



State and Private Forestry Fact Sheet

Nebraska 2018



Investment in State's Cooperative Programs

Program	FY 2017 Final
Community Forestry and Open Space	\$0
Cooperative Lands - Forest Health Management	\$285,667
Forest Legacy	\$0
Forest Stewardship	\$135,348
Landscape Scale Restoration	\$774,999
State Fire Assistance	\$1,299,311
Urban and Community Forestry	\$1,575,858
Volunteer Fire Assistance	\$256,073
Total	\$4,327,256

NOTE: This funding is for all entities within the state, not just the State Forester's office.

NE's forest resources provide important environmental and economic benefits, such as soil and water conservation, wildlife habitat, wood and specialty forest products, wind protection and beauty. Unfortunately, many of NE's rural woodlands are unmanaged and community forests across NE are declining due to drought and insect and disease pests. Community forest refers to the collection of trees, shrubs and related vegetation growing in cities and towns. Approximately 66% (1,176,000) of Nebraskans live in urban, suburban or community areas and benefit from community forests. In NE there are approximately 470,000 acres of community forests. NE's community forests improve air and water quality; reduce noise pollution; improve human comfort, health and psychological well-being, increase property values and improve a community's "sense of place." NE's rural forests include native forestland, as well as conservation plantings, such as windbreaks and riparian forest buffers. These trees contribute to Nebraska agriculture by increasing crop yields and protecting livestock. They also protect precious water resources by filtering sediment and runoff and reduce erosion. All NFS activities are designed to educate landowners and homeowners of the importance of healthy forests and how both rural and community forests can be managed to provide maximum benefits. These activities will also educate green industry professionals about proper tree care and emerging threats so they are able to interact with and educate homeowners and landowners about maintaining healthy forests. Woody biomass is a proven, reliable energy source for heating and cooling, as well as industrial applications, electricity generation and ethanol production. Woody biomass is a near-carbon-neutral energy source that can be used to co-fire coal-burning power plants, reduce air pollution and offset carbon emissions. For industrial applications, woody biomass can replace ancient fossil fuels.

Program Goals

- Volunteer fire assistance and wildland fire hazardous fuel funds are pass-through to volunteer fire districts or forest landowners.
- Increase cost effectiveness through the use of expanded and effective partnerships.
- Increase values through sustained productivity of forests.
- Deliver programs that are voluntary and use non-regulatory approaches.
- Address the critical issues of: approaching and existing threats to forest health and productivity; declining community forests; increasing wildfire risk to forests; declining rural forest health and productivity; the loss of conservation plantings on agricultural lands; diminishing understanding and appreciation of the value of trees and forests; persistent lack of wood product markets; and under-utilized forest resources.
- Geographically concentrate program efforts on critical landscapes to achieve landscape-level, all lands impacts.
- Promote species diversity as part of healthy rural and community forest resources.
- Develop effective partnerships to promote the use of woody biomass for energy and other applications.

- The restoration of disturbance adapted hardwood forests along the Missouri and Platte rivers

Key Issues

- Fuel loads in Nebraska's ponderosa pine, mixed pine/cedar and some riparian ecosystems are dangerously high and growing and must be thinned to reduce the risk of intense, stand-replacing catastrophic wildfire, as experienced in 2012.
- Eastern redcedar forests are expanding at a rapid rate across rangeland and under existing hardwood forests. These forests are expanding by 38,000 acres per year, and are generating considerable concern by the conservation community, the fire community, and the agricultural community, while at the same time creating economic opportunities for wood products enterprises.
- Emerald ash borer is now in Colorado, Kansas, Iowa, Missouri and Minnesota and discoveries in Nebraska now threatens our 44 million ash trees across the state. This is a huge threat to Nebraska's forest resources. In Nebraska's community forests alone, costs to remove and replace ash trees killed by EAB are estimated to exceed \$1.0 billion. Ash trees in Nebraska represent nine percent of the state's entire tree population.
- Declining forest health, due to an aging community tree population, recent emergence of several fatal tree diseases, severe weather events, drought and severe flooding along the Missouri and Platte Rivers.
- Large-scale community tree planting programs, as well as urban/suburban dweller education and green professional training are all required to restore healthy community forests.
- Expanded use of green infrastructure to reduce costs, increase tree planting, improve aesthetics and provide ecosystem services is an important new direction for community forestry programs.
- Need to extend community forestry programs to the wildland-urban interface.
- Declining health and quality of rural forests due to damage from livestock grazing, herbicide drift, harvesting practices and conversion to non-forest uses. Approximately 75 percent of Nebraska's natural and planted forest resources are in need of improvement practices.
- Need to establish new conservation plantings for wildlife habitat, shelterbelts, watershed protection, wood products and other conservation purposes.
- Training of local firefighters is often not consistent with that of federal firefighters.
- To reverse the decline of rural economies across Nebraska, woody biomass markets will be fostered as long-term drivers of rural economic development and a pathway toward Nebraska's energy independence.
- Federal, state and local legislators and their staffs must be educated on the economic and environmental benefits provided by trees and forests.

Forest Facts and Accomplishments

Selected Facts	Value	FY 2017 Accomplishments	Value
Population	1,826,341	Landowners Receiving Educational or Technical Assistance	4,338
Acres of Forest Land	1,532,084	Acres Covered by New or Revised Forest Stewardship Plans	24,431
Acres of Nonindustrial Private Forest Land	1,092,000	Acres in Important Forest Resource Areas Covered by New or Revised Stewardship Plans	22,658
Number of NIPF Landowners	57,000	Volunteer Fire Departments Assisted	150
Acres of Federal Land Under State Fire Protection	741,247	State Fire Communities Assisted	10
Acres of Private Land Under State Fire Protection	48,342,273	Coop Forest Health Acres Protected	240
Number of Rural Fire Departments	494	Forest Legacy Project Acquisitions	0
Cities and Towns	530	Communities Provided Urban Forestry Program Assistance	134
Forest Based Employment	2,200	Population Living in Communities Provided Urban Forestry Program Assistance	1,249,475
Economic Impact of Forestry (by rank)	34,000,000	Urban Forestry Volunteer Assistance	3,300
State Forestry Budget (All Sources)	5,306,217		

Program Highlights

Community Forestry and Open Space

Tree City USA Recognition Day and trainings were completed with 100 communities certified as TCUSA (\$8.5 million locally invested), 4 utility providers certified as Tree Line USA and 5 campuses certified as Tree Campus USA. NFS has had on-going coordination and collaboration with Nebraska Statewide Arboretum, Inc. to implement programs and projects statewide. Efforts included investing more than \$1,260,000 in 126 community projects to support tree planting and landscaping efforts across the state. INITIATIVES: Continue to support growth of the ReTree Nebraska Initiative to cover 295 participating ReTree ambassadors, 122 participating communities and 12 ReTree nursery sponsors with the Sustainable School Yards Program and Conservation Education programming. Sustainable Community Trees and Environmentally Adapted Trees are fully implemented with 10 participating communities and green industry partners. Nebraska's Ten Largest Communities and Community Marketing for Trees are also being implemented with participating partners.

Conservation Education

Conservation Education within the NFS has seen major gains this year. NFS grew and expanded the network of trained educators, including training new facilitators, participated in outreach efforts across the state, and built new, meaningful partnerships to meet the needs of underserved communities reaching thousands of students. Impacted the lives of children throughout Nebraska by training teachers and child care providers in multiple curricula in 5 of our 6 regions of the state, further spreading CE impact. To help respond to these growing requests, 16 new facilitators were trained.

Cooperative Fire Protection

NFS Wildland fire training provided NWCG training to local, state, and federal agency personnel. The NFS worked directly with local fire chiefs and firefighters to broaden their knowledge of wildland fire suppression and mitigation tactics through classroom and hands on training. In addition, the NFS participated in TREX held at Fort Robinson, hosted the annual Nebraska Wildland Fire Academy and provided field training to the NE National Guard.

The Fire Prevention program with cooperators and local VFDs provided over thirty events that reached approximately 19,000 people. The second community in Nebraska was certified as Fire Wise with a third community working toward that goal.

The impact that the NFS has had throughout the state in 2017 has been substantial; through the training program, NFS, cooperating agencies, VFDs, and the communities are better prepared to keep fire small and avoid large for catastrophic wildfire and large scale incidents.

Economic Action

2017 was a milestone year for the Forest Products Unit (FPU). Along with dramatically increasing our outreach hours and number of direct outreach participants since 2016--increases of 79% and 177%, respectively--FPU staff became more deeply involved in working with the forest products industry. Capitalizing on opportunities, FPU staff coordinated with the forest products industry on issues related to transportation logistics, regulatory concerns, and market development.

There was also a significant increase in FPU involvement with urban wood utilization. FPU, using NFS sawmill and kiln, participated in two large urban sawmilling projects and have agreed to assist with a significant urban wood utilization project --providing urban ash lumber for use in the Lincoln Public Schools wood shop curriculum for the 2018-2019 academic year. Even though there were no new EAB finds in Nebraska in 2017, there remains interest in innovative solutions to urban wood waste disposal.

Three significant efforts were completed which will be used to guide FPU program which focus on removing barriers to entry into markets by industry; the Western Timber Supply Study, Wood Energy Hotspot Assessment, and Western Timber Landowner Survey. These tools demonstrate significant investments to leverage projects for the next several years that will continue to identify opportunities and remove barriers for forest products markets and industry.

NFS Staff helped fourteen landowners setup and market timber sale on 187 acres of land with a total value of over \$53,000. NFS forest fuels treatment programs generated eighty-five (85) jobs (skilled thinning contractor labor force), \$334,900 payroll and \$1,967,800 worth of goods/services to enhance rural economic development. We ramped up the "business incubator" role of NFS by causing \$785,418 financial assistance for fuels reduction projects to roll over in Nebraska communities for \$3,345,9261 of total economic impact

Forest Health Protection

Forest Health provided extensive education and outreach to professionals and the public on a wide variety of insect, disease and other tree health issues, including thirty-seven workshop presentations that reached over 1,200 people. Many of these presentations focused on emerald ash borer (EAB), considered the most destructive insect pest ever to occur in the U.S. These EAB presentations raised awareness, prompted readiness planning, and helped to clarify the complex issues surrounding treatments. Other Forest Health education and outreach tools included Coffee with a Forester workshops, an updated Forest Health Monthly Newsletter, and brochures covering more than 60 tree pests and problems--available in hardcopy and online.

Abiotic issues, particularly herbicide damage, drought and freeze, were a problem this year. These issues were addressed in a number of presentations, publications and direct landowner consultations. Forest Health hosted the annual meeting of the Great Plains Tree Pest Council where herbicide issues was a featured topic--setting the stage for a possible collaborative 4-state project investigating herbicide injury in the Great Plains.

Forest Health surveyed for emerald ash borer and thousand cankers disease in multiple high-risk locations in the state, and began organizing Tree Canopy Pest Detection workshops, which will train urban tree care professionals in identifying invasive pests, thus expanding detection efforts.

Forest Legacy

NFS is working on the development of 3 potential projects in the Pine Ridge and one in the Niobrara Valley (5 miles east of Valentine) with the help of Nebraska Land Trust. These projects are in the planning stages. Lincoln City project is high on the list to move forward after review by the R2 Coordinator, project is worth pursuing due to the unique nature of what we are trying to do. One potential new project has come to the forefront in the northeast part of the state. A highly prized partial containing an oak savanna woodland is in discussion with the landowners. NFS prepared an update draft of AON and presented for approval by the Stewardship Committee, draft presented to WO for comment and review.

Forest Stewardship

The Rural Forestry Program provided direct, on-the-ground, technical assistance to woodland owners,

agricultural producers, and land stewards to improve the health and productivity of their forest resources. Additionally, NFS worked in partnership with natural resources conservation agencies and organizations at the county, state and federal level to provide assistance and advice to carry out programs that serve woodland owners.

The Rural Forestry program implements the Forest Stewardship program which provides woodland owners with access to cost-share assistance programs and forest certifications schemes through the preparation and implementation of Forest Stewardship Management plans. Staff met with 342 woodland owners on their property to provide management advice to help them meet their goals; met with 470 woodland owners with established Forest Stewardship Management plans to discuss the implementation; wrote one landscape level Management Plan covering 1,300 acres, 51 forestry stewardship Management Plans covering over 52,000 acres, four Forest Management Plans covering over 7,000 acres of public lands, 120 practice plans for the planting or management of trees on over 4,000 acres of land and 68 written recommendations for the forest health recommendations on over 450 acres of land.

Landowner Assistance

NFS forest fuels treatment programs treated 1,321 acres which led to the protection of an additional 396 forested acres; 96 new projects are being implemented to treat 2,606 additional acres.

Repeated, increasingly frequent, uncharacteristic wildfires are rapidly destroying the ponderosa pine ecosystems in the Niobrara Valley and Pine Ridge. Since 1989, the iconic Pine Ridge of northwest Nebraska has lost 66 percent of its forest cover, from 250,000 acres in 1989 to approximately 80,000 acres today. To address this situation the Nebraska Forest Service is providing cost-share incentives to private and public landowners to thin and remove dead, burned trees around surviving islands of green trees to protect their long-term capacity to regenerate. The goal of this project is to minimize future crown fires, help restore pine forest health and sustain the flora and fauna that depend on this unique ecosystem. In addition, NFS is working with landowners within the burn footprint to re-establish ponderosa pine seedlings. This project is in the recruitment phase and landowners are signing up to plant more than 200,000 seedlings over the next 2 years.

Landscape Scale Restoration

The NE-TLC project focuses on communities within which 50% of the state's population resides. Urbanization of rural areas is expanding by 3,200 acres/year. Strategies for this priority landscape include targeted planting of large maturing shade trees to address critical issues of energy use, storm water management and air/water quality. This project leverages diverse state and national partnerships to design, promote and implement the strategic planting of 10,000 trees in targeted community locations.

Full Circle Benefits (FCB) is a forest management initiative which identifies and captures the full worth of community tree resources and land management opportunities to maximize public benefit. This effort proactively puts in place a market driven conservation plan to capitalize on expanding benefits of trees from shade to edible forest landscapes to wood products. Project partners will demonstrate and promote traditional and non-traditional practices to mitigate loss of canopy and maximize local benefits.

Arborists Safety is to increase accessibility and availability of green industry training to maximize safety, increase production and leverage management investment within identified critical landscapes. This effort targets: arborists, city forestry staff, loggers and firefighters to mitigate and reverse the identified degradation of the urban and rural canopies which inventories and SFRAS have characterized as extreme risk due to over-maturity, current and future invasives and multiple severe weather events. This project increases safety, awareness of critical forestry issues and effectiveness among tree care workers during a time of increased urban and rural canopy removal and fire mitigation work.

Community Marketing for Trees program provide resources and a foundation for community forest health and planting efforts.

Urban and Community Forestry

NFS awarded grants to targeted communities across the state resulting in 128 projects that have high impacts on stormwater management, increased pollinator habitat and other tree and environmental benefits. NFS directly impacted over 8,690 people through education and outreach events, volunteering and project implementation. NFS indirectly impacted 240,000 through newspaper articles, videos and

social media. Additionally, NSA's projects and grant dollars were distributed to communities large and small. NSA worked directly with 29 villages/towns/cities on 70 landscape projects. Of those projects: 28 serve communities with populations under 8,000; 23 serve populations 8,000-54,000; and 19 serve Lincoln/Omaha. These efforts involve 700+ volunteers plus local green-industry staff and serve schools, hospitals, museums, parks, urban and small-town streetscapes and nursing homes. In addition, we work with 30 communities through the NSA affiliate site program.

Over 7,200 individuals participated in statewide training activities in cooperation with NFS, NSA Inc., NNLA, LONM and NE Arborists Association. Supported and promoted the annual arborists training seminar and arborists outreach program efforts including hosting a MWISA class for ISA certification in western Nebraska. Supported training series on root health and proper planting practices targeting green industry professionals.

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