a major transportation corridor. A North Platte CNG station will fill a much needed void for CNG availability between Lincoln and Denver or Lincoln and Cheyenne that currently exists. The adoption of CNG by fleets will dramatically reduce adverse emissions to the local environment. Natural gas is the cleanest commercially available fuel for transportation today. This project will expand the usage of natural gas vehicles to Western Nebraska, and fill a much needed void in infrastructure along Interstate 80.

Sponsor Name: Stirk Compressed Natural Gas **Nearest Town:** Lincoln
Project Name: Compressed Natural Gas Mobile Daughter Station **Project No:** 15-154
Amount Requested: \$450,000 **Term of Project Request:** 1 **Review Group:** Air Quality

Stirk CNG wants to purchase a Compressed Natural Gas (CNG) Mobile refueling station (Daughter station). The Daughter reference is because the mobile station receives its supply for delivery from an existing CNG station. Stirk CNG owns the CNG fast fill station at 6001 Cornhusker Highway in Lincoln, NE. Stirk would fill the Daughter station at it's station to provide onsite delivery to the StarTran bus fleet in Lincoln NE, the City of Lincoln and Lancaster County (City), and University of Nebraska Lincoln (UNL). All three entities have shown extreme interest in using CNG. StarTran has already purchased dedicated CNG buses with more scheduled for delivery over the next 15 months. The proximity to an existing station has created a logistic dilemma and eroded potential savings due to the additional labor required to fill the buses daily. The Daughter station will allow Stirk CNG to fill the buses at the StarTran bus barn and dramatically reduce their labor expense. The Daughter station is designed and built by ANGI Systems in Janesville, WI and will be placed on a 48 foot flatbed trailer and pulled by a semi-truck. Stirk CNG will own the Daughter station and provide the truck and trailer. Stirk CNG is only seeking funding for the cost of the Daughter station equipment.

Sponsor Name: The Nature Conservancy **Nearest Town:** Multiple
Project Name: Learning from the 2012 Niobrara Fire **Project No:** 13-176-3
Amount Requested: \$64,257 **Term of Project Request:** 3 **Review Group:** Rural Habitat

The July 2012 wildfires that burned more than 76,000 acres in north-central Nebraska have created an unprecedented set of opportunities: 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. Over three years, the Conservancy will: 1) Train 120 fire personnel from the private sector, from federal and state government, and from non-governmental organizations through fire training exchanges. 2) Through the course of training, safely execute prescribed fires (approximately 10,000 acres per year over three years for a total of 30,000 acres, weather conditions permitting) in the Middle Niobrara and the Central Loess Hills to maintain ecological structure and function for the management of native species through fire training exchanges. 3) Integrate a host of stakeholders to conduct community outreach and promote best fire practices during the fire training exchanges. 4) Convene researchers from interested colleges and universities to identify the most pressing evaluation questions, coordinate efforts, share information, and develop short and long-term studies. In years two and three, research will begin. The information will be collected and distributed by The Nature Conservancy's Fire Learning Network for anyone to learn from and use. 5) Share images from six time-lapse cameras to be installed on the Niobrara Valley Preserve to enhance research efforts and to educate the public about the positive ecological impacts of fire. These activities will result in: better habitat for wildlife, including several species at risk; better management on land used by the public; pockets of prescribed fire expertise across the state; greater understanding of the effects of wildfire that will inform future land management; a better informed citizenry; and, ultimately, prevention of catastrophic wildfires. THIS PROJECT WAS FUNDED \$154,932 IN 2013 WITH THE INTENT TO FUND UP TO \$114,257 IN YEAR TWO AND \$64,257 IN YEAR THREE PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE THIRD YEAR REQUEST.

Sponsor Name: The Nature Conservancy **Nearest Town:** Johnstown
Project Name: Building a Learning Community at the Niobrara Valley Preserve **Project No:** 15-129
Amount Requested: \$961,096 **Term of Project Request:** 3 **Review Group:** Education

In the early 1980s, The Nature Conservancy purchased two ranches along a 25-mile stretch of the middle Niobrara River and established the Niobrara Valley Preserve (NVP). Our vision then was to forever protect this Sandhills gem ensuring its healthy prairies, abundant wildlife, and iconic streams, springs and seeps would endure. A lot has changed in thirty years. Grasslands continue to diminish at alarming rates. Wildfires are increasingly intense. Cedar encroachment has emerged as a huge threat to our state's ecological and economic values. Today, an intentional community of conservation-committed individuals and groups is coming together at the NVP that is unparalleled in the state. With a 60,000-acre mosaic of habitats to serve as the largest classroom in the Great Plains, our vision now is that together we can transform the NVP into the center for teaching and learning that today's challenges demand. The Conservancy's members have given us the opportunity to test ideas and practices (fire, rotational grazing, invasive species removal, and other techniques to care for habitat) and we are ready to share those lessons. For example, fire workers from all over the U.S. and as far away as Spain have come to the NVP for five years with such a strong desire to develop fire expertise they are willing to sleep in tents in the snow. This momentum must be supported by the citizens of Nebraska. That's why we will improve access to the Preserve's trails, historical and archeological artifacts, and the largest free-ranging bison herd in Nebraska. To meet demand - and to grow - we must be able to offer safe and functional workshop and lab space, more showers and restrooms, long-term housing, and the assistance of dedicated staff. We are asking the Trust to help us renovate and build for the future.

Sponsor Name: Transduction Technologies

Nearest Town: Omaha

Project Name: Residential Electrical Data Monitors

Project No: 15-176

Amount Requested: \$288,032

Term of Project Request: 3

Review Group: Air Quality

In June 2014, OPPD’s Board of Directors approved a 20-year generation plan that will significantly reduce OPPD’s greenhouse gases (GHG) emissions, therefore improving Nebraska’s environment by improving Nebraska’s air quality, water quality, and reducing industrial waste. However, to accomplish this reduction in OPPD’s GHG emission, the plan also calls for reducing current electrical demand by at least 300 Megawatts (MW) over 20 years through customer participation in Demand Side Management (DSM) programs and expanded energy-efficiency measures. While these programs will be expanded, it is difficult to see how these commercial and industrial programs alone will achieve the 300 MW reductions necessary for OPPD to meet expected electrical demand. However, electrical demand reduction from OPPD’s Air Conditioning Management Program suggests that a significant portion of the demand reduction can be achieved from the residential sector. However, OPPD does not have any data on how much of their total electrical demand comes from the residential sector. We propose installing 120 electrical usage data monitors into 120 residential buildings throughout metro Omaha, NE for two years to collect data on how much electrical demand is consumed by the residential market. This information, available in real-time over the internet, will be made available to the homeowners to educate them on their energy usage. Furthermore, this precious data, which currently does not exist, can provide us with field data to determine the most effective DSM program(s) to implement to reduce OPPD’s GHG emissions. After the project conclusions, these data monitors will be used to educate the public, document and verify electric demand savings for AC Demand Management Programs, Energy Efficiency Programs, contractor quality assurance programs, and other collaborations with the Nebraska Energy Office, local municipalities, building code officials, Lincoln Electrical Systems, and Nebraska Public Power District.

Sponsor Name: Tutuaca Mountain School

Nearest Town: Crawford

Project Name: Rimrock Ranch Acquisition

Project No: 15-178

Amount Requested: \$600,000

Term of Project Request: 3

Review Group: Rural Habitat

The Rimrock Ranch is an 800 acre property located adjacent to Ft. Robinson State Park within the Pine Ridge Biologically Unique Landscape. The ranch is excellent wildlife habitat and an important wildlife linkage between Ft. Robinson and the Oglala National Grasslands. Tutuaca Mountain School (TMS) is requesting funds from NET to help fund the acquisition of the Rimrock. This purchase will protect 800 acres of prime habitat adjacent to Fort Robinson in perpetuity, will provide public access to Ft. Robinson in perpetuity and will also provide TMS with a campus for educational programming. We have received funds from two major donors for this acquisition: the Rocky Mountain Elk Foundation (RMEF) and the Neotropical Migratory Bird Conservation Act (NMBCA) through our partners, the Rocky Mountain Bird Observatory (RMBO). Rimrock Ranch is strategic large ungulate habitat (elk, mule deer and big horn sheep, bison). The ranch also supports a population of neotropical migratory birds-- seed and insect eating birds, crucial to a healthy agricultural economy. TMS is committed to preserving and restoring native habitat on the Rimrock. Private lands biologists with NGPC and the USFWS Partner program are working with us on habitat projects. TMS initiated educational programming and research support at the Rimrock. We ran our first Rimrock Science and Adventure Camp (a weeklong residential camp for teenagers) in August. We work with students from Chadron State College’s Range Management Program and will be providing support for students studying Swift Fox from UNL, this September. We are expanding our collaborative efforts with Universities, our summer science and adventure camps and will be adding citizen science opportunities. By 2015-2016 we will be offering middle and high school residential learning opportunities at the Rimrock. TMS is committed to education and the Rimrock is an ideal campus for our mission.

Sponsor Name: Twin Valley Weed Management Area **Nearest Town:** Red Cloud
Project Name: Eastern Republican and Little Blue Riparian Improvement Project **Project No:** 15-198
Amount Requested: \$328,000 **Term of Project Request:** 1 **Review Group:** Rural Habitat

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 (TVWMA) counties. Control efforts are conducted in a holistic manner, utilizing a full range of mechanical, biological and chemical tools. TVWMA has undertaken this project over recent years to improve stream flow along the Republican and Little Blue Rivers to help enable Nebraska to meet its water delivery obligations to Kansas, to restore and maintain into the future a healthy river system and prevent wasteful degradation of water resources, to improve riparian habitat including re-planting beneficial species, and to increase public awareness of the best practices that can be used to properly manage riparian lands.

Sponsor Name: Upper Elkhorn Natural Resources District **Nearest Town:** Creighton
Project Name: Bazile Groundwater Management Area Plan **Project No:** 14-213-2
Amount Requested: \$27,775 **Term of Project Request:** 2 **Review Group:** Water

In Nebraska, approximately 85% of the state relies on groundwater as their drinking water source. An increasing issue with groundwater is contamination from nitrates as a result of fertilizer application and irrigation. Once groundwater is contaminated it is extremely difficult and expensive to clean up. An area of groundwater quality concern, now known as the Bazile Groundwater Management Area (BGMA), was identified in the late 1980s as a result of high nitrates in groundwater in Northeast Nebraska. Groundwater management plans have been implemented in this area by the four NRDs; however, significant improvements have not been achieved. Four NRDs are working together to address the groundwater contamination in the BGMA. This project seeks 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. This proposal will create a foundation for long-term commitment in an effort to improve groundwater quality. Four NRDs have agreed to work collectively on the BGMA Plan to protect and restore groundwater quality. THIS PROJECT WAS FUNDED \$78,775 IN 2014 WITH THE INTENT TO FUND UP TO \$27,775 IN YEAR TWO PENDING AVAILABLE FUNDS AND SATISFACTORY PROGRESS. THIS IS THE SECOND YEAR REQUEST.

Sponsor Name: Upper Niobrara - White Natural Resources District **Nearest Town:** Chadron
Project Name: Modeling to Protect Surface and Groundwater Resources in the Upper Niobrara Basin **Project No:** 15-180
Amount Requested: \$220,000 **Term of Project Request:** 2 **Review Group:** Water

The Upper Niobrara-White Natural Resources District (UNWNRD) encompasses all of Box Butte, Dawes and Sheridan counties and the northern 80% of Sioux county. In total over 4.4 million acres and 13 communities are within the district boundaries. Hydrologically, the district includes the Upper Niobrara River, White River and Hat Creek Basins. As a result of the limited precipitation and evapotranspiration rates, supplemental irrigation is utilized for crop production, both from surface and groundwater sources. While groundwater in certain areas of the district is plentiful, the supply is finite. Data collected by the NRDs, compiled and reported on by UNL-CSD reflect groundwater level declines of up to 70 feet in some portions of the district. Along with the concern over groundwater supplies, long term surface water monitoring above Box Butte Reservoir have shown a significant decrease in stream flows. Box Butte Reservoir supplies water for irrigation on the Mirage Flats project as well as providing recreational opportunities (i.e. swimming, water skiing, fishing, etc). Declining inflows have required limitations on irrigation deliveries and have reduced recreation. As a result of the declines and other concerns, the UNWNRD and the Nebraska Department of Natural Resources (NDNR) have taken steps to protect the water resources of the district. The UNWNRD and NDNR have developed a surface and groundwater simulation model that can be used as a tool to evaluate and implement management strategies. This project will outline and model multiple strategies aimed at protecting the existing supplies, including inflows to Box Butte Reservoir as well as reducing the rate of groundwater declines in some areas of the district. This project will also ensure the public is engage in the process through the solicitation of comments and suggestions of the stakeholders along with state agencies and other entities.

Sponsor Name: Upper Republican Natural Resources District **Nearest Town:** Multiple
Project Name: URNRD Moisture Monitoring Program **Project No:** 15-222
Amount Requested: \$100,000 **Term of Project Request:** 2 **Review Group:** Water

Irrigation water use in Perkins, Chase and Dundy Counties will be reduced under the program, helping extend the life of the Ogallala Aquifer in the Upper Republican NRD. A two-year grant from the Trust for the same program expires in June 2015 and the current grant request proposes to extend the program for another two years. The grant would pay for approximately half the cost of soil-moisture probes and related technology obtained by farmers in the URNRD. URNRD and landowner funds would pay the remaining half of the costs. Use of soil-moisture probes can negate unnecessary irrigations and has been shown to reduce water use by two to four inches per acre by electronically communicating to farmers the moisture content of their fields and offering recommendations on whether irrigation is necessary. Approximately 100 probes could be leased or purchased over a two year period under the program, reducing water use by approximately 1 billion gallons or approximately 3,000 acre feet across the URNRD assuming use of the probes reduced water use by approximately 2 acre inches per acre, per year over two years. The cost-share program recognizes the growing array of soil-moisture probes and telemetry products so will not restrict what brands of probes would be eligible for cost-share reimbursement and allow for leasing of probes.

Sponsor Name: Uribe Refuse Service, Inc. **Nearest Town:** Lincoln
Project Name: Nebraska Organic Waste Resources Project **Project No:** 15-166
Amount Requested: \$734,050 **Term of Project Request:** 3 **Review Group:** Waste Management

Uribe Refuse Services, Inc. (Uribe) requests up to \$734,050 in NET Grant Program funds over a period of three grant terms to develop and implement the Nebraska Organic Waste Resources (NOW Resources) Project. Total project costs are valued at \$1.61 million during the grant period. NET Grant Program funds will be used to offset administrative, equipment and program expenses. The NOW Resources Project seeks to establish a new single-stream organic waste recycling service for our commercial and residential customers and to demonstrate the feasibility and replicability of innovations in local entrepreneurship and available waste conversion technology to optimize the environmental, energy and economic performance and security of conventional waste management practices and business operations in Nebraska by maximizing recovery of the available energy, nutrients and recyclable materials from up to 1,460 tons per year of organic waste – representing about 10% of Uribe’s total annual collections. The NOW Resources Project involves developing a new solid waste processing facility on Uribe property located at 4600 North 48th Street in Lincoln. The processing facility includes the installation of a state-of-the-art anaerobic digester system and the construction of a new operations building. To ensure efficient system operations and lasting success, the NOW Resources Project includes also the creation of educational and technical support programs and publications. Over a 25-year lifetime, the NOW Resources Project will divert up to 36,500 tons of organic waste from entering area landfills; displace up to 6.5 million gallons of fresh water and petroleum fertilizer products from our gardens, lawns and waterways; reduce Uribe’s emissions by an estimated 17,825 metric tons of CO2 equivalent; create 2-4 permanent local jobs; and generate about \$1.6 million in gross revenue.

Sponsor Name: Voices of Hope **Nearest Town:** Lincoln
Project Name: Nature Explore Classroom and Healing Garden **Project No:** 15-179
Amount Requested: \$86,900 **Term of Project Request:** 1 **Review Group:** Education

This request for \$86,900 from the Nebraska Environmental Trust is to support a one-year collaborative project between Voices of Hope, Arbor Day Foundation and Dimensions Educational Research Foundation to create an Nature Explore classroom and healing garden on the property where Voices of Hope provides crisis services to victims of domestic violence their children, thus impacting the environment and enhancing the healing of children who have been traumatized by experiencing the co-occurrence of child abuse and domestic violence. The environmental objective of this project meeting the mission of the Nebraska Environmental Trust is to create a replicable demonstration site to serve as a state-wide model which promotes best management landscape design practices through transitioning from a traditionally resource intensive, manicured lawn, to significant environmental asset enhancements, promoting native habitat, storm water runoff reduction, soil replenishment and carbon sequestration. This site will also serve as a pilot project to enhance healing from the traumatic effects of domestic violence, sexual assault, stalking and related forms of abuse for victims of domestic violence, their children and the staff and volunteers at VOH who provide crisis services to these families. This will impact on thousands of victims and children. Since 2009, Nature Explore, a collaborative project of the Arbor Day Foundation and Dimensions Educational Research Foundation, has designed outdoor classrooms in urban domestic violence shelters. We wish to build on the success of these projects in other states and impact on Nebraska Domestic Violence Programs; specifically at Voices of Hope, a domestic violence program located in Lincoln Nebraska. Designed as a therapeutic landscaped space for children, families, and adult survivors to enjoy, the Nature Explore Classroom reinforces the belief that families deserve a safe, special, beautiful place-an idea that is often refuted by an abuser. Numerous opportunities are provided for adult survivors to reconnect with their children and to strengthen the parent-child bond within the outdoor classroom.

Sponsor Name: WasteCap Nebraska **Nearest Town:** Multiple
Project Name: Phase One Zero Waste Community Planning **Project No:** 15-182
Amount Requested: \$178,620 **Term of Project Request:** 1 **Review Group:** Waste Management

The intent of this one-year grant request is to support the five communities in which we are currently providing Zero Waste education and assessment in developing Phase One Zero Waste plans based on Eco-Cycle’s Zero Waste Community Planning Guide and Ten Year Strategy. These communities include Imperial, Broken Bow, Wayne, Hastings, and Cass County with an emphasis in Louisville. While each community is unique in their make-up and structure and require a somewhat individualized path to Zero Waste, we will urge all of them to: Commit as a City or County to Zero Waste planning/Adopt Phase One four year diversion goals/Require both garbage and recycling haulers to provide annual data for their city on volumes of materials hauled. In setting diversion goals communities will draw upon previous assessments and reports provided to them by WasteCap and will also identify first step actions for which WasteCap will provide guidance, resources and technical assistance. First steps may range from establishing City or County policies to conducting community or business surveys or pilots. WasteCap will also provide outreach and technical assistance to businesses for waste assessment and reduction through a matching grant from the Nebraska Department of Environmental Quality. This grant will help both our Project communities with Zero Waste Planning assistance and provide valuable tools, guidance, and insight to help other communities embrace Zero Waste planning as they seek to develop sustainable and environmentally sound waste diversion and recovery systems.

