

**State and Private Forestry
FY 2010 Western Competitive
Resource Allocation
Single-State Project Proposal**

Filename	
NE_Assessing	
Administration Information	
Dollar Amount Requested:	\$300,000
Matching Share:	\$300,000

Applicant Information	
State Forestry Agency:	Nebraska Forest Service (NFS)
Contact Person:	Dr. Scott J. Josiah
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Project Information			
Descriptive Title of Project:	Assessing, Protecting & Enhancing Forest Health in Nebraska		
Names of Partnering Agencies / Organizations:	Natural Resource Conservation Service (NRCS), NE Game & Parks Commission (NGPC), Natural Resource Districts (NRDs), NE Information Technology Comm. (NITC), Resource Conservation and Development (RC&D), The Nature Conservancy (TNC), NE Emergency Mgmt. Agency (NEMA), Fish and Wildlife Service (FWS), Farm Service Agency (FSA), NE Arborists Assn. (NAA), NE Nursery & Landscape Assoc. (NNLA), NE Statewide Arboretum, Inc. (NSA Inc.), NE Dept.of Roads (NDOR) and NE State Volunteer Firefighters Assn. (NSVFA).		
State(s):	Nebraska	Congressional Districts:	District 3
Counties:	30 Counties in Southwestern and Central Nebraska	Forest Service Regions:	Region 2

Total Leverage							
Please specify each 3 rd party contributor (partnering organizations and agencies, including other Federal) and the dollar value of each contribution. Please DO NOT show grant requested funds in this table.							
3	Contributors: (Please specify by name)	USFS	NRCS	NRDs	NDNR	NDEQ	TOTAL
	Value of Contributions:	\$4,000	\$15,000	\$11,320	\$10,000	\$15,000	\$55,320

Project Budget					
	Grant Share (\$ requested)	Applicant	Non-Federal Contributors	TOTAL	
		Cash¹	In-Kind²		
4	Personnel / Labor:	\$195,820	\$107,778	\$0	\$303,598
	Fringe Benefits:	\$54,830	\$30,178	\$0	\$85,008
	Travel:	\$27,000	\$0	\$0	\$27,000
	Equipment:	\$0	\$0	\$0	\$ 0
	Supplies:	\$16,350	\$0	\$0	\$16,350
	Contractual:	\$6,000	\$0	\$0	\$6,000
	Construction:	\$0	\$0	\$0	\$ 0
	Other:	\$0	\$0	\$0	\$ 0
	Indirect Costs:	\$0	\$162,044	\$0	\$162,044
	TOTAL:	\$300,000	\$300,000	\$ 0	\$600,000

Project Duration	
5	What is the duration of this project? <input type="checkbox"/> One Year <input type="checkbox"/> Two Years <input checked="" type="checkbox"/> Three Years

National Relevance	
6	Conserve Working Forest Landscapes <input checked="" type="checkbox"/> Protect Forests From Harm <input checked="" type="checkbox"/> Enhance Public Benefits From Trees and Forests <input checked="" type="checkbox"/>

Project Description	
7	<p>Maximum 5500 Characters Including Spaces – Clearly summarize the proposed project, including goals, objectives, measurable outputs, outcomes, and how grant funds will be used towards successful completion of the project.</p> <p>This project addresses all 3 S&PF Redesign themes, as well as priorities identified by the Secretary and Chief, including restoring forest landscapes, protecting water quality & wildlife habitat & stimulating rural economies.</p> <p>FOCUS:</p> <p>To reduce the risk of catastrophic wildland fire & preserve & protect forest health in 5 newly identified critical landscapes that, combined, comprise more than 400,000 acres at increasing risk to catastrophic wildfire.</p> <p>In a similar project, NFS successfully geospatially mapped the Niobrara Valley in north central NE & identified tracts of land dominated by fire-prone tree species. This information can be compared with the location of communities, roads, completed fuel reduction sites & a host of other geo-referenced data making it valuable to wildfire protection & forest management.</p> <p>GRANT DOLLARS WILL FUND THE FOLLOWING OBJECTIVES:</p> <p>-Use geospatial technologies, including the latest 2009 1-m aerial imagery, Definiens software and LIDAR technology (Light Detection and Ranging) to map all 5 critical areas needing fuels reduction & at risk to specific forest health threats. Completed maps will also show species volume.</p>

¹ 'Cash' is the value of any qualifying match the applicant pays for such as cash, staff time, supplies, or equipment.

² 'In-Kind' is the value of any qualifying match contributed by a non-federal 3rd party contributor such as donated time, supplies, or equipment.

- Definitively document the current extent, condition and potential of forest land within the 5 critical landscapes.
- Craft 20 forest stewardship & practice plans with private landowners.
- Write 5 Community Wildfire Protection Plans (CWPPs).
- Implement fuels reduction.
- Foster market development for woody biomass.
- Implement Firewise programs with seasonal & permanent residents.
- Assess forest health & fragmentation trends.

PRIORITY:

5 priority areas were selected based on their emerging/increasing wildfire risk and lack of local CWPPs. In addition to protecting life and property by reducing the risk of catastrophic wildland fire, focusing resources in these areas will protect and enhance the health of forestland and associated benefits in the following critical landscapes:

The Wildcat Hills in the NE Panhandle (14,417 a) contains unmanaged and dangerously overstocked forest land with a very hazardous fuel combination—a Ponderosa pine overstory and eastern redcedar understory. Many homes have been built in this scenic but dangerous landscape. The area also contains 4 NGPC-managed properties and has been in the grips of a prolonged, severe drought for the last decade. In June 2009, mountain pine beetle was confirmed for the first time in the Wildcat Hills. The area's mix of dead & dying trees, volatile fuel loads and homes brings increased urgency to the need for sound forest management.

The Platte (232,641 a) & Republican Rivers (80,523 a) span hundreds of miles in central & southern NE respectively. Both rivers & their forests are valued for their recreational opportunities. The Platte River runs immediately adjacent to one of the nation's busiest roads: Interstate 80. Invasives & aggressive natives (phragmites, Russian olive, saltcedar & eastern redcedar) are expanding at an alarming rate in these areas, clogging river channels (impacting both water quality & quantity downstream) & creating a dense, highly flammable understory that outcompetes native species. These forests are also threatened by emerald ash borer (EAB), which has reached MN & MO in its push west. Because NE's riparian forests are 33% ash, EAB is a significant threat. Over the years, multiple ownerships, highly flammable invasive & aggressive native species & lack of management have resulted in dangerously overstocked & increasingly fire-prone forests in areas that, historically, were at lower risk of catastrophic wildfire. In March 2009, a wildfire along the Platte R. burned 640 a & closed Interstate 80 for nearly 7 hours, resulting in economic losses of nearly \$7 million dollars. The chief of one responding volunteer fire department was reported as saying, "I hope I never have to fight a fire again in 40 mph winds down in the river bottom, in tall grass & in trees like we had down there yesterday." Because of this wildfire, which lasted 9 1/2 hours, 30-35 homes were evacuated & 3 structures & a bridge were destroyed. 66 firefighters from 10 fire depts battled the blaze. Millions of dead & dying ash trees, combined with the existing highly flammable understory will significantly compound this risk.

The Loess Hills (40,375 a) of southwestern NE is scenic canyon country with grassland heavily colonized by eastern redcedar forests. Area ranchers are attempting to reclaim grazing land in these canyons with fire. At the same time others have chosen to build their homes in this area, placing themselves at great risk to wildfire. Given the very high fuel loads, rolling terrain & lack of experience with, yet increased use of, prescribed fire, there is a great risk to life and property in this area.

The Central Uplands (38,000 a) in central NE is a mix of small communities, farmland and rangeland. Over the past several decades extensive, dense stands of eastern redcedar have invaded thousands of acres of rangeland. These new, highly flammable forests extend right up to the limits of some communities. Now farmers, ranchers & communities find themselves at risk to a new, more dangerous kind of wildfire.

OUTCOMES:

- CWPPs that benefit communities requiring fuel treatment cost-sharing.
- Greater awareness of the consequences & risks of wildfire.
- Reduced risk to life and property.

	<p>-Enhanced forest health. -Better understanding of available woody biomass resource.</p>
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8	<table border="1" style="width: 100%; background-color: #cccccc;"> <tr> <th colspan="2" style="text-align: center;">Program Integration</th> </tr> </table> <p>Maximum 1250 Characters Including Spaces</p> <p>This project creates synergy by uniting the traditional S&PF programs of Coop. Fire, Urban & Community Forestry, Forest Stewardship and Forest Health. UCF, with its green industry ties & landscape design capacities, will contribute to Firewise landscaping presentations in workshops & on site. Through its successful work with forest landowners across the state, FS will be instrumental in developing stewardship & fuels treatment plans. Because both abiotic & biotic agents affect forest health & the condition of forest fuels, expertise provided by the FH program will be key in interpreting current forest health impacts revealed by the project & determining best management practices for long-term forest health. Coop Fire professionals will provide GIS, CWPP and Firewise expertise.</p> <p>Increasing forest fuels pose not only a problem, but also an opportunity, so this project also incorporates Marketing & Utilization. Utilization of woody biomass reduces fuel loads, creates long-term jobs, reduces reliance on fossil fuels & revitalizes local communities, as evidenced by existing woody biomass-utilizing facilities in NE. This project will provide information needed to facilitate further woody biomass utilization.</p>	Program Integration	
Program Integration			

9	<table border="1" style="width: 100%; background-color: #cccccc;"> <tr> <th colspan="2" style="text-align: center;">Collaboration</th> </tr> </table> <p>Maximum 1250 Characters Including Spaces</p> <p>NFS has substantially engaged a broad range of partners in the development & implementation of this project:</p> <ul style="list-style-type: none"> -NRDs, NGPC, FSA, NSVFA, RC&D, NEMA, FWS, TNC and NITC will contribute aerial photography, time, landscape knowledge, local fire history, GIS data and expertise, and local connections. -NRCS will contribute substantial support including the best available GPS/GIS and remote sensing technology and software, aerial photos and software training to conduct the strategic fuels assessment. -NAA & NNLA will provide technical expertise through local nursery managers and certified arborists in implementing tree health care practices complimentary to Firewise community planning and management. -In cooperation with NDOR and other funding entities, NFS will target community forestry grant funds to implement Firewise tree and shrub planting projects within these critical landscapes, including design assistance and selection of appropriate fire-resistant species. -All partnering organizations will provide expert advice in the development of a comprehensive education and outreach strategy for forest thinning and firewise design. 	Collaboration	
Collaboration			

10	Leverage
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Maximum 1250 Characters Including Spaces
 Multiple programs within NFS share the S&PF mission and support this project, bringing with their support the support of numerous outside partners, including state, federal and local agencies who will add their financial and in-kind support to the successful completion of this project:
 -NFS will use the latest available 1-meter resolution, aerial photography & LIDAR purchased with financial assistance from: USFS, NRCS, NDNR, NDEQ, NRDs, as well as the NFS;
 -NRCS provides training in the use of software which examines the imagery and differentiates between species and fuel types;
 -field office personnel in NRCS, the NRDs and local volunteer fire departments struggle with the impact of invasive species and changing fuel types and are therefore willing partners, sharing their time and expertise with landowners to ensure the successful completion of this project.

Meaningful Scale

11 **Maximum 1250 Characters Including Spaces**
 The goal of this project is to assess the forest fuels in each of 5 areas identified by NFS as priority landscapes based on existing and emerging fire and forest health threats. Combined, these areas represent 400,000 acres of Nebraska's most at-risk forested areas. This project addresses the steps needed to preserve the overall health, productivity and sustainability of these forests.
 -High quality aerial photos are available for these areas, and an experienced GIS specialist will complete this assessment.
 -Because one goal of this project is to identify areas in need of CWPPs and fuel treatment, NFS will utilize the expertise of a planner and field foresters, all currently on staff, who are experienced in these areas and will be able to provide ongoing assistance to communities and landowners assisted through this project.
 -Firewise workshops in local areas will be promoted and staffed by experienced UCF and Cooperative Fire staff and will provide forest landowners information they need to implement and maintain Firewise practices on their property. Based on previous experience, the resources of NFS and our partners are more than adequate to successfully complete this project.

Sphere of Influence

12 **Maximum 1250 Characters Including Spaces**
 This project will test and refine a highly replicable geospatial model that enables the characterization of linear, fragmented forests in ways that FIA data cannot. We believe this model has powerful applications in many other states where accurate data about stand characterizations, acreage and fuel types and loads are central to the effective management of these lands and the maximum protection of life and property.
 Other states with GIS capability could replicate this study and get valuable information about the location and extent of diffuse and riparian forest resources. A model, derived from this study could be used by other states to take forest type data from aerial photo interpretation and use it, along with LIDAR data, to determine valid estimates of wood volume. This information will help foresters assess the ability of current forests to meet the demands of existing and emerging wood product and woody biomass markets and allow potential consumers of wood and woody biomass to make informed investment decisions.
 All educational & media materials will be available to other states for their use in executing similar projects.

Sustainability of Outcomes

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Maximum 1250 Characters Including Spaces

Outcomes of this project include not only accurate, up-to-date information, but also baseline data to which future survey results can be compared. These data will provide valuable information in such areas as forest growth and fire hazard changes/trends. Forest volume estimates will also help NFS keep pace with future interest/demand for woody biomass, which, when developed, creates long-term markets in critical landscapes. CWPPs emphasize the need for stewardship plans and the management of large tracts of forest land over a long period of time. Along with fuel reduction agreements, CWPPs also emphasize the need to reduce fuel loads to a manageable level and maintain these levels through proper forest management, making them a pathway to long-term forest management practices on a landscape scale.