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Introduction

The 2008 Farm Bill¹ requires each State to complete a Statewide Forest Resource Assessment (State Assessment) and Statewide Forest Resource Strategy (State Strategy) by June 2010 to receive funds under the Cooperative Forestry Assistance Act.² State Assessments are intended to identify key forest-related issues and priorities to support development of the long-term State Strategy. As directed in the Farm Bill, these State Assessments and Strategies are “deemed to be sufficient to satisfy all relevant State planning and assessment requirements under [the Cooperative Forestry Assistance Act].”

Iowa’s State Forest Resource Strategies document is complementary to Iowa’s State Resource Assessment. The State Forest Resource Assessment goes into detail describing the benefits trees and forests provide to communities, their residents, to rural landowners and public agencies. The State Forest Resource Strategies document will describe issues that were identified in the Assessment that prevent Iowa’s forest resources from being recognized as a solution to a variety of problems related to Iowa’s natural resources.

The State Forest Resource Strategies document begins by showing geospatially the landscape areas that are a priority in the state. This map was created using 15 criteria important for identifying where to emphasize protecting or enhancing forestry activity. Background details can be found by referencing the State Forest Resource Assessment document.

Another map showing the multi-state priority areas where opportunities exist to partner with adjacent states to work on forestry issues common to each state.

This document takes the issues described in the State Forest Resource Assessment and consolidates them under 9 priority themes.

1. Competing land uses
2. Communication & Education
3. Sustainability of forest resources
4. Ecosystem Services: Wildlife Habitat & Diversity, Scenic Landscapes, Water Quality, Air Quality, Carbon Sequestration
5. Fire management
6. Sustainability of urban forests
7. Forest health
8. Utilization and marketing
9. Legal/ Political/ Economic Considerations

¹ The Food, Conservation, and Energy Act of 2008, commonly referred to as the Farm Bill, was enacted June 19, 2008.

² The Cooperative Forest Assistance Act provides authority for the S&PF program areas.

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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Purpose, explain what is in this document, reference details can be found in the assessment and brought these issues up for forestry to deal with.

Have program folks comment on revise draft before sending this out for stakeholder review.

These priority themes have similar issues that address different problems for each theme. How these issues affect Iowa's forest resources can be found in detail within the State Forest Resource Assessment. The short-term and long-term strategies for addressing each issue are explained following each issue statement. The resources necessary to address each theme are discussed at the **end of each chapter**.

1. Competing Land Uses:

1.1 Promote tree planting in growing Iowa communities, especially when new developments occur where no trees exist. [3.1, 3.2, 3.6, 3.7]

Few of Iowa's communities have a dedicated forestry/ arborist on staff to plan and care for their public trees. In fact, the trend now is to not plant trees in public right of ways, so the community will not be responsible for the costs associated with planting, maintenance and removal of those trees. When communities annex more land under their jurisdiction, the conversion of that land does not usually take into account existing trees or for planting more trees to produce more urban tree canopy. The only tree canopy that will be occurring in these new developments is where homeowners or home builders spend their own money to plant trees in the yard. By having fewer street trees, the amount of impervious materials will be greater as communities grow. This will increase demand for energy from utility companies and raise utility bills for businesses and homeowners located in areas where public trees are removed and not replaced.

Long-term strategies to address this issue:

- Increase tree canopy in new developments to increase energy efficiency, modify local climates, help air quality, water quality and quantity, decrease soil erosion and keep soil horizons, increased aesthetics, noise reduction, economic stability.
- Partner with utility companies and Trees Forever to educate city planners, developers and community leaders to plant more trees in communities where those trees can be most beneficial at increasing energy efficiency, reducing the "heat island" effect, improve air quality, improve water infiltration and reduce stormwater runoff, stabilizing soils, improving aesthetics, reducing noise and increasing property values.
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Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

Blue- Issue submitted by a stakeholder

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- Staff available to work with partners to communicate with community planners, developers and city leaders to better incorporate trees into their residential plans.
- Suitable planting stock that is adapted for growing in Iowa under urban conditions for the long term. Right now most of the Iowa landscape nursery stock comes in from out of state sources, increasing the introduction of insects and diseases. A lot of this nursery stock has grafting or adaptability issues, shortening the lifespan of those trees.
- Money to pay for buying trees, planting, maintenance and removing hazardous trees is the biggest limiting factor for addressing this issue. Without a continuous dedicated source, more communities will continue to cut or eliminate programs to save money. More education and outreach is needed to show communities the indirect economic savings trees provide to communities, businesses and homeowners.

Programs Involved:

Urban & Community Forestry, Conservation Education

Stakeholders Involved:

Municipalities, DNR Urban Forestry, Trees Forever, ISU Extension, Regional RC&D's and Iowa Urban and Community Forestry Council.

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1.2 Promote tree planting as part of every Stewardship and Community plan. [3.1, 3.2, 3.5, 3.6, 3.7]

From a homeowner planting a tree in their front yard to the farmer putting in a conservation planting, every kind of tree planting is as important as any other. Planting trees are a way to get landowners to stay in touch with their property and leave a legacy for future generations.

Most people understand the simple benefits provided by trees like the cooler temperatures under the shade of a tree on a hot summer day. With more and more people owning less land, reaching out to everyone about how they can help with getting more trees planted in their yard or on their farm would have a positive impact on the land in Iowa. Most people take for granted the existence of natural resources around them. An ongoing message to the public about the benefits provided by trees and how they can participate is needed to engage the public about improving the tree/ forest resource around them. Trying to get people to replace the trees they are using for products and to grow more trees for storing carbon from their pollution would be a way to make Iowa a carbon neutral state.

Long-term strategies to address this issue:

- Every site visit a forester makes should include promotion of tree planting conservation programs with native tree seedlings.
- Make landowner visits to all willing landowners within a high priority area to provide information about how to manage/ appreciate their forest resource.
- More education and outreach through Forestry Field Days.
- A recognition program that rewards landowners who are leaders in conservation will bring attention to tree planting and good conservation practices. Following through with local newspaper coverage, bringing attention to the activities by these model landowners, would provide inspiration to others.
- Make information more readily available about how to offset the carbon footprint of each homeowner. By including a statistic about how many trees would need to be planted to offset each homeowner's utility bill and challenge those people to plant or contribute to an organization that would plant trees on their behalf.
- Work with federal partners (**list**) to shape conservation programs that encourage tree planting for all landowners willing to participate in tree planting conservation programs. Promoting the benefits of permanent vegetation like trees on highly erodible lands as long-term solutions for protecting soils on steep slopes, soils located close to waterways, improved water infiltration, improved soil stability and for carbon sequestration.

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Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Staff available to help landowners/ homeowners get more trees planted. We have 16 foresters available to service 150,000 forest landowners across Iowa.
- Need increased funding for additional staff to deliver conservation education programs. Problem is we have lost the ISU county extension infrastructure for education outreach, so the future management of most natural resources will be an overwhelming challenge.
- Suitable native conservation seedlings available at a low cost, to keep tree planting from being a cost prohibitive activity.
- Financial incentives to get people in communities to plant trees that will effectively shade buildings/ houses or other impervious barriers on their property to reduce energy needs.
- Financial incentives to allow people with land that is highly erodible, near a water corridor, adjacent to community water sources, key pieces for creating corridors that connect important forested ecosystems as defined in the priority map to plant these lands to trees.
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Programs Involved:

Stakeholders Involved:

Blue- Issue submitted by a stakeholder

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1.3 Parcelization/ Fragmentation [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

Smaller units of forest support less wildlife species and a smaller population of those species. As travel corridors are reduced or eliminated it is difficult for wildlife to move from one area to another. More fragmentation makes it easier for invasive species to become established. Iowa has lost about ½ of its forest due to conversion to agriculture on floodplain rich soils over the past 170 years. Pressure to build houses on acreages is converting remaining forests near urban areas into smaller units, removing most of the functionality of those forests.

Personal landowner visits are effective but we only impact about 12% of all the forest landowners each year. It's certain that we won't get more DNR field foresters to work with the landowners, and we have lost the ISU county extension infrastructure for education outreach, so the future management of most natural resources will be an overwhelming challenge.

landowner visits and forest stewardship plans,

Long-term strategies to address this issue:

- Minimize conversion of existing forest land by supporting local conservation efforts. Survey to see if there are any counties that would participate in creating rules that restrict how forest land is developed, similar to how farmland can't be subdivided for housing developments. Do not allow any forest greater than 40 acres to be subdivided into smaller parcels.
- Work with federal partners(list) to shape conservation programs that encourage tree planting for all landowners willing to participate in tree planting conservation programs. Promote the benefits of permanent vegetation like trees in areas where forest wildlife species of greatest conservation need have been identified in the Wildlife Action Plan and where priority areas are identified in the State Assessment.
- Provide economic incentives to people who own high quality forest ecosystems to manage those ecosystems in a sustainable manner that maintains those qualities that make that forest ecosystem desirable.
- Create markets that pay landowners for the ecosystem services the trees on their land provide. Trees filter air, water, provide long-term storage for carbon, important wildlife habitat, lower utility bills for businesses and homeowners and provide aesthetic qualities that can be spiritually uplifting. As of today, none of those services that we all benefit from are captured economically by those landowners that own the resource. Better management of the forest resource will not occur, under a capitalist society, until there are economic incentives for the ecosystem services trees and forests provide.
- Promote easements as a part of every stewardship plan. Mention the possibility with each forest landowner that has large contiguous forest cover that is identified as a priority on the map from the State Forest

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Resource Assessment. Including information about what an easement is, who to contact for more information and the advantages for an easement, could engage more landowners to protect their forest resource from being developed.

- Research showing how many acres of forest is necessary for species of greatest conservation need and the habitat type they prefer to inhabit. Research showing which vascular plants and wildlife species are displaced when various forest types are fragmented into different sized acreages.
- More emphasis on education and outreach through Forestry Field Days to forest landowners to promote forest stewardship, water quality, wildlife viewing and Important Bird Areas.
- More landowner visits and forest stewardship plans written in priority areas that promote protecting and increasing the forest resource.
- Monitor real estate sales and planned residential development of forested parcels in each county, and compare it to the SAP map priority areas.
- Annual review of individual county goals and accomplishments of forest stewardship projects on the land.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Financial incentives to allow people with land that is highly erodible, near a water corridor, adjacent to community water sources, key pieces for creating corridors that connect important forested ecosystems as defined in the priority map to plant these lands to trees.
- Financial incentives to allow people with important forest land as identified in the State Assessment to be managed for those qualities that make that forest ecosystem desirable.
- Work with stakeholders to create a grassroots effort to influence county supervisors to create rules that prevent parcelization of forestland into smaller units than 40 acres. Work with existing forest advocacy groups to promote this idea and see if developing more groups to be effective in other areas of the state is worthwhile.
- Need increased funding for additional staff to deliver conservation education programs.
- Federal, state and county cost share programs for landowners to help with costs of TSI, tree plantings, and riparian areas. Education outreach and Forestry Field Days.

Programs Involved:

Forest Stewardship

Stakeholders Involved:

IWOA, DNR Wildlife, NRCS, FSA, ISU Forestry Extension, County Conservation Boards, Tree Farm Committee, Forestry Consultants, Sawmills and Loggers.

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1.4 Abandoned/ Active Pasture lands [1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

Abandoned pastures are usually poorly stocked stands of low quality trees that are in need of management. Active pasturing of woodlands reduces the biological diversity of plants and animals that once inhabited that forest. Need to get farmers to think about their trees as another crop that needs proper management to be sustainable and profitable.

Long-term strategies to address this issue:

- Determine ownership of those areas formerly pastured and offer an on site visit to discuss improving the forest resource. If they qualify for a conservation program to help them with management and improvement of the resource, inform them of the opportunity.
- Determine ownership of those areas being pastured and offer an on site visit to discuss improving the forest resource. If they qualify for a conservation program to help them with management and improvement of the resource, inform them of the opportunity.
- Research showing the economic loss associated with pasturing woodlands, reduction of wood quality. Also, research showing the habitat loss by species of vascular plants and wildlife from pasturing woodlands.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Work with NRCS and their EQIP program to offer financial assistance to people that own forest land that is being pastured or was pastured to make needed improvements to the land and forest resource to restore a fully functioning ecosystem. Require repayment of all incentives, if the land reverts to pasture, even if ownership changes.
- Service foresters to make site visits and discuss options with landowners that have formerly pastured forest or are currently pasturing their forest.
- Need cooperation from FSA to determine ownership of everyone that has forest on their property. Then several maps or layers would be used to determine which properties are pasturing their forest currently and in the past.
- Articles supported by research with information about the damage pasturing woodlands causes to the forest resource in farm magazines and newsletters. Discussing not just the timber value being lost but the forest as an ecosystem that has displaced habitat for native plants and wildlife that use to grow symbiotically with the trees.

Programs Involved:

Stakeholders Involved:

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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1.5 Multiple-use conflicts [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

Iowa has just over 383,000 acres of forest cover in public land. That is not much more than 0.1 acres of forest on public land dedicated to each Iowan. To satisfy the demands of users, many areas are used for multiple user groups which leads to degradation of these public natural resources. Multiple-use trails/ areas are essential for providing opportunities for the greatest number of users because of the limited available public areas.

Multiple use trails help address the desire from the public for more areas for recreational access. Unfortunately, funding for maintenance of trails or upgrading their surfaces is expensive and certainly not adequate at current levels. Seeking public support for a sustained, dedicated funding source to maintain and upgrade recreational trails would protect the natural resources they are coming to visit.

Land is expensive and it is difficult to obtain pristine areas worthy of protecting after 170 years of settlement. The more access we provide to natural resources, the easier it is for invasive species to be established, the more disrupted that ecosystem becomes, potentially reducing the biodiversity of that ecosystem. More impervious trails or roads reduces water infiltration, increases runoff, thus increasing sedimentation, erosion or gulying depending on the slope or soil types.

Long-term strategies to address this issue:

- Create a policy that outlines which recreational activities are appropriate for different forest types, soil types within various sizes of forest. This will prevent recreational activities that are detrimental to the forest resource from occurring in sensitive areas that cause the most harm to the entire forest ecosystem.
- Only build the infrastructure that can be properly maintained. Maintaining trails is expensive, time consuming and labor intensive work.
- Work with our stakeholders to create effective working groups to lobby political officials to provide sustainable funding for maintaining public areas for multiple user groups.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Create a sustainable source of funding to better maintain and create multiple-use opportunities for the public to enjoy the forests of Iowa.

Programs Involved:

Stakeholders Involved:

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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1.6 Acquisition efforts enhanced [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

Work with forestry stakeholders to pool resources together to protect important forested areas from development as designated in the [State Forest Resource Assessment](#). Iowa has just over 383,000 acres of forest cover in public land. That is not much more than 0.1 acres of forest on public land dedicated to each Iowan. To satisfy the demands of users, many areas are used for multiple user groups which leads to degradation/ overuse of these public natural resources.

Land is expensive and it is difficult to obtain pristine areas worthy of protecting after 170 years of settlement. With an aging population of forest land property owners good opportunities exist now to make arrangements to protect quality forests in Iowa. Having local contacts who visit with landowners and establishing a trusting relationship has been the best way for finding willing landowners to establish easements for their property.

The Iowa Natural Heritage Foundation has private funds available for purchasing easements and works with state funds through REAP to secure easements for properties. TNC? Working in priority areas for each organization helps pool the limited funds available to protect important forest areas and the ecosystems they represent.

Long-term strategies to address this issue:

- Work with our stakeholders to create effective working groups to lobby political officials to provide sustainable funding so easements can be purchased to protect important forest ecosystems from development.
- Create a department policy for land acquisition that centers around obtaining forested areas that are identified in the State Forest Resource Assessment as a high priority.
- Stakeholders pool money together to have a better chance at acquiring important pieces of land to protect from future urbanization and fragmentation of the remaining forest ecosystems.
- Create a stronger mission of protection and accelerate buying important forest ecosystems.
- Invest in perpetual protection and strive for diversity of landscapes and habitats.
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Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Create a sustainable source of funding to better maintain and create multiple-use opportunities for the public to enjoy the forests of Iowa.

Programs Involved:

Forest Legacy, Forest Health and State Lands Management

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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Stakeholders Involved:

DNR, CCB, TNC, INHF, USFS, NPS, Turner Enterprises, other large contiguous woodland landowners?

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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1.7 Changing Ownership [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

Iowa's population is shifting to a more urbanized & suburban population, increasing the pressure on forest resources in surrounding communities.

A lot of communities were founded along water corridors. This is also where the majority of the forest resources were located as well. As communities grow they either encroach on more forest or farmland. This creates more parcelization and fragmentation of the forest ecosystem.

As farming has changed to more acres being managed by fewer people, rural populations have been migrating to communities for jobs. The people growing up are less connected to the land, how it functions and don't appreciate what nature has provided. Finding a way to keep these people connected is important if natural resources are going to survive and be appreciated into the future.

Long-term strategies to address this issue:

- Stakeholders work with communities to develop covenants that protect development of forest resources when land is annexed or new developments are proposed.
- Education articles provided to all local newspapers explaining the benefits of that forest resource and the importance of taking care of the forest ecosystem.
- Stakeholders work with county supervisors to develop covenants that protect development of forest resources based on the quality of that forest ecosystem as described in the State Forest Resource Assessment.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Foresters to service communities and help them develop community management plans.
- Foresters to be working with forest landowners with land that is located within the priority areas shown on the State Forest Resource Assessment priority map.

Programs Involved:

Stakeholders Involved:

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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2. Communications and Education:

2.1 Lack of forestry education in public schools [1.2, 2.2, 3.4, 3.6]

Increase children's awareness of natural resources and the benefits trees provide and move learning about natural resources to outdoor classrooms.

Long-term strategies to address this issue:

- Work with teachers to develop curriculum that meet national science standards
- Increase tree canopy and tree diversity at schools for outdoor classrooms
- Facilitate workshops and produce educational materials
- Use advertising and marketing strategies to create public awareness of tree benefits (Such campaigns as: calling a professional arborist, EAB related topics, and proper tree planting and care)
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Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Personnel to work with teachers on developing curriculum that promotes the benefits trees provide to everyone.
- Quality nursery stock for planting at schools that promote longevity and diversity.
- Hiring consultants to do advertising, publishing and printing of educational materials
- Costs of Workshops and educational materials
- Employment of an outreach position (such as Iowa State Forestry Extension)

Programs Involved:

Urban & Community Forestry, Conservation Education, Forest Health

Stakeholders Involved:

Iowa Arborists Association, Urban Forestry Council, Alliant Energy, Mid American Energy, Black Hills Corp, City Tree boards, Trees Forever, PTA/PTO, Iowa Teachers Association, Nation Education Association, National Science Teachers Association, Wilderness Education Association, City Foresters, City Planners, City Administrators, Homeowners, Iowa State University Extension

2.2 Education, Outreach & Advocacy: The benefits of trees

Several outreach campaigns and workshops to increase awareness of tree benefits and support of our tree resources. Education for public lands neighbors: including education on proper plant selection, invasive species, loss of diversity, responsible land use, beneficial silvicultural techniques, etc – private property w/ public consequences. Facilitate partnerships that foster an understanding of the value of trees, citizen stewardship and shared learning. [1.2, 2.2, 3.4, 3.6, 3.7]

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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2.3 Promoting awareness of forest resource issues while surveying results of stewardship plans and outreach [1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

On a larger scale, these issues that the general public hears about that may affect their trees in town are the perfect "in" we need to open up conversation and for better serving the general public needs. Only a small portion of Iowa NIPF owners are aware of the multiple benefits of forest ownership. Most forest landowners are not aware of forestry benefits of their woodlands or assistance available through the DNR. We work with 2,000 out of 150,000 forest landowners annually. Promote the importance of tree planting by improving public awareness of the absolute importance that trees have for the sustained benefits that pertain to human quality of life. The things that trees and no other plant species do for us. Provide information about the need for protection, the importance of protecting areas with TREE COVER, and services available to get the job done.

Long-term strategies to address this issue:

- Direct contact with forest landowners, citizens through land visits, group talks
- Publicity on issue driven forest topics like diversity & invasives
- Development of online feedback survey on DNR Forestry Page (for general questions & feedback on talks/ field days).
- Plant trees & shrubs in areas of need.
- Contact all private landowners involved.
- Promote tree planting as part of every Stewardship plan. Every kind of tree planting is as important as any other regardless of acreage. Key on the issue of planting trees as a way to get and stay in touch with your property and leave a legacy for future generations.
- Promote the state nursery as being the absolute "best" source of native planting stock for conservation related tree plantings.
- Improved outreach through countywide meetings, printed media, television, field days, one on one contact.
- Improved outreach concerning incentives that already exist through Federal, State, and non-profit organization cost-share programs,.
- Improve working relationships with RC&D, NRCS, and FSA to promote this program need and to identify eligible landowners.
- Improve the operation of the state nursery to be the "best" source of planting stock
- Study and improve nursery product quality and operation. Specifically, the handling and packaging of nursery stock.
- Consider down-sizing the current operation to produce 2 to 3 million high quality seedlings annually. Produce only the essential varieties of trees and shrubs needed. Key more on specialty packet improvement. Consider species grown input from stakeholders.
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Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Every conservation oriented bureau in the DNR should have a stake in the funding and operation of the state nursery, because of need for planting stock and the need for a research facility.
- Also consider funding from outside stakeholders such as NWTF.
- Improve existing cost-share programs to be more long term for tree planting.
- Develop long-term easements instead of or in addition to cost-share programs.
- Federal and or state funding can be used for a nursery efficiency study and for product marketing.
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Programs Involved:

Stakeholders Involved:

IWOA, NRCS, FSA, ISU, Forestry Consultants, NWTF, RC&D. The citizens of Iowa are the major stakeholders for the future of tree planting and the state nursery in Iowa.

[2.4 Inconsistency of application of silvicultural terminology & practices](#)- Training internal & consulting foresters with terminology that matches on the ground practices [\[3.6\]](#)

[2.5 Lack of communication between professional foresters, public, forestry organizations, natural resource entities in the state](#)- Creation of a web-based Iowa forestry connection – ideas: education, classifieds, discussion forums, employment, research, successful project updates, grant opportunities, “ask a forester” blog, publications, wood industry info, etc. [\[3.6\]](#)

[2.6 Marketing](#) - Promote the state nursery as being the absolute “best” source of native planting stock for conservation related tree plantings. [\[1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7\]](#)

3. Sustainability of Forest Resources:

[3.1 Maintain a Tree Seedling Nursery](#) [\[1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7\]](#)

Promote native seedlings for use in any private lands project that is federal, state, county, or private (i.e. National Turkey Federation) cost shared and/ or any landowner that contacts the state (forester or private lands biologist) for assistance. Increase the existing forest resource by planting more trees.

Long-term strategies to address this issue:

- Promote the state nursery as being the absolute “best” source of native planting stock for conservation related tree plantings.

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- Encourage tree planting to all landowners that have eligible areas. Work with other State, Federal, County, and conservation groups to promote conservation planting programs.
- Insure that top quality native seedlings are produced and provide quality customer service.
- Discuss the importance of planting native seedlings at field days, trade shows, and any other event of conservation importance including urban education.
- Get more trees and shrubs planted.
- Increase nursery sales.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Cost share programs to help off set cost of seedlings, planting, and maintaining the trees.
- Promote alternatives to row crops to encourage diversity in state.
- Invest in nurseries

Programs Involved:

Forest Stewardship, Nursery & Tree Improvement, Conservation Education

Stakeholders Involved:

NRCS, FSA, NWTF, PF, QF, WU, DU, County Conservation Boards, Forest Service, IWOA, Tree Farmer, Trees Forever, State and County gov., ISU Extension, Utility Companies

[3.2 Conserve & enhance biological diversity on contiguously owned properties across boundary lines and owners in communities and rural areas \[1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7\]](#)

Ecosystems are seldom defined by property boundaries. It makes sense that the best way to protect and conserve the biological diversity of species and maximize resources is by grouping landowners with common ecosystems together.

Long-term strategies to address this issue:

- Helping forest landowners manage their woodlands for diversity and basal area to reduce their risk to insect and disease problems.
- Helping forest landowners understand how to use prescribed fire as a management tool for oak regeneration and invasive species control.
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Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Setup internal work crews from the different partners for work field days
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Programs Involved:

Forest Stewardship by visiting properties drafting team approach plans with implementations laid out.

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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Stakeholders Involved:

DNR, CCB, TNC, INHF, other large contiguous woodland landowners?

3.3 Promote healthy, multiple use public owned forests- Make state and county land eligible for funding sources. Plant trees & shrubs in areas of need. Promote tree planting as part of every Stewardship plan. Every kind of tree planting is as important as any other regardless of acreage. Key on the issue of planting trees as a way to get and stay in touch with your property and leave a legacy for future generations. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

3.4 Promoting riparian buffer/ bottomland forest need and management on a watershed level [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

Helping landowners understand the importance of their watershed and the importance of identification and management of riparian/ wet/ ephemeral areas for improved water quality, wildlife corridors and carbon sequestration. Promoting forest stewardship with private landowners and state lands management while focusing on improved water quality through young vigorous stands of hard mast producing trees. Reforestation of the floodplains would help to mitigate flooding problems on agriculture lands and in communities.

Damage caused by frequent flooding to once productive bottomland crop fields and to river communities is an expensive burden that is preventable. Floods are filling-in the bottomlands with alluvium much faster than our rivers can transport the materials down stream. Most of the record floods throughout most of Northeast Iowa, have occurred sometime in this past decade. (Look at the data available through the USGS). In Northeast Iowa, the most likely culprit for explaining these changes has to do with conversion of the once more abundant grasslands (e.g. hayland and pastureland) to row crop production. Additionally, farmers throughout these watersheds have been adding tiles to fields that were never tiled before. These two factors increase the rate of run off and decrease infiltration rates. (E.g. grasslands can infiltrate approximately four inches of rain per hour compared to about one inch per hour on cropland. Much of the rain that does manage to infiltrate is rapidly conveyed through the field tile systems down to the rivers.) Trees growing along water corridors would improve the fishing habitat by reducing sediment and cooling stream temperatures by shading the water from sunshine.

Trees should help armor the stream banks and reduce stream bank erosion. The alternative cover of trees, compared to row crops, would reduce nutrient loading to our river systems and provide better wildlife habitat. These forests could provide an alternative crop and support the timber industry.

By not taking action to protect riparian areas, continued hidden costs will continue to grow in other areas of everyone's budget. Water bills will increase to cover the costs of removing sediment and nutrients that get dumped into streams

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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from runoff and tiles. Emergency funding that takes away from all programs in a state or federal budget will continue to be needed as property within communities are flooded from inefficiently tiling cropland.

Long-term strategies to address this issue:

- Reforestation of the floodplains would mitigate flooding problems in communities downstream because there would be more area for the water to be stored and better water infiltration rates to absorb the water. An intact bottomland flood plain forest would slow down water flow and take out some of the water's energy that cause scour erosion.
- State policy that requires landowners in watersheds that are important sources of drinking water or prone to flooding, to manage an area along the stream in such a way that reduces sediment, improves/ maintains water quality for both aquatic wildlife and drinking supplies.
- There should be another special outreach program *in conjunction* with any bump to the incentives package. This outreach should be conducted by district foresters or someone directly under Forestry Bureau supervision.
- Policies that discourage or penalize tile from being placed directly into streams would improve water quality across the state.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- The CRP program is attempting to address this issue by providing cost-share and sign-up bonuses for landowners to plant trees (CP31 with 75% cost-share, \$100 sign-up bonus & 20% rental incentive). Probably need better sign-up bonus and rental rates to compete with rates farmers receive for growing corn and beans.
- The DNR has provided outreach assistance through their private lands assistance program (e.g. District Foresters) and through support provided to Northeast Iowa RC&D to do outreach to landowners in watersheds in Northeast Iowa (Upper Iowa, Yellow and Turkey Rivers).
- The USDA could raise the cost-share rate by adding a 40% PIP. They could also increase the sign-up bonus to whatever level is needed to get the job done. Having "one" contact person to deal with on all of the USDA paperwork would also help.
- A stakeholder advocacy group to implement policies that improve riparian corridors. Making the case about the hidden costs (emergency disaster relief, water treatment plants) associated with not protecting riparian corridors.

Programs Involved:

Forest Stewardship

Stakeholders Involved:

USDA, DNR & any conservation group interested in better water quality and wildlife habitat.

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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3.5 Prevent loss of oak and promote oak regeneration on forestlands in Iowa [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

Assisting the private landowner, counties and public entities with understanding and managing their land to maintain, and increase their oak resource. Promoting landscape level management to combat the increasing smaller landholdings through watershed and/or large multi-owner tract management.

Increase the amount of forest management practices that favor the regeneration of oak. State Lands are considered to be sustainable and should be managed for sustainability for as long as management exists.

Helping private forest landowner and county, state, and federal wildlife agencies maintain and promote critical habitats for threatened tree species. Example white oak and bur oak timber types.

Oak regeneration can provide managers with a better understanding of what the future stand will be comprised of for management purposes. Based on species regeneration management can be focused for wood products, wildlife, aesthetics, carbon sequestration or any other objective that is desired for that site.

Genetics of trees on the site should ensure regeneration is healthy and viable for the site.

Loss of oak-hickory forest type poses a significant long-term threat to the wood industry and current wildlife populations. Loss of oak forests on both public and private land. Importance of oak management for Iowa's forest health, diversity, wildlife, and wood industry

DNR/forestry collaborate with Iowa DNR/private lands with technical support for private lands projects cost-shared by federal dedicated funds appropriated through the soil conservation districts

Assisting the private landowner, counties and public entities with understanding and managing their land to maintain, and increase their oak resource. Promoting landscape level management to combat the increasing smaller landholdings through watershed and/or large multi-owner tract management.

Long-term strategies to address this issue:

- landowner visits, both individual and landscape scale meetings to understand oak management and write stewardship plans focused on promoting long term health and diversity.
- County conservation board/employee field days to educate, assist in management.
- Intensify even-aged management and prescribed fire in oak-hickory forest types.

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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- Hold field days and demonstrations with key stakeholders on public lands to get private landowners interested in doing similar management on their own land.
- Train forestry consultants to successfully implement prescriptions to encourage desirable species in a stand.
- Educate landowners, loggers and consultants on the bigger picture (landscape or regional level) and the influence timber harvests and post-harvest treatments have on species composition of future stands of timber.
- Assist private landowners, counties and public entities with understanding and managing their land to maintain, and increase their oak resource with one-on-one visits that result in stewardship plans that promote long-term health and diversity of their oak forest resource.
- Promote landscape level management to combat the increasingly smaller landholdings through multi-owner tract management.
- Increase the amount of pre harvest and post harvest management activities in order to use an existing seed source. TSI activities will promote growth of site specific seed which will increase health and vigor.
- Prescribed fire will be needed in some areas to thwart invasive species and give Oak a natural head start.
- Education of public through field days and establishment of demonstration areas.
- Over mature trees will be removed for the forest stand in order to provide sunlight for natural regeneration. These will be utilized by sawmills. Contractors will need to be used to ensure work is completed in a timely manner.
- Inventories designed to look at the amount of regeneration present on the site.
- Multiple years of inventorying different stages of regeneration.
- Promoting forest diversity with brochures, outreach through insect/disease related materials
- Promote Iowa native oaks
- Increase the number of acres of forest stand improvement accomplished.
- Increase the number of acres of forest protected from livestock.
- Restore oak-hickory forest where needed, protect remaining high quality stands
- DNR/forestry collaborate with Iowa DNR/private lands with technical support for private lands projects.
- Focusing on already oak dominated forests to slow down decline.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Funding will be used for hiring Forest management practices to be done.
- Publishing brochures and pamphlets to be used at field days and educating citizens of Iowa on the importance of Oak.
- Use funds for equipment for State land managers to get practices done.

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

DRAFT

- County conservation board/employee field days to educate, assist in management.
- Cost share programs aimed at diversity and oak management, giving precedence or different pool of dollars on projects that meet soil, water, and habitat and diversity management.
- Funding for forestry field days and public stewardship forums
- Cost share programs for FSI, livestock exclusion, and mast tree plantings. Include a CRP program for mast tree plantings in the uplands.
- acquire federal funds dedicated to restoration of savannas on private and public land
- Savanna restoration cost-shared 75% by federal dedicated funds appropriated through the soil conservation districts
- Matching funds for projects on public land
- Cost share programs aimed at diversity and oak management, giving precedence or different pool of dollars on projects that meet soil, water, AND habitat and diversity management.

Programs Involved:

State Lands Management, Forest Stewardship, Forest Health, Fire, Conservation Education, Utilization & Marketing, Nursery & Tree Improvement

Stakeholders Involved:

IWOA, American Tree Farm System, ISU, CCB, Forestry Consultants, Every Iowan, Future Generations, NRCS, FSA, USF&W, IDNR, Audubon Society, NEIAFAC, EIAFAC, and forestry consultants, Iowa Prairie Network, IDALS, Soil Conservation Districts

[3.6 Impact to Forest Regeneration from depredation \[1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7\]](#)

Invasive species & wildlife pressures make reforestation efforts challenging and expensive. There are a number of factors that impact the desire of landowners to plant trees in Iowa. One of the major factors in their decision is whether or not their young tree plantings will be destroyed or deformed by white-tail deer. District Foresters across Iowa, over the past decade, have witnessed numerous comments from landowners who have stated they do not wish to plant trees because they believe deer will destroy them and it would therefore be a waste of their time and money. Over the coming years, Iowa's forest resource may dwindle or significantly change (i.e. less oak) if depredation to trees is not dealt with.

An alternative special reimbursement program could be set up that might be more effective because it could be added on top of other programs as needed. It could also be offered as a stand alone program to any landowner regardless of size.

Long-term strategies to address this issue:

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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- Landowners have had good success growing trees by protecting them with tree shelters and exclusion fencing.
- Reduce the number of deer at a local level to what can be sustainably supported by the natural resources in the area. Create a stakeholder group that looks at the resource first before making recommendations for deer population levels for that area.
- Educate forest landowners about the importance of hunting on their property to keep deer populations from concentrating in “safe” areas.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- The major road blocks to more landowners using tree shelters or fence is the expense and, to a lesser extent, time commitment on maintenance. More landowners would be receptive to planting more trees, if the costs could be reduced. This could be accomplished by providing additional cost-share funding ear-marked for tree shelters and exclusion fencing.
- Another alternative might be to provide a reimbursement system (e.g. like a coupon), provided through the DNR, which any landowner could apply toward their tree shelter expenses.
- Cost-share programs like CRP, REAP, WHIP and EQIP already partially fund tree shelters. Many times program rules do not provide enough funding to do a very complete job. Changes would need to be made to these programs to make them more effective. (For example, the REAP rules under Rescue Treatment (690) could be amended to add tree shelters as a cost-shareable component. A new component of tree shelters could also be added to the Tree Planting code (612)).
- Create policies that allow private forest landowners more hunting options to control depredation to their trees from wildlife.
-

Programs Involved:

Forest Stewardship

Stakeholders Involved:

All Bureaus of the Conservation and Recreation Division, Iowa DNR, Pheasants Forever, Ducks Unlimited, Trees Forever, Iowa Woodland Owners Association, NEFAC, Tree Farm System, SWCD's, USDA, CCB's

[3.7 Forest Conservation \[1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7\]](#)

Since we are always moving along a successional timeline we must constantly be moving back along the continuum to keep more of our desired tree species. This can be done in locations where landowners choose to pursue it and there is a likelihood of success.

A key side benefit is that trees that are thought to be desirable are more likely to be retained. And retained trees translates into less conversion of the land to

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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non-timber uses (crops). Transitioning stands from less desirable species to more desirable ones may in effect save the stand as a whole.

Conversion to less desirable species loss of oak/hickory forest type. Helping private landowners, county, state, and federal agencies map out, manage, and promote critical habitat for unique populations of tree species.

Helping private landowners, county, state, and federal agencies map out, manage, and promote critical habitat for the northern most populations in north America of the rare northern pecan and north American pawpaw trees.

Long-term strategies to address this issue:

- Maintaining a native seed source for conservation tree planting.
- Helping private forest landowners as well as county, state, and federal wildlife agencies maintain and promote critical habitats for threatened tree species.
- Provide technical support for private lands projects cost-shared by federal dedicated funds appropriated through the soil conservation districts. Example white oak and bur oak forest types or oak savannas.
- Train forestry consultants to successfully implement prescriptions to encourage desirable species in a stand.
- Educate landowners, loggers and consultants on the bigger picture (landscape or regional level) and the influence timber harvests and post-harvest treatments have on the stand in the future.
- Create a database to record locations of species of trees that are rare
- Promote planting rare species to increase their populations.
- Write stewardship plans that perpetuate the presence of rare species and perform forest stand improvement around mature populations to promote healthy trees, increase seed production and increase germination on site.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Invest in cost-share programs as an incentive for landowners to think long-term and beyond their property lines.
- Increase the number of field foresters for promoting the concept and oversee projects.
- Keep enough NRCS employees to not bog down the reimbursement or send funding directly through states.
- Hire a person to map out the habitat for the two tree species.
- Cost share programs for the FSI, livestock exclusion, and tree planting, with protection payments for areas that have critical populations of threatened trees.

Programs Involved:

Forest Health, Forest Legacy, Forest Stewardship, State Lands Management, Conservation Education, Nursery & Tree Improvement, Utilization & Marketing

Stakeholders Involved:

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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NRCS, FSA, NWTF, Woodland Owner groups, USF&W, US ACE, IDNR, ISU, EIAFAC, Grouse Society, USFS, individual landowners who control most of the timberland

3.8 Promoting Backyard Forest Management [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

It is important that the fragmentation of Iowa's forest cover is minimized and avoided when possible, but it is also critical that smaller sized woodlands are managed and not ignored. Ignoring small parcels of woodlands (i.e. 1-12 acres in size) can have a number of negative impacts on quality woodlands throughout Iowa. Also, a high quality small woodland can deteriorate over time if left unmanaged.

Long-term strategies to address this issue:

- Helping Backyard Forest Landowners (i.e. woodlands 1 to 12 acres in size) manage their woodlands for multiple uses and to promote healthy forest by reducing impacts of non-native invasive plant species
- Areas adjacent to heavy populated urban areas (i.e. Iowa City, Cedar Rapids, Quad Cities, Des Moines, and Council Bluffs), where woodlands have been fragmented into smaller parcels for residential development
- Visit Backyard Forest Landowners and develop a written Backyard Forest stewardship plan
- Field days targeted toward smaller acreage owners with forest cover
- Promote healthy forest by encouraging diversity and reducing populations of non-native invasive plant species through education field days, articles, and target web sites
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Cost-share for small acreage owners that normally do not qualify for traditional cost-share programs
- Field days targeted toward Backyard Forest Landowners
- Signs promoting Backyard Forest Management properties
-

Programs Involved:

Forest Stewardship, Forest Health

Stakeholders Involved:

IWOA, NRCS, ISU, Local County Conservation Boards, Trees Forever

3.9 Increasing the amount of productive forested areas [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

Increase the amount of productive native hardwood areas. Rapid decline of cottonwood forest stands that can be replaced with hard mast producing floodplain type trees.

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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Promote forest stewardship with private landowners and state lands management while focusing on improved water quality through young vigorous stands and improved habitat by establishing hard mast producing trees. Short term gains include many acres of early successional habitat. Long term potential income should also be promoted since a higher value tree species will be planted.

Declining cottonwood stands should be clearcut. Slash needs to be in windrows or piles to allow for tree planting. Seedlings will be machine or hand planted with floodplain type hard mast trees. Tree shelters should be used to protect from deer damage. Other soft mast trees will naturally regenerate to provide a diverse and fully-stocked forest stand.

Long-term strategies to address this issue:

- Removing locust, elm, and ash plantings and replace with Oak/Hickory forest cover.
- Declining cottonwood stands should be clearcut. Slash needs to be in windrows or piles to allow for tree planting. Seedlings will be machine or hand planted with floodplain type hard mast trees. Tree shelters should be used to protect from deer damage. Other soft mast trees will naturally regenerate to provide a diverse and fully-stocked forest stand.
- Increase stocking levels within existing forests to enable NIPF to grow more wood per acre, increasing the value of those forests.
- Oak/Hickory has more management potential for a wider variety of uses. Products, Wildlife, Aesthetics.
- Most of the unproductive areas are getting mature and having forest health issues. These should be removed and replanting with more productive forest type.
- Prescribed fire will be needed in some areas to thwart invasive species and increase seedling survival. Mechanical control where fire isn't effective.
- Education of public through field days and establishment of demonstration areas that promote why to replace declining stands of forest with young vigorous stands.
- Over mature trees will be removed for the forest stand in order to provide sunlight for natural regeneration. These will be utilized by sawmills and firewood contractors. Contractors and state land staff will need to be used to ensure work is completed in a timely manner.
- Inventories designed to look at the amount of productive trees are present on the site.
- Multiple years of inventorying to ensure survival of planted trees.
- Inventory which wildlife species are benefiting from forestry practices. Press releases to promote forest stewardship, utilize declining stands, and tree planting for hard mast producers.

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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- Stewardship plans to document current stand conditions and provide prescriptions to establish hard mast trees
- Promote forest management and recognition for proper management through Tree Farm recognition designation.
- Promote the use of Iowa forestry contractors to restore floodplain areas to productive mast producing tree species on both private and public land.
- For tree plantings, promote native forest seed source
- Utilize Iowa grown wood products, maintain a continuous and renewable supply of logs, provide timber buyers and sawmills with markets for their products
- Increase the number of acres with stewardship plans that address this issue, acres converted from undesirable stocking levels or species composition, increase the number of hard mast producing seedlings planted and the number of acres planted to those seedlings.
- Maintain or increase number of timber buyers and sawmills that use floodplain species.
- Maintain or increase viable forestry consulting firms that are physically located in Iowa within 75 miles of the Missouri River.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Funding will be used for hiring Forest management practices to be done.
- Publishing brochures and pamphlets to be used at field days and educating citizens of Iowa on the importance of a productive and healthy forest.
- Using funds for equipment for State land managers to get practices done.
- Cost-share to private landowners for tree planting. Financial support for hosting forestry field days to promote tree planting and hard mast trees.
- Better utilization of lower value forest stands.
-

Programs Involved:

State Lands Management, Forest Stewardship, Forest Health, Fire, Conservation Education, Utilization & Marketing

Stakeholders Involved:

IWOA, American Tree Farm System, ISU, CCB, Forestry Consultants, Every Iowan, Future Generations, State land users, Private landowners, IDNR Forestry, IDNR Wildlife, NWTF, NRCS

3.10 One-on-One landowner contacts and site visits to increase forest management, provide technical assistance, and promote tree planting in Iowa [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7]

Increased funding for working on forest conservation programs defined in the Farm Bill. Since Iowa soils are so productive at growing agricultural commodities, programs that reinforce good stewardship of the land are

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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necessary to get landowners to perform good stewardship on their property that will benefit all of society.

Long-term strategies to address this issue:

- One-on-one site visits with forest landowners to help them achieve their objectives
- Education through informational materials, program presentations, advertisements in the local papers/radio, field days, educational days and forest advisory committees.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- funds for landowner education / site visits
- funds for the plans to do the recommended forestry work
- Funds for Private landowner advertisements, field days, educational days and forest advisory committees.

Programs Involved:

Conservation Education, Forest Stewardship

Stakeholders Involved:

Private landowners, IDNR Forestry Bureau and Private contractors

4. Ecosystem Services: Wildlife Habitat & Diversity, Scenic Landscapes, Water quality, Air Quality, Carbon Sequestration:

4.1 Climate change- Inability of fragmented forest resource to move long-lived tree species from one region to another. Inability to provide travel corridors for wildlife to safely move along. Iowa is a net producer of carbon dioxide, one of the main causes for greenhouse gas build-up in the atmosphere. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

4.2 Retain water on the landscape to reduce flooding and pollution of rivers and streams [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Select landscapes with class IV slopes and steeper across the state to plant a combination of prairie grasses, shrubs, and trees. This will stabilize these sensitive soils and allow the planted permanent vegetation to develop soil structure that will be better able to absorb rainfall, reducing sediment and nutrient runoff. This will have a direct impact on water quality and the organisms that depend on good water quality for life.

By planting trees on these sites, people are less likely to hire a bulldozer operator to remove the trees to plant crops on the area in the future. If grass is planted, it is much easier to remove this vegetation if ownership of that land changes.

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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Planting trees allows for additional benefits like carbon sequestration that grass alone cannot provide. By planting a more permanent solution like trees along water corridors, it ensures the investment of federal and state cost share will become a long term investment.

Long-term strategies to address this issue:

- Easements to establish permanent vegetation on steep areas that are currently being pastured or farmed.
- Conservation programs for all interested landowners to be eligible to get financial assistance for planting areas on steep slopes or along water corridors to trees.
- Conservation programs for all interested landowners to be eligible to get financial payments for protecting soil on steep slopes or along water corridors with trees.
- Service foresters to identify and contact landowners with property on steep slopes or along water corridors about the benefits of planting trees to protect the soil and water on their land and hopefully be able to offer financial incentives through state and federal partners.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Federal funding would be used to buy the easements and establish permanent cover.
- Existing programs such as REAP could be used to assist with planting trees and grasses.
- Research showing the benefits to having wider buffers along water corridors and the cost savings for communities downstream in terms of water treatment costs.

Programs Involved:

Forest Stewardship, Urban & Community Forestry, State Lands Management, Conservation Education, and Nursery & Tree Improvement.

Stakeholders Involved:

Iowa DNR Forestry, NRCS, Farm Bureau

[4.3 Reduce fragmentation of forests in BCA's \(Bird Conservation Areas\)-](#)

Connect existing public and adjacent private forestland through land acquisition and conservation easements to create larger, contiguous forested areas relative to the BCA's. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

[4.4 Promote healthy, multiple use public owned forests](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Help managers of city, county, and state owned forests manage their woodlands.

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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Long-term strategies to address this issue:

- Perpetuate oak forests
- Control/ eradicate invasive species
- Get needed timber stand improvement work done
- Plant trees & shrubs in areas of need

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- The key to getting this much needed work done is to include public lands as eligible participants in our existing cost-share programs, such as REAP, WHIP, and EQUIP. Even with the best intentions, most city, county, & state owned areas have neither the manpower, money, or expertise to properly manage their woodlands.

Programs Involved:

State Lands Management, Forest Stewardship

Stakeholders Involved:

DNR forestry, Forestry Consultants, City Administrators, Councils, Park & Rec., and Tree Boards, County Conservation Boards, Directors, and Area Managers, DNR Conservation & Recreation Division Administrator, DNR Forestry Bureau Chief, DNR Wildlife Bureau Chief, and Area Managers and all the people of Iowa who use and enjoy these areas, now and in the future. Add anyone else willing to “jump on the bandwagon”, such as NRCS, FSA, or Trees Forever.

4.5 Promote woodland management as key to specific habitat preferences [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Focus forest improvement practices (over-story thinning, weed tree removal, woody plant understory manipulation, timber harvesting, and tree/shrub planting) to specific habitat improvement practices for deer and turkey habitat improvement.

Long-term strategies to address this issue:

- Improve existing cost share programs such as WHIP & EQUIP to better fund habitat improvement practices at more realistic rates.
- Target specific woodland owners with hunting/leasing interest. Use work done with key celebrity individuals to promote management.
- Use integrated “team” approach of foresters and habitat specialists (both government and private) to provide management assistance.
- Integrate QDM practices with traditional woodland management practices.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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- Cost-share improvement, field days and demonstrations, magazine articles.

Programs Involved:

Stakeholders Involved:

Private consultants, wildlife habitat specialists, NRCS, NWTF, WU

4.6 Decrease impact of equestrian riding on State Forest Land [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Improving multiple use trails on State lands in order to lessen soil erosion and increase access for forest management practices. Better designed trails will be more sustainable and reduce the impact those trails and the people using them have on the natural resources they came to the forest to enjoy. When trails are not maintained, equestrian users travel around bad trails creating new, less adequate trails and degrading more of the ecosystem they came to experience. Well built trails will improve forest ecosystem health by lessening the impact people are having on that area.

With well maintained trails provide access, allowing better and more up to date planning of forest management practices.

Another benefit for an improve trail system is well established fire lines will help with prescribed burning and provide access for vehicles to fight wildfires.

Long-term strategies to address this issue:

- Better engineered trails will also help with access in order actively manage the forest resource.
- Education of public through field days and adjacent landowner visits.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Funding will be used for stabilizing material for the trails.
- Publishing brochures and pamphlets to be used at field days and educating trails users.
- Machinery use to stabilize the unstable areas.
- Contracting work to better utilize funds. Help local economy while improving State Forest.

Programs Involved:

State Lands Management, Forest Stewardship, Forest Health, Fire, Conservation Education

Stakeholders Involved:

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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IWOA, American Tree Farm System, ISU, CCB, General contractors, local business, trail users

4.7 Improving water quality and reducing flood damage in large river basins through enhanced reforestation efforts [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Increase the amount of reforestation activities on upland and riparian lands using a targeted watershed approach. Helping landowners understand the importance of their watershed and the importance of identification and management of riparian/wet/ephemeral areas for improved water quality, wildlife corridors, and carbon sequestration. Emphasize efforts in watersheds that provide domestic water supplies and watersheds that include impaired waters.

Long-term strategies to address this issue:

- Utilizing existing financial incentives and grant funding for enhanced public education & marketing efforts.
- Collaborate with conservation partners to promote cost share incentives & a targeted approach to watershed reforestation, educate through news releases & field days, visit landowners and prepare tree planting plans, assist in utilization of private contractors.
- Provide educational materials & programs to make public & private landowners aware of how critical upland watershed management is to flood prevention & water quality.
- Provide improved seedling varieties to stimulate landowner buy-in to the programs.
- Increase the number of projects occurring in impaired watersheds
- Increase in the percent of riparian zone planted to forest/perennial cover
- Reduce the number of impaired watersheds that are used for drinking water.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- GIS software and personnel to query databases for a variety of parameters.
- Utilize existing federal & state cost share programs for reforestation activities while using grant monies to increase education & marketing efforts.
- Collaborate w/ USDA agencies to target programs to landowners meeting criteria through direct mailings.
-

Programs Involved:

Forest Stewardship, Forest Health, Nursery & Tree Improvement

Stakeholders Involved:

IDNR, IDALS, NRCS/FSA, SWCD's, ISU

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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4.8 Protecting major water quality, aesthetic and recreational corridors. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Helping all landowners and producers, municipalities, industrial sites, urban landowners, rural landowners to improve and protect water quality and manage vegetation more responsibly on their properties to improve & protect the water quality and the recreational experience. The importance of tree planting & forest management practices to improve water quality is not recognized in Iowa.

Long-term strategies to address this issue:

- Promote forest stewardship with private landowners and state lands management while focusing on improved water quality through young vigorous stands and improved habitat by establishing hard mast producing trees.
- Protect, enhance, restore floodplains to mitigate flooding problems for farmers and communities downstream.
- Contact all private landowners involved and work with them to install conservation practices that will provide long term solutions.
- Provide information about the need for protection, the importance of protecting areas with TREE COVER, and services available to get the job done.
- Identify all perennial and intermittent flow streams, water holding structures, and drainages needing forested buffer protection.
- Outreach through countywide meetings, printed brochures, local newspapers, field days, one on one contact.
- Outreach concerning incentives that already exist through Federal and State cost-share programs, i.e. REAP, WHIP, CRP.
- Improve working relationships with RC&D, NRCS, and FSA to promote this program need and to identify eligible landowners.
- Investigate the need and practicality of improving tree planting incentives through more long term programs such as easements.
- Continue to find more sources to utilize small-diameter wood
- Work through County Conservation Boards and their naturalists to develop training & teaching the next generation.
- Residential tree distributions, community inventories & management plans, urban tree steward training
- Control invasive species, hire consultants to get TSI done, conduct scheduled harvests to pay for and to support improvement and enhancement work, field days to demonstrate benefits.
- Identify all perennial and intermittent flow streams, water holding structures, and drainages needing forested buffer protection.
-
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

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Green- National Objective that complements the issue

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- Improve existing cost-share programs to be more long term for this specific purpose.
- Develop long-term easements instead of or in addition to cost-share programs.
- Target federal and state funding or grant funding for demonstrations, identifying areas (landowners) needing the protection treatments, and for information-education.
- Utilize REAP, FLEP, CRP, WHIP, EQIP programs when possible for financial assistance, providing extra points for working in priority areas.

Programs Involved:

Stakeholders Involved:

Cities, Industrial and Agriculture producers, County Conservation Boards, R, C & Ds in the counties affected, Iowa Soybean Association, The Nature Conservancy, Iowa Natural Heritage Foundation, Iowa DNR Parks, Wildlife and Forestry, Iowa WOA, Iowa CTG, Iowa Corn Growers Association, NRCS, FSA, ISU Extension, Forestry Consultants, National Wild Turkey Federation

[4.9 Declining seedling/tree planting demand leading to declining nursery sales-](#)

Promote the importance of tree planting by improving public awareness of the absolute importance that trees have for the sustained benefits that pertain to human quality of life. The things that trees and no other plant species do for us. To get more trees and shrubs planted. Increase nursery sales. To protect the existing forest resource. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

[4.10 Lack of Community and Forestland Biological Diversity on contiguously owned properties across boundary lines and owners](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Promote and maintain biological diversity.

Assist State Lands Managers to manage their woodlands, prairies, savanna's, riparians, etc. For a diversity of species in order to reduce the risk of insect and disease problems. Natural succession causes decreased biological diversity; therefore disturbance is necessary to maintain certain tree and plant species in a forest.

Long-term strategies to address this issue:

- Look at FIA data and Community Inventory data to determine the best land management practices for each site that maintains maximum diversity.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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- Cost share programs,
- Alliant and MidAmerican Tree Distributions
- District Foresters Assistance to Landowners
- Educational workshops.
-

Programs Involved:

Forest Health, Urban and Community Forestry, and Forest Stewardship.

Stakeholders Involved:

Iowa Department of Agriculture and Land Stewardship, Iowa State University Extension, University of Iowa Hygienic Lab, state and federal forest health cooperative groups, Gypsy Moth Slow the Spread Foundation, U.S. Forest Service, Natural Resource and Conservation Service, and RC&D's.

5. Wildfire Management - Resource Protection and Public Safety:

[5.1 Increasing the role of prescribed fire in Iowa's oak woodlands](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Teaching the short and long term benefits of using fire on private and public lands.

Long-term strategies to address this issue:

- using more prescribed fires on private and state lands to decrease destructive insect and disease populations and damage, and to decrease invasive vegetation.
- using fire to change the basic composition of woodlands by affecting stocking rates, basal areas, and species composition. This may be a key management style in rebuilding Iowa's oak woodlands by reducing or removing native and invasive, shade-tolerant tree and brush species, such as, multi-flora rose.
- Recording which County Conservation Boards are using prescribed fire in their land management. Recording an increase in the number of local fire departments that are providing low-cost burning services; and also improving their equipment and personnel training.
- Measuring a reduction in the number of invasive plant species on any selected land area
- Recording direct changes in woodland stocking, basal areas, and species composition on state or private land.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Increasing the number of DNR employees qualified as fire fighters who can directly apply their experience on private or public lands.

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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- Having more DNR employees in wildlife, parks and forestry divisions trained and experienced in the application of prescribed fire on state lands. Have some of these employees qualified on the national level for fire suppression (Red Carded) to gain valuable experience which can be re-applied on state lands.
- Provide federally-certified fire training to 50% of Iowa's rural, volunteer fire departments. In turn these fire departments provide prescribed burning services to local landowners with oak woodlands or prairies. These paid services will provide needed funds to the fire departments to improve their fire training and to purchase necessary equipment.
- Utilizing fire experienced people from many County Conservation Boards working with interested and unqualified personnel from other Conservation Boards not currently using fire on their lands
- Increase the number of qualified fire instructors from two to eight in Iowa.
- Use dollars to provide fire training to local fire departments and certifying these fire departments. Using these instructors and experienced County Conservation Board fire personnel to provide fire training and actual fire experience to unqualified Conservation Boards.
-

Programs Involved:

Fire, Forest Health, State Lands Management, and Forest Stewardship,

Stakeholders Involved:

DNR personnel, County Conservation Boards, local fire departments, state lands, and most importantly, private lands and their owners.

[5.2 Applying Prescribed Fire in Iowa's Urban Interface](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Reducing the probability and number of devastating fires in and around homes and businesses in towns and cities, and outside of the city limits.

Apply principles of fire management on a statewide scale especially around larger towns which are expanding their boundaries, and into rural areas around these towns. For example, the city of Sioux City draws its employees from area towns and rural area surrounding the town. Many residents have built new homes on hillsides and hill tops and have planted various types of habitats including tall grass prairies below these homes. Fire department coverage is stretched to service these homeowners and travel times are longer. Dry hydrants are rare.

Long-term strategies to address this issue:

- Provide training in suppression and prescribed burning to fire departments across the state.
- Educate urban and community planners about fire and suppression problems to landscape architects, builders for better designs which reduce

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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- fire risk, suppression costs, improve access for fire equipment, permit periodic prescribed burning and better communication.
- Work with insurance companies to allow a fire policy that allows for periodic burning within city limits. Reduce insurance premiums and the direct costs of damages or fire suppression.
 - Through local colleges provide continuing education opportunities about fire to landscape architects, insurance agents, planning people, home builders (expose these people to experienced fire fighters and the lessons they have learned).

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Federal funding to state forest agencies to train fire departments in prescribed burning and proper suppression tactics.
- Have better communications equipment between suppression agencies and their fire fighters and local police.

Programs Involved:

Fire, Urban and Community Forestry, Conservation Education

Stakeholders Involved:

Fire departments, cities, planning and zoning commissions, landscape architects, County commissions, insurance companies, DNR, County Conservation Boards.

[5.3 Do more landscape burning](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Long-term strategies to address this issue:

- Create a group of people available to implement burns on any ownership with similar goals for their properties, in order to replicate historical fire regimes that occurred on these natural areas in the past.
- Have field days, workshops and organizational meetings to educate private forest landowners about the benefits of burning natural ecosystems on their property.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Funding for equipment needs and personnel to deliver fire management to private and public forest landowners.
-

Programs Involved:

Fire, Forest Health, Forest Stewardship, State Lands, Conservation Education

Stakeholders Involved:

DNR, CCB, TNC, INHF, USFS, NPS, Hunting Organizations, Recreational Groups, Adjoining landowners

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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[5.4 Promoting healthy forests](#) - Helping forest landowners understand how to use prescribed fire as a management tool for oak regeneration and invasive species control. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

[5.5 Delivery of prescribed fire training and education on woodland burning](#)- [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

6. Sustainability/ Enhancing of Urban Forests:

[6.1 Urban Forest Diversity](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Helping urban homeowners and communities manage the trees on their properties for diversity to reduce the risk to insect and disease problems.

Long-term strategies to address this issue:

- Inventories to determine species composition of public owned trees.
- Management plans for cities to plant a diverse tree mix in cities with over 20% in a genus.
- Increase diversity of trees on private property through residential distributions.
- Education and outreach about how diversity improves the overall health of the community forest.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Hire consultants to do tree inventories
- Help communities with the cost of planting trees (grant money)
-

Programs Involved:

Urban Forestry, Forest Health, Conservation Education

Stakeholders Involved:

Iowa Arborists Association, Urban Forestry Council, Alliant Energy, Mid American Energy, Black Hills Corp, City Tree boards, City Foresters, Planners, and Administrators, Home owners

[6.2 Declining trees and replacement – Hazardous trees increase by forest health issues](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Decrease harm to people and property and replacing the benefits of those existing trees. Communities with large populations of declining or dying trees and areas with forest health problems.

Long-term strategies to address this issue:

- Tree inventories including hazard tree assessments (i-Tree)
- Nuisance tree ordinance implementation

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[Green- National Objective that complements the issue](#)

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- Tree replacement
- Education for communities on how to deal with tree health issues, such as were to take trees infested with EAB

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Grant money for communities to remove and replace trees
- Personnel for inventories and education of communities
- Stakeholders group with an advocate to work with communities at improving their tree ordinances.

Programs Involved:

Urban & Community Forestry, Forest health

Stakeholders Involved:

Iowa Arborists Association, Urban Forestry Council, City Tree boards, City Foresters, Planners, and Administrators, Home owners, Saw Mills/Lumber yards

[6.3 Enhancing the Urban Forestry Council by better defining its goals and providing organizational and administrative support](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

A Council that advocates for issues important to urban forestry will provide benefits in the way of additional support and resources. This should be an improvement over it's current (yet important) functions, which are primarily education, recognition, and networking. The Urban Forestry program will provide organizational and administrative assistance in all facets of the Council enhancement.

Initial evaluation will be by the health of the organization and it's ability to generate an agenda and energy around the agenda. Future evaluation will be based upon it's success in garnering additional support and resources for urban forestry.

Long-term strategies to address this issue:

- Enhancing Council leadership, recruiting new members, and strengthening the skills of existing members would assist advocates in producing tangible results.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Providing organizational and administrative support for Council activities, could even consider hiring an executive director.

Programs Involved:

Urban & Community Forestry

Stakeholders Involved:

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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6.4 Promote and develop additional funding resources for communities [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Additional funding resources for communities within Iowa will have an impact on enhancing the urban forest resource in Iowa communities.

Long-term strategies to address this issue:

- Provide leadership and guidance in promoting additional funding for communities.
- Review how other states have implemented increased funding (grant) programs.
- Increase community involvement

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Provide additional funding assistance to develop and update urban forestry management for communities
- increased budgeting at the community level to enhance urban forest resources
- Sources of financial support and increased funding to communities
- Invest in conducting or contracting out the completion of a survey for how to increase funding for communities. A decision can then be made as to whether to invest in developing a schedule for increasing the availability of funding for communities.
-

Programs Involved:

Urban & Community Forestry

Stakeholders Involved:

DNR Urban Forestry, Iowa Investor Owned Utilities, Community Tree Stewards Trees Forever, Iowa Arborist Association, INLA and Iowa Urban and Community Forestry Council.

6.5 Promote and develop additional urban forestry management planning for communities [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Investigate how additional professional management guidance for communities within Iowa will have an impact on enhancing the urban forest resource in Iowa communities. Work with communities to improve local codes or ordinances to improve/ support healthy tree cover.

Long-term strategies to address this issue:

- Provide leadership and guidance in promoting additional management guidance for communities.
- Survey of how other states have implemented increased management plan development.

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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- Increase community involvement
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Increased budgeting at the community level to enhance urban forest resources
- Increased funding to communities to accomplish this process.
- Invest in conducting or contracting out the completion of the survey.
- invest in increasing the availability of updated management plans for communities.

Programs Involved:

Urban & Community Forestry

Stakeholders Involved:

[6.6 Improving the quality and consistency of retail nursery stock, with special emphasis on the residential tree distribution programs \[1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7\]](#)

Cultural practices within the nursery industry sometimes deviate from recommended guidelines, and it can be difficult to maintain a level of quality that ensures a good chance of survival for the tree (things to encourage include adequate root systems, avoiding excessive pruning, maintaining a central leader, and reduction of frost cracks and basal injuries, for instance).

In some cases the quality of the plant material can be improved by working within the retail industry. It may also be necessary to explore options for working directly with wholesale growers to procure plant material.

Both changes in the practices of retail nurseries as well as a notable improvement in the quality and consistency of trees could be measured as successes. In addition, a review and comparison over time of the survival rates of trees planted would provide information on trends and success.

Long-term strategies to address this issue:

- With partners and academic experts, will work directly with retail and wholesale nurseries to improve the quality and consistency of the material being brought into the state and delivered to projects. This can be done by tightening plant material specifications, working to educate nurseries, and inspecting trees ahead of or as they are delivered for projects.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Invest in conducting or contracting out the completion of a survey of survival rates.

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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Programs Involved:

Urban & Community Forestry

Stakeholders Involved:

ISU, INLA, tree distribution partners, municipalities.

[6.7 Investigate the feasibility and advantages/disadvantages of establishing a tree-care industry licensing credential \(requirement\) for arborists and tree service companies \[1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7\]](#)

Investigate the actions necessary to promote and develop professionalism/training of using private arborist industry in Iowa. Investigate how licensing has been done in other states and what the effect has been on industry practices.

In order to investigate how promotion and training of private arborist will provide additional management guidance for communities within Iowa and the impacts of developing this industry within Iowa.

Long-term strategies to address this issue:

- conduct or contract out (ISU, for instance) a survey of how other states handle licensing programs.
- Education and outreach regarding the licensing requirement, as well as a possible role in administering a credentialing program if it is administered at the state level (as opposed to the municipal level, for instance).
- Improved tree care practices
- Fair pricing for tree care services to encourage homeowners to take better care of their trees
- Provide leadership and guidance in promoting training and certification of additional arborist.
- community involvement, increased budgeting at the community level to enhance urban forest consulting, and partnerships to provide training and certification opportunities.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- revenue generated from licensing fees
- Invest in conducting or contracting out the completion of the survey. A decision can then be made as to whether to invest in developing a licensing program.
- Invest in conducting or contracting out the completion of the survey.
- A decision can then be made as to whether to invest in increasing the number of certified arborists and making them available to communities.
-

Programs Involved:

Urban & Community Forestry

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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Stakeholders Involved:

ISU, municipalities, DNR Urban Forestry, Iowa Arborist Association, International Society of Arboriculture and Iowa Urban and Community Forestry Council.

6.8 Building and maintaining a healthy and energetic base of volunteers to lead community tree groups and activities [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Investigate the actions necessary to promote and develop additional training for volunteers committed to participating in and supporting community forestry. Investigate how additional volunteer involvement in communities within Iowa will have an impact on enhancing the urban forest resource in Iowa communities. Many community tree groups have been declining in membership, activity, funding, etc. Reinvigorating these volunteer groups takes an infusion of new people who bring varied talents, excitement, and leadership skills.

These people and groups are important to urban forestry because they accomplish a lot of the work that gets done, especially in small communities.

Long-term strategies to address this issue:

- working with partner groups, the DNR can assist these groups in recruiting new members
- improving organizational health and leadership, becoming advocates
- accomplishing tree planting and other projects
- Provide leadership and guidance in promoting additional management guidance for communities. Survey of how other states have implemented increased education and development of volunteer base.
- Increase community involvement by empowerment of local citizens in enhancing local urban forest resources
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Staff time could be devoted to nurturing volunteer organizations and/or partners could be contracted with to work on helping to develop these groups.
- Increased funding to communities to accomplish this process.
- Invest in conducting or contracting out the completion of a survey about the benefits of using volunteers.
- Invest in developing a schedule for increasing the availability of updated related training for community volunteers.
-

Programs Involved:

Urban & Community Forestry

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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Stakeholders Involved:

Council, Municipalities, Keepers of the Land, DNR Urban Forestry, Trees Forever, ISU Extension, Regional RC&D's and Iowa Urban and Community Forestry Council.

6.9 Investigate the feasibility and advantages/disadvantages of using UTC Assessment tools for promoting and prioritizing community forestry outreach [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

In order to determine whether this is something that is worthwhile to pursue, investigate how UTC assessments have been used in other states and the impacts of using data gathered from this process.

Long-term strategies to address this issue:

- Conduct (Within DNR GIS section) or contract out (NCDC, for instance) UTC projects for communities within the state.
- Research how other states have implemented UTC assessments to determine whether implementation of UTC assessments are pursued. If this proceeds, evaluation will be based upon such things as community involvement, increased budgeting at the community level to enhance urban forest resources, management plans based on information gathered from UTC.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Invest in conducting or contracting out the completion of the survey about developing a schedule for UTC's for targeted communities.

Programs Involved:

Urban & Community Forestry

Stakeholders Involved:

DNR GIS section, NCDC for Satellite imagery, UNI for analysis of imagery

6.10 Increase tree canopy in communities with excessive impervious material [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Increasing tree canopy in new communities has many economic and environmental benefits like increased energy efficiency, modify local climates, help air quality, water quality and quantity, decrease soil erosion and keep soil horizons, increased aesthetics, noise reduction, economic stability.

Long-term strategies to address this issue:

- Rank communities from least to most tree cover and begin working with the communities that would benefit the most from increased canopy cover.

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Green- National Objective that complements the issue

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- Creating city ordinances addressing issues with soil preservation, planting requirements and diversity requirements, residential tree plantings through distributions.
- Information for community planners and homeowners about the importance of trees.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Consultants to help communities with the legal writing of the new ordinances
- Money for more tree planting
- Money for education to communities and homeowner about the importance of trees helping them save money on their utility bills, increase their property value and improve their overall sense of well being.

Programs Involved:

Urban and Community, Conservation Education

Stakeholders Involved:

Iowa Arborists Association, Urban Forestry Council, Alliant Energy, Mid American Energy, Black Hills Corp, City Tree boards, City Foresters, Planners, and Administrators, Home owners

[6.11 Stormwater runoff](#)- identify communities most in need and work with planners/ developers of new developments to use natural systems to filter stormwater before depositing the excess water into streams. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

7. Forest Health:

[7.1 Invasive Species Management \(plant, insect & disease\) to benefit native plant and animal communities through monitoring, control and regulatory needs to reduce the impacts from exotic or invasive pests on public and private lands.](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Non-native insects, diseases and plants are displacing and killing mature native trees throughout Iowa, forever changing the composition and biological diversity our forests can provide. Suppression of native trees and plants in the understory by invasive plants is a problem as well. Developing management plans that minimize the threats invasive plant species and other exotic pests pose to our native forest types and associated plant community is a challenge.

An example of the detrimental effect from one invasive species is garlic mustard, an exotic invasive herbaceous plant common throughout much of Northeast Iowa (It is ubiquitous throughout northeast Iowa). Research suggests garlic mustard has the potential to displace most of the native herbaceous plant community of a healthy forest. Garlic mustard has been proven to be allelopathic to native herbaceous and woody plants. Whitetail deer and other insects and wildlife will

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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not feed on garlic mustard. As a result, this adds additional feeding pressure on other native plants. Garlic mustard infested woodlands have little woody regeneration. Over decades it is feared that continuous garlic mustard infestations will lead to gradual deforestation due to little or no woody recruitment. Methods for controlling garlic mustard are proving to be ineffective over the long run because it is so time consuming and arduous. Also, garlic mustard seed can remain dormant for many years. Re-infestations can occur continuously from dormant seeds and from seeds being spread from adjoining properties. Only a very small quantity of garlic mustard infestations are being addressed by landowners, State and Federal agencies. On a landscape level, we are addressing only a minute amount of the problem.

Private lands have been invaded by native and exotic plants and have changed the ecosystem along with the benefits those ecosystems provided. Dense ground stories of brush and small trees have been changing the species composition for oak and hickory and associated tree species to very shade-tolerant brush species that ruin required habitats for wildlife and further prevent the natural regeneration of oak and hickory tree species. Invasive species limit sunlight and force the death of the woodland forbs layer. This forbs layer also produces the required protein sources for many bird species including wild turkey. Since private landowners own over 90% of the forest in the state, having strategies that help these people are necessary to protect and restore natural ecosystems.

State lands are being invaded by the same plants and causing the same changes and damages only on a smaller scale than private lands. State lands are important hunting areas for the public. Large changes in habitats caused by invasive plants will affect wildlife populations, species and their health.

Forest health on private and state lands will be indirectly affected because the very dense ground layer formed by invasive plants will offer more competition for very limited resources for growth. Invasive shade-tolerant shrub and tree species will automatically displace and then replace Iowa's oak and hickory tree species and their associated tree species. As woody habitat changes, so will the wildlife species and the numbers of wildlife.

Long-term strategies to address this issue:

- Control, if possible, eradicate invasive species.
- Management plans to address invasive removal and follow-up treatments
- Work with partners to delimit, establish quarantines, and start managing invasives utilizing national early detection and rapid response protocols.
- Follow-up with delimit trapping/ monitoring to report success or failures to the national database.
- Work with other state forest health specialist to determine other management options.

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Green- National Objective that complements the issue

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- Educate the public on identification, promote prevention and train forestry contractors about the best and latest methods for controlling or eradicating invasive species, provide brochures.
- Assisting contractors in purchase of equipment for mechanical removal of invasive plants.
- Helping forest landowners understand how to manage invasive species on their property.
- Use prescribed fire as a management tool for oak regeneration and invasive species control.
- Create a statewide database on invasive plant locations.
- Include information in stewardship plans about identification and management options about invasive plants found on their property.
- Create a sustainable funding source that addresses invasive species problems on public lands to demonstrate to the public effective methods for managing invasive plants.
- Delimit and monitor the success of the management plans at limiting or stopping the spread of an exotic or invasive pest.
- Combine existing information from public and private agencies along with information from private landowners to form best management practices for control/ management of buckthorn.
- Research solutions for releasing a biological control for garlic mustard and develop best management practices for control/ management.
- Develop strategy to control Japanese knotweed.
- Increased monitoring/reporting on invasive species database and ranking grant award for contractors based on required training/work record for equipment purchase
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Need dedicated staff to coordinate projects across the state for different invasive species and to provide the educational component to private forest landowners.
- Need sustainable funding source to purchase necessary equipment and hire seasonal staff to help with monitoring projects and to get invasive species removed.
- Cost share programs to help landowners with the costs of invasive species management.
- State policy that does not allow landowners to plant invasive species or neglect the spread of invasive species from their property.
- State funds
- Iowa partners
- redesign grants
- funding through the federal pest act
- EPA

Blue- Issue submitted by a stakeholder

Green- National Objective that complements the issue

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- Employ local consultants and/or crews such as Minnesota Conservation Corps (AmeriCorps) to accomplish work.
- Purchase herbicides and equipment.
- Grant for private contractors with experience. Grant helps with 25-35% of equipment purchase with required training on state lands, x # of hours work included on state lands, x # of hours spent on machine for invasive removal work. Grant can be multi-county as most contractors cover multiple counties. (Ex. Grant to pay for \$10-15K of total cost of equipment. At \$100/hour 30 hours can be donated to state lands, with an agreement of 60 total hours to be used by state. The requirement of an additional 100 hours to be used on invasive removal will be part of grant contract, which DF and NRCS will be aware of for matching projects with contractors)
- Money for state lands removal-dollars to pay contractors beyond what is tied in with equipment grant
- Funding for promotional materials, outreach, field days

Programs Involved:

Fire, Forest Health, Forest Legacy, Forest Stewardship, Urban & Community Forestry, State Lands Management, Conservation Education, Nursery & Tree Improvement, Utilization & Marketing

Stakeholders Involved:

FSA, Forestry Consultants, NEIAFAC, all DNR Bureaus, Fishing enthusiasts, Iowa Department of Agriculture and Land Stewardship, Iowa State University Extension, University of Iowa Hygienic Lab, state and federal forest health cooperative groups, Gypsy Moth Slow the Spread Foundation, U.S. Forest Service, Natural Resource and Conservation Service, Cooperative Weed Management Associations, RC&D's, all private landowners, county conservation boards, Federal agencies with land, county roadside managers, communities with woodlands, invasive volunteer groups, Pheasants Forever, National Wild Turkey Federation

[7.2 Managing Urban ash trees with an advancing Emerald Ash Borer](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Measuring financial impacts: combating costs, tree removal costs, and lowering property tax base (effecting local and state budgets).

Most of Iowa's ash trees are found in our cities and parks, and in windbreaks on farms, the amount of chemicals applied to combat this pest will be huge. In addition, since the urban and city landscapes have the largest amount of pavement, chemical application and its runoff into storm sewers and then creeks, streams, and water bodies may effect our water quality, aquatic life, and then enter our water table and drinking wells.

[Blue- Issue submitted by a stakeholder](#)

[Green- National Objective that complements the issue](#)

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When emerald ash borer is established in Iowa there will be large areas of dead standing trees, many windbreaks will need rebuilding and landowners will need low cost replacement plant stock. State nursery stock can already be used to rebuild existing windbreaks, extend rows, and lengthen rows but not new windbreaks. Wildlife habitat plantings with a large amount of young ash trees and forestry plantings using ash as a trainer tree may need replanting.

Emerald ash borer will be an ongoing problem where it is established because natural regeneration will reseed ash and these areas will be affected.

Long-term strategies to address this issue:

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Tree removal costs
- Monitoring and measuring changes in water quality when larger volumes of chemicals are being applied
- Monitor property tax base changes and making sure homeowners know of these changes in an honest fashion if that's possible.
- Noting any interstate commerce of logs.

Programs Involved:

Urban and Community Forestry, Nursery and Tree Improvement, Forest Health, Forest Stewardship, and State lands management

Stakeholders Involved:

All cities and homeowners, rural homeowners, County Conservation Boards, nurseries, chemical applicators and jobbers, sawmills and wood markets, tree removal companies, landscape companies making or providing chips and mulch, fire departments if large piles of trees catch on fire.

[7.3 Promoting diversity and healthy trees within communities-](#) Helping urban homeowners and communities manage their property for diversity to reduce their risk to insect and disease problems. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

[7.4 Oak tatters and tatters on hackberry are leaf conditions that occur primarily on oaks \(especially white oak\) and hackberry](#) [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Oak tatters and tatters on hackberry are leaf conditions that occur primarily on oaks (especially white oak) and hackberry. Tatters is described as a form of extensive leaf defoliation. Tatters conditions are frequently noticed in the spring in certain regions of the country. Foresters and researchers throughout the Midwest have been looking into this condition for well over a decade. A growing consensus suggests that the most likely cause of tatters comes from a commonly

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used farm herbicide that drifts (including volatilization) specifically from products containing acetachlor herbicide. Repeated defoliation causes stress which will weaken a tree and make it more susceptible to mortality from secondary pests such as two-line chestnut borer and amilaria root rot. We have witnessed this in Northeast Iowa, especially in stands of mature white oak.

Research has been conducted which points to acetachlor as the problem. The regulatory agency, Environmental Protection Agency, needs to look at the evidence and apply restrictions to the use of acetochlor. This may require limits to when it can be applied or requirements for changing the formulation.

Long-term strategies to address this issue:

- Convince the Environmental Protection Agency to review all chemicals with the active ingredient acetochlor as a damaging agent to white oak and hackberry trees.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Create a stakeholder group to present compelling evidence to EPA about the damage the farm chemical acetochlor is causing to trees in the Midwest.
-

Programs Involved:

Forest Health, Forest Stewardship

Stakeholders Involved:

Every interest group concerned about forest health and environmental quality could potentially be a stakeholder. The primary stakeholders should be State and Federal agencies concerned with forest health.

7.5 Promote Forest Health and Sustainability [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Address diversity and exotic/invasive pests and the impact that they have on forest resources. Assist forest landowners and public land managers to manage their woodlands, prairies, savanna's, riparians, etc. For a diversity of species in order to reduce the risk of insect and disease problems.

Long-term strategies to address this issue:

- Collaborate with partners regionally and nationally
- Detect, monitor, forest pests and how they influence the forest health utilizing national early detection and rapid response protocols and management plans.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

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- Cost share programs
- Redesign grants
- Funding through the federal pest act
- District Foresters Assistance to Landowners
- Educational workshops

Programs Involved:

Fire, Forest Health, Forest Legacy, Forest Stewardship, Urban & Community Forestry, State Lands Management, Conservation Education, Nursery & Tree Improvement, Utilization & Marketing

Stakeholders Involved:

Iowa Department of Agriculture and Land Stewardship, Iowa State University Extension, University of Iowa Hygienic Lab, state and federal forest health cooperative groups, Gypsy Moth Slow the Spread Foundation, U.S. Forest Service, Natural Resource and Conservation Service, and RC&D's.

7.6 Determine effective monitoring, control, and regulatory needs to reduce the impacts from the exotic or invasive pest impacts- Delimit and monitor the success of the management plan at limiting or stopping the spread of an exotic or invasive pest. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

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8. Utilization and Marketing

8.1 Green Certification- the expense of certification may prohibit most Iowa forest landowners from becoming certified. Identify existing and future economic incentives to benefit landowners for being green certified. Promote Iowa walnut (other species) as being unique- like wine industry has done for labeling certain areas in the country for prime wine. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

8.2 Utilize wood residue from timber management for woody biomass- provide a sustainable flow of woody biomass from public forest lands through the use of small diameter residue from thinning and harvesting operations – develop markets that utilize a steady source of woody biomass. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

8.3 Ensure/expand viable wood industry of Iowa forest products [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Relate economic importance of specialized small diameter log based product production to local economies. Tie the sustainability of smaller diameter wood product production to forest management, primarily timber stand improvement practices such as thinning. FIA data indicates that Iowa NIPF contain a large amount of low quality hardwoods. This material has limited commercial value.

Long-term strategies to address this issue:

- Use FIA, LIDAR, GIS based inventory data to target quantities of existing product material, acreages, and ownership.
- Implement usage and market feasibility studies to develop a realistic potential for the creation of wood based mills and businesses to process, buy ,and sell the products.
- Relate raw material availability directly to woodland management. Promote the buying of woody material directly from actively managed forests.
- Promote the planting of plantation grown raw materials for specialty products such as posts, in addition to the native material already available.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Grants and incentives for market studies, material inventories, marketing and advertising, and wood usage related business start ups.

Programs Involved:

Stakeholders Involved:

Private consultants, wood products businesses, sawmills, ISU, Forest Products Lab, IWOA, RC&D.

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8.4 Drastic reduction in the number of loggers, timber buyers, sawmills, and secondary wood processors [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Long-term strategies to address this issue:

- Outreach and education to the loggers and wood businesses to promote business plans
- promote utilization of urban tree species
- promote utilization of small diameter tree species.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Funding for more efficient operations and utilization of small diameter tree species.
- Bring in economic development staff to review wood industry and see where their grant programs can fit these businesses.
- Federally funded programs
- State funded IDED programs
- Private Foundations and Non-Profit Organizations which assist small business development.

Programs Involved:

Forest Stewardship, Urban & Community Forestry, Utilization & Marketing

Stakeholders Involved:

Iowa DNR Bureau of Forestry, Iowa Small Business Development Centers for designing Business Plans, Iowa League of Resource Conservation & Development Areas, Iowa Department of Economic Development for funding sources.

8.5 Limited markets for low quality hardwoods- FIA data indicates that Iowa NIPF contain a large amount of low quality hardwoods. This material has limited commercial value. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

8.6 Economic Importance of forest based recreation- Iowa has less public land than almost any other state. Yet fall color, river trails, parks provide millions of dollars to the state of Iowa in tax revenue from businesses and employs thousands of Iowans across the state. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

8.7 Develop and sustain markets for forest products- Need to engage current industries utilizing wood from out-of-state to see how their needs can be met with Iowa wood based resources. Create a better way for users to find suppliers of woody material. Provide economic incentives to initiate new business development. Identify existing associations and create a stakeholders group that

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can be effective at promoting their interests. Promote local business opportunities using local forest resources. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

8.8 Economic Importance of forest resource on private land- Summarize timber sale bids being offered to forest landowners and show trends on website. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

8.9 Economic Importance of Forest products in Iowa- show how a tree goes from forest to final product and the value added each step along the way. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

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9. Legal/ Institutional/ Economic Considerations

9.1 Lack of funding, personnel, equipment to perform scheduled / needed forest management [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

State Lands are considered to be sustainable and should be managed for sustainability for as long management exists.

with proper equipment the amount of forest management being completed could be dramatically more. The right tools for the job. This would also help to manage other multiple use areas

Equipment is a necessary part of getting proven management practices completed in a timely manner and completed correctly. This, in turn, helps to increase forest byproducts, wildlife, and aesthetics.

Areas with forest health concern can be better managed when you have the right equipment to do the management.

Prescribed fire is being used more for management and the state lands need to proper equipment to do burns more effectively and safely.

Long-term strategies to address this issue:

- The general public loves to use equipment and if forest landowner can get excited about forestry we all win. Demonstrating the uses of equipment is always a big hit at field days.
- Equipment can be used in forestry practices to utilize trees normally left in the forest.
-

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Increase revenues on State Forests by increasing timber sales
- marketing of alternative forest products,
- education for Area Foresters (grant writing),
- increases in user fees (especially equestrian usage fees).
- Purchase equipment needed to manage large areas of forest and facilities.
- Funding will be used for purchasing equipment better suited for work in the forest.
- Upgrade several old or worn out machines.
- Upgrading chainsaws and purchasing safety gear for the operators.
- Using funds for equipment for State land mangers to get practices done.
-

Programs Involved:

Fire, Forest Health, Forest Stewardship, State Lands Management, Conservation Education, Utilization & Marketing

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Stakeholders Involved:

IWOA, American Tree Farm System, ISU, CCB, Forestry Consultants, Every lowan, Future Generations

9.2 Economic pressures- Lack of capital to invest in long-term forestry practices, lack of fed & state cost-share incentives and lack of time to consider forest benefits are problems with enticing forest landowners to invest their time & money because it yields minimal financial returns. Increasing pressure on State & Federal financial resources has continued to strain the ability to deliver technical assistance to private woodland owners; further exacerbating the problems Iowa woodlands already have. Make state and county land eligible for funding sources. Declining state general fund dollars and the subsequent impact on program delivery. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

9.3 Conservation Program variability- Promoting forest management within conservation programs as being a better long term return on investment. It is more difficult to remove a tree planting after 10 or 15 years compared to a grass planting, when conservation contracts expire. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

9.4 Aging infrastructure on State Forest land; buildings, pond dams/spillways, culverts, gates/fencing, roads, etc- Create inventory, investigate condition, estimate improvement costs, prioritize projects, research funding sources, create improvement schedule, use 'green' alternatives when possible, utilize local contractors / small businesses for projects. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

9.5 Declining Involvement with land grant universities [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

Better communication and interaction from Iowa State University on forestry topics that would benefit Iowa forest landowners.

Long-term strategies to address this issue:

- Work with ISU (extension and plant clinic) on forestry related issues and classes.
- Take role of education when needed on county level to show what proper stewardship is and how to achieve those goals through field days and Master Woodland Manger programs.
- Attempt to be first contact with public to make an initial assessment and assist in collecting samples for diagnosis of forest health problems.
- Provide assistance to public by providing a place to collect informational packets provided by ISU
- Intermediary with sawmills, loggers, and others in the wood product industry and ISU extension.

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Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Forestry field days and other instructional/educational programs

Programs Involved:

Forest Stewardship, Forest Health, Urban & Community Forestry, Utilization & Marketing

Stakeholders Involved:

ISU extension forester and individual county offices, ISU forestry Department

9.6 Recreational Upkeep [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

A way toward improving natural resources is to keep people connected to the benefits natural ecosystems provide. The more people value and appreciate those resources, the easier it is to get support to maintain, improve and increase those systems. Not enough emphasis is placed on providing people and equipment to manage the natural resources for the public to enjoy.

Long-term strategies to address this issue:

- Improve recreational trails and facilities to minimize impacts on the forest resource.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- Create a sustained funding mechanism that would allow state and public lands to utilize for recreational upkeep and improvements for hiking trails, structures, educational nature trails, hunting accommodations etc.
- Create a sustained funding mechanism for training and education the public about natural resources benefits and issues for maintaining them.

Programs Involved:

Fire, Forest Health, Forest Legacy, Forest Stewardship, State Lands Management, Conservation Education

Stakeholders Involved:

DNR, CCB, TNC, INHF, USFS, NPS, Hunting Organizations, Recreational Groups

9.7 Strengthen State Regulatory Programs:

- **Bonded Timber Buyer Law-** Make management plans a requirement to sell timber in Iowa to ensure a better future forest resource; more consumer protection for forest land owners is needed than what the current structure provides.
- **City ordinances-** rules to protect existing trees from developers or to replace those removed by planting new ones within their development. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

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9.8 Forest Reserve- require forest management plan to be eligible for tax break. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

9.9 Best Management Practices- provide resource protection to trees, soil and streams during timber harvesting. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

9.10 There is a need to assist communities in rebounding from the damaging effects of tornadoes, ice storms, and other natural disasters on trees [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

The ability of the DNR to provide storm response assistance is limited to those activities that do not require significant funding. Most common is the availability of technical assistance which can be offered to communities. Trees located in private and public property in communities and rural areas. Ability to respond to the requests of affected communities. A beneficial adjustment in the mix of species present in communities (to reduce the percentage of over-represented species, for example) through the development of a management plan.

Long-term strategies to address this issue:

- Communities could benefit from the Forestry Bureau's involvement in initial post-storm assessment and prioritization of hazard trees
- Development of an inventory and management plan to help with storm management after the storm damage occurs.

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

- There is a need for more assistance in the form of trees and/or grant dollars.
- Funding for tree removal and pruning right after a disaster strikes a community.
- Funding for replanting and/or residential tree distribution programs.
- All stages of response could benefit from federal funds, whether from providing technical assistance, grant dollars, etc.

Programs Involved:

Urban & Community Forestry

Stakeholders Involved:

Municipalities, Alliant Energy, MidAmerican Energy, IAMU, REC's

9.11 High agricultural commodity and land prices- annual income from agricultural crops are difficult for long-term forestry practices to compete with. [1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7]

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Appendix

List plans consulted to create this document (required to consult CWPP, Wildlife Action Plan; suggested to also consult any other plans that exist like State Stewardship Plan, Urban and Community Plans, others??)

List stakeholders consulted to create this document

Long-term strategies to address this issue:

Description of resources necessary to address the issue (capacity, legal, financial, staffing, partners):

Programs Involved:

Stakeholders Involved:

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