

Spatial Analysis/EQIP Success Story

The State of Iowa has a rich agricultural tradition. Iowa is a national leader in the annual production of corn, soybeans, hogs, and cattle. Because of this rich tradition and the need to address water quality issues revolving around confined animal feeding operations, it has been difficult to get Environmental Quality Improvement Program (EQIP) funds targeted towards forest resource management.

It has also been difficult to put forth a convincing and compelling case demonstrating the need and demand for cost-share dollars targeted toward forestry practices in Iowa. The utilization of GIS technology to spatially demonstrate and document forest stand management locations and prescriptions in conjunction with the identification and development of Iowa's important forest resource areas have been critical to crafting a credible argument for forest management cost-share dollars.

Utilizing information gathered and developed through the Spatial Analysis Program in conjunction with Forest Inventory Analysis data and information on the economic importance of Iowa's forest resource, a forest management proposal (see attached) was presented to Iowa's Natural Resources Conservation Service's EQIP sub-committee.

The EQIP sub-committee rejected the proposal to set aside a portion of the State's EQIP allocation and target it to forest management practices. However, they did encourage that individual counties set aside a portion of their EQIP allocation to address special resource concerns such as forest management. This encouragement led to several counties targeting EQIP dollars to forest management and reforestation practices on private land. One county alone earmarked and allocated over \$40,000 to address their forest resource concerns.

The creation and utilization of credible data is critical when attempting to convince potential partners such as NRCS that investing in forest management is a wise use of their financial resources. The success achieved with EQIP and forestry practices in Iowa was due in large part to the ability to spatially demonstrate the location of important forest resource areas within the state and to demonstrate the interest and demand that Iowa landowners have in stewarding and improving their forest resource. It was also due to the NRCS program staff's willingness to consider the IA DNR proposal and to their willingness to encourage field staff to consider and include forestry practices as a legitimate and worthy use of EQIP funds.

EQIP FOREST MANAGEMENT PROPOSAL

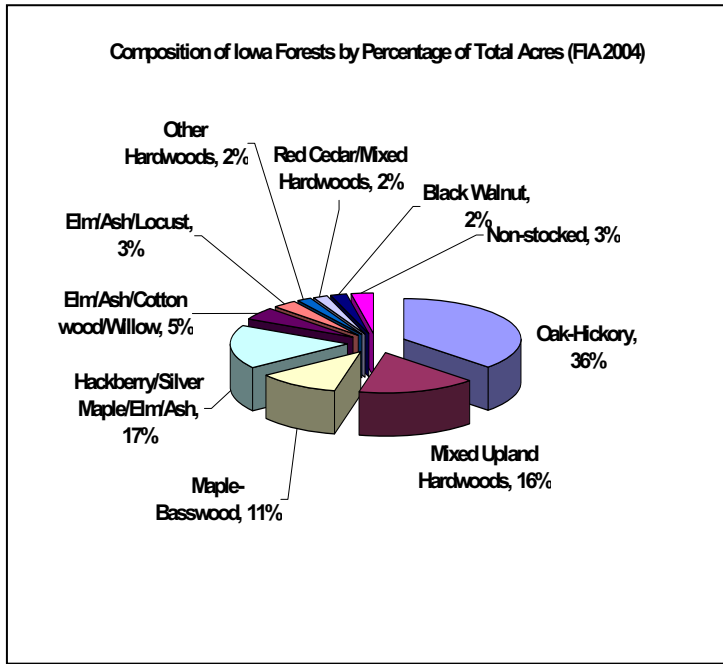
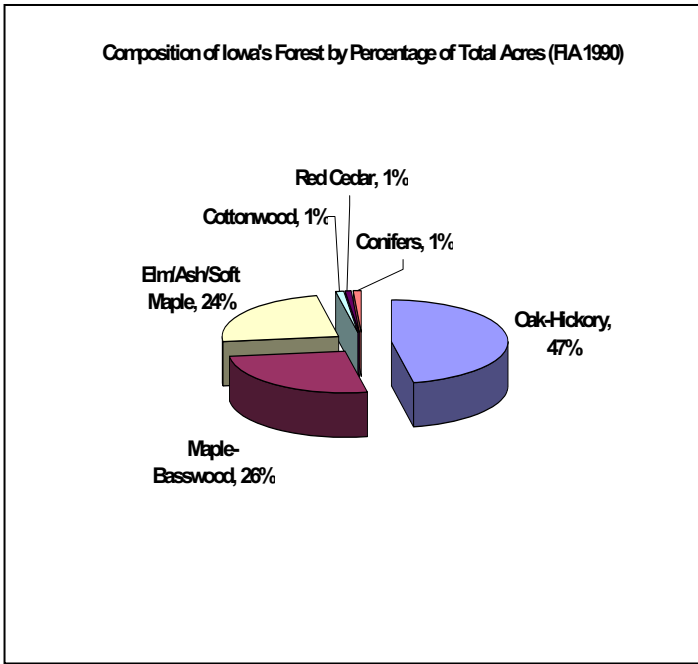
Issue

Iowa has experienced a 4.3 million acre net loss of forested area since European settlement. Since 1974, Iowa's forested acreage has increased from 1.6 million acres to 2.6 million acres (62.5 percent increase); however, at the same time Iowa's oak-hickory forests have declined from 1.2 million acres to 933 thousand acres (11 percent decrease). If the current rate of decline continues, oak forests will be virtually non-existent in Iowa within the next 150 years. The continued decline of acorn producing oak forests will have a devastating impact on Iowa's most dependent wildlife species. Over 90 North American vertebrate species are known to use acorns as a food source. As Iowa's oak forest resource continues to age it is probable that the rate of oak forest loss will accelerate.

Oak forests are critical for wildlife habitat; however, the economic importance of Iowa's forest resource should not be overlooked. Iowa's forest resource provides the following annual economic benefits.

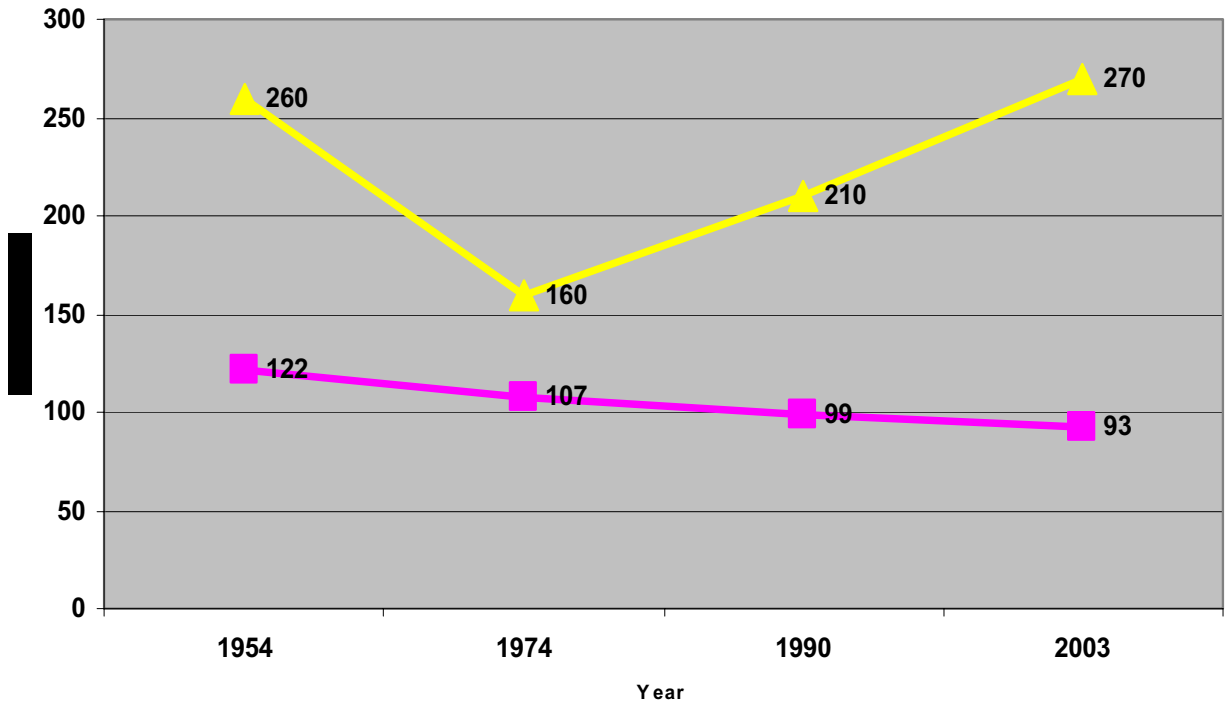
- Iowa's primary and secondary forest industry generates one billion dollars of economic value to the State.
- Iowa's 300+ wood using businesses employ over 7,000 people.
- Iowa landowners received 20 million dollars in 2004 from the sale of timber.
- Iowa has more than 50 forestry consulting and contracting firms providing over 10 million dollars worth of forestry services to Iowa landowners.
- Hunting, fishing and wildlife viewing contributes \$700,000,000 to Iowa's economy. Iowa's forest resource provides a critical backdrop for these activities and critical habitat for valued wildlife species.

Prioritization and targeting of EQIP money focused on forest management and regeneration of existing oak-hickory stands is critical to reversing the decline of this resource. It assures adequate habitat for woodland dependent wildlife species including ruffed grouse, wild turkeys, woodpeckers, quail, blue jays, migrant neo-tropical birds and squirrels. It helps reduce both soil erosion and non-point source pollution by returning unsuitable row-crop land to its original forested state. It helps maintain a diversified and strong rural economy. Reforestation and forest management represent opportunities, at both the national and state level, to prioritize EQIP funding to restore and steward forested ecosystems to ensure the continued flow of forest derived benefits to the State of Iowa and its citizens.



The charts above illustrate the decline of Iowa's oak resource from 1990 to 2004. The chart below illustrates the steady decline of Iowa's oak resource in spite of an overall increase in forested acres. The yellow line represents overall forested acres. The purple line represents the decrease in acres of oak forest.

Comparison of Acres of Oak 1954-2003 (FIA)



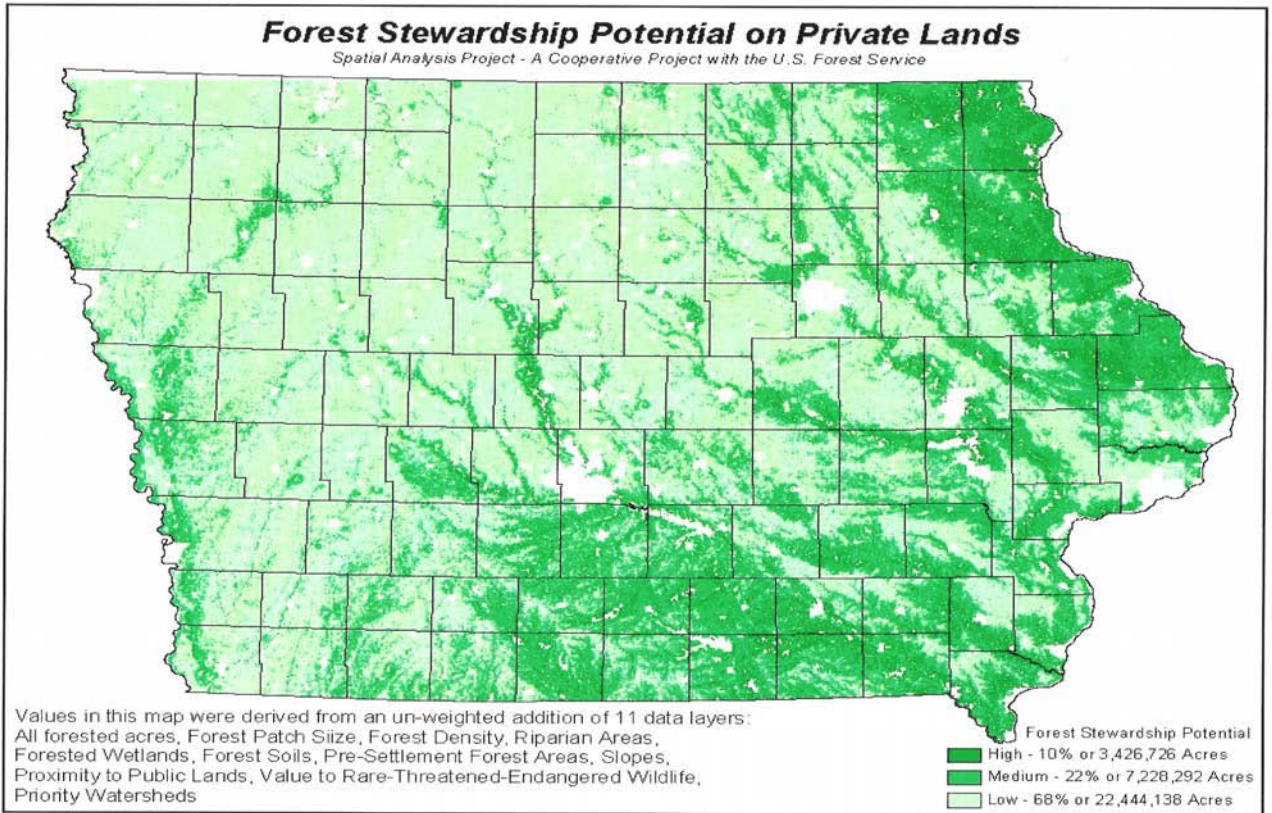
Focus Area

Map one on the following page demonstrates Iowa's important forest resource areas as determined by several factors including existing forest acres, forest patch size, forested wetlands, forest soils, value to forested wildlife species of greatest conservation need, proximity to public lands, and priority watersheds. Map two illustrates suitable habitat for forest wildlife species of greatest conservation need in Iowa. Map three spatially illustrates the proposed EQIP Forest Management Priority Area, the number of forest stands with written management prescriptions within that project area, and the backlog of project acres to be implemented on private forest land by prescription. The table immediately below demonstrates the backlog of selected forestry practices in the proposed project area.

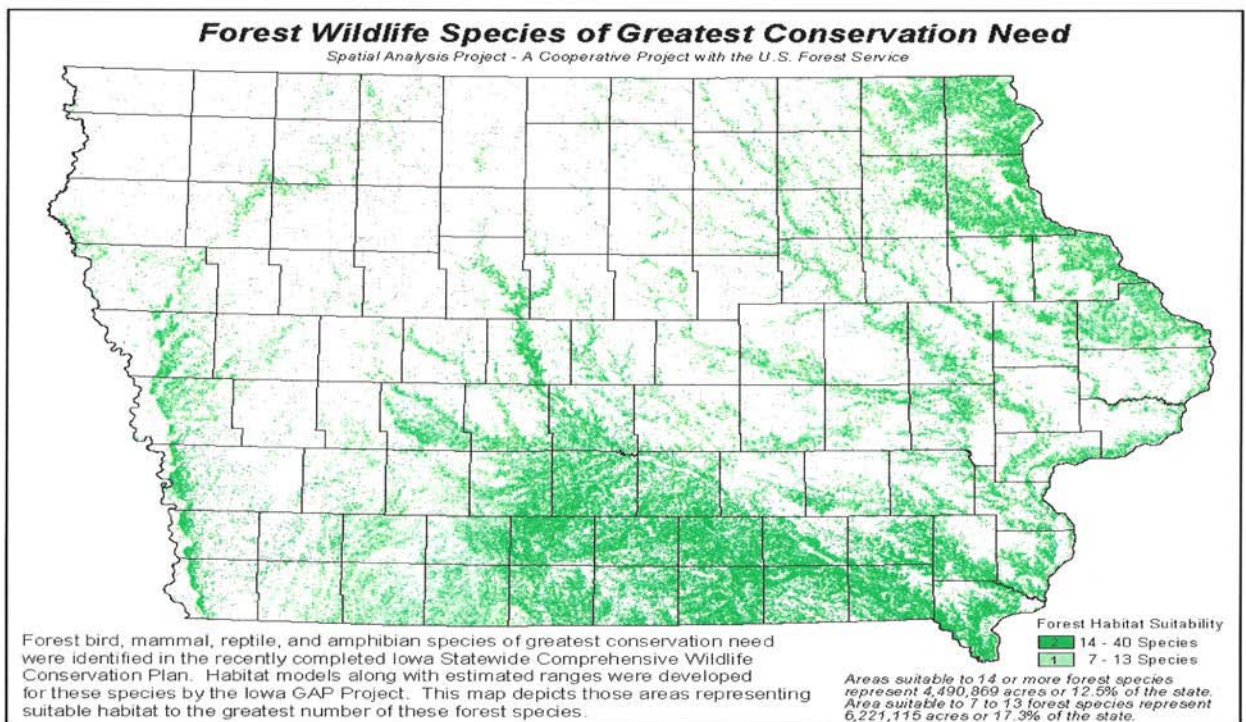
Practice	Acres Backlog	Dollar Backlog
Forest Stand Improvement	18,472	2,425,560
Invasive Species Control	1,330	199,500
Woodland Planting/Seeding	5,489	2,744,500
Prescribed Fire	223	44,600
Reforestation	76	45,600
Fencing	466	34,950
Estimated Total	26,056	5,494,700

Proposal:

It is proposed that 2.5 to 5 percent of the statewide EQIP allocation be set aside at the state level and targeted at forestry practices on private forest land. Those practices would include forest stand improvement, reforestation, prescribed burning, invasive species control, fencing, savanna management, tree planting, direct seeding, and site preparation for natural regeneration. Practices that focus on the management and reestablishment of Iowa's oak forest resource would be prioritized.



Map 1: Forest Stewardship Potential on Private Lands



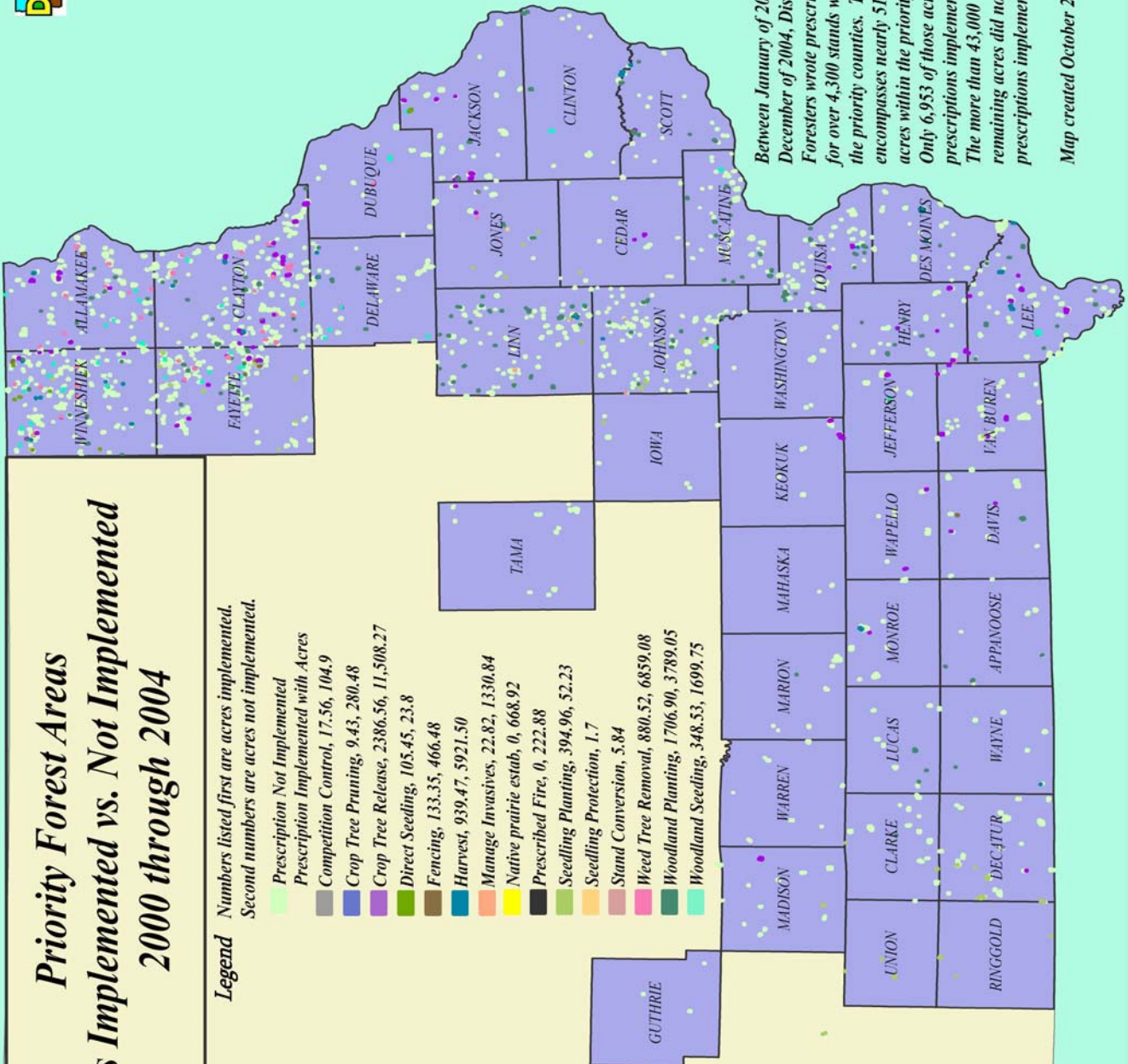
Map Two: Forest Wildlife Species of Greatest Need



Priority Forest Areas Plans Implemented vs. Not Implemented 2000 through 2004

Legend Numbers listed first are acres implemented.
Second numbers are acres not implemented.

- Prescription Not Implemented
- Prescription Implemented with Acres
- Competition Control, 17.56, 104.9
- Crop Tree Pruning, 9.43, 280.48
- Crop Tree Release, 2386.56, 11,508.27
- Direct Seeding, 105.45, 23.8
- Fencing, 133.35, 466.48
- Harvest, 939.47, 5921.50
- Manage Invasives, 22.82, 1330.84
- Native prairie estab, 0, 6668.92
- Prescribed Fire, 0, 222.88
- Seedling Plantings, 394.96, 52.23
- Seedling Protection, 1.7
- Stand Conversion, 5.84
- Weed Tree Removal, 880.52, 6859.08
- Woodland Planting, 1706.90, 3789.05
- Woodland Seeding, 348.53, 1699.75



Between January of 2000 and December of 2004, District Foresters wrote prescriptions for over 4,300 stands within the priority counties. This encompasses nearly 51,000 acres within the priority area. Only 6,953 of those acres had prescriptions implemented. The more than 43,000 remaining acres did not have prescriptions implemented.

Map created October 24, 2005.

Map Three: Proposed EQIP Forestry Priority Area