

Appendix A. Ranking of Forest Acreage by County.

County	Total Land Class	Accessible Forest	Non Forest	Noncensus Water	Census Water	% of County in Forest
Allamakee	420,318	176,675	233,599	4,189	5,856	42.03%
Clayton	518,960	142,133	361,626	9,305	5,897	27.39%
Jackson	415,252	108,807	298,068	0	8,378	26.20%
Decatur	338,921	92,369	238,547	2,594	5,410	27.25%
Lee	340,189	84,507	238,096	0	17,587	24.84%
Van Buren	311,995	76,275	227,547	0	8,173	24.75%
Des Moines	284,172	72,632	203,970	0	7,570	25.56%
Monrow	286,085	71,498	204,812	9,774	0	24.99%
Wapello	274,560	69,717	199,925	0	4,918	25.39%
Appanoose	335,796	69,697	254,233	0	11,866	20.76%
Tama	468,893	66,541	400,623	1,729	0	14.19%
Winnesiek	447,955	65,761	381,217	977	0	14.68%
Lucas	293,526	64,828	227,780	918	0	22.09%
Madison	356,602	59,943	296,659	0	0	16.81%
Dubuque	377,991	55,988	131,625	0	8,378	14.81%
Linn	473,081	51,669	419,875	1,538	0	10.92%
Guthrie	374,977	49,124	325,275	577	0	13.10%
Mahaska	346,406	47,479	298,927	0	0	13.71%
Davis	315,882	47,060	267,419	1,403	0	14.90%
Harrison	444,875	45,085	399,790	0	0	10.13%
Warren	392,471	44,124	347,120	1,226	0	11.24%
Johnson	409,742	43,668	366,074	0	0	10.66%
Clarke	281,516	43,327	238,189	0	0	15.39%
Henry	286,788	42,676	244,112	0	0	14.88%
Jefferson	285,954	41,971	243,984	0	0	14.68%
Iowa	358,207	40,667	314,879	2,661	0	11.35%
Monona	443,093	40,179	402,915	0	0	9.07%
Marion	360,654	39,918	320,736	0	0	11.07%
Mills	290,307	37,345	245,758	1,254	5,950	12.86%
Potawattamie	609,724	36,133	573,591	0	0	5.93%
Washington	377,357	35,988	338,262	3,007	0	9.54%
Muscatine	286,992	35,640	251,174	177	0	12.42%
Polk	374,879	34,899	339,980	0	0	9.32%
Wayne	329,450	33,287	290,229	5,933	0	10.10%
Story	358,862	30,886	327,977	0	0	8.61%
Webster	455,452	30,704	424,748	0	0	6.74%
Woodbury	573,768	30,330	541,394	556	1,487	5.29%
Fremont	324,244	29,945	288,349	0	5,950	9.24%
Keokuk	356,216	29,853	323,073	3,281	0	8.38%
Dallas	347,909	29,700	340,555	0	4,655	7.92%
Benton	432,287	29,496	402,424	366	0	6.82%
Black Hawk	369,588	29,018	338,108	2,462	0	7.85%

County	Total Land Class	Accessible Forest	Non Forest	Noncensus Water	Census Water	% of County in Forest
Page	344,765	28,137	314,273	2,355	0	8.16%
Ringgold	337,690	28,041	309,649	0	0	6.92%
Boone	375,949	26,757	345,866	0	3,306	7.12%
Powershiek	398,928	25,968	364,781	8,179	0	6.51%
Greene	365,961	25,318	340,643	0	0	6.92%
Howard	314,655	25,147	289,508	0	0	7.99%
Union	280,319	24,847	255,472	0	0	8.86%
Clinton	454,775	24,789	414,004	5,897	10,086	5.45%
Floyd	317,384	24,588	289,053	3,774	0	7.74%
Louisa	250,641	24,295	202,418	1,637	22,291	9.69%
Scott	299,318	24,249	264,563	5,897	4,611	8.10%
Delaware	369,308	24,029	345,279	0	0	6.51%
Plymouth	545,431	22,718	522,713	0	0	4.17%
Bremer	293,814	21,742	272,072	0	0	7.40%
Fayette	465,809	21,263	444,547	0	0	4.56%
Jasper	459,701	19,680	440,022	0	0	4.28%
Hardin	369,736	19,640	350,095	0	0	5.31%
Marshall	370,063	18,867	350,576	621	0	5.10%
Taylor	331,297	18,813	303,534	5,950	0	5.68%
Adair	377,046	18,278	357,513	1,254	0	4.85%
Jones	374,789	17,608	357,182	0	0	4.70%
Montgomery	284,683	17,388	267,295	0	0	6.11%
Crawford	446,909	17,050	429,859	0	0	3.83%
Cedar	363,382	14,786	345,509	3,568	0	4.06%
Mitchell	294,664	14,451	280,214	0	0	4.90%
Butler	365,573	13,032	352,541	0	0	3.56%
Buchanan	378,624	9,612	367,228	1,784	0	2.54%
Cherokee	373,972	8,924	365,048	0	0	2.39%
Clay	375,669	7,787	362,787	0	5,095	2.07%
Chickasaw	307,467	7,136	297,383	2,948	0	2.32%
Grundy	307,076	6,816	300,260	0	0	2.22%
Humboldt	276,036	6,734	269,302	0	0	2.44%
Franklin	384,937	6,562	378,376	0	0	1.70%
Cass	363,712	6,505	357,207	0	0	1.79%
Hamilton	374,490	6,404	364,366	3,721	0	1.71%
Cerro Gordo	361,995	6,071	355,924	0	0	1.68%
Osceola	263,622	5,841	257,781	0	0	2.22%

County	Total Land Class	Accessible Forest	Non Forest	Noncensus Water	Census Water	% of County in Forest
Kossuth	620,451	5,573	614,742	136	0	0.90%
Palo Alto	359,721	5,017	354,704	0	0	1.39%
Sac	373,970	4,938	368,255	777	0	1.32%
Pocahontas	374,757	4,374	364,433	5,950	0	1.17%
Emmet	260,074	4,058	250,921	0	5,095	1.56%
Adams	266,801	3,763	263,038	0	0	1.41%
Ida	279,633	3,218	276,415	0	0	1.15%
Wright	379,844	3,035	374,827	1,982	0	0.80%
Lyon	382,544	2,766	379,778	0	0	0.72%
Shelby	375,611	2,581	373,030	0	0	0.69%
Buena Vista	373,894	2,509	365,436	0	5,950	0.67%
Dickinson	265,099	1,684	257,466	0	5,950	0.64%
Total County	35,998,727	2,993,267	32,724,688	116,316	164,456	8.31%

Appendix B. Population and Forest Acreage Changes since Statehood.

Year	Population	Percentage Change	Acres of Forest	Percentage Change
1840	43,000			
1850	192,000	+346	6,471,000	
1860	675,000	+251		
1870	1,194,000	+74		
1880	1,625,000	+36		
1890	1,912,000	+18		
1900	2,232,000	+17		
1910	2,225,000	-.5	2,500,000	-61%
1920	2,404,000	+8	2,000,000	-20%
1930	2,471,000	+3	2,500,000	+25%
1940	2,538,000	+3	2,500,000	-----
1950	2,621,000	+3	2,500,000	-----
1960	2,758,000	+5	2,500,000	-----
1970	2,824,000	+2	1,500,000	-67%
1980	2,914,000	+3		
1990	2,777,000	-5	2,054,000	+37
2000	2,926,000	+5		
2008	3,002,555	+3	3,032,000	+48

Appendix C. Forest Legacy.

The Iowa Forest Legacy Assessment of Need (AON) remains unchanged from the approved version on March 7, 2002 by the U.S. Secretary of Agriculture at that time. The information provided in here is from that document.

The individual descriptions for each forest legacy area have specific information about the given Forest Legacy Area, including:

- General Description
- Description of Boundaries of the Forest Legacy Area
- State/Federal Managed Lands with the Forest Legacy Area
- Description of the Important Values within the Forest Legacy Area
- Current and Potential Conversion Pressures
- Goals and Objectives for the Specific Forest Legacy Area

The Iowa Department of Natural Resources, Forests & Prairies Division and the Forest Legacy Subcommittee recommended the following forested areas in Iowa to be designated Forest Legacy Areas.

1. *Loess Hills*
2. *Upper Des Moines River Valley*
3. *Mississippi River Blufflands*
4. *Iowa/ Cedar River Valleys*
5. *Driftless Area*
6. *State-protected waterways*
7. *Southern Iowa Drift Plain*

1. Loess Hills

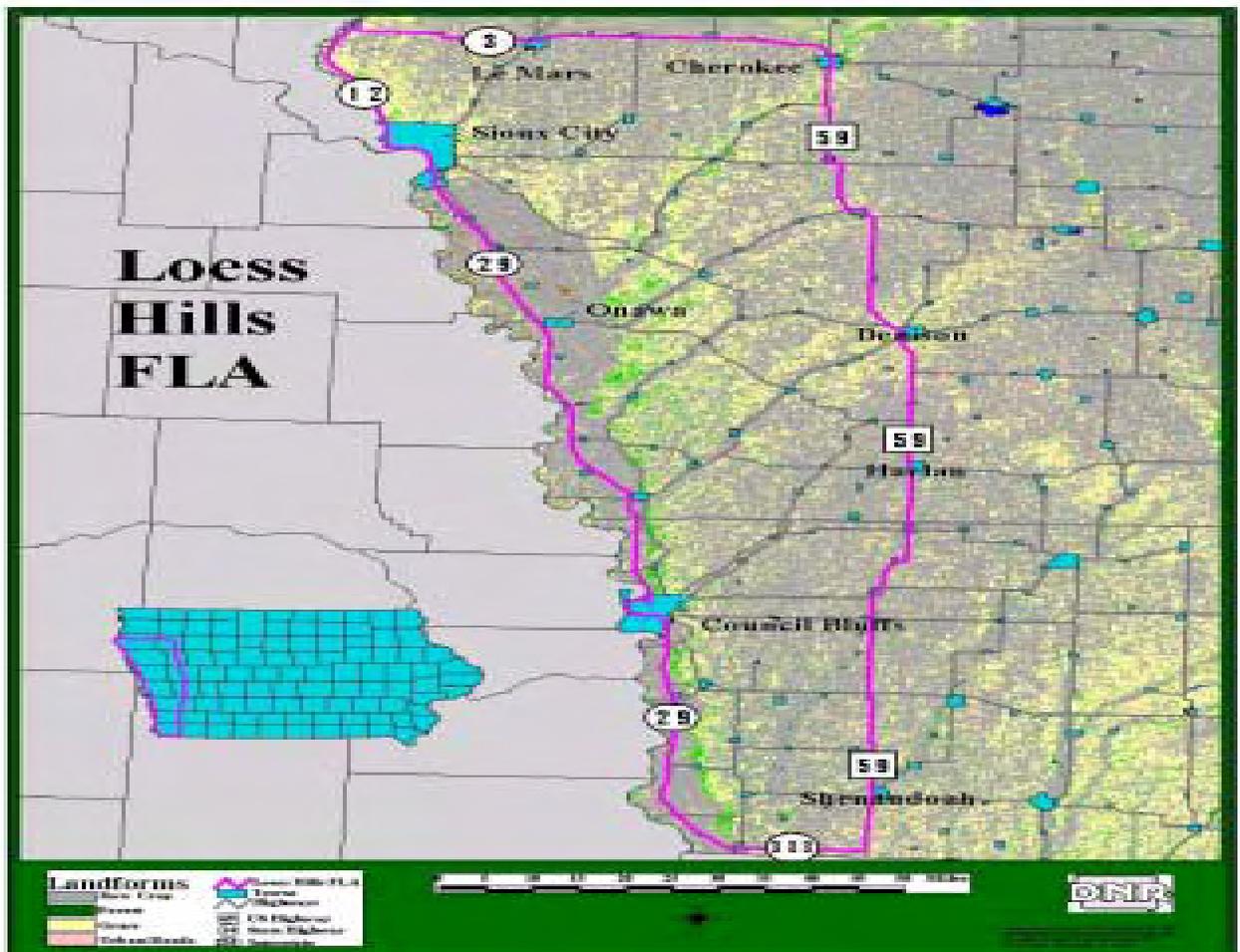
General Description

The Loess Hills Region is the most unique natural area remaining in Iowa today. The area was formed thousands of years ago by finely ground material washed out of melting glaciers that was deposited by prevailing westerly winds and deposited in a band of hills which resemble huge snowdrifts along the Missouri River floodplain. While loess, which is the major soil composition of the Loess Hills area, is fairly common in the world, it rarely reaches the depth and relief of the western Iowa loess. The rugged nature of these hills has prevented their conversion to cropland and has protected them from overgrazing by livestock. Some hills today appear as the first native Americans and pioneers first saw them, the former considering the land looking over the broad Missouri to be sacred ground.

Description of Boundaries of Forest Legacy Area

The Loess Hills Forest Legacy Area follows the unique geological formation of the Loess Hills stretching from Plymouth County near the Nebraska/South Dakota border in the north to Fremont County near the Nebraska/Missouri Border in the south. Specifically, the northern boundary of the Loess Hills Forest Legacy Area will start at the City of Akron at the intersection of State Highway 3 and 12, then east along Highway 3 to the City of Cherokee, south along U.S. Highway 59, west on State Highway 333, north on Interstate 29, north on State Highway 12 to the City of Akron.

Loess Hills FLA Area



State/Federal Managed Lands within the Forest Legacy Area

State and Federal managed lands within the Loess Hills Forest Legacy Area include: the Loess Hills State Forest (10,000 acres), Stone State Park (1,069 acres), Preparation Canyon State Park (344 acres) and Waubonsie State Park (390 acres).

Description of the Important Environmental Values

Private ownership dominates the forests of the Loess Hills Forest Legacy area. A national scenic byway was established the length of the Loess Hills offering overlooks and vistas of this unique geological formation. The forests are composed of oak-hickory woodlands, rare oak savannas, bottomland hardwoods and redcedar sucessional areas. These forests are contiguous offering unique and critical habitat for native plant and wildlife species, including several threatened and endangered species. These forests are beginning to offer increase public recreational opportunities for hunting, fishing, hiking and camping. These forests protect the fragile loess soils from erosion and limiting sedimentation in city drinking water supplies.

Current and Potential Conversion Pressures

This forest legacy area is threatened from continued fragmentation into residential hobby farms (urban/rural interface). Interstate 29 interchanges invite residential and commercial development, and provide high-speed transportation corridors for commuters. Native American and Riverboat casinos located at Onawa, Sioux City and Council Bluffs, Iowa employ a large number of people and increase development pressure on the area. The continued mining of fill for the development of urbanization is a serious concern threatening the Loess Hills in the ever growing metro areas of Omaha-Council Bluffs and Sioux City.

Goals and Objectives for the Loess Hills Forest Legacy Area

Goal: To reduce fragmentation and reduce the threats of mining for fill of private forests bordering or near federal, state county government or permanently protected forest holdings.

Objectives - to use conservation easements, purchase of other development rights fee acquisition and forest stewardship planning on private lands to:

- reduce forest fragmentation thereby maintaining contiguous forest resources,
- protect boundaries and natural resource management opportunities on federal, state, county government or permanently protected forests,
- protect unique and critical habitat for native plant and wildlife species,
- protect fragile loess soils from erosion.

2. Upper Des Moines River Valley

General Description

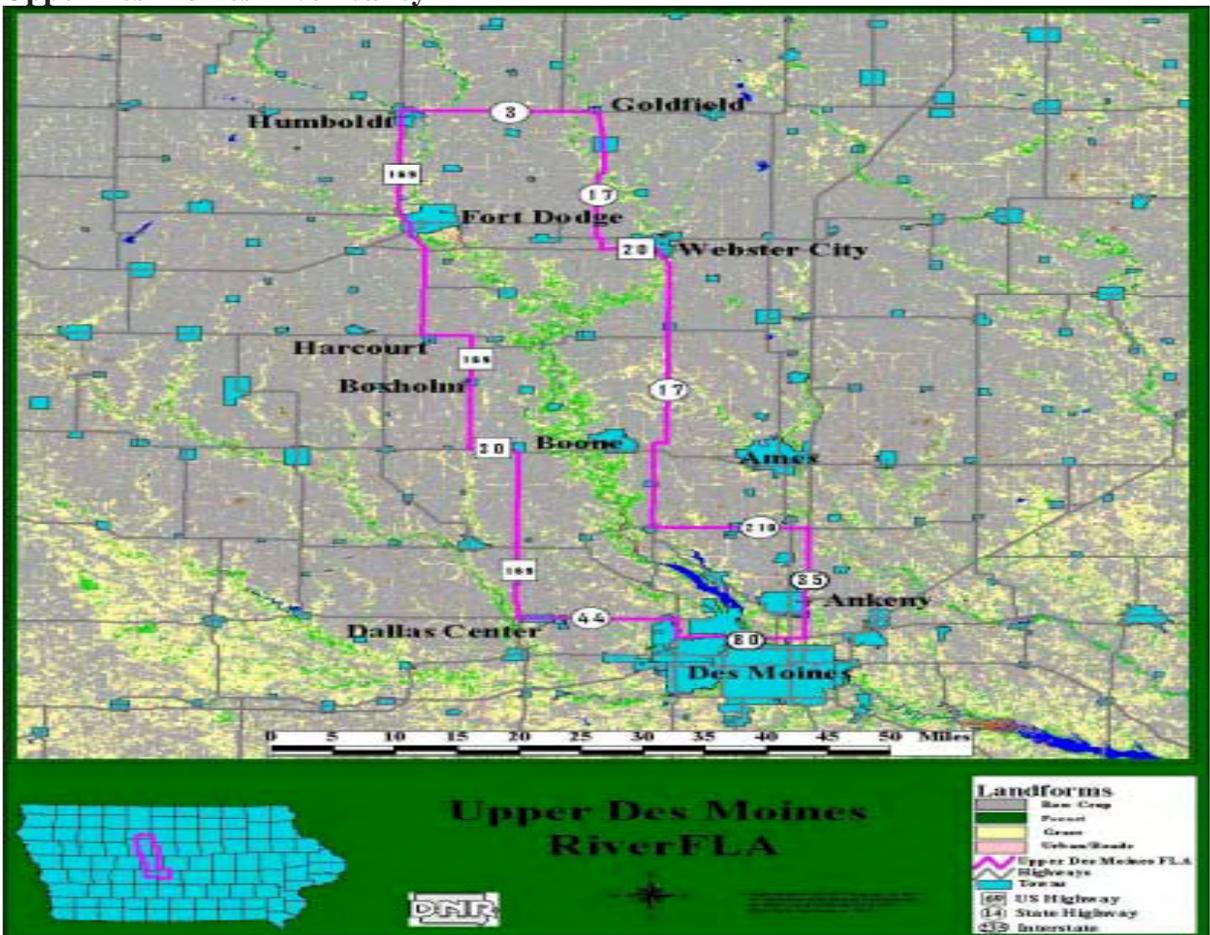
Deep valleys and wooded, moist habitats characterize the landscape along one of Iowa's major rivers. The Upper Des Moines River Valley provides a pathway for the migration of numerous animals and migratory birds every spring and fall. This area provides a habitat to Iowa's rare and threatened plant and animal species and many of its remaining wild species. Nesting hawks, and many other birds and squirrels, nestle into the fragmented floodplain forests and endangered communities that spring up along this specialized niche. One of these specialized niches, Woodsman Hollow, is a literal botanical treasure trove located adjacent to the Upper Des Moines River, and is home to a large population of unusual ferns.

Description of Boundaries of the Forest Legacy Area

The Upper Des Moines River Valley is forested from Humboldt County in North Central Iowa to the Saylorville Lake Dam in Polk County just north of the City of Des Moines, Iowa.

Private ownership dominates the Forest Legacy area's forestland. Specifically, the Upper Des Moines River Valley Forest Legacy Area northern boundary is at the intersection of State Highway 3 and U.S. Highway 169 at the City of Humboldt, east along State Highway 3 to the City of Goldfield, south along State Highway 17 to the City of Madrid, east along State Highway 210 to Interstate 35 south, south along Interstate 35, west along Interstates 80/35 to State Highway 141 north, west along State Highway 44, north along U.S. Highway 169 to the City of Humboldt.

Upper Des Moines River Valley FLA



State/Federal Managed Lands within the Upper Des Moines River Valley Forest Legacy Area

State and Federal managed lands within the Upper Des Moines River Valley Forest Legacy Area includes: Dolliver Memorial State Park (600 acres), Ledges State Park (1,200 acres), Big Creek State Park (3,550 acres), Brushy Creek State Recreation Area (6,500 acres) and Jester County Park (300 acres). There are several large natural park areas owned and managed by the City of Fort Dodge, Iowa in this area as well.

Description of Important Environmental Values

The forests in the Des Moines River Valley exist primarily on upland slopes and floodplain areas too steep for agriculture. The forests are dominated by oak-hickory, maple-basswood and silver maple-green ash-cottonwood. The Upper Des Moines River Valley forests protect major U.S. Army Corps of Engineer recreational/flood control lakes at Saylorville and Red Rock Reservoirs. State and County parks within this Legacy Area are some of the most heavily utilized recreational areas in the state due to their proximity to the Des Moines-Ames metro areas. These forests offer scenic overlooks and vistas containing unique cultural and geological resources. The forests are contiguous and offer critical fish and wildlife habitat, along opportunities for continuation of traditional forest management activities. Sawmill and wood producing operations in Boone, Des Moines, Redfield and Webster City depend upon the working forests in the Legacy Area for their raw materials.

Current and Potential Conversion Pressures

The Des Moines metro area is expanding into this Forest Legacy Area. Hobby farms and larger house lots fragment the resource, with choice house lots being located near federal (Corps of Engineers) and State (DNR) ownership limiting natural resource management efforts. All indications are that this trend will continue, forcing forestland values to increase, spurring additional development pressures on forest landowners.

Goals and Objectives for the Upper Des Moines Forest Legacy Area

Goal: To reduce fragmentation of private forests bordering or near federal, state, county government or permanently protected forest holdings.

Objectives – to use conservation easement, purchase of development rights, fee acquisition and forest stewardship planning on private lands to:

- reduce forest fragmentation thereby maintaining contiguous forest resources
- protect boundaries and natural resource management opportunities on federal, state, county or permanently protect forests
- protect scenic overlooks and vistas
- protect unique cultural and geological resources
- protect critical fish and wildlife habitat
- provide opportunities for continued traditional forest management activities that provides raw materials for the forest products industry
- protect riparian forest watershed values

3. Mississippi River Blufflands

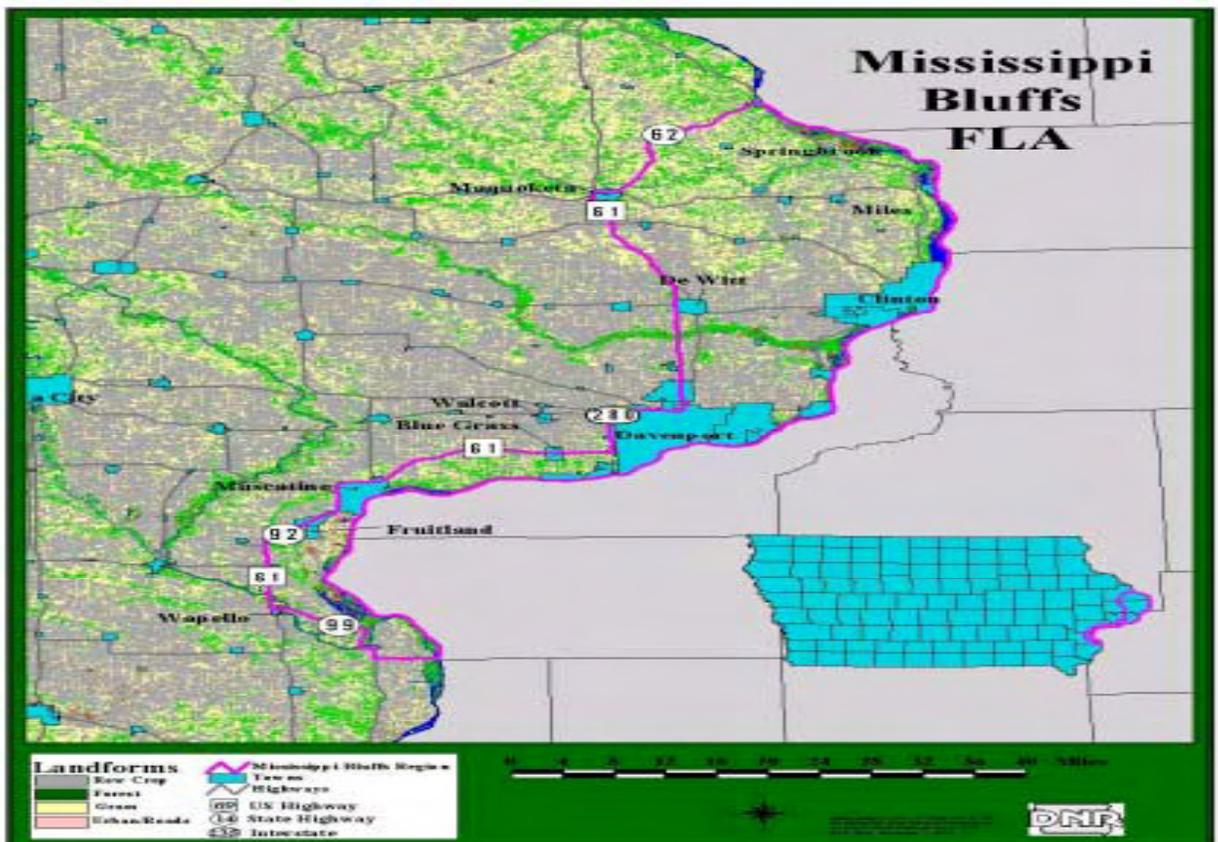
General Descriptions

In scattered spots along the Mississippi River Valley remnants of native forest both on steep bluffs and level floodplains/islands can still be seen. Though much of this land has been stripped for agricultural use and drainage, many bluffland and floodplain forests still thrive along this great river. These undisturbed, bluffland and riparian communities are some of Iowa's most endangered community types from real estate development and fragmentation. Serving as transportation for goods and supplies, as well as people, for hundreds of years, the Mississippi River Blufflands Forest Legacy Area is dotted by numerous settlements. Some of the oldest cities in Iowa are located along the great river, including the Cities of Bellevue, Bettendorf, Clinton, Davenport and Muscatine.

Description of Boundaries of Forest Legacy Area

The Forests of the Mississippi River Bluffslands extend along Iowa's eastern border with Illinois. The Mississippi River Blufflands Forest Legacy Area stretches from Jackson County in the north to Louisa County in the south. The forests within the Mississippi River Blufflands Forest Legacy Area are primarily owned by private landowners. Specifically, the northern boundary of the Mississippi River Blufflands Forest Legacy Area starts at the City of Bellevue, Iowa south along the banks of the Mississippi River to Lake Odessa State Wildlife State Wildlife Area and the City of Tooleboro. Then the area goes west along State Highway 99 (the Great River Road), northeast along U.S. Highway 61 and State Highway 92, north along Interstate 280, east along Interstate 80, north along U.S. Highway 61 to the City of Maquoketa, northwest along State Highway 62 to the City of Bellevue.

Mississippi River Blufflands Area



State/Federal Managed Lands Within the Mississippi River Blufflands Forest Legacy Area

State and Federal managed lands within the Mississippi River Blufflands Forest Legacy Area includes: several forested Islands managed by the U.S. Army Corps of Engineers involving the Upper Mississippi River National Wildlife Refuge and the Mark Twain National Wildlife Refuge. Other important public ownership in the Forest Legacy Area are Bellevue State Park (707 acres), and Wildcat Den State Park (423 acres).

Description of the Important Environmental Values

The forests of the Mississippi River Blufflands Forest Legacy Area are a combination of high quality blufflands - upland forest of oak-hickory and sugar maple-basswood and floodplain – riparian forests and islands of silver maple-cottonwood. The upland forests are on extreme steep slopes and along with the floodplain forests are a critical for protecting drink water supplies, recreational opportunities and flood control. This Forest Legacy Area possesses important nesting sites for the red-shouldered hawk and the bald eagle. This is a critical corridor for migratory birds. These bluffland riparian areas also serve as buffer between the river and the upland agricultural community, protecting and cleaning the waters running into the Mississippi River drainage. The Forests of this Forest Legacy area offer opportunities for the continuation of traditional forest management activities involving the high quality hardwood resources that influences economic opportunities for sawmills in the communities of Mount Pleasant, and Fort Madison, Iowa to the west and south of this area. They also hold unique cultural and geological resources.

Current and Potential Conversion Pressures

The Blufflands area is one of the last areas in Iowa, where large parcels of contiguous forestland remain. Many of these large parcels of private forests border public forestholdings. The senior citizen demographics of forest ownership in this region indicate a great potential for landowner turnover in the next 10 years. In recent years the area has been experiencing increasing forestland values as second homes and recreational parcels for absentee landowners. Private forestland owners along with the Iowa Natural Heritage Foundation have commented on increased subdivisions of these last remaining large parcels of valuable forestlands being more common. With the close proximity to Chicago, Minneapolis-St. Paul, Rochester, MN and Madison, WI, absentee landowner trends are predicted to continue, and with affordable prices for smaller parcels, forest fragmentation will undoubtedly occur.

Goals and Objectives For the Mississippi River Blufflands Forest Legacy Area

Goal: To reduce fragmentation and protect water quality values of private forests that border or are near federal, state, county or permanently protected forests.

Objectives – to use conservation easements, purchase of other development rights, fee acquisition and forest stewardship planning to:

- reduce forest fragmentation and maintain contiguous forest resources
- protect boundaries and natural resource management opportunities on federal, state, county or permanently protected forests
- reduce soil erosion and protect water quality
- provide critical fish and wildlife habitat
- provide outdoor recreation opportunities
- provide opportunities to continue traditional forest management that provides resources for economic development of rural communities
- protect unique archeological, cultural and geological resource

4. Iowa/ Cedar River Valleys

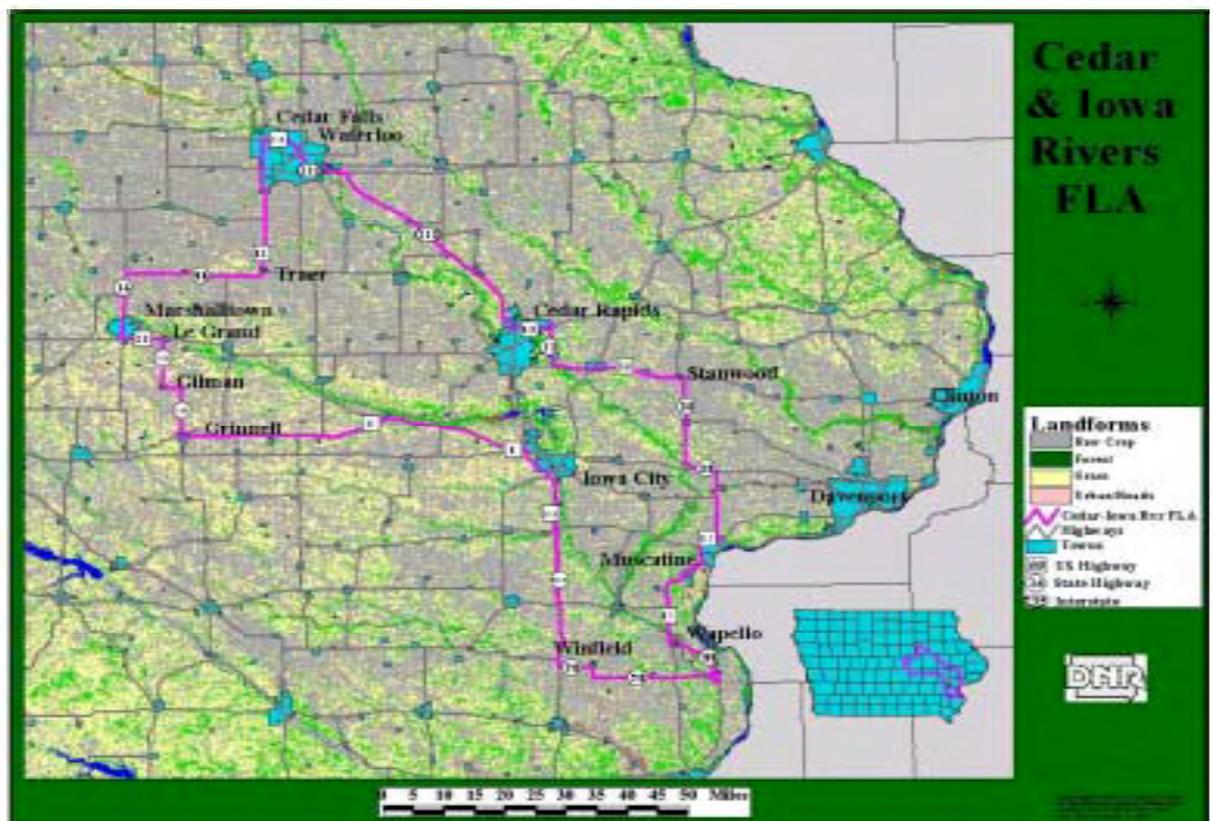
General Description

The Cedar and Iowa Rivers run from heavily agricultural areas of north central Iowa through the Cities of Waterloo/Cedar Falls, Cedar Rapids and Iowa City to their final destination at the Mississippi River. The forests within this Forest Legacy Area exist on steep slopes or floodplain areas. The forests along these steep slopes are upland species of oak-hickory, while the floodplain forests are silver maple-green ash-cottonwood.

Description of Boundaries of Forest Legacy Area

The Cedar/Iowa River Valley Forest Legacy Area extends from North Central Iowa, joining together at Columbus Junction, Iowa then emptying into the Mississippi River at Lake Odessa State Wildlife Area. Specifically, this Legacy area starts at the intersection of State Highway 57 and U.S. Highway 218 in the City of Cedar Falls. It runs south along Interstate 380, east along State Highway 65, then south on State Highway 13. It then goes east along U.S. Highway 30, south along State Highway 38, east along Interstate 80. It then goes south along State Highway 38/U.S. 6, southwest along U.S. Highway 61. It heads east along State Highway 99 and west along Louisa County Highway H22. It then heads west along State Highway 78, north along U.S. Highway 218, west On Interstate 80, west on U.S. Highway 6 to the City of Grinnell. Then the Forest Legacy Area goes north on State Highway 146, west on U.S. Highway 30 to the City of Marshalltown. It runs north on State Highway 14, east on State Highway 96, north on U.S. Highway 63, north on State Highway 58 to the City of Cedar Falls, Iowa. Private ownership dominates the Cedar/Iowa River Forest Legacy area.

Iowa/ Cedar River Valleys Area



State/Federal Managed Areas within the Cedar/Iowa River Valley Forest Legacy Area

Managed Federal and State Forest areas within the Cedar/Iowa River Valleys Forest Legacy Area includes: George Wyth State Park (1,200 acres), Pleasant Creek State Park (1,927 acres), Palisades-Kepler State Park (840 acres), and Lake Odessa Wildlife Area (5,000 acres). Along the Iowa River, the Corps of Engineers controls a large flood control/recreational lake at Coralville Reservoir. This Forest Legacy area contains the drinking water supply watersheds for the Cities of Waterloo-Cedar Falls, and Cedar Rapids-Iowa City. In addition, the historic Amana Colonies Forests, the largest private forest ownership in Iowa (7,000+ acres) are located within this Forest Legacy area.

Description of the Important Environmental Values

The private forests within the Cedar/Iowa River Valleys Forest Legacy Area help to provide drinking water supplies for the cities of Cedar Falls, Waterloo, Cedar Rapids, Iowa City and many other smaller communities. The forests of the Cedar and Iowa Rivers provide recreational opportunities along with critical fish and wildlife habitat. These forests have long been important for the timber industry in Iowa, as markets for silver maple and high quality oak help sawmills in Belle Plaine, Edgewood, Vinton and Wyoming, Iowa.

Current and Potential Conversion Pressures

Currently, urban sprawl is parceling forestland around the metro areas of Cedar Falls/Waterloo and Cedar Rapids/Iowa City, impacting contiguous forest wildlife habitat and traditional forest management opportunities. Continued parcelization is expected to continue as farming becomes less attractive financially and land subdivision increases. Forested parcels especially near public holdings are highly sought by developers. This continued forest fragmentation would impact the riparian values of the forests within this Legacy Area. The Forests of the Cedar/Iowa River Valley Forest Legacy Area have in the last decade taken severe impacts from storms and flooding. During 1998, over 10,000 acres of private forests within the Iowa River Valley were either broken or blown over by a 100-mph straight wind/tornado.

Goals and Objectives for the Iowa/ Cedar River Valley Forest Legacy Area

Goal: To reduce forest fragmentation and water quality values of private forests that border or are near federal, state, county or permanently protected forests.

Objectives – to use conservation easements, purchase of other development rights, fee acquisition and forest stewardship planning to:

- maintain contiguous forest resources
- maintain and expand riparian forests
- protect boundaries and natural resource management opportunities on federal, state, county or permanently protected forests
- provide critical fish and wildlife habitat
- provide critical fish and wildlife habitat
- provide opportunities for outdoor recreation
- provide opportunities to continue traditional and sustainable forest management that benefits the economy of rural communities

5. Driftless Area

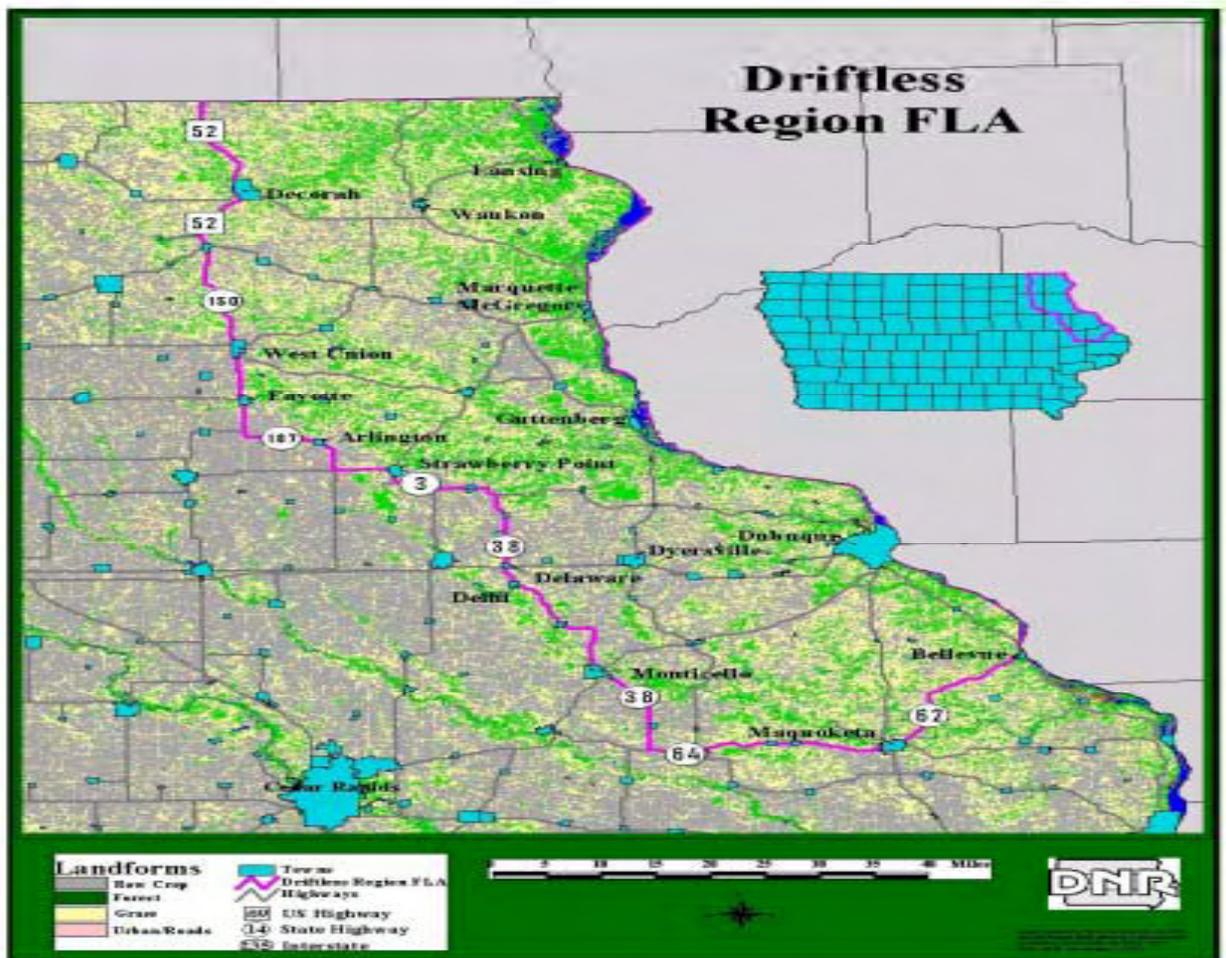
General Description

Located in extreme northeast Iowa counties of Allamakee, Clayton, Dubuque, Fayette, Jackson and Winneshiek, the Driftless Forest Legacy Area contains some of the last remaining large parcels of forestland in Iowa. The Driftless Forest Legacy Area given its name because of its lack of glacial deposits or “drift,” the topography is Iowa’s most rugged and scenic, and is also home to a considerable portion of Iowa’s remaining forestland.

Description of Boundaries of Driftless Forest Legacy Area

The Driftless Area exists in extreme Northeast Iowa counties of Allamakee, Clayton, Dubuque, Fayette, Jackson and Winneshiek, bordering the states of Illinois, Minnesota and Wisconsin. Specifically, the Driftless Forest Legacy Area starts at the Minnesota state border at U.S. Highway 52, south along Highway 52 through the City of Decorah, then south to State Highway 150. It then runs south on State Highway 150, then east/south along State Highway 187, and east along U.S. Highway 20. It then runs south along State Highway 38, east along State Highway 64 to the City of Maquoketa. It then runs northeast along State Highway 62 to the Mississippi River, then north along the Mississippi River to the Iowa/Minnesota state border near the City of New Albin, then west along the state boundary to U.S. Highway 52.

Driftless Area



State/Federal Managed Lands within the Driftless Forest Legacy Area

State and Federal managed lands within the Driftless Forest Legacy Area includes: Yellow River State Forest (9,000 acres), Pikes Peak State Park (970 acres), Volga River State Recreation Area (5,500 acres), Maquoketa Caves State Park (300 acres), Bixby State Park (184 acres), Backbone State Park (2,000 acres) and Effigy Mounds National Monument (3,000 acres). The Forest Legacy Area also includes valuable county and city park areas, such as the City Parks of Dubuque, Iowa. The Driftless Forest Legacy Area contains the protected waterway areas of the Upper Iowa River and its watershed.

Description of the Important Environmental Values

Because of the extremely dissected nature of the land, this area is also home to many microhabitats. Along the cool, north-facing slopes are ice caves, through which cold airflows, that create a boreal habitat capable of sustaining golden saxifrage, monkshood and bunchberry plants. The practically extinct small land snail, a holdover from the Ice Age, makes its home in this region. The land snail is currently found nowhere else in the world, and two lichens, lungwort and umbilicaria, grow nowhere else in the state of Iowa. The Driftless Area is also home to some of Iowa's best trout streams. The Upper Iowa River Watershed includes Iowa's only tie to prehistoric times, with native populations of balsam fir and white pine. This heavily forested river watershed contains unique areas, threatened and endangered plants, and possesses the highest quality fisheries in the state. The forests of the Driftless area exist on extremely steep slopes (>28%) and consist of high quality hardwoods of Oak-Hickory and Sugar Maple-Basswood. The forests provide scenic overlooks and vistas, providing countless opportunities for public recreation on public and private lands. Traditional forest management activities occur throughout the area due to the high quality of the trees, providing income to forest landowners and helping to employ sawmills in Dubuque, Elkader, and Guttenberg, Iowa.

Current and Potential Conversion Pressures

In partnership with the Iowa Natural Heritage Foundation, the IDNR has determined that private forestlands in the Driftless Forest Legacy Area are some of the largest remaining forested parcels in the state. These private forests border many key public and permanently protected forest areas. Landowner demographics so an aging ownership with few heirs with interests in continuing farming. Development pressures for these scenic forests are increasing through the area; subdivision advertisements and higher forestland offers have been seen at land auctions. County records show increased absentee and out of state land ownership, as second and recreational homes are increasing throughout the area. This trend in demand for second homes/recreational lands is expected to continue given the close proximity of the Driftless Forest Legacy Area to the Metropolitan areas of Chicago (3 hours away) and Minneapolis-St. Paul (2 hours away). The Driftless Forest Legacy Area is suffering from increased problems of non-native invasive plants such as buckthorn and garlic mustard. The area is at the leading front of the Gypsy moth now established in the Madison, Wisconsin area.

Goals and Objectives of the Driftless Forest Legacy Area

Goal: To reduce forest fragmentation of private forests bordering or near federal, state, county or permanently protected forest holdings.

Objectives –to use conservation easements, purchase of other development rights, fee acquisition and forest stewardship planning to:

- Protect boundaries and natural resource management opportunities on federal, state, county or permanently protected forests
- Protect unique archeological, cultural and geological resources
- Protect unique the habitats of flora and fauna resources
- Provide opportunities for outdoor recreation
- Protect scenic vistas and overlooks
- Protect opportunities for sustainable traditional forest management on private lands to benefit economies of rural communities
- Reduce soil erosion to protect water quality.

6. State Protected Waterways

General Description

In the late 1970's the then Iowa Conservation Commission (today the Iowa DNR) spent considerable effort and time in developing a State Protected Water Areas program. State Designated Protected water Areas contain a high quality condition landscape that is unique in the state. Areas designated for Protected Waters are Middle Fork of the Raccoon River, the Boone River the Wapsipinicon River and Little Sioux River. Each of these Protected Water Areas contains critical forest cover that is threatened from surrounding land use conversion from commercial and expanded agricultural interests.

Description of Boundaries of State Protected Waterways Forest Legacy Area

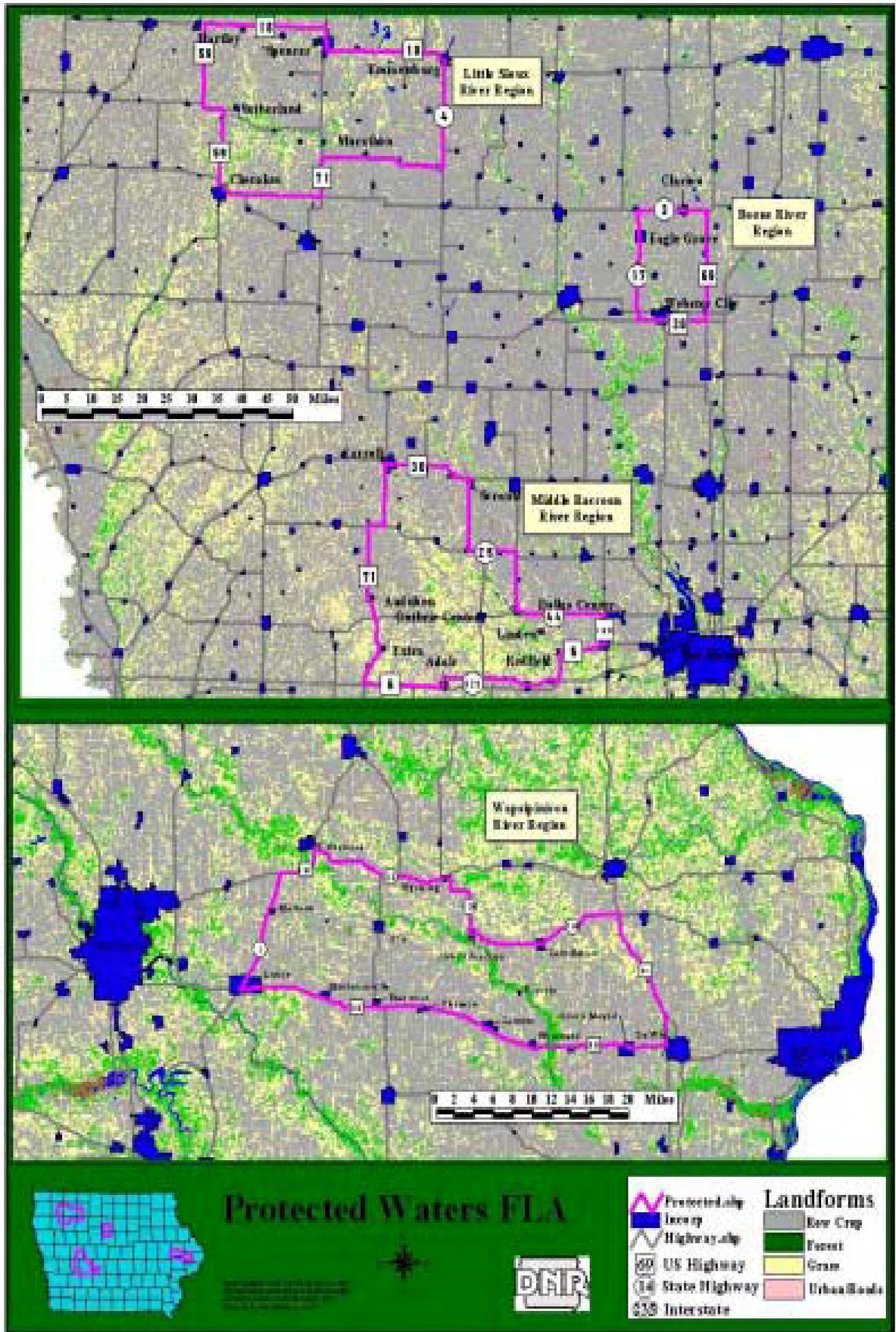
The Middle Fork of the Raccoon River flows from the west central to central Iowa joining the Raccoon River just west of the City of Des Moines. The Forest Legacy Area starts at the intersection of U.S. Highway 71 and U.S. Highway 30 in the City of Carroll, Iowa. It continues east along Highway 30 to the City of Scranton, heading south along State Highway 25. It then continues east along State Highway 141, heading south along State Highway 4. Then it heads east along State Highway 44 to the City of Dallas Center. It then heads south along U.S. Highway 169 to U.S. Highway 6 in the City of Adel. It continues along State Highway 6 to Interstate 80 West. It then goes west along Instate 80, then west on State Highway 925 to the City of Adair. It then west along U.S. Highway 6, then heads north on U.S. Highway 71 to the City of Carroll.

The Boone River flows through a heavy agricultural area of North Central Iowa. The Forest Legacy Area of the Boone River Valley would start at intersection of State Highway 17 and State Highway 3. It runs east along State Highway 3, then heads south along U.S. Highway 69. It then runs west along U.S. Highway 20, then heads north along State Highway 17.

The Wapsipinicon River protected waterway area located in east central Iowa of this Forest Legacy Area begins at Intersection of U.S. Highway 61 and U.S. Highway 30 just west of the City of DeWitt, Iowa. It runs west along U.S. Highway 30 to the Cities of Mount Vernon/Lisbon. It then runs north along State Highway 1, then east along U.S. Highway 151 to the City of Anamosa. It then runs east along State Highway 38, then runs south/east along State Highway 136. It then turns south on U.S. Highway 61 to the intersection of U.S. Highway 30.

The Little Sioux River protected waterway area is located in extreme northwest Iowa. The Forest Legacy Area begins intersection of U.S. Highways 71 and 18 at the City of Spencer, Iowa. It heads east along Highway 18 to the City of Emmetsburg, heading south along State Highway 4. It then turns west on State Highway 10, heading south along U.S. Highway 71. It then turns west along State Highway 3 to the City of Cherokee, heading north on U.S. Highway 59 to the intersection with U.S. Highway 18 north of the City of Primghar. It then heads east along U.S. Highway 18 to the Intersection of U.S. Highway 71 in the City of Spencer, Iowa.

State Protected Waterways Areas



Description of the Important Environmental Values

The Middle Fork of the Raccoon River and the Boone River forests exist as upland hardwood forests on steep slopes and floodplain forests in a highly agricultural area of North and West Central Iowa. They provide critical fish and wildlife habitat in this limited forested area, helping to provide drinking water for several communities in their areas. They both contain rare and unique oak savanna remnants. The Wapsipinicon State Protected Waterway possesses steep slopes covered with upland and floodplain hardwood trees. The forestlands in the Wapsipinicon River State Protected Waterway provide drinking water supplies for all the communities in their watershed and are critical fish and wildlife habitat areas. Several unique and rare cultural and geologic features are found in the Limestone Bluffs of Wapsipinicon River valley. The Middle Raccoon River Protected Waters area is the source of drinking water for the Des Moines metro area (400,000 residents). The forests along the Middle Raccoon River are critical riparian habitat and a source of raw materials for the sawmill at Redfield, Iowa. The Little Sioux River forests are Bur oak savanna remnants along with bottomland hardwoods in the floodplains, with redcedar covered steep slopes. The Little Sioux River's forests is the only wooded habitat in the region. This state protected waterway supplies drinking water supplies for the City of Spencer, Iowa (25,000 residents).

State/Federal Managed Lands within the State Protected Waterways Forest Legacy Area

State and Federal managed lands within the Middle Raccoon State Protected Water portion of this Forest Legacy Area includes Springbrook State Recreation and Educational Center (920 acres) and Lake Panorama private recreation area. The Boone State Protected Water portion of this Forest Legacy Area includes no major state or federal managed lands. The Wapsipinicon State Protected Water portion of this Forest Legacy Area includes Wapsipinicon State Park (390 acres). The Little Sioux Protected Water portion of this Forest Legacy Area includes Wanata State Park (160 acres).

Current and Potential Conversion Pressures

The forests within this Forest Legacy Area are critical for water quality for both drinking water supplies and outdoor recreation. They have all been under constant pressure to conversion from agricultural clearing for crops and for unrestricted livestock grazing for beef and dairy production. The forests of the Wapsipinicon and the Middle Raccoon State Protected Water portions now facing residential and commercial land development due to their proximity to the metro areas of Cedar Rapids and Des Moines respectively. Interest in land development is especially keen around areas that border county and state parks areas.

Goals and Objectives of the State Protected Waterways Forest Legacy Area

Goal: To reduce fragmentation of private forests bordering or near federal, state, county or permanently protected forests.

Objectives – to use conservation easements, purchase of other development rights, fee acquisition and forest stewardship planning to:

- Maintain contiguous forest resources
- Protect and expand riparian forests
- Protect unique archeological, cultural and geologic resources
- Provide critical fish and wildlife habitat
- Provide opportunities for sustainable traditional forest management that will benefit the economies of rural communities
- Reduce soil erosion to protect drinking water supplies.

7. Southern Iowa Drift Plain

General Description

Southern Iowa forests are a unique resource that resembles the forests of the Ozarks of Missouri and Arkansas. Hardwood forests occupy steep and highly erodible slopes. These forests have been abused by past agricultural and livestock overuse. These forests offer opportunities for agroforestry development of non-traditional forest products, from nuts to mushrooms. Absentee land ownership is increasing and fragmentation has been noted in the area.

Description of Boundaries of Southern Iowa Drift Plain Forest Legacy Area

The Southern Iowa Drift Plain extends from southwestern Iowa northeast to the Des Moines metro area, south east along the Des Moines River to the Mississippi River to the Missouri State border. areas bordering the Mississippi River with its southern boundary being Missouri. It covers a large expense of the southern 1/3 of Iowa, and is an area in transition from marginal cropland to large animal feeding operations. The southwest corner of this Forest Legacy Area begins at the City of Braddyville at the Intersection of U.S. Highway 71 and the border with the State of Missouri. It runs north along Highway 71 to U.S. Highway 6, heading through the City of Des Moines. At U.S. Highway 69 it runs south to State Highway 163 to the City of Oskaloosa. At the City of Oskaloosa, it turns south along U.S. Highway 63, then east along State Highway 78 to the Community of Olds. Then it runs south along U.S. Highway 61 (also known as the Great River Road) bordering the Mississippi River to the City of Keokuk, Iowa. At the City of Keokuk, the Legacy Area turns west along the state border with Missouri.

Map of Southern Iowa Drift Plain



State/Federal Managed Lands within the Southern Iowa Drift Plain Forest Legacy Area

Although this Forest Legacy Area forest ownership is largely controlled by private landowners, but does contain several important state forested public areas. These include: as Stephens State Forest (12,000 acres), Lake Ahquabi State Park (770 acres), Lake Darling State Park (1,387 acres), Lake of Three Fires State Park (1,155 acres), Nine Eagles State Park (1,119 acres), Lake Icaria County Recreation Area (1,945 acres), Green Valley State Recreation Area (990 acres), Bobwhite State Park (398 acres), Redhaw State Park (649 acres), Honey Creek State Recreation Area (828 acres), Lake Wapello State Park (1,150 acres), Sharon Bluffs State Park (144 acres), Geode State Park (1,641 acres) and the Rathbun Lake State Wildlife Area. Rathbun Lake is a major drinking water source for all of south central Iowa and north central Missouri.

Description of Important Environmental Values

The forests of the Southern Iowa Drift Plain are upland forests similar to Ozark forests of Southern Missouri. They exist on steep slopes (>14%). These forests had been heavily grazed when cow-calf operations were economic until the 1980's farm crisis and the shift now towards feedlot operations. Forestland grazing still continues in the area, with estimates that 59% of the forests are grazed. The area forests provide abundant areas for game and non-game wildlife; it was here that the first successful restoration of wild turkey and white tailed deer was started. Golden and bald eagle migration along the Des Moines River makes heavy use of the forested areas. The forests provide significant areas for outdoor recreation for residents and visitors to the area; the forests are critical to a growing tourism trade. Water quality is a major issue within this Forest Legacy Area, from sedimentation and excessive nutrient issues. Forests and their protection can play an important roll in protecting water quality, especially as it relates to the Des Moines River and Rathbun Lake. The forests within this Forest Legacy Area offer opportunities for expansion of traditional and non-traditional forest products. Resource Conservation and Development Areas in Burlington, Centerville, Fairfield and Runnells, Iowa are expanding rural development through forestry efforts in finding markets for traditional and non-traditional forest products.

Current and Potential Conversion Pressures

Pressures continue to convert forested areas into agricultural crop ground or livestock grazing, as the region is economically depressed. There is a general lack of awareness of the values of forestland to water quality enhancement, though efforts to restore riparian areas is increasing. The close proximity to the Des Moines metro area is increasing opportunities for large parcels to be subdivided into residential and hobby farm locations. Interest for private hunting preserves in southern Iowa according to recent state and Iowa Natural Heritage Foundation land purchases has significantly increased land values, increasing subdivision and forest fragmentation in the area. This trend is expected to continue, with increased absentee land ownership pushing forestland values even higher. Opportunities for increased forest stewardship efforts especially for improved wildlife habitat exist with many of these absentee landowners.

Goals and Objectives for the Southern Iowa Drift Plain Forest Legacy Area

Goal: To reduce forest fragmentation of private forests bordering or near federal, state, county or permanently protected forests.

Objectives – to use conservation easements, purchase of other development rights, fee acquisition and forest stewardship planning to:

- Maintain contiguous forest resources
- Protect boundaries and natural resource management opportunities on federal, state, county, and permanently protected forest
- Enhance and expand riparian forest areas
- Protect unique archeological, cultural and geologic resources
- Provide critical fish and wildlife habitat
- Provide opportunities for sustainable traditional and nontraditional forest products to assist the economies of rural communities
- Reduce soil erosion to protect drinking water supplies.

Those items common to each of the Forest Legacy Areas are the government entities that may be assigned management responsibilities and the Means for Protection, addressed below:

Identification of governmental entity that may be assigned management responsibility

The Forest Legacy Program in Iowa will be implemented through a State Grant Option, by which the State of Iowa will hold title to all conservation easements or deeds for acquired tracts of forestland entered into the Forest Legacy Program in Iowa. The Iowa Department of Natural Resources (IDNR), Division of Forests and Prairies is the lead agency for this program, with consultation through the Iowa Forest Stewardship Committee.

The State of Iowa, IDNR Division of Forests and Prairies will hold title to all acquisitions made through the Forest Legacy Program in Iowa, in coordination with the IDNR's Land Acquisition Bureau. The IDNR Division of Forests and Prairies may elect to delegate management and administration of individual tracts of land within the Forest Legacy Program to another agency within the IDNR, or to other organizations or government entity, including land trust or other conservation groups.

Means for Protection of Forest Legacy Area Tracts

- Acquisition of tracts of forestland will primarily be accomplished through conservation easements, as the preferred method. However, were the situation is warranted, acquisition of full-fee may be utilized as an appropriate method of acquisition.
- Acquire development rights on all tracts. Those rights include, but are not limited to the right to construct buildings and other improvements, remove forest cover for non-forest uses and control utility right-of-way locations.
- Timber rights retained by the landowner shall follow guidelines set forth in the Forest Stewardship Plan approved by the Iowa State Forester or his designee, and include the use of Forestry Best Management Practices (BMPs), applicable laws and regulations and with the following provisions:
 - All timber harvesting for a tract or tracts shall be in consultation with a professional forester and all logging conducted by state Bonded Timber Buyers. Departures from sustained forest management are permitted only in limited response to outbreaks of forest insects and disease and salvage in the event of fire or natural disasters.
 - Timber harvesting or cutting is according to Iowa's Forestry Best Management practices and within the guidelines of the individual Forest Stewardship Plan.

- Forest Stewardship plans shall be reviewed and updated as needed at least once every ten years.
- Consider acquisition of public access rights on each tract (not required). Determine on a case by case basis the need for public access vs. the potential threat for land conversion. The Iowa Forest Stewardship Committee will make final recommendations concerning public access provisions for any said tract to the State Forester. The Iowa State Forester will make final decisions prior to the start of negotiations.
- Restrict development of mineral or oil and gas rights to allow no more than 10 percent of the surface occupancy of the Forest Legacy tract, with total area of all non-forest uses not exceeding 10 percent of the total tract area. Upon landowner completion of operations, the land shall be reclaimed as much as practical to its original contour and reforested.
- No disposal of waste or hazardous material will be allowed on properties in the Forest Legacy program in Iowa.
- Prohibit the use of signs and billboards on all properties, except to state the name and address of the property owner and/or provide Forest Legacy or other forestland incentive/recognition programs, such as Tree Farm, etc.
- Existing dams or water impoundments or similar structures may be allowed to remain and be maintained. The Forest Stewardship Committee who will make recommendations to the State Forester for his final approval/denial will review exceptions or new impoundments on a case by case basis.
- Any revisions to the easement regarding existing structures may be made only upon approval by the government holding title to the easement.
- New or expansion of industrial, commercial or residential activities, except traditional forest uses will be reviewed on a case by case basis by the Iowa Forest Stewardship Committee. The Forest Stewardship Committee will then make recommendations to the State Forester for his final determination.
- A parcel must have a Forest Stewardship plan completed by a professional forester and approved by the State Forester or his designee before entering the Forest Legacy Program. This Forest Stewardship plan must be current and updated at least every 10 years or as needed.
- Each conservation easement will contain appropriate clauses to address the goals and objectives of the individual Forest Legacy area. Such clauses may include, but are not limited to the following:
 - **Scenic Resources** – where local, state or nationally designated scenic routes, bike trails, hiking trails or area would be impacted, design timber harvests and timber stand improvement work to minimize aesthetic impacts.
 - **Public Recreation** – where appropriate acquire public recreation access easements for public recreation such as hiking, hunting and fishing.

- **Riparian Areas** – where appropriate, limit impacts to riparian zones during traditional forest uses by following Iowa Forestry Best Management Practices, develop species control measures in aquatic communities to minimize negative impacts of invasive species. These measures should be addressed in the Forest Stewardship plan.
- **Unique, Rare, Threatened or Endangered Species** – where identified unique, rare, threatened or endangered species of animals or plants exist on the Forest Legacy tract, the Forest Stewardship plan must address their protection and appropriate management.
- **Archeological, Cultural or Geologic Features** – if a tract contains known archeological, cultural or geologic features, the Forest Stewardship plan must address their protection.
- **Borders existing public or permanently protected forests** – where the tract borders existing public or permanently protected forests, the Forest Stewardship plan will address the use of appropriate buffer zones during traditional forest use.
- **Unique or Isolated Tree Species/Stand Conditions** – if a tract contains known unique or isolated tree species/stand conditions such as old growth or savannas, the Forest Stewardship plan will address appropriate management efforts.
- **Invasive Species** – limit the terrestrial plant and animal stocking activities (particularly exotic species) to minimize negative impacts on native ecosystems. Such stocking and invasive species control and management efforts should be addressed in the Forest Stewardship plan.

Iowa Forest Legacy Landowner Application Package WILL CONTAIN:

- Forest Legacy Program Application-Information Sheet
- Landowner Inspection Consent Agreement
- Forest Legacy Program Application Form (# of pages)
- Application Submission Checklist
- Map of Designated Forest Legacy Areas
- Iowa Forest Legacy Program Evaluation Criteria and Description

Application and Ranking of Requests

Landowners will be expected to complete an application with the assistance of the local DNR Forester or other knowledgeable professionals to insure that the information is complete and correct. Applications will be reviewed by the Iowa DNR Division of Forests and Prairies and go to the Forest Stewardship Committee for review and prioritization.

Points will be awarded to the applications for the number of criteria met. Actual point amounts for each criterion will be determined by the Forest Stewardship Committee and approved by the Iowa State Forester.

Site visits and inspections of the actual property will be necessary for properties being considered, an inspection consent agreement will be completed at the time of application.

Applicants will be notified of how their application was scored once the Forest Stewardship Committee and the State Forester have completed their assessment and recommendations.

IOWA'S ASSESSMENT OF NEED-PUBLIC INVOLVEMENT

Public Participation Process and Draft timetable:

The public participation process for Iowa's Forest Legacy Program Assessment of Need (AON) took place initially during the fall of 1999 when the Iowa Forest Stewardship Council was introduced to the concept of the Forest Legacy Program. The council voted to pursue development of the Assessment of Need by the Iowa DNR Division of Forests and Prairies.

The next phase involved discussion with interested organizations, stewardship committee members and landowners over the state of Iowa at organization meetings and through informal/formal networks of forestry and private landowner organizations. A Forest Legacy Sub Committee was established in August of 2000 to help in the development and review of the initial draft AON. This sub committee determined the proposed Forest Legacy Areas. The second draft was developed in May 2001 being brought in front of the entire Forest Stewardship Committee for comment and approval on May 8, 2001. Comments were received on the second draft, and are included in this AON from Forest Stewardship Committee members. The entire stewardship committee voted to support the 7 proposed Forest Legacy Areas.

Additions and revisions proposed by the Stewardship Committee were addressed in the Third Draft of the AON that was released for public comment on August 14, 2001. During the Iowa Natural Resources Commission public meeting of August 2001, State Forester Mike Brandrup gave an informational review of the Draft AON, and asked for any comments to be made by September 10, 2001. The Draft AON and news release was placed on the Department of Natural Resources-Division of Forests and Prairies web site www.state.ia.us/forestry on August 14, 2001. A general state wide news release was put out by the Department of Natural Resources on that same day letting people know about the AON, and that a public hearing was set for September 10, 2001 at the State Forest Nursery in Ames. The public hearing was held on September 10th with 7 participants. Additional public comments were received and addressed through a question and answer period.

Additional email and telephone conversations concerning the AON were received and addressed right up to the final preparation of the AON on November 30th.

A letter to the Chair of each County Supervisor where a Forest Legacy Area is proposed was mailed on November 29, 2001. In addition, letters to members of Iowa's delegation to the House of Representatives and Senate were mailed on November 29, 2001. The final AON was completed and sent to the U.S. Department of Agriculture Secretary for her approval on December 3, 2001.

Following is the timetable for production of this Forest Legacy Assessment of Need (AON) for the State of Iowa:

November 1999 -- State Forest Stewardship Committee is introduced to Forest Legacy concept and votes to pursue Assessment of Need development.

March 2000 -- State of Iowa applies to federal matching funds to develop AON

May 2000 -- Research on other states' Forest Legacy Plan begins; an AON outline is constructed; list of organizations and people to talk with about the program is developed and implemented.

June 2000 -- Preparation of the AON Draft document begins following discussions with members of the forest stewardship committee and state foresters; focus of Forest Legacy Plan and possible Forest Legacy Areas are identified as information is gathered for the AON. Funding for preparation of the AON is received by IDNR from USDA Forest Service-State/Private Forestry.

August 2000 -- AON drafted and sent to a Forest Legacy subcommittee for review and comment; a meeting is held with the subcommittee where comments are received, the AON is sent back to the DNR for further development and revisions.

May 2001 -- The second draft of the Forest Legacy Plan is developed and presented for comment to the State Forest Stewardship committee. Comments are received from State Stewardship Committee members (enclosed).

July 2001 -- A third draft is developed and sent out to the Forest Legacy subcommittee for further review.

August 2001 -- Efforts to receive additional public through open meetings is held with the Iowa Woodland Owners Association, Iowa Tree Farm Committee, Northeast Iowa Forest Advisory Committee and the Southeast Forest Advisory Committee. The document is put on the DNR's web page and news releases requesting public input are sent out statewide for a 21-day review and comment period. Letters sent to the Chair of County Supervisors where FLA will occur.

September 2001 -- Public hearing was held on September 10th from 6:30-8 pm at the State Forest Nursery in Ames. A formal presentation was given to the audience and comments were taken and addressed during the meeting. Additional comments were received and addressed via email and phone calls. Governor Vilsack approves the plan and designates the Iowa DNR Division of Forests and Prairies as the lead agency in program implementation (see attached letter).

October 2001 -- The Iowa Natural Heritage Foundation Executive Director support the AON, and helps to coordinate a partnership meeting with the DNR to begin identification of potential legacy tracts around Yellow River State Forest. November 2001 -- Revisions are then made to draft AON; additions and corrections are made to the final AON; lists of involved parties is added, as well as names of organizations involved in the implementation of the plan. The Final AON sent to U.S. Secretary of Agriculture for approval follows.



THOMAS J. VILSACK
GOVERNOR

OFFICE OF THE GOVERNOR

STATE CAPITOL
DES MOINES, IOWA 50319
515 281-5211
FAX 515-281-6611

SALLY J. PEDERSON
LT. GOVERNOR

September 21, 1999

Mr. Mike Dombek
Chief, USDA Forest Service
201 14th Street, SW at Independence Ave., SW
Washington, DC 20024

Dear Chief Dombek:

I am writing to designate the Forest and Prairies Division of the Iowa Department of Natural Resources as the state's lead agency for USDA's Forest Legacy Program as authorized under Section 1217 of Title XII of the Food, Agriculture, Conservation and Trade Act of 1990.

Please send all information and pertinent materials to: Michael E. Brandrup, State Forester, Iowa Department of Natural Resources, Wallace State Office Building, Des Moines, Iowa 50319-0034.

The Forest Legacy Program and the federal, state, local and private partnerships that it will promote will compliment other programs within the state. The program will better enable us to protect and manage our valuable forest resources today and in the future.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Vilsack".

Thomas J. Vilsack
Governor

Cc: Paul Johnson, Director of the Iowa Department of Natural Resources



United States Department of Agriculture

Office of the Secretary
Washington, D.C. 20250

MAR 7 2002

The Honorable Thomas J. Vilsack
Governor
State of Iowa
Des Moines, Iowa 50319-0001

Dear Governor Vilsack:

I am pleased to inform you that your request for participation in the Forest Legacy Program (FLP) has been approved pursuant to our authority under Section 7 of the Cooperative Forestry Assistance Act of 1978 (16 USC 2103c), as amended.

Seven candidate Forest Legacy Area(s) (FLA) meeting eligibility criteria to achieve these goals and having public support were proposed. They are described and mapped in the Iowa AON. All seven areas are hereby instituted as approved FLA's.

We appreciate the work of the employees of the Iowa Department of Natural Resources, under the leadership of Director Jeffrey R. Vonk, who has worked diligently to bring Iowa into the FLP.

Thank you again for your efforts to join the FLP. Please do not hesitate to contact Under Secretary for Natural Resources and Environment Mark Rey if you have any questions.

Sincerely,

Ann M. Veneman
Secretary

An Equal Opportunity Employer

Appendix D. Priority Urban Communities.

Community
Adel
Albia
Anamosa
Atkins
Beacon
Bedford
Belmond
Bloomfield
Bonaparte
Boone
Buffalo
Carlisle
Center Point
Chariton
Charles City
Chelsea
Chillicothe
Clermont
Coalville
Colfax
Columbus Junction
Coon Rapids
Coralville
Crescent
Cumberland
Dawson
Dayton
De Soto
Decorah
Dounds
Dubuque
Dundee
Dyersville
Earlham
Eddyville
Eldon
Eldora
Eldridge
Elgin
Elk Run Heights

Community

Elkader

Elkport

Evensdale

Floris

Floyd

Fraser

Fredericksburg

Fredonia

Fredonia

Garber

Garner

Granger

Grant

Guttenberg

Hamilton

Hampton

Hartford

Harvey

Hazleton

Humboldt

Huxley

Keokuk

Keosauqua

Kirkville

La Porte City

Lambs Grove

Lansing

Le Claire

Leando

Lehigh

Leighton

Linn Grove

Lisbon

Lovilia

Marysville

Massena

Maxwell

McGregor

Melrose

Middletown

Missouri Valley

Mitchell

Community

Montrose

Mount Vernon

Mystic

New Hampton

Newhall

Nora Springs

North Buena Vista

Oakland

Oakland Acres

Okoboji

Olin

Oskaloosa

Oxford

Palo

Panora

Panorama Park

Peterson

Pilot Mound

Plymouth

Polk City

Princeton

Rathbun

RedField

Riceville

Riverdale

Rock Falls

Rockford

Sac City

Sageville

Saylorville

Shellsburg

Sioux Rapids

Spillville

St. Lucas

Steamboat Rock

Swan

Tama

Thurman

Tiffin

Unionville

University Heights

University Park

Community

Urbana

Van Meter

Volga

Wadena

Wahpeton

Walcott

Walker

Waterville

Wellman

West Burlington

West Liberty

West Okoboji

West Union

What Cheer

Windsor Heights

Winterset

Woodburn

Appendix E. Forest Type Acres and Percentages in 1990, 2003, 2008.

Forest Type	2008 Total	2008 Percentage	2003 Total	2003 Percentage	1990 Total	1990 Percentage
Nonstocked	81,367	2.7%	73,343	2.8%	2,700	0.1%
Aspen	9,407	0.3%	12,035	0.5%	7,304	0.4%
Cottonwood	102,379	3.4%	83,825	3.1%	22,741	1.1%
Eastern Redcedar	21,650	0.7%	32,018	1.2%	24,472	1.2%
Eastern Redcedar/ Hardwood	61,427	2.0%	34,299	1.3%	26,305	1.3%
White Oak	135,483	4.5%	155,155	5.8%	89,430	4.4%
Mixed Uplands Hardwoods	485,596	16.0%	370,415	13.9%	105,116	5.1%
Black Ash/ American Elm/Red Maple	27,998	0.9%	21,867	0.8%	497,427	24.2%
Sugar Maple/ Yellow Birch	24,590	0.8%	25,343	1.0%	509,018	24.8%
White Oak/ Red Oak/ Hickory	778,491	25.7%	779,197	29.2%	763,949	37.2%
Other Pine/ Hardwood	3,400	0.1%	4,045	0.2%		0.0%
Northern Red Oak	37,280	1.2%	50,773	1.9%		0.0%
Blur Oak	201,223	6.6%	143,595	5.4%		0.0%
Black Walnut	111,926	3.7%	59,662	2.2%		0.0%
Black Locust	32,037	1.1%	18,087	0.7%		0.0%
Cherry/ White Ash/ Yellow Poplar	61,934	2.0%	12,838	0.5%		0.0%
E l m / A s h / Black Locust	247,998	8.2%	194,011	7.3%		0.0%
River Birch/ Sycamore	39,967	1.3%	40,530	1.5%		0.0%
Willow	25,923	0.9%	15,932	0,6%		0.0%

Forest Type	2008 Total	2008 Percentage	2003 Total	2003 Percentage	1990 Total	1990 Percentage
Sycamore/ Pecan/ American Elm	6,560	0.2%	6,454	0.2%		0.0%
Hackberry/ Elm/Green Ash	281,423	9.3%	289,507	10.9%		0.0%
Silver Maple/ American Elm	177,773	5.9%	155,848	5.8%		0.0%
Cottonwood/ Willow	15,529	0.5%	26,768	1.0%		0.0%
Black Cherry	1,416	0.0%	0	0.0%		0.0%
Hard Maple/ Basswood	35,266	1.2%	34,233	1.3%		0.0%
Other Hardwoods	13,519	0.4%	14,673	0.6%		0.0%
Other Exotic Hardwoods	11,045	0.4%	5,906	0.2%		0.0%
Totals	3,032,807		2,665,150		2,054,795	

Appendix F. Forest Wildlife Species of Greatest Conservation Need.

Source of the information from this Appendix comes from Iowa's Wildlife Action Plan.

Iowa Abundance: A=abundant, C=common, CL=common locally, U=uncommon, UL=uncommon locally, R=rare, SC=special concern, Th=threatened, En=Endangered, X=extirpated, E=extinct

Iowa/National Status: B=breeding, N=non-breeding
 SX/NX=presumed extirpated, SH/NH=possibly extirpated, S1/N1=critically imperiled, S2/N2=imperiled, S3/N3=vulnerable, S4/N4=apparently secure, S5/N5=secure, SNR/NNR=unranked, SU/NU=unrankable, SNA/NNA=not applicable

Table 1. Wildlife of greatest conservation need found in forest habitat (>60% canopy of tree species with crowns interlocking).

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Birds				
Red Eagle	<i>Haliaeetus leucocephalus</i>	Endangered R	S3B, S3N	N4B, N4N
Red-Shouldered Hawk	<i>Buteo lineatus</i>	Endangered U	S2B	N5B, N5N
Broad-Winged Hawk	<i>Buteo platypterus</i>	R	S3B	N5B
Peregrine Falcon	<i>Falco peregrinus</i>	U	S4B	N5
Ruffed Grouse	<i>Bonasa umbellus</i>	U	S4B	N5
American Woodcock	<i>Scolopax minor</i>	C	S4B, S5N	N5B, N5N
Black-Billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	C	S3B	N5B
Yellow-Billed Cuckoo	<i>Coccyzus americanus</i>	C	S3B	N5B
Whip-Poor-Will	<i>Caprimulgus vociferous</i>	CL	S5B	N5B
Acadian Flycatcher	<i>Empidonax virescens</i>	R	S3b, S3N	N5B
Brown Creeper	<i>Certhia americana</i>	R	S2B, S3N	N5B

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Veery	<i>Catharus fuscescens</i>	R	S2B, S3N	N5B
Wood Thrush	<i>Hylocichla mustelina</i>	U	S4B, S4N	N5B
Blue-Winged Warbler	<i>Vermivora primus</i>	U in E, R in W	S3b, S4N	N5B
Golden-winged Warber	<i>Vermivora chrysoptera</i>	U	S1B	N4B
Canada Warbler				
Cerulean Warber	<i>Dendroica cerulean</i>	R	S2b, S3N	N4B
Prothonotary Warbler	<i>Protonotaria citrea</i>	R	S3B, S3N	N5B
Worm-eating Warber	<i>Helmitheros vermivorus</i>	R	S2B, S2N	N5B
Black & White Warber	<i>Mniotilta varia</i>	R	S5N	N5B, N4N
Hooded warbler	<i>Wilsonia citrine</i>	R	S1B, S2N	N5B
Louisiana Waterthrush	<i>Seiurus motacilla</i>	R	S3B, S4N	N5B
Kentucky Warbler	<i>Oporornis formosus</i>	R	S1B, S3N	N5B
Mammals				
Hayden's shrew	<i>Sorex haydeni</i>	CL	S4-Apparently Secure	N4
Short-tailed Shrew	<i>Blarina hylophaga</i>	CL	S4	?
Evening bat	<i>Nycticeius humeralis</i>	CL	S3 Threatened	N5
Northern Myotis	<i>Myotis septentrionalis</i>	CL	S4-Apparently Secure	N4
Red Squirrel	<i>Tamiasciurus Hudsonicus</i>	CL	S3	N5
Red-Backed Vole	<i>Clethrionomys gapperi</i>	R	Endangered	N5
Woodland Vole	<i>Mictotus pinetorum</i>	R	S3	N5

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Spotted Skunk	<i>Spilogale putorius</i>	R	Endangered	N5
Bobcat	<i>Lynx rufus</i>	U	S3	N5
Reptiles & Amphibians				
Timber Rattlesnake	<i>Crotalus horridus</i>		S3	N5
Copperhead	<i>Agristrodon contortix</i>		S1	N5
Butterflies				
Pipevine Swallowtail	<i>Battus philenor</i>	SC	S?	N5
Columbine Duskywing	<i>Erynnis lucilius</i>	SC	S3	N4
Hickory Hairstreak	<i>Satyrium caryaevorum</i>	SC	S3	N4
Land Snails				
Iowa Pleistocene Snail	<i>Discus macclintocki</i>	R		N1
Fagid Ambershell	<i>Catinella gelida</i>	R		N1
Minnesota Pleistocene snail	<i>Novasuccinea N. SP. Minnesota A.</i>	R		N.N.R
Iowa Pleistocene Succinea	<i>Novasuccinea N. SP. Minnesota B.</i>	r		N.R.R
Briarton Pleistocene snail	<i>Vertigo brierensis</i>	R		N1
Hubricht's vertigo	<i>Vertigo hubrichti</i>	R		N3
Iowa Pleistocene Vertigo	<i>Vertigo iowaensis</i>	R		n3
Bluff Vertigo	<i>Vertigo occulta</i>	R		N2

Table 2. Wildlife of greatest conservation need found in wet forest habitat (Temporarily or seasonally flooded forest or woodland).

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Birds				
Yellow-Crowned Night-Heron	<i>Nyctanassa violacea</i>	R	S3B, S3N	N5B, N5N
Osprey	<i>Pandion haliaetus</i>	R	SXC, S3N	N5B, N4N
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Endangered R	S3B, S3N	N4B, N4N
Red-shouldered Hawk	<i>Buteo lineatus</i>	Endangered U	S2B	N5B, N5N
Peregrine Falcon	<i>Falco peregrinus</i>	Endangered R	S1B	N4B, N4N
American Woodcock	<i>Scolopax minor</i>	C	S4B, S5N	N5B, N5N
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	C	S3B	N5B
Long Eared Owl	<i>Asio otus</i>	Th	S2B, S3N	N5B, N5N
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	C	S5B	N5B, N5N
Brown Creeper	<i>Certhia americana</i>	R	S3B	N5
Acadian Flycatcher	<i>Empidonax vireescens</i>	R	S3B, S3N	N5B
Veery	<i>Catharus fuscescens</i>	R	S2B, S3N	N5B
Wood Thrush	<i>Hylocichla mustelina</i>	U	S4B, S4N	N5B
Cerulean Warbler	<i>Dendroica cerulean</i>	R	S2B, S3N	N4B
Prothonotary Warbler	<i>Protonotaria citrea</i>	R	S3B, S3N	N5B
Louisiana Waterthrush	<i>Seiurus motacilla</i>	R	S3B, S4N	N5B

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Kentucky Warbler	<i>Oporornis formosus</i>	R	S1B, S3N	N5B
Rusty blackbird	<i>Euphagus carolinus</i>	R	S3N	N5B, N5N
Mammals				
Hayden's shrew	<i>Sorex haydeni</i>	CL	S4 Apparently Secure	N4
Least shrew	<i>Cryptotis parva</i>	R	S3 Threatened	N5
Evening bat	<i>Nycticeius humeralis</i>	CL	S3 Threatened	N5
Reptiles & Amphibians				
Blue-spotted Salamander	<i>Ambystoma laterale</i>		S1	N5
Central Newt	<i>Notophthalmus viridescens</i>		S2	N5
Smallmouth Salamander	<i>Ambystoma texanum</i>		S3	N5
Crawfish frog	<i>Rana areolata</i>		S1	N4
Wood turtle	<i>Clemmys insculpta</i>		S1	N4
Yellowbelly Water Snake	<i>Nerodia erythrogaster flavigaster</i>		S1	N5
Copperbelly Water Snake	<i>Nerodia erythrogaster neglecta</i>		S1	N5

Table 3. Wildlife of greatest conservation need found in forest habitat (Open stands of tree species with 25-60% canopy cover).

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Birds				
Bald eagle	<i>Haliaeetus leucocephalus</i>	Endangered R	S3B, S3N	N4B, N4N
Red-shouldered Hawk	<i>Buteo lineatus</i>	Endangered U	S2B	N5B, N5N
Swainson's Hawk	<i>Buteo swainsoni</i>	R	S3B, S3N	N5B
Ruffed grouse	<i>Bonasa umbellus</i>	U	S4B	N5
American Woodcock	<i>Scolopax minor</i>	C	S4B, S5N	N5B, N5N
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	C	S3B	N5B
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	C	S3B	N5B
Long-eared owl				
Whip-poor-will	<i>Caprimulgus vociferous</i>	CL	S5B	N5B
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	C	S5B	N5B, N5N
Least flycatcher	<i>Empidonax minimus</i>	R	S1B, S4N	N5B
Bewick's wren	<i>Thryomanes bewickii</i>	R	S2B, S2N	N5B
Northern Mockingbird	<i>Mimus polyglottos</i>	R	S3B	N5
White-eyed Vireo	<i>Vireo griseus</i>	R	S2B, S3N	N5B, N5N
Blue-winged Warbler	<i>Vireo pinus</i>	R-W/U-E	S3B, S4N	N5B
Golden-winged Warber	<i>Vermivora chrysoptera</i>	U	S1B	N4B
Yellow-breasted chat	<i>Icteria virens</i>	R	S3B, S3N	N5B
Eastern towhee	<i>Pipilo erythro- phthalmus</i>	CL	S4B, S4N	N5
Mammals				

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Hayden's shrew	<i>Sorex haydeni</i>	CL	S4-Apparently Secure	N4
Short-tailed Shrew	<i>Blarina hylophaga</i>	CL	S4	?
Least shrew	<i>Cryptotis parva</i>	R	S3 Threatened	N5
Bobcat	<i>Lynx rufus</i>	U	S3	N5
Reptiles & Amphibians				
Timber Rattlesnake	<i>Crotalus horridus</i>		S3	N5
Central Newt	<i>Notophthalmus viridescens</i>		S2	N5
Blue-spotted Salamander	<i>Ambystoma laterale</i>		S1	N5
Smallmouth Salamander	<i>Ambystoma texanum</i>		S3	N5
Slender glass Lizard	<i>Ophisaurus attenuatus</i>		S2	N5
Western Worm Snake	<i>Carphophis amoenus</i>		S2	N5
Prairie Kingsnake	<i>Lampropeltis calligaster</i>		S3	N5
Speckled KingSnake	<i>Lampropeltis getulus</i>		S1	N5
Bull Snake	<i>Pituophis catenifer sayi</i>		S3	N5
Smooth earth Snake	<i>Virginia valeriae</i>		S3	N5
Butterflies				
Pepper and Salt Skipper	<i>Amblyscirtes hegon</i>	K	S?	N5
Columbine Duskywing	<i>Erynnis lucilius</i>	SC	S3	N4
Dreamy Duskywing	<i>Erynnis icelus</i>	R	S3	N5
Zebra Swallowtail	<i>Eurytides marcellus</i>	R	S?	N5
Silvery Blue	<i>Glaucopsyche lygdamus</i>	R	S2	N5
Zabulon skipper	<i>Poanes zabulon</i>	LC	SC	N5
Edward's Hairstreak	<i>Satyrium edwardsii</i>	K	S3	N5
Striped Hairstreak	<i>Satyrium liparops</i>	K	S?	N5

Table 4. Wildlife of greatest conservation need found in wet forest habitat (Open stands of tree species with < 25% canopy cover).

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Birds				
Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	R	S1B	N4
Northern Bobwhite	<i>Colinus virginianus</i>	CL	S5B	N5
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	C	S3B	N5B
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	R	S3B, S3N	N5B, N5N
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	C	S3B	N5B
Bewick's Wren	<i>Thryomanes bewickii</i>	R	S2B, S2N	N5B
Northern Mockingbird	<i>Mimus polyglottos</i>	R	S3B	N5
Loggerhead Shrike	<i>Lanius ludovicianus</i>	U	S3B, S3N	N4
White-eyed Vireo	<i>Vireo greseus</i>	R	S2B, S3N	N5B, N5N
Bell's Vireo	<i>Vireo bellii</i>	R	S3B, S4N	N4B
Willow Flycatcher	<i>Empidonax traillii</i>	C	S4B, S4N	N5B
Blue-winged Warbler	<i>Vermivora pinus</i>	R-W/U-E	S3B, S4N	N5B
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	U	S1B	N4B
Yellow-breasted Chat	<i>Icteria virens</i>	R	S3B, S3N	N5B
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	CL	S4B, S4N	N5
Field sparrow	<i>Spizella pusilla</i>	C	S5B, S5N	N5
Rusty blackbird	<i>Euphagus carolinus</i>	U	S3N	N5B, N5N
Bell's Vireo	<i>Vireo bellii</i>	U	S3B, S4N	N4B
Mammals				

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Least Shrew	<i>Cryptotis parva</i>	R	S3 Threatened	N5
Bobcat	<i>Lynx rufus</i>	U	S3	N5
<i>Reptiles & Amphibians</i>				
Northern Prairie Skink	<i>Eumeces septentrionalis</i>		S3	N5
Smooth green Snake	<i>Opheodrys vernalis</i>		S3	N5
Eastern Massasauga Rattlesnake	<i>Sistrurus catenatus</i>		S1	N3,N4

Table 5. Wildlife of greatest conservation need found in Savanna habitat.

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Birds				
Swainson's Hawk	<i>Buteo swainsoni</i>	R	S3B, S3N	N5B
Barn Owl	<i>Tyto alba</i>	En	S1B	N5
Long-eared Owl	<i>Asio otus</i>	Th	S2B, S3N	N5B, N5N
Red-Headed Woodpecker	<i>Melanerpes erythrocephalus</i>	C	S5B	N5B, N5N
Northern Mockingbird	<i>Mimus polyglottos</i>	R	S3B	N5
Loggerhead shrike	<i>Lanius ludovicianus</i>	U	S3B, S3N	N4
Bell's Vireo	<i>Vireo bellii</i>	U	S3B, S4N	N4B
Lark Sparrow	<i>Chondestes grammacus</i>	CL	S4B	N5B
Eastern Meadowlark	<i>Sturnella magna</i>	C	S4B, S4N	N5
Franklin's Round Squirrel	<i>Spermophilus franklinii</i>	R	S3	N5
Spotted Skunk	<i>Spilogale putorius</i>	R	Endangered	N5
Least Shrew	<i>Cryptotis parva</i>	R	S3 Threatened	N5
Short Tailed Shrew	<i>Blarina hylophaga</i>	CL	S4	?
Reptiles & Amphibians				
Six-lined Racerunner	<i>Cnemidophorus sexlineatus</i>		S3	N5
Slender Glass Lizard	<i>Ophisaurus attenuatus</i>		S2	N5
Six-lined Racerunner	<i>Cnemidophorus sexlineatus</i>		S3	N5
Slender Glass Lizard	<i>Ophisaurus attenuatus</i>		S2	N5

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Ornate Box Turtle	<i>Tarrapene ornata</i>		S2	N5
Smooth Green Snake	<i>Opheodrys reynoldsi</i>		S3	N5
Speckled King Snake	<i>Lampropeltis getulus</i>		S1	N5
Prairie Kingsnake	<i>Lampropeltis calligaster</i>		S3	N5
Bullsnake	<i>Pituophis catenifer Sayi</i>		S3	N5
Butterflies				
Dreamy	<i>Erynnis icelus</i>	R	S3	N5
Dustywing				

Appendix G. Forest Health Data.

Table 1. History of the Number of Gypsy Moth Catches and the Number of Acres Treated for gypsy moth eradication in Iowa (1972-2007). Unless specified, *Bacillus thuringiensis* var. *kurstaki* was the treatment method.

Year	Number of traps used in survey	Number of multiple catches	Number of moths caught	Number of acres treated
1972	253		1	
1973	1196		0	
1974	1210		1	
1975	1120		0	
1976	1650		0	
1977	1130		0	
1978	741		1	
1979	854		0	
1980	676		1	
1981	970		6	
1982	1123		11	
1983	1617		14	
1984	3585		10	
1985	2538		6	
1986	3217		15	
1987	3084		18	
1988	2259		13	
1989	2858		27	9
1990	2760		17	0
1991	2775		61	0
1992	4738		162	21
1993	4800		72	73.5
1994	5797		143	90
1995	6324		76	52
1996	5241		104	25
1997	5899		151	10
1998	7093		371	21.3
1999	7532		135	224 (pheromone flakes)
2000	6834		47	42
2001	5729		26	15
2002	5729		35	2
2003	3068		159	3 (carbaryl)
2004	4374		27	26
2005	4996		4	0
2006	4891		20	0
2007	4900		175	0
2008	4732		626	0
2009	5217		82	0

Table 2. Known Invasive Plants in Iowa 2008.

Key: *NP*= Not Present- Not known to exist in Iowa
I= Isolated- the species is infrequent, not commonly seen
LA= Locally Abundant- the species is present but is not in the majority of the counties
W= Widespread- commonly seen in the majority of counties in large or small populations

Species	Common Name	Abundance
Abutilon Theophrasti	Velvetleaf	W
Ailanthus Altissima	Tree-of-Heaven	W
Alliaria Petiolata	Garlic Mustard	LA
Berberis Thunbergii	Japanese Barberry	W
Bromus Tectorum	Cheatgrass	W
Butomus Umbellatus	Flowering Rush	NP
Carduus Acanthoides	Plumeless Thistle	I
Carduus Nutans	Musk Thistle	W
Celastrus Orbiculata	Oriental Bittersweet	I
Centaurea Maculosa/ Biebersteinii	Spotted Knapweed	LA
Centaurea Repens	Russian Knapweed	I
Centaurea Solstitialis	Yellow Starthistle	I
Cirsium Arvense	Canada Thistle	W
Cirsium spp.	Thistle	W
Cirsium Vulgare	Bull Thistle	W
Conium Maculatum	Poison Hemlock	I
Coronilla Varia	Crown Vetch	W
Daucus Carota	Queen Anne's Lace	W
Dipsacus fullonum/sylvestris	Common Teasel	I
Dipsacus laciniatus	Cutleaf Teasel	I
Dipsacus Sativus	Indian Teasel	NP
Elaeagnus Angustifolia	Russian Olive	I
Elaeagnus Umbellata	Autumn Olive	LA
Euonymus Alatus	Burning Bush	I
Euphorbia Esula	Leafy Spurge	W
Fallopia Japonica/ Polygonum Cuspidatum	Japanese Knotweed	LA
Frangula Alnus/ Rhamnus Frangula	Glossy Buckthorn	I
Heracleum Mantegazzianum	Giant Hogweed	NP
Hesperis Matrionalis	Dame's Rocket	W
Lespedeza Cuneata	Sericea Lespedeza	I
Ligustrum Japonicum	Japanese Privet	NP

Species	Common Name	Abundance
Ligustrum Obtusifolium	Blunt-Leaved or Border Privet	I
Ligustrum Sinense	Chinese Privet	NP
Ligustrum Vulgare	Common or European Privet	I
Lonicera Fragrantissima	Fragrant Honeysuckle	NP
Lonicera Japonica	Japanese Honeysuckle	LA
Lonicera Maackii	Amur Honeysuckle	W
Lonicera Morrowii	Morrow's Honeysuckle	I
Lonicera Standishii	Standish's Honeysuckle	NP
Lonicera Tatarica	Tatarian Honeysuckle	W
Lonicera X Bella	Bell's Honeysuckle	I
Lonicera Xylosteum	European Fly Honeysuckle	NP
Lythrum Salicaria	Purple Loosestrife	W
Morus Alba	White Mulberry	W
Pastinaca Sativa	Wild Parsnip	W
Potamogeton Crispus	Curlyleaf Pondweed	I
Pueraria Montana	Kudzu	I
Rhamnus Cathartica	Common Buckthorn	W
Tamarix spp.	Salt Cedar	I

Appendix H. Ginseng Harvested in 2008.

County	Dry Weight
Allamakee	137.49
Benton	4.06
Boone	4.32
Boone	4.32
Bremer	2
Buchanan, Linn, Clayton, Fayette, Hardin, Black Hawk, Grundy	5.5
Butler	1.8
Cedar	5.22
Clayton	153.66
Clinton and Scott	4.31
Delaware	12.53
Des Moines	0.2
Dubuque	24.69
Fayette	36.95
Franklin	1.5
Hardin	2.35
Henry	1.85
Howard	1.12
Iowa	1
Jackson	14.09
Johnson	8.95
Jones	13.07
Linn	25.78
Louisa	4.57
Mahaska	5.98
Marion	0.1
Mitchell	0.02
Muscatine	120.17
Polk, Jasper, Boone	14.75
Pottawattamie	7.31
Scott	17.15
Tama	18.7
Wapello	6.48
Warren	0.15
Webster	54.39
Winneshiek	44.37
Woodbury	1.31
Total	758.71

Appendix I. Trees and Shrubs Native to Iowa.

Common Name	Scientific Name	Mature Height (feet)	Growth Rate	Shade Tolerance
American Basswood	<i>Tilia americana</i>	80	Fast	Tolerant
American Elm	<i>Ulmus americana</i>	70	Medium	Intermediate
American Hazelnut	<i>Corylus americana</i>	15	Medium	Intermediate
American Hornbeam	<i>Carpinus caroliniana</i>	35	Slow	Very Tolerant
Balsam Fir	<i>Abies balsamea</i>	50	Slow	Very Tolerant
Balsam Poplar	<i>Populus balsamifera</i>	50	Fast	Very Tolerant
Beaked Hazelnut	<i>Corylus cornuta</i>	6	Medium	Intermediate
Bebb Willow	<i>Salix bebbiana</i>	25	Fast	Intolerant
Bigtooth Aspen	<i>Populus grandidentata</i>	45	Fast	Very Tolerant
Bitternut Hickory	<i>Carya cordiformis</i>	70	Slow	Intolerant
Black Ash	<i>Fraxinus nigra</i>	50	Medium	Intolerant
Black Cherry	<i>Prunus serotina</i>	50	Medium	Intolerant
Black Maple	<i>Acer nigrum</i>	60	Medium	Very Tolerant
Black Oak	<i>Quercus velutina</i>	60	Medium	Intermediate
Black Walnut	<i>Juglans nigra</i>	80	Fast	Intolerant
Black Willow	<i>Salix nigra</i>	50	Fast	Very Intolerant
Blackhaw Viburnum	<i>Viburnum prunifolium</i>	12	Slow	Intermediate
Blackjack Oak	<i>Quercus marilandica</i>	35	Slow	Intermediate
Blue Ash	<i>Fraxinus quadrangulata</i>	40	Medium	Intermediate
Boxelder	<i>Acer negundo</i>	50	Fast	Tolerant
Buffaloberry	<i>Sheperdia argentea</i>	8	Medium	Intermediate
Bur Oak	<i>Quercus macrocarpa</i>	100	Slow	Intermediate
Butternut	<i>Juglans cinerea</i>	60	Slow	Intolerant
Canada Plum	<i>Prunus nigra</i>	20	Medium	Intolerant
Canadian Yew	<i>Taxus canadensis</i>	3	Slow	Tolerant

Common Name	Scientific Name	Mature Height (feet)	Growth Rate	Shade Tolerance
Chinkapin Dwarf Oak	<i>Quercus prinoides</i>	20	Slow	Intolerant
Chinkapin Oak	<i>Quercus muhlenbergii</i>	50	Slow	Intolerant
Chokecherry	<i>Prunus virginiana</i>	20	Medium	Very Intolerant
Cockspur Hawthorn	<i>Crataegus crus-galli</i>	20	Slow	Intermediate
Common Juniper	<i>Juniperus communis</i>	10	Medium	Intolerant
Common Pawpaw	<i>Asimina triloba</i>	25	Medium	Intermediate
Common Persimmon	<i>Diospyros virginiana</i>	40	Slow	Very Tolerant
Cottonwood	<i>Populus deltoides</i>	100	Very Fast	Very Intolerant
Coyote Willow	<i>Salix exigua</i>	25	Fast	Intolerant
Dotted Hawthorn	<i>Crataegus punctata</i>	25	Slow	Intermediate
Downy Hawthorn	<i>Crataegus mollis</i>	30	Slow	Intermediate
Downy Serviceberry	<i>Amelanchier arborea</i>	25	Medium	Tolerant
Eastern Red Cedar	<i>Juniperus virginiana</i>	40	Medium	Very Tolerant
Eastern Redbud	<i>Cercis canadensis</i>	15	Slow	Tolerant
Eastern Wahoo	<i>Euonymus atropurpureus</i>	15	Medium	Tolerant
Elderberry	<i>Sambucus canadensis</i>	8	Fast	Intermediate
Fleshy Hawthorn	<i>Crataegus succulenta</i>	30	Slow	Intermediate
Gray Dogwood	<i>Cornus racemosa</i>	10	Medium	Tolerant
Green Ash	<i>Fraxinus pennsylvanica</i>	60	Fast	Tolerant
Hackberry	<i>Celtis occidentalis</i>	60	Slow	Intermediate
Heart-leaved Willow	<i>Salix rigida</i>	10	Fast	Very Intolerant

Common Name	Scientific Name	Mature Height (feet)	Growth Rate	Shade Tolerance
Honeylocust	<i>Gleditsia triacanthos</i>	70	Fast	Intolerant
Hophornbeam	<i>Ostrya virginiana</i>	30	Slow	Tolerant
Hoptree/ Water Ash	<i>Ptelea trifoliata</i>	15	Slow	Intermediate
Hortulan Plum	<i>Prunus hortulana</i>	15	Medium	Very Intolerant
Inland Serviceberry	<i>Amelanchier interior</i>	20	Medium	Tolerant
Kentucky Coffeetree	<i>Gymnocladus dioicus</i>	60	Medium	Intolerant
Margaret's Hawthorn	<i>Crataegus margaretta</i>	30	Slow	Intermediate
Meadow Willow	<i>Salix petiolaris</i>	10	Fast	Very Intolerant
Mexican Plum	<i>Prunus mexicana</i>	20	Medium	Very Intolerant
Missouri River Willow	<i>Salix eriocephala</i>	40	Fast	Intolerant
Mountain Maple	<i>Acer spicatum</i>	20	Slow	Tolerant
Nannyberry	<i>Viburnum lentago</i>	15	Medium	Intermediate
Northern Pin Oak	<i>Quercus elipsoidalis</i>	50	Medium	Intolerant
Ohio Buckeye	<i>Aesculus glabra</i>	50	Medium	Tolerant
Pagoda Dogwood	<i>Cornus alternifolia</i>	20	Slow	Tolerant
Paper Birch	<i>Betula papyrifera</i>	70	Fast	Intolerant
Peachleaf Willow	<i>Salix amygdaloides</i>	40	Fast	Intolerant
Pear Hawthorn	<i>Crataegus calpodendron</i>	30	Slow	Intermediate
Pecan	<i>Carya illinoensis</i>	70	Slow	Intolerant
Pignut Hickory	<i>Carya glabra</i>	70	Slow	Intermediate

Common Name	Scientific Name	Mature Height (feet)	Growth Rate	Shade Tolerance
Pin Cherry	<i>Prunus pennsylvanica</i>	30	Fast	Very Intolerant
Pin Oak	<i>Quercus palustris</i>	60	Slow	Intolerant
Post Oak	<i>Quercus stellata</i>	30	Slow	Intolerant
Prairie Crabapple	<i>Malus ioensis</i>	22	Medium	Intolerant
Prickly Ash	<i>Zanthoxylum americanum</i>	12	Slow	Intolerant
Pussy Willow	<i>Salix discolor</i>	15	Fast	Intolerant
Quaking Aspen	<i>Populus tremuloides</i>	40	Fast	Very Intolerant
Red Maple	<i>Acer rubrum</i>	50	Medium	Tolerant
Red Mulberry	<i>Morus rubra</i>	35	Medium	Tolerant
Red Oak	<i>Quercus rubra</i>	70	Medium	Intermediate
Redosier Dogwood	<i>Cornus stolonifera</i>	8	Fast	Tolerant
River Birch	<i>Betula nigra</i>	80	Fast	Intolerant
Rock Elm	<i>Ulmus thomasii</i>	70	Medium	Intermediate
Rough-Leaf Dogwood	<i>Cornus drummondii</i>	8	Medium	Tolerant
Roundleaf Dogwood	<i>Cornus rugosa</i>	8	Medium	Tolerant
Roundleaf Serviceberry	<i>Amelanchier sanguinea</i>	20	Medium	Tolerant
Sandbar Willow	<i>Salix interior</i>	30	Fast	Intolerant
Saskatoon Serviceberry	<i>Amelanchier alnifolia</i>	18	Medium	Tolerant
Shagbark Hickory	<i>Carya ovata</i>	70	Slow	Intermediate
Shellbark Hickory	<i>Cary laciniosa</i>	70	Slow	Very tolerant
Shingle Oak	<i>Quercus imbricaria</i>	45	Slow	Intermediate

Common Name	Scientific Name	Mature Height (feet)	Growth Rate	Shade Tolerance
Shining Willow	<i>Salix lucida</i>	25	Fast	Intolerant
Showy Mountainash	<i>Sorbus decora</i>	20	Medium	Intolerant
Silky Dogwood	<i>Cornus obliqua</i>	10	Medium	Tolerant
Silver Maple	<i>Acer saccharinum</i>	120	Very Fast	Tolerant
Slippery Elm	<i>Ulmus rubra</i>	60	Medium	Tolerant
Smooth Sumac	<i>Rhus glabra</i>	15	Medium	Intermediate
Speckled Alder	<i>Alnus incana</i>	30	Medium	Intermediate
Staghorn Sumac	<i>Rhus typhina</i>	20	Medium	Intermediate
Sugar Maple	<i>Acer saccharum</i>	60	Medium	Very Tolerant
Swamp White Oak	<i>Quercus bicolor</i>	70	Slow	Intermediate
Sycamore	<i>Platanus occidentalis</i>	100	Fast	Intermediate
White Ash	<i>Fraxinus americana</i>	70	Medium	Intolerant
White Oak	<i>Quercus alba</i>	100	Slow	Intermediate
White Pine	<i>Pinus strobus</i>	90	Medium	Intermediate
Wild Plum	<i>Prunus americana</i>	20	Fast	Very Intolerant
Witchhazel	<i>Hamamelis</i>	10	Medium	Intermediate
Yellow Birch	<i>Betula alleghaniensis</i>	100	Medium	Intermediate

Appendix J. Stakeholders Consulted.

This table shows the organizations and people that were either contacted for information by e-mail or who attended stakeholder meetings that were hosted. Their input is incorporated into this document where applicable.

Stakeholder	Number of Representatives
Alliant Energy	1
Army Corps of Engineers	1
Black Hills Utility	1
Black Walnut Council	1
Central Iowa Paddlers	1
Conservation Districts of Iowa	1
County Conservation Boards	10
County Roadside Vegetation Managers	3
Department of Transportation	1
Des Moines Area Community College	1
DNR- Climate Change Program	1
DNR- Endangered Species Program	1
DNR- Fisheries Bureau	1
DNR- Forestry Bureau	40
DNR- Geological Services Bureau	1
DNR- Parks Bureau	1
DNR- Water Quality Bureau	1
DNR- Wildlife Bureau	5
Drake University	1
Ducks Unlimited	1
East Central Iowa Furtakers	1
Farm Service Agency	1
Forestry Consultants	5
Friends of Iowa	1
Hawkeye Community College	1
IEC	1
Iowa Arborist Association	3
Iowa Audubon	1
Iowa Bowhunters Association	1
Iowa Chamber of Commerce Executives	1
Iowa Chapter Ruffed Grouse Society	1
Iowa Department of Agriculture	4
Iowa Farm Bureau	1
Iowa Lodging Association	1
Iowa National Guard	1
Iowa Native Plant Society	1
Iowa Nursery Landscape Association	13

Stakeholder	Number of Representatives
Iowa Nut Growers Association	1
Iowa OHV Association	1
Iowa Ornithologists Association	1
Iowa Parks and Recreation Association	1
Iowa Prairie Network	1
Iowa Rivers Revival	1
Iowa State Coonhunters Association	1
Iowa State University	2
Iowa Trails Council	1
Iowa Trappers Association	1
Iowa Tree Farm	2
Iowa Urban and Community Forestry Council	5
Iowa Volunteer Fire Departments	12
Iowa Whitewater Coalition	1
Iowa Wildlife Federation	1
Iowa Wildlife Society	1
Iowa Woodland Owners Association	38
IPF	1
ISU Extension	4
Izaak Walton League	1
Keep Iowa Beautiful	1
Meskwaki Nation	1
Mid-American Energy	1
National Rifleman's Association	1
National Wild Turkey Federation	1
Natural Heritage Foundation	2
Natural Resouce Conservation Service	1
North Raccoon Watershed Association	1
Northeast Iowa Community College	1
NRCS- Rural Development- Forestry	1
Pheasants Forever	1
Prairie Edge Sustainable Forestry COOP	1
Quad Cities Conservation Alliance	1
Quail Forever	1
Resource Conservation and Development	3
Sawmills	7
SEIA Forestry Advisory Council	1
State Forest Stewardship Coordinating Committee	5
State Soil Conservation	1
State Technical Committee	1

Stakeholder	Number of Representatives
Sustainable Funding Coalition	1
The Nature Conservancy	3
Trees Forever	2
U.S. Fish & Wildlife Service	1
U.S. Forest Service	1
Waterfowls Association of Iowa	1
Whitetails Unlimited	1
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Appendix K. Data Gaps.

- County level FIA data is unusable.
- Would like species specific FIA data- not forest types; need a better breakdown to understand trends better.
- High standard error (>10%) associated with FIA data misleads people into thinking that information is known, because most users do not check the standard error.
- No dedicated GIS specialist or communications people on staff to develop this document.
- Effects of timber management techniques (tsi, harvesting, etc) on wildlife populations: to help address impacts on “species of greatest conservation need” some recent, quality research on these “species of greatest concern” would be important. Research should be done in Iowa, so that foresters and biologists can quantify trends that are occurring in this state and not have to assume / extrapolate data and conclusions from other states forest types.
- Effects of uneven aged management techniques on oak forests in Iowa.
- Possible marketing / utilization for previously ‘unmerchantable’ timber – pine, alternative forest products, small diameter, woody biomass, etc.
- Inability to compare private land FIA data to public land FIA because of std. error.
- Baseline forestry information to know how things have changed over time.
- Quality of the forest compared to past .
- Amount of forest that has landowners willing to manage the property.
- Lack of urban inventory information to help communities with planning efforts.
- Invasive species presence has not been documented very thoroughly.
- Lack of information about carbon sequestration by tree species.
- Lack of timely information about the value of the wood products industry in the state.
- Lack of available information about the economic value trees have to Iowa’s economy, number of jobs in Iowa related to forestry and wood products.
- Lack of available information about the economic value trees have for businesses and homeowners.
- Lack of Iowa related forest research to resolve issues affecting Iowa’s forest resources.
- State specific data if not available for most issues affecting Iowa’s forest resources.

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About the Cover:

This is an example of the most valuable timber species that grows in Iowa: black walnut. Trees similar to this one command top dollar during timber sales. This particular tree, for example, has been appraised at \$20-30,000.



www.iowadnr.gov/forestry/assessment.html