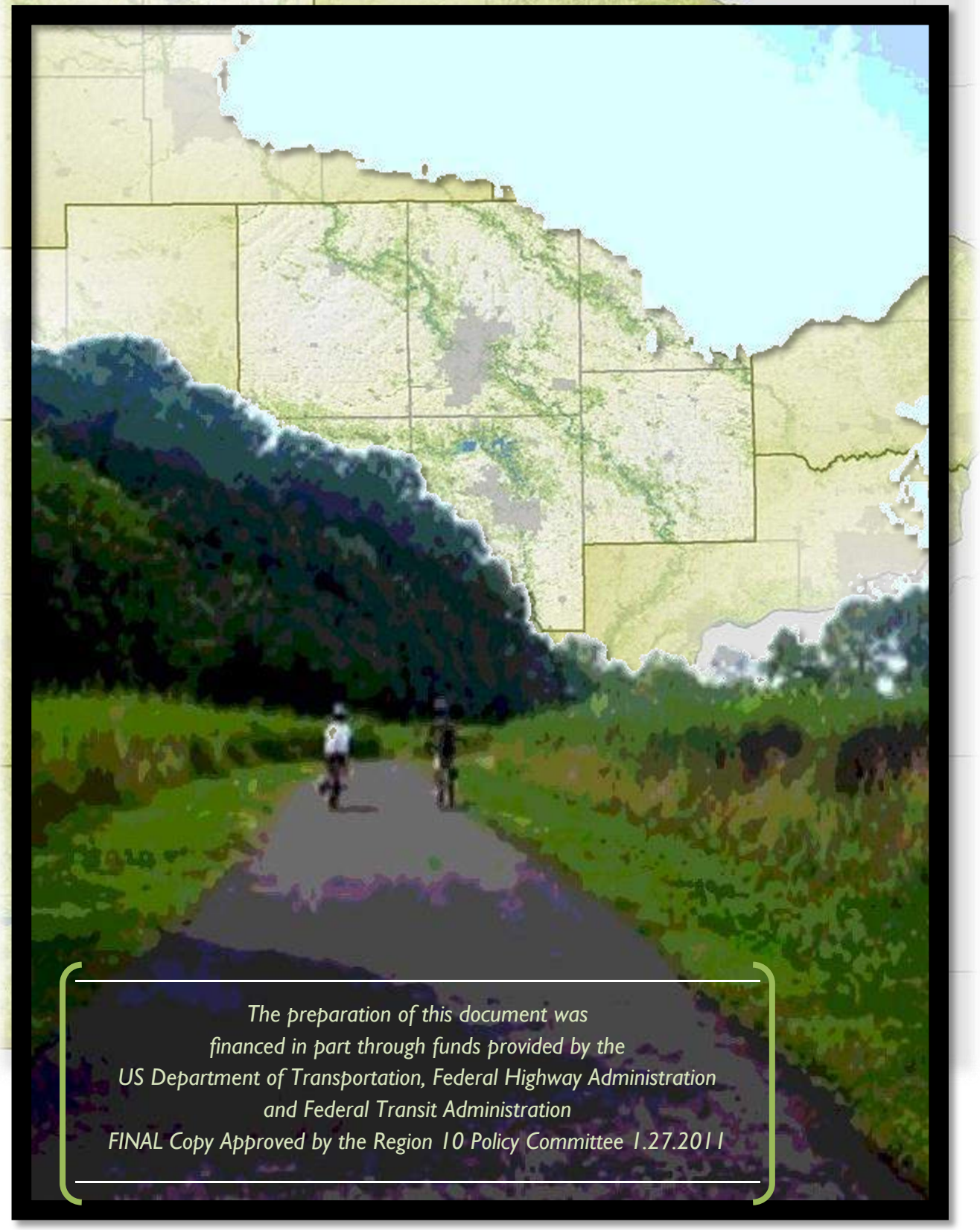
ECICOG

ECICOG TRAILS PLAN 2011



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FINAL Copy Approved by the Region 10 Policy Committee 1.27.2011

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RESOLUTION OF ADOPTION

Region 10 Regional Planning Affiliation
Resolution 2011 - 02

A resolution adopting the Regional Trails Plan as a guide for the development of a trails system in the region, including the counties of Benton, Cedar, Iowa, Johnson, Jones, Linn and Washington.

WHEREAS, on the behalf of the Regional Planning Affiliation, the East Central Iowa Council of Governments (ECICOG) has prepared the Regional Trails Plan, and

WHEREAS, the Region 10 RPA hosted trails planning workshops in each affiliated county in 2010 and placed the draft plan on the ECICOG website for public input, and

WHEREAS, the RPA Policy Committee heard public input on the Trails Plan at a scheduled public hearing, and

WHEREAS, the RPA Policy Committee has expressed support for the Trail Plan,

BE IT RESOLVED, that the Region 10 RPA hereby adopts the Regional Trails Plan.

Passed this 7th day of January, 2011, and signed this 7th day of January, 2011, by the Policy Committee Chairperson.

SIGNED: Tim Carver **ATTESTED:**
Chairperson

ACKNOWLEDGEMENTS

A number of individuals were involved in the drafting and adoption of this plan. The Region 10 trails plan was presented to both the Region 10 Policy Committee and the Region 10 Transportation Technical Advisory Committee for review, comment and consideration. The plan was written by Hilary Copeland, AICP, of the East Central Iowa Council of Governments, on behalf of the Region 10 RPA.

The Policy Committee was established in 1994 with the membership comprised of representatives of Benton, Cedar, Iowa, Johnson, Jones, Linn, and Washington Counties. Members include two elected officials from each affiliated county, and are appointed by the respective Board of Supervisors.

Region 10 Policy Committee

Member	Representation
David Vermedahl, County Supervisor	Benton County
Andrew Lent, Vinton City Administrator	Benton County
Brad Gaul, County Supervisor	Cedar County
Rob Fangmann, County Engineer	Cedar County
Vicki Pope, County Supervisor	Iowa County
Kevin Heitshusen, County Supervisor	Iowa County
Sally Stutsman, County Supervisor	Johnson County
Vacancy	Johnson County
Leo Cook, County Supervisor	Jones County
Doug Herman, Monticello City Administrator	Jones County
Linda Langston, County Supervisor	Linn County
Lu Barron, County Supervisor	Linn County
Adam Mangold, County Supervisor	Washington County
David Plyman, Washington City Administrator	Washington County
Cathy Cutler, Iowa DOT	Ex-Officio
Tracy Troutner, FHWA – Iowa Division	Ex-Officio
Mark Bechtel, FTA – Region 7	Ex-Officio

Region 10 Transportation Technical Advisory Committee

Member	Representation
Myron Parizek, County Engineer	Benton County
Jerry Petermeier, Engineer	Benton County
Rick Erickson, Vinton City Engineer	Benton County
Rob Fangman, County Engineer	Cedar County
Ben Hull, Asst. to the County Engineer	Cedar County
Doug Boldt, Tipton City Manager	Cedar County
Jin Yeene Neumann, County Engineer	Iowa County
Linda Yoder, County Supervisor	Iowa County
Charles Montross, County Supervisor	Iowa County

Greg Parker, County Engineer	Johnson County
Sally Stutsman, County Supervisor	Johnson County
Rob Winstead, Engineer	Johnson County
Mike McClain, County Engineer	Jones County
Todd Postel, Asst. to the County Engineer	Jones County
Derek Snead, Asst. to the County Engineer	Jones County
Steve Gannon, County Engineer	Linn County
Randy Burke, Conservation Planner	Linn County
Dan Schwartzendruber, Planning and Zoning Admin.	Linn County
David Patterson, County Engineer	Washington County
Rob MacDonald, City of Washington Engineer	Washington County
Adam Mangold, County Supervisor	Washington County
Cathy Cutler, Iowa DOT	Ex-Officio
Tracy Troutner, FHWA – Iowa Division	Ex-Officio
Mark Bechtel, FTA – Region 7	Ex-Officio

INTRODUCTION

This plan was prepared by the East Central Iowa Council of Governments on behalf of the Region 10 Regional Planning Affiliation (RPA) as a component of the RPA's work program under contract from the Iowa Department of Transportation (IDOT). This plan is a departure from the previous Region 10 trails plan in that this document is more specific than its predecessor. This change was made to place emphasis on trails that have greater public support and momentum, and are thus more likely to be constructed, and also to facilitate the creation of a network of trails rather than disjointed trails segments. With that in mind, however, it should also be noted that the limited finances available to trails building often create disjointed trails segments at the time of construction, and it is not the intention of this plan to discourage phased construction, but rather to ensure that trails are planned for in such a way as to benefit the region as a whole.

PLANNING OVERVIEW

Within the boundaries of the Region 10 RPA, three transportation agencies are responsible for the provision of transportation planning services. The East Central Iowa Council of Governments, located in Cedar Rapids, is home to the RPA, which provides services primarily to the non-metro areas of the region. The Corridor Metropolitan Planning Organization (formerly the Linn County RPC), is the MPO for the Cedar Rapids metropolitan area and is housed within the City of Cedar Rapids. Finally, the Johnson County Council of Governments operates out of the City of Iowa City, and provides transportation planning services to that respective metropolitan area.

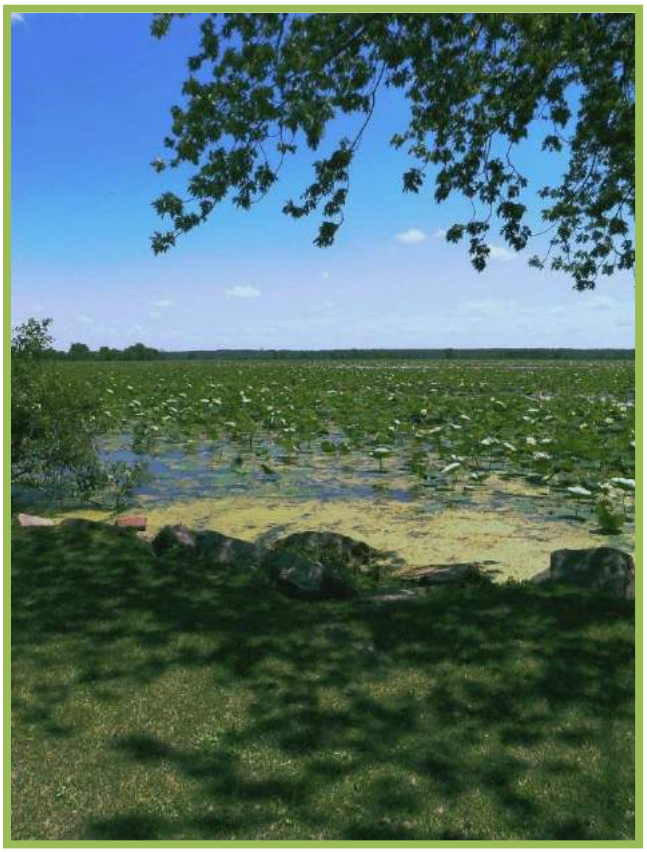


Figure 1: View from the Kolonieweg Trail, Amana

With the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, the IDOT created the Region 10 RPA to serve local governments within Benton, Cedar, Iowa, Johnson, Jones, Linn and Washington Counties, and more specifically to allow for local participation in the transportation planning and programming process. Under ITSEA, emphasis was placed on the need for multi-modal transportation, which includes the planning and development of trails. Trails entered the category of multi-modal transportation facilities in 1990, when the U.S. DOT determined that walking and biking were indeed viable forms of transportation.

Statewide trails planning in Iowa, however, predates ITSEA by seven years, at which time the Iowa Legislature directed the DOT to begin the process of developing a comprehensive, statewide trails plan. This plan was targeted to trails of national, state or regional significance, and was to include recommendations for land acquisition, development, promotion and trails management. In 1990, the document was completed and became the Iowa Statewide Recreational Trails Plan, which identified 2.982 miles of trails, 400 of which were complete at the time. Following the 1990 trails plan, which focused primarily on the location of the trails facilities, the DOT created the Iowa Trails 2000, which goes beyond the facility based approach and has become a resource for local governments pursuing trails planning and implementation across the state. The design guidelines and modal uses identified in Iowa Trails 2000 are retained in this document. Additionally, the focus on the creation of local trails networks, where regionally significant trails are supported and enhanced through interconnectivity with smaller local trails, is also continued in this document.

Despite budgetary difficulties associated with the recession that began in 2007, trails have continued to gain popularity. As air quality concerns have gained attention, even in more rural areas such as Region 10, multi-modal commute has become more common place. According to 2000 Census data, 58,088 (4.0%) of Iowans walk to work, and another 5,244 (0.4%) commute by bike. Within Region 10, those percentages are slightly higher, with 10,384 or 4.6% of residents walking to work, and 1307 or 0.6% of residents bike commuting. These numbers are slightly skewed by the presence of Johnson County within the region, where 8.3% of the population reported walking to work and 1.4% commute by bike.

The increase in awareness of multimodal transportation is likely to due to a combination of factors, including rising gas prices prior to and during the early stages of the 2007 recession, increased environmental awareness, and an effort to combat obesity rates by increasing exercise. According to the CDC, the adult obesity rate (defined as a body-mass index of 30 or higher) in Iowa in 2009 was 27.9%, slightly above the 26.7% overall self-reported obesity prevalence in the United States (CDC, 2010). While obesity rates in recent years have been rising at a slower rate than in the early 2000s in much of the upper Midwest, these levels are still far above the target of a 15% obesity rate set by the U.S. Surgeon General in his *Call to Action to Prevent and Decrease Overweight and Obesity* in 2001. The high prevalence of this condition and its associated chronic diseases lead to high medical costs for individuals, insurance companies, employers, and governments through Medicare and Medicaid programs. From 1987 to 2001, obesity-related diseases accounted for 27% of the increases in U.S. medical costs (Thorpe and Howard, 2004). In a

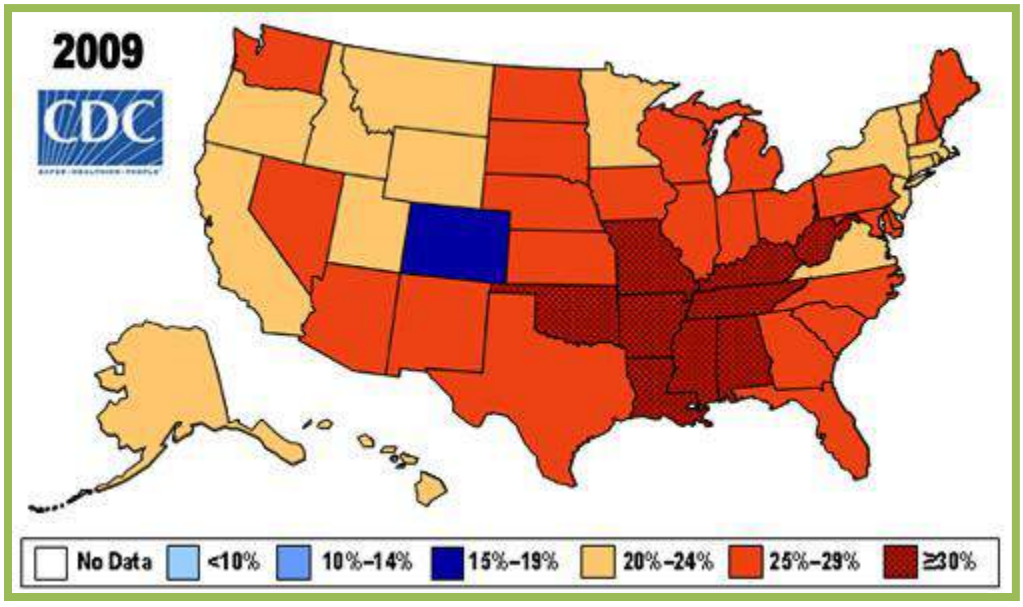


Figure 2: Obesity Rates in the U.S.

separate study of 2006 figures, medical costs associated with obesity were estimated at $147 billion, and individual costs for obese persons were $1,429 higher than persons of normal weight (Finkelstein, Trogden, Cohen and Dietz, 2009). The World Health Organization attributes part of this rise in obesity to the decrease in physical activity, and specifically noted the increase of automated transport and passive recreation. Provision of facilities that allow for safe human powered transport and active recreation provide people with the resources needed to make healthier lifestyle choices.

GOALS

1) Promote connectivity and trails linkages within the region

Trails that are most important to the region are those that appeal to a wide variety of potential users and enhance existing regional assets. Regional trails are not intended to substitute for sidewalks or other multi-modal accommodations that should have been planned for in a local capital improvements program. While regionally significant trails may be constructed in small segments or link relatively few locations, even the smallest regional trails should contribute to the development and enhancement of the trails network identified within Region 10. Regionally significant trails are generally not those that are planned for the exclusive benefit of residents of the community in which the trail is located. Regional trails may be constructed in phases without being considered to be of local benefit only.

2) Coordinate trails planning between counties and regions

Trails do not end at the corporate limits of a jurisdiction. Regional trails should be planned to extend beyond the boundaries of the region to enhance the potential user group of the trail. Regional and multi-county coordination is also beneficial when determining ways to finance and maintain trails. Trails funds are limited, and a phased, coordinated application process can minimize the competition for grants and help maintain momentum for construction of that trail by having a well-developed grant application plan.

3) Expand and improve existing trail facilities

A number of the communities consulted during this planning process have already created their own trails plans, and felt that they had identified a sufficient number of potential trails so as to have no need to either identify additional routes or modify previously identified routes. Instead, many communities felt it was more important to continue to seek funding to improve and maintain their existing trails. The most commonly sighted improvement to an existing trail was resurfacing, particularly on trails that are currently crushed limestone and could be upgraded to a type of paved material.

4) Promote long range county and local level trails planning

Although many communities consulted during this process already had identified locations where they might like to see trails, the lack of adopted trails plan and implementation schedule has hindered the trails development process, particularly in the area of financing trails. When a community determines that they want trails, the next step should be to create some type of trails plan and then the Council of Board of Supervisors should adopt that plan. The scope of this type of project could vary widely from a staff or volunteer coordinated project that identifies and prioritizes trail routes and accommodation

types, to a plan created by an engineering firm that includes the above and detailed cost estimates. Either way, this is an important early step in moving the trails development process forward.

5) Create a Trails and Recreation Enhancement Committee

Historically, applications for RPA trails enhancement funding have been evaluated by the Region 10 Transportation Technical Advisory Committee (TTAC).

This plan suggests implementing a new committee of individuals with a professional background in trails planning, advocacy, implementation or maintenance to serve in an advisory role to the Policy Committee. The three main functions of this Trails and Recreation Enhancement Committee (TREC) are as follows:

1) Review the Region 10 trails plan and advise ECICOG staff of appropriate updates to the trails plan.
2) Serve as a regional round table to share knowledge, questions and success stories regarding trails planning, funding and implementation, as well as on other multi-modal subjects such as Safe Routes to School.
3) Review regional enhancement applications, and score and prioritize those applications for presentation to the Policy Committee.

This committee would be comprised of one representative from each county within Region 10, as appointed by the Board of Supervisors from that county, for a total of seven representatives. The committee would meet on an annual or as-needed basis to review the trails plan, discuss regional trails planning issues, and/or review enhancement applications. This committee will not review or comment on the use or programming of regional STP funds.

Appropriate candidates would include county conservation staff, secondary roads or engineering staff, economic development professionals, or, where applicable, a representative of the county's trail foundation. Representatives from other backgrounds may also be appropriate, at the discretion of the county board of supervisors. The term of each appointment will be one year, with the option of a representative serving multiple terms. Although this committee does serve to diversify the opinions provided throughout the enhancement application review process, appointment to the TTAC or Policy Committee would not prevent concurrent appointment to the TREC.

REGIONAL OVERVIEW

The ECICOG transportation planning region (Region 10 RPA) covers approximately 4.365 square miles and includes the counties of Benton, Cedar, Iowa, Johnson, Jones, Linn and Washington, and excludes the metro areas of Cedar Rapids and Iowa City, which are served by their respective metropolitan planning organizations, as detailed on the map below:

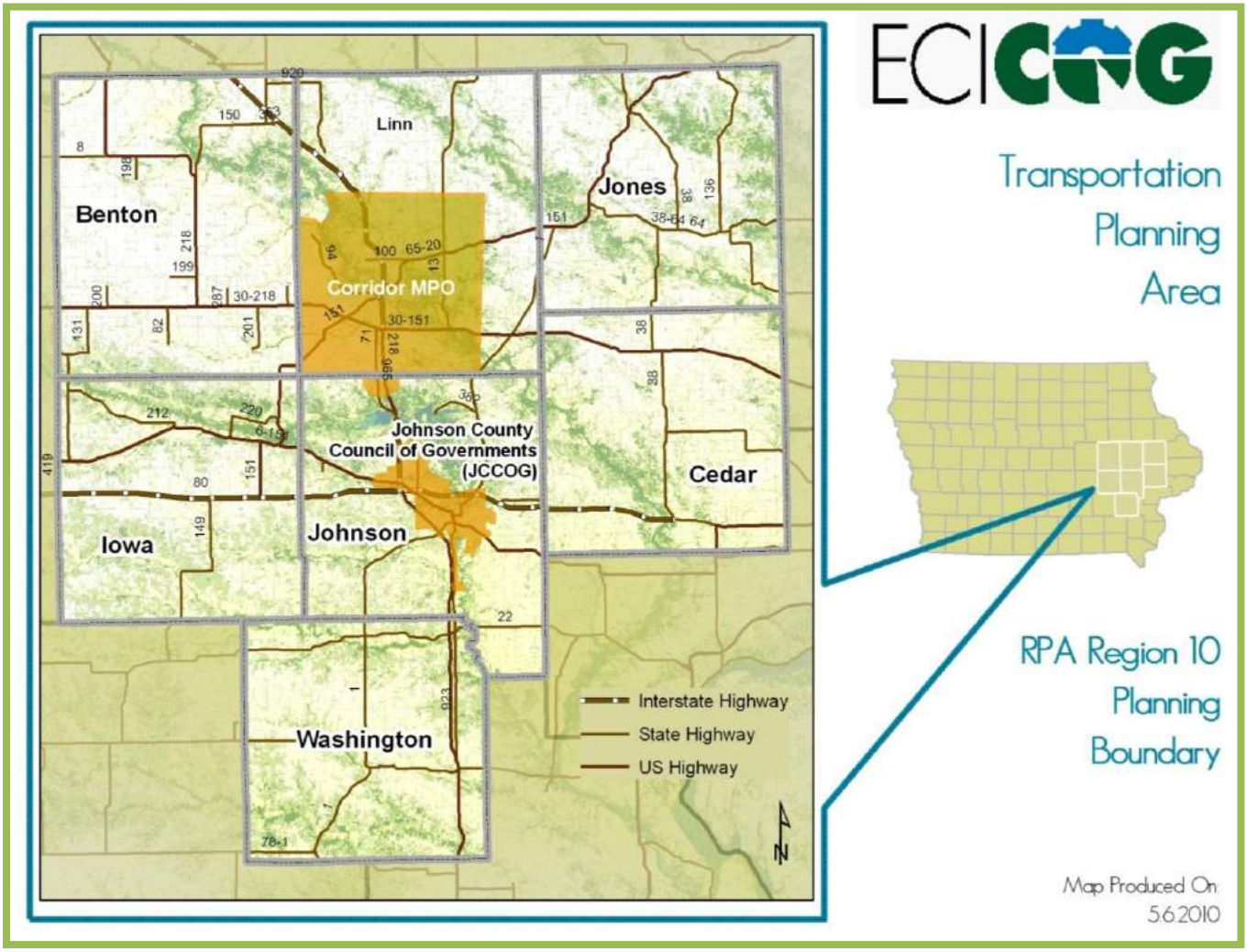
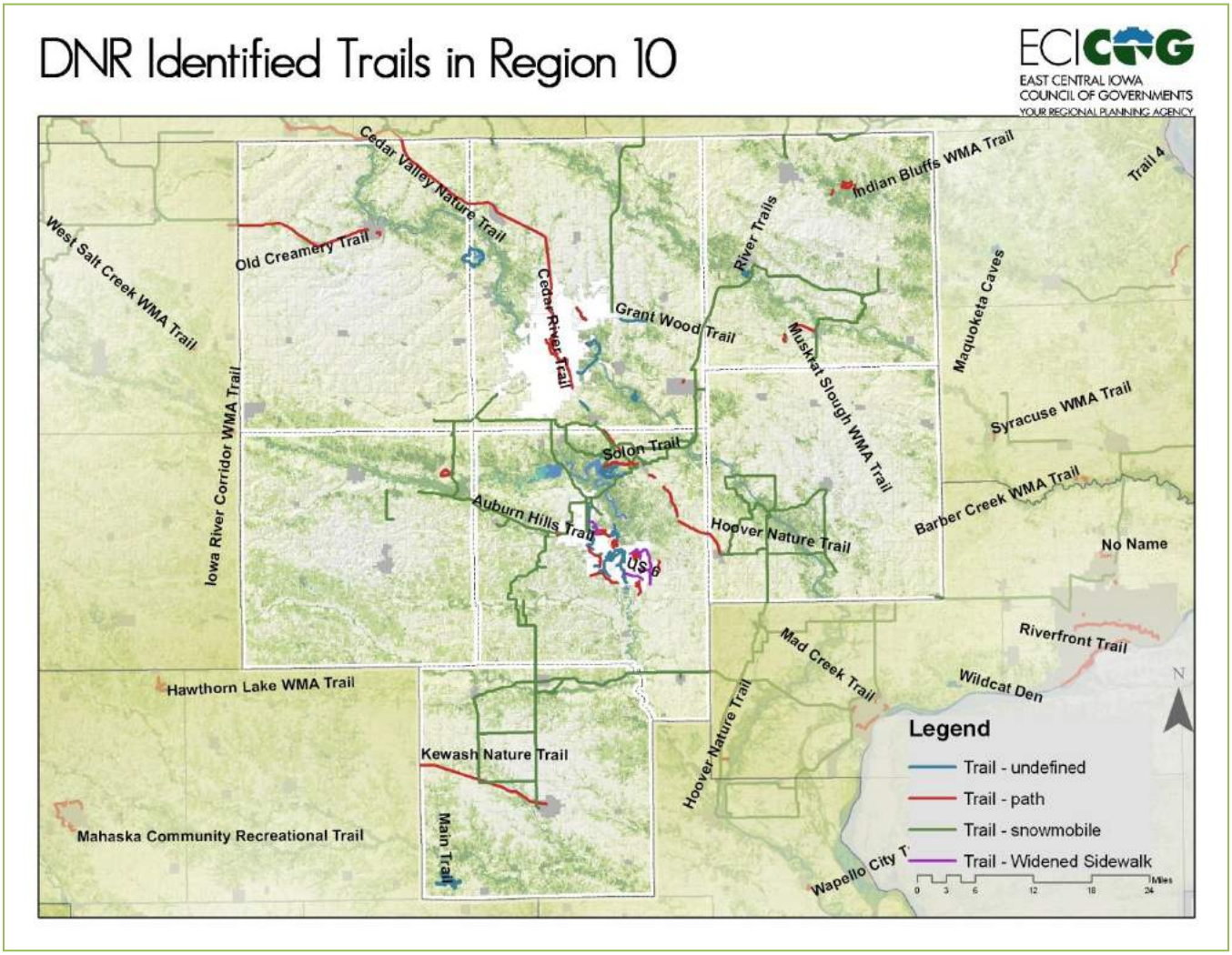


Figure 3: Region 10 Planning Area

Region 10 is composed of a combination of rural counties (Benton, Cedar, Iowa, Jones and Washington) and urban counties (Johnson and Linn). As a result, and due to other factors, trails planning efforts vary widely between the member counties, with the urban counties tending to have a greater number of trails constructed and more detailed plans for future trails.

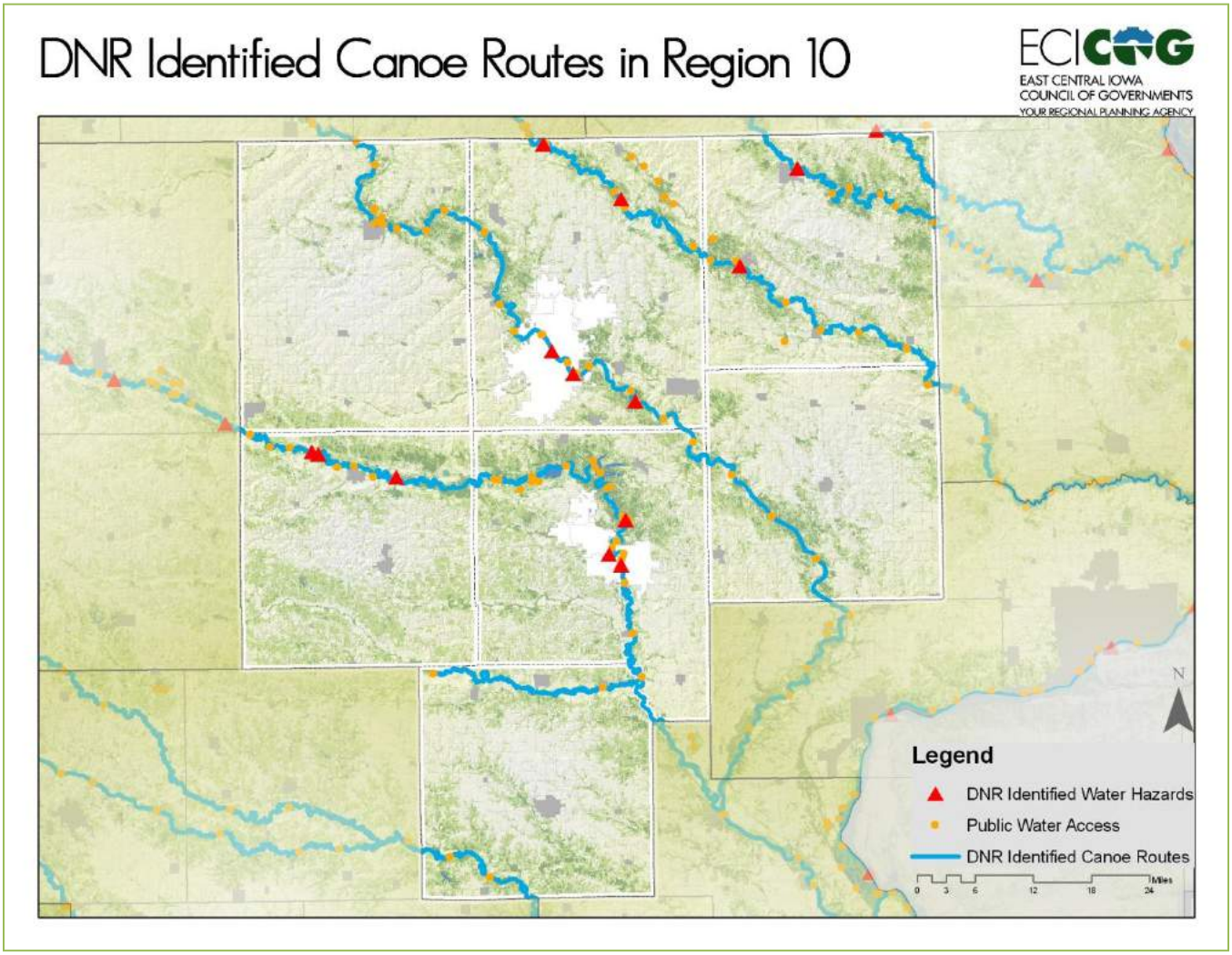
Figure 4: DNR Identified Trails (Existing in 2008)



A number of separated trails also exist within the region, and are shown in red on the map above. These include: the Old Creamery Trail in Benton County; the Cedar Valley Nature Trail in Benton and Linn Counties and the Cedar River Trail in Linn County, both part of the American Discovery Trail; the Hoover Nature Trail in Johnson and Cedar Counties, also part of the American Discovery Trail; and the Kewash Nature Trail in Washington County. Both metro areas and many parks offer additional trails.

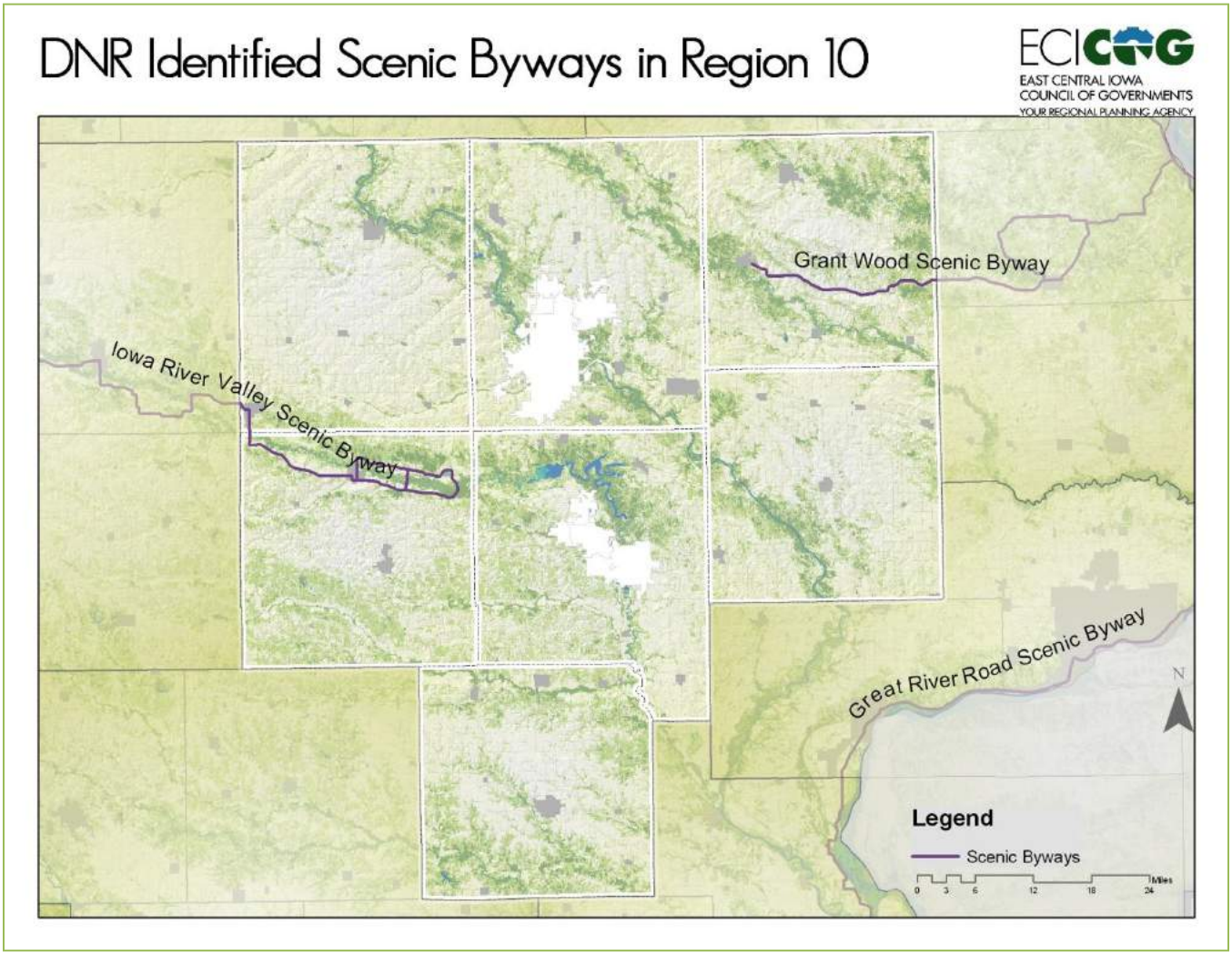
Region 10 contains a number of rivers that are designated as Canoe Routes by the Iowa DNR. Based on the Report on the Survey of Iowa Canoe, Kayak and Innertube Liveries (IDNR, 2009), there are five liveries in Region 10. These five liveries all offer canoe rental, and one livery also rents kayaks. No innertube rentals were available within Region 10. However, across the state, innertubing trips in 2008 (19,486) substantially exceeded the number of kayaking trips (3,516) and nearly equaled the number of canoeing trips (21,474). Many water trails users may chose not to make use of liveries, and there are a number of public water access sites within the region, as detailed on the next map.

Figure 5: DNR Identified Canoe Routes



A few water hazards also exist, and those that have been identified by the IDNR are also displayed on the map above. The majority of these water hazards are dams, and thus some areas along the identified canoe routes may not be suitable for all water trail users, especially in areas where there is a relatively short distance between water hazards or where current and water levels are high.

Figure 6: Scenic Byways

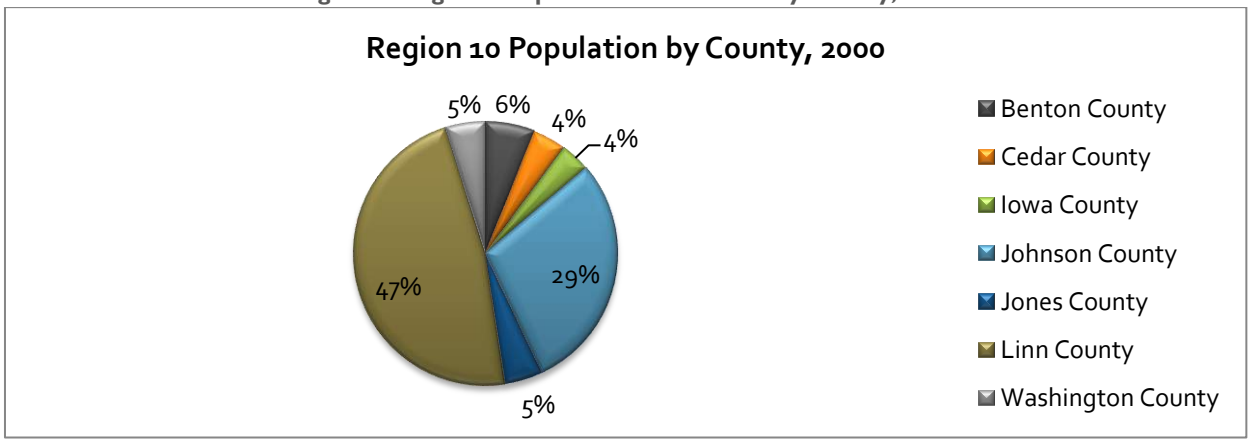


The Iowa River Valley Scenic Byway has a loop around the Amana Colonies in Iowa County. The Colonies offer many museums along with German-inspired food and architecture. The byway was designated as an Iowa State Scenic Byway on June 2nd, 1988.

Various trails, both planned and unplanned exist in Region 10. The map below details trails that have been identified by the Iowa DNR in their shapefile titled Recreational Trails in the State of Iowa. The version shown in the map below was created December 17, 2008, and was the most current edition available. As detailed on the map, a large number of the trails that have been documented within Region 10 are snowmobile trails, the majority of which are routes that run alongside road right of way in rural areas.

REGION 10 POPULATION

Figure 7: Regional Population Distribution by County, 2000



The 2000 U.S. Census reported the Region's total population as 404,764 residents. The Region contains 73 municipalities, with 67 percent of the area's total population residing within the 14 urban communities with populations exceeding 2,500 persons. Almost 90 percent of this urban population is located with the cities of Cedar Rapids and Iowa City. The other 10 percent of the Region's urban population is located within the smaller communities of Belle Plain and Vinton in Benton County, Marengo and Williamsburg in Iowa County, Coralville and North Liberty in Johnson County, Anamosa and Monticello in Jones County, Marion, Hiawatha, Robins and Mount Vernon in Linn County, and Washington and Kalona in Washington County. Nearly half of the region's population resides in Linn County, as detailed on the diagram below. Nearly another third live within Johnson County, with the rural counties combined contributing to just under one-quarter of the region's population in 2000.

The following tables describes the age distribution within the region as reported in the 2000 Census, as well as the means of commute indicated in the long form sample. While trails are typically provided as a recreational service, the number of people who commute to work without the use of a private vehicle may also be likely trail users, and those figures are also provided below.

Table 1: Region 10 Population Totals, 2000

Region 10 Totals		
Total Population	402,764	100.0%
Under 5 years of age	26,075	6.5%
Ages 5 to 15	65,947	16.4%
Age 16-64	262,584	65.2%
Age 65 to 84	41,208	10.2%
Age 85 and over	6,950	1.7%
Means of Transportation to Work (ages 16 and over)		
Car, truck, van – drove alone	168,631	74.1%
Car, truck, van – carpooled	20,868	9.2%
Public transportation (excluding taxi)	4,809	2.1%
Walked	10,384	4.6%
Taxicab, motorcycle, bicycle, other means	3,919	1.7%
Worked at home	9,282	4.1%

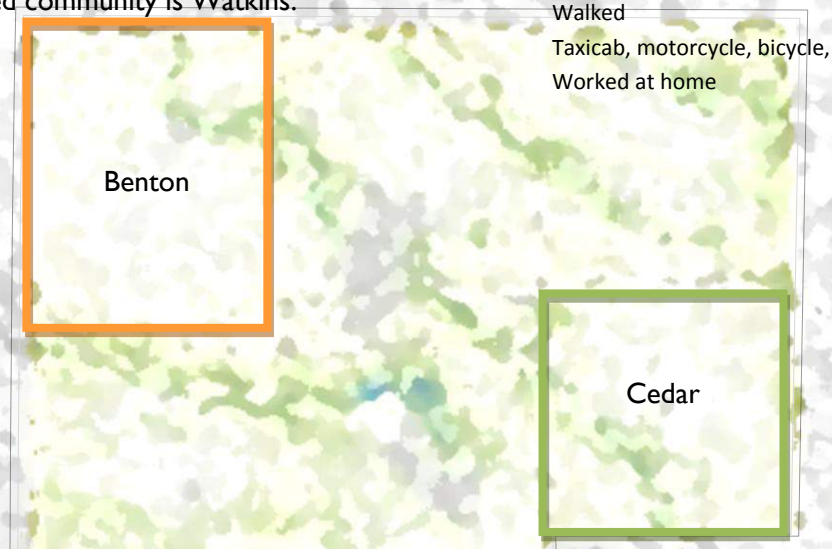
Benton County Population

Community

The 2009 Census population estimate for Benton County was 26,734 residents. The county includes the cities of Atkins, Belle Plaine, Blairstown, Garrison, Keystone, Luzerne, Mount Auburn, Newhall, Norway, Shellsburg, Urbana, Van Horne, Vinton and Walford. Many residents also live in the unincorporated areas of the county, and the largest unincorporated community is Watkins.

Table 2: Benton County Population Overview, 2000

Benton County Population		
Total Population	25,308	100.0%
Under 5 years of age	1,638	6.5%
Ages 5 to 15	4,923	19.5%
Age 16-64	14,845	58.7%
Age 65 to 84	3,297	13.0%
Age 85 and over	605	2.4%
Means of Transportation to Work (ages 16 and over)		
Car, truck, van – drove alone	9,721	73.7%
Car, truck, van – carpooled	1,726	13.1%
Public transportation	44	0.3%
Walked	307	2.3%
Taxicab, motorcycle, bicycle,	45	0.3%
Worked at home	798	6.1%



Cedar County Population

Community

The 2009 Census population estimate for Cedar County was 18,006, a slight decrease from the 2000 estimate of 18,187 residents. Cedar County includes the incorporated communities of Bennett, Clarence, Durant, Lowden, Mechanicsville, Stanwood, Tipton, and West Branch, as well as the villages of Cedar Bluff, Cedar Valley, Centerdale, Downey, Lime City, Plato, Rochester, Springdale, Sunbury, and Wald.

Table 3: Cedar County Population Overview, 2000

Cedar County Population		
Total Population	18,187	100.0%
Under 5 years of age	1,102	6.1%
Ages 5 to 15	3,311	18.2%
Age 16-64	10,822	59.5%
Age 65 to 84	2,447	13.5%
Age 85 and over	505	2.8%
Means of Transportation to Work (ages 16 and over)		
Car, truck, van – drove alone	7,443	87.7%
Car, truck, van – carpooled	1,283	15.1%
Public transportation	25	0.3%
Walked	344	4.1%
Taxicab, motorcycle, bicycle,	60	0.7%
Worked at home	463	5.5%

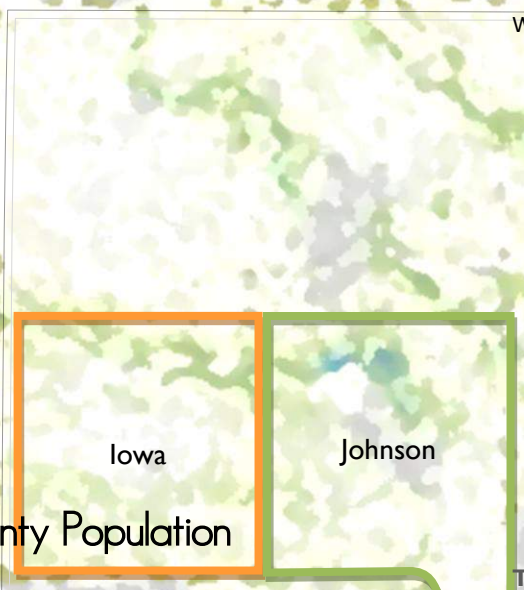
Iowa County Population

Community

The 2009 Census estimate placed the population of Iowa County at 15,811 people, up from 15,671 in 2000. Iowa County includes the incorporated communities of Ladora, Marengo, Millersburg, North English, Parnell, Victor and Williamsburg, and the unincorporated communities of Conroy, Genoa Bluff and the Amana Colonies.

Table 4: Iowa County Population Overview, 2000

Iowa County Population		
Total Population	15,671	100.0%
Under 5 years of age	972	6.2%
Ages 5 to 15	2,963	18.9%
Age 16-64	9,055	57.8%
Age 65 to 84	2,191	14.0%
Age 85 and over	490	3.1%
Means of Transportation to Work (ages 16 and over)		
Car, truck, van – drove alone	5,858	69.0%
Car, truck, van – carpooled	1,387	16.3%
Public transportation	7	0.1%
Walked	313	3.7%
Taxicab, motorcycle, bicycle,	49	0.6%
Worked at home	597	7.0%



Johnson County Population

Community

The 2009 Census population estimate for Johnson County is 131,005 people, up from 111,006 in 2000. Johnson County includes the incorporated communities of Coralville, Hills, Iowa City, Lone Tree, North Liberty, Oxford, Shueyville, Solon, Swisher, Tiffin and University Heights. Johnson County also contains the villages of Amis, Elmira, Cosgrove, Frytown, Morse, Oasis, River Junction, Sharon Center, Sutliff and Windham.

Table 5: Johnson County Population Overview, 2000

Johnson County Population		
Total Population	111,006	100.0%
Under 5 years of age	6,428	5.8%
Ages 5 to 15	14,894	13.4%
Age 16-64	81,419	73.3%
Age 65 to 84	7,164	6.5%
Age 85 and over	1,101	1.0%
Means of Transportation to Work (ages 16 and over)		
Car, truck, van – drove alone	48,331	72.2%
Car, truck, van – carpooled	7,382	11.0%
Public transportation (excluding taxi)	3,384	5.1%
Walked	5,546	8.3%
Taxicab, motorcycle, bicycle, other means	2,145	3.2%
Worked at home	3,314	4.9%

Jones County Population

Community

The 2009 Census estimate for Jones County is 20,364, up slightly from the 2000 county of 20,221. Jones County includes the incorporated cites of Anamosa, Cascade, Center Junction, Martelle, Monticello, Morley, Olin, Onslow, Oxford Junction and Wyoming. The county also contains a number of unincorporated villages, including Amber, Canton, Fairview, Hale, Langworthy, Oxford Mills and Scotch Grove.

Table 6: Jones County Population Overview, 2000

Jones County Population		
Total Population	20,221	100.0%
Under 5 years of age	1,128	5.6%
Ages 5 to 15	3,415	16.9%
Age 16-64	12,479	61.7%
Age 65 to 84	2,750	13.6%
Age 85 and over	449	2.2%
Means of Transportation to Work (ages 16 and over)		
Car, truck, van – drove alone	7,407	73.1%
Car, truck, van – carpooled	1,060	10.5%
Public transportation	2	0.0%
Walked	386	3.8%
Taxicab, motorcycle, bicycle, other means	48	0.5%
Worked at home	711	7.0%

Linn County Population

Community

Linn County is the most populous county in Region 10, with a 2009 Census estimate of 209,226 people, up from 191,701 in 2000. Linn County includes the cities of Alburnett, Burtram, Cedar Rapids, Center Point, Central City, Coggon, Ely, Fairfax, Hiawatha, Lisbon, Marion, Mount Vernon, Palo, Prairiesburg, Robins, Springville and Walker, in addition to the unincorporated communities of Toddville, Troy Mills, Viola, Waubeek and Whittier.

Table 7: Linn County Population Overview, 2000

Linn County Population		
Total Population	191,701	100.0%
Under 5 years of age	13,425	7.0%
Ages 5 to 15	32,775	17.1%
Age 16-64	122,036	63.7%
Age 65 to 84	20,317	10.6%
Age 85 and over	3,148	1.6%
Means of Transportation to Work (ages 16 and over)		
Car, truck, van – drove alone	89,624	83.3%
Car, truck, van – carpooled	7,858	7.3%
Public transportation	1,333	1.2%
Walked	3,440	3.2%
Taxicab, motorcycle, bicycle, other means	1,543	1.4%
Worked at home	2,909	2.7%

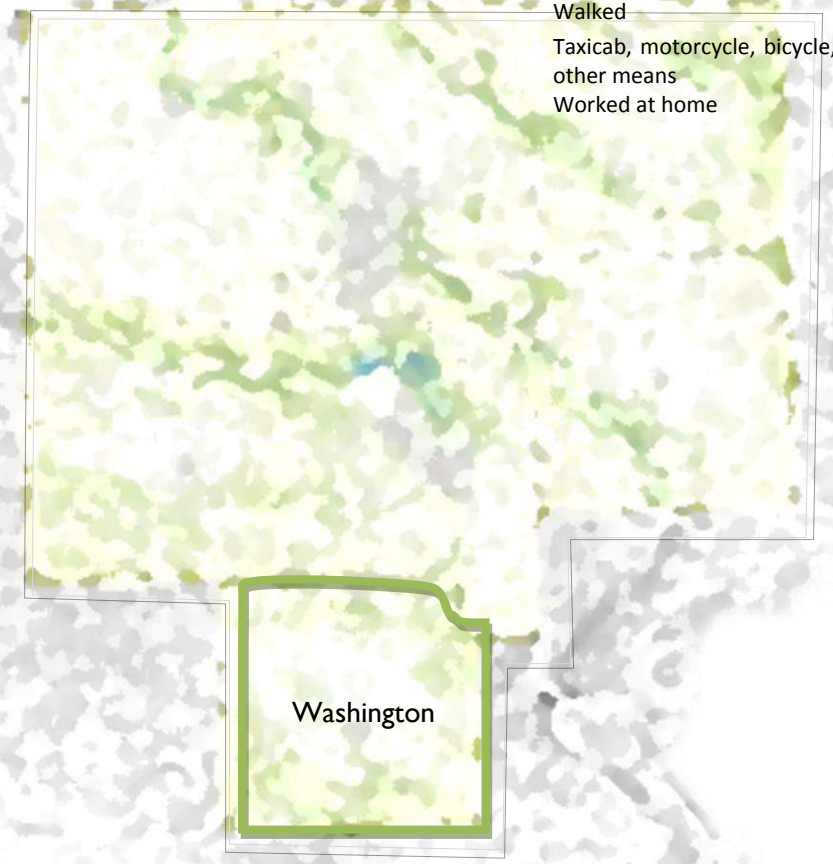
Washington County Population

Community

Washington County is the southernmost county in Region 10, part of which extends into the Iowa City Metropolitan Statistical Area. The 2009 population estimate for the county was 21,258, up 2.8% from the 2000 Census count of 20,670. Washington County includes the incorporated communities of Ainsworth, Brighton, Crawfordsville, Kalona, Riverside, Washington, Wellman and West Chester.

Table 8: Washington County Population Overview, 2000

Linn County Population		
Total Population	20,670	100.0%
Under 5 years of age	1,382	6.7%
Ages 5 to 15	3,666	17.7%
Age 16-64	11,928	57.7%
Age 65 to 84	3,042	14.7%
Age 85 and over	652	3.2%
Means of Transportation to Work (ages 16 and over)		
Car, truck, van – drove alone	7,690	69.5%
Car, truck, van – carpooled	1,455	13.1%
Public transportation (excluding taxi)	39	0.4%
Walked	392	3.5%
Taxicab, motorcycle, bicycle, other means	89	0.8%
Worked at home	953	8.6%



Benton County Attractions

Benton County offers a number of sites that may be of interest to the local trails enthusiast or trails users visiting from other regions. These sites include areas of historic significance, areas of natural or geologic significance and recreational facilities.

Figure 8: Summer in Benton County, Courtesy of Benton County Conservation Board

Several sites in Benton County are listed on the National Register of Historic Places. This includes: the Benton County Courthouse, the Burlington, Cedar Rapids and Northern Passenger station in Vinton, the Herring Hotel in Belle Plaine, the James Greer McQuilkin Round Barn near Eagle Center (unincorporated), the Frank G. Ray House and Carriage House in Vinton, two round barns in Bruce Township, the Sankot Motor Company in Belle Plaine, the Shellsburg Bridge in Shellsburg, the Upper Stone Schoolhouse east of Vinton, the old Vinton Public Library and the Youngville Café in Watkins.

The Benton County Conservation Board manages over 1,355 acres of natural areas, preserves, river access sites and boat launches, and 17 parks. The parks include:

Benton City-Fry Recreation Area (River Park) near Vinton: A scenic, quiet recreation area located along the Cedar River in northeastern Benton County offering camping, hiking, and river access. Pavilion and playgrounds make it a wonderful location for family-gatherings and events.

Cumberland's Recreation Area near Vinton: Cumberland's Recreation Area is situated on 20 acres of lowland forests in the Cedar River floodplain only 1 mile north of Vinton on Highway 150, adjacent (north side) to the Vinton compost facility with access along highway 150.

Hannen Park near Blairstown: Located in beautiful southern Benton County (Southwest of Blairstown), Hannen Park is a wonderful get-away to spend a day fishing and swimming or an ideal location for your next vacation. Nestled on 180 acres, Hannen Park is surrounded by a 50 acre lake, and is recognized as the first county conservation built (man-made) lake in the state of Iowa.

Hoefle-Dulin Recreation Area (River Park) near Vinton: A lovely, quiet river campground and boat launch along the Cedar River only minutes from downtown Vinton, Iowa. Several campsites are nestled alongside the river

providing visitors a unique and peaceful location to spend a weekend or a week. The campground is open, after the 2008 flood, with new picnic tables and fire-rings.

Milroy Access (River Park) near Vinton: Located two miles from downtown Vinton, Milroy Access is situated on 6 acres of Cedar River shoreline providing riverside fishing access and nature appreciation. Rustic park offers few amenities (floods during spring thaw).

Minne Estema (River Park) near Vinton: A historic river park, owned by the Iowa Department of Natural Resources and managed by Benton County Conservation Board, located 8 miles north of Vinton, IA on the Cedar River. Once home to a thriving summertime getaway, Minne Estema no longer offers river-boat rides but is a beautiful location for your next camping trip.

Mt Auburn Boat Launch (Winnegar Lake Area) near Brandon: With nearly 2 miles of Cedar River shoreline, the Winnegar Lake Area (including Mt. Auburn Boat Launch and Tobin's Cabin Area) offers spectacular opportunities to enjoy nature. Forested lowland areas surrounding oxbow lakes alongside the scenic Cedar River offers fishing and hunting opportunities (in season) and hiking and birding possibilities. Maintained as a Game Management Area.

Polk Township Wildlife Area near Brandon: The sights, sounds and smells of Iowa will awaken your senses as you enjoy this northeastern Benton County wildlife area. Family-friendly shoreline fishing awaits you conveniently located close to Urbana, Brandon and the I-380 corridor. Groomed walking trails around the lake and wild flowers encircle this precious day-use area. Pack a lunch, a fishing pole, and plan a day at Polk Township Wildlife Area.

Rodgers Park near Vinton: This beautiful park and campground, located in northern Benton County, offers spectacular opportunities for camping, fishing, and enjoying nature. The camping areas are situated to overlook the 21 acre lake and offers perfect views of summer sunsets. The swimming beach is adjacent to camping areas and a new playground.

Wildcat Bluff Recreation Area near Urbana: Named after its geologic features, the stunning Wildcat Bluff reaches 860 (above sea level) rising from the lazy Cedar River in northeastern Benton County. This recreation area provides the ultimate experience for campers, fishers, river boaters and canoeists, and nature explorers. Springtime mushroom hunting and wildflowers provide great reasons to explore and hike the winding trails within this 131 acre recreational area. Wildcat Bluff Recreation Area is home to a challenging 18 hole Disc Golf Course.

Park information courtesy of the Benton County Conservation Board via mycountyparks.com

Cedar County Attractions

Figure 9: Herbert Hoover National Historic Site, Photo Courtesy of the National Park Service

Several sites in Cedar County are listed on the National Register of Historic Places. This includes the Cedar County Sheriff's House and Jail in Tipton, the Downy Savings Bank in Downy, Floral Hall in Tipton, the William Green House in Rochester, the Gruwell and Crew General Store in West Branch, the Hannah Morse Fowler Hall House in Buchanan, the Hotel Tipton in Tipton, the Kreinbring Phillips 66 Gas Station in Lowden, the Lincoln Hotel in Lowden, the Mill Creek Bridge near Clarence, the Red Oak Grove Presbyterian Church and Cemetery in Tipton, the John Christian and Bertha Landrock Reichert house in Tipton, St Paul's Episcopal Church and Parish Hall in Durant, Tipton State Bank in Tipton, and the West Branch Commercial Historic District in West Branch. Also located in Cedar County is one of three National Historic Landmarks in Region 10: the Herbert Hoover National Historic Site, also known as the Herbert Hoover Birthplace. The grounds include cottage where Hoover was born in 1874, several other period structures, the Herbert Hoover Presidential Library and Museum, the gravesites of President and First Lady Hoover, and an 81-acre native tallgrass prairie restoration.

The Cedar County Conservation Board manages 16 parks, wildlife areas and timbers encompassing 920 acres of recreational and reserve facilities. The parks include:

Bennett Park near Bennett: Bennett Park encompasses 80 acres approximately 3 miles east of Bennett along Hwy 130. Amenities include three shelters, pit toilets, drinking water, playground equipment, volleyball court, horseshoe courts, and electric camp sites. The park also features a 10 acre pond, a butterfly garden, a reconstructed prairie, and several hiking trails.

Cedar Bluff Access west of Cedar Bluff: the Cedar Bluff Access is a concrete boat ram offering access to the Cedar River. The site also includes 17 acres of park and offers primitive camp grounds.

Cedar Bluff Wildlife Area near Cedar Bluff: The Cedar Bluff Wildlife Area is a 43 acre reserve of bottomland forest. The area was a gift from the Iowa Natural Heritage Foundation. The Cedar Bluff Wildlife Area is a designated public hunting area.

Cedar Valley Park near Tipton: Cedar Valley Park is located approximately 7 miles from Tipton, and is a multi-use park comprised of a combination of river bottomland and upland forest. The park includes three shelters, pit toilets, drinking water, playground equipment, and electric campsites. It also features a concrete boat ramp, two fishing quarries, and several hiking trails. Swimming is not prohibited in the quarries.

Massillon Park near Lowden: Massillon Park is located approximately 4 miles north of Lowden. The 20 acre park borders the southern banks of the Wapsipinicon River, and consists of a combination of river bottomland and upland forest. The park features two shelters, pit toilets, playground equipment, camping areas, picnic areas and drinking water. The park also has a concrete boat ramp providing access to the Wapsi.

Figure 10: Hoover Nature Trailhead, Photo Courtesy of Cedar County Conservation

Hoover Nature Trail near West Branch: The Hoover Nature Trail is a 3 mile granular and hard surface trail near West Branch. The trail was donated to the Conservation Board by the Iowa Natural Heritage Foundation in 2006. The trail is open to hiking and biking.

Mitzner Property near Tipton: The Mitzner Property is a 40 acre area located 3 miles west of Tipton. The site was acquired in 2007 through a bequest by the Richard Mitzner Estate, and is reserved for bow hunting.

Norton Nature Area near Durant: The Norton Nature Area is located one mile west of Durant on the south side of Highway 6. The 30 acre floodplain timber tract was a gift from the family of Charles and Ruby Norton. No camping or hunting is permitted.

Pioneer Park in Downey: Pioneer Park is a 1 acre green space for day use and picnicking. Features include an air conditioned building and modern restrooms. The area was donated to the CCCB in 2001 by the Pioneer Seed Company.

Red Oak near Tipton: Red Oak Park is located 6 miles northwest of Tipton. The 17 acre park includes an enclosed shelter, pit toilets, drinking water, playground equipment, fire ring, grill, a volleyball court, horseshoe goals and hiking trails.

River Valley Wetland near Cedar Bluff: River Valley Wetland is a 100 acre area consisting of a 5 acre wetland, river bottomland and upland forest areas, with 25 acres converted into a prairie and food plots. There are no recreational facilities, however the site does include a bird blind.

Rochester Park near Atalissa: Rochester Park is a 3 acre park bordering the Cedar River. Features include a concrete boat ram, enclosed shelter, pit toilet, drinking water, playground equipment, grills, a volleyball court and horseshoe courts. Camping and hunting are not permitted.

Townsend Wildlife Area near Lowden: Townsend Wildlife Area is located 6 miles south of Lowden. The 118 acre forest is open to public hunting, however hiking is encouraged when the hunting season has closed. A federal cost share grant under the Land and Water Conservation Program provided for one-half of the purchase of this area. The IDNR owns a 60 acre tract of public hunting ground across the road from the Townsend Wildlife Area. No facilities are provided.

West Rochester Sand Pit near Rochester: The West Rochester Sand Pit is located approximately 1 mile north of Rochester near the Cedar River. The Sand Pit is a 26 acre area that contains an abandoned sand pit for fishing in addition to several hundred feet of river frontage. This property was donated to the CCCB in June of 200 by Wendling Quarries.

Iowa County Attractions

Figure 11: Main Amana

Iowa County contains several National Register of Historic Places buildings and a district listing for the Amana Colonies. The Amana colonies are a group of settlements of the Ebenezer Society, also referred to as *die Germeinde der wahren Inspiration* (Community of True Inspiration) who came from Germany and Switzerland via West Seneca, NY, around 1855. The 26,000 acre settlement functioned in a communal manner under the Amana Society until the 1930s, and the villages today are known as heritage tourism destinations for food, crafts, and the unique architecture of many of the original buildings. The listed buildings in Iowa County include the E.J. Baird House in Millersburg, the David and M. Maria Hughes House in Williamsburg, the Indian Fish Weir in Middle Amana, the Iowa County Courthouse in Marengo, the Ladora Savings Bank in Ladora, the Lenox Township Church of the New Jerusalem in Lenox Township, Pilot Grove southwest of Williamsburg, the Plagmann Round Barn in Conroy, St Michael's Church, Cemetery, Rectory and Ancient Order of Hibernians Hall in Parnell, and the Fred G. Turner House in North English.

The Iowa County Conservation Board manages 1,577 acres of land, encompassing14 parks, wildlife areas, preserves and historic sites. The largest of these sites is Lake Iowa Park near Ladora, which is a 97 acres lake surrounded by campgrounds and trails. Lake Iowa Park offers a quiet, safe and beautifully-maintained campground that includes 120 rocked pads with electricity, showers and a dump station. There are water hydrants with rural water spread throughout the campground to fill your camper tanks. Tent areas are also available. No reservations for camping, it is all first come first served. The 97 acre lake supports Large Mouth Bass, Red ear Sunfish, White and Black Crappie, and Catfish. A boat ramp with parking area, fish cleaning station and restroom are provided. There is a no-wake/no wave restriction on the lake. Picnic areas include seven shelter houses that overlook Lake Iowa. The Roundhouse is an enclosed facility with outside BBQ grills available. The remaining open air shelters include grills, bathroom facilities, water, electricity and some playground equipment. All shelters may be reserved in advance. Beach and swimming areas are open from Memorial Day to Labor Day. (Swim at your own risk) Hiking trails connect the shelter houses and wind around the lake through native prairies and woodlands.

Other parks managed by the Iowa County Conservation board include:

Berstler Woods near Millersburg: Berstler Woods is located just 2 miles south of Millersburg. The 69-acre oak-hickory timber and grassland, is rich in Native American history as well as an excellent wildlife area. The Conservation Board acquired the land with assistance from the Iowa Wildlife Habitat Stamp Fund, supported by Iowa hunters and anglers.

Big Bend Conservation Area near Marengo: The Big Bend Conservation Area is located just 2 miles northwest of Marengo, along the Iowa River Corridor. Drive 1 mile north of Marengo on V-66, and one mile east on Hwy F-15. An access road and parking area are provided as well as limited access to the river. It includes 250 acres

of cottonwood-maple forest mixed with 70 acres of wetland. Wildlife abounds in this area, including a great variety of waterfowl, beaver, otter, eagles, songbirds, deer and turkey.

Burr Oak Wildlife Area near Marengo: Burr Oak is located to the northeast of Marengo. Overlooking the Iowa River, this 28 acre preserve was an upland timber donated to the State by Paul Hursch. The Iowa County Conservation Board manages the area as a preserve and is an excellent area for hiking, birding, and other nature study activities.

Butler Timber Reserve near Millersburg: Located 4 miles from Millersburg, go west of F-52, north on F Ave, west on 280th St. Access is by dirt road only. The Butler Timber Reserve was set aside for upland timber and wildlife habitat. It is 20 acres of excellent hunting and off-trail hiking.

Fuller Addition – English River Wildlife Area near North English: The acquisition of this diverse 160 acres area was made possible by the combined effort of the Iowa, Washington and Keokuk County Conservation Boards. Habitat Stamp funds covered 75% of the cost; the three county conservation boards paid the remainder. The area now includes 60 acres of wetlands, upland and lowland timber and grasslands, making it excellent wildlife habitat area open to hunting and trapping.

Gateway Park and Preserve near Marengo: Gateway Park and Preserve is located 1/2 mile north of the City of Marengo, Iowa and occupies a portion of the southern bank of the Iowa River. The project site is 131 acres and includes a 41-acre lake and a 12-acre pond which were created through the excavation of sand and gravel which was used for a concrete business. There is a network of walking and biking trails that encompass the lake and pond. While still in early development, ICCB hopes to be a viable asset to the community, county and surrounding area.

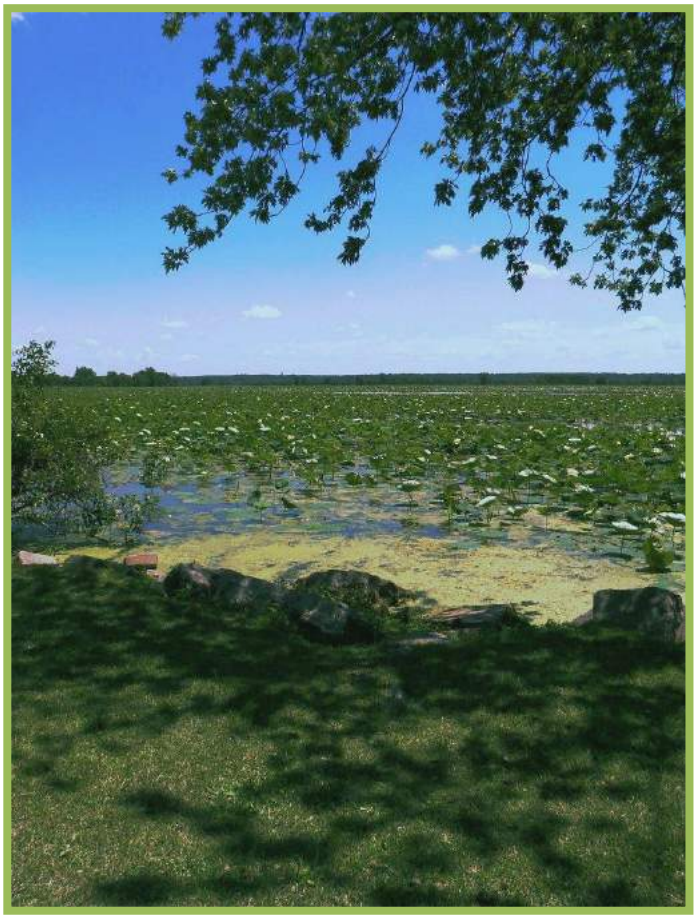


Figure 12: Lily Pond near the Kolonieweg Trail

Gunderson Wildlife Area near Marengo: The Iowa County Conservation Board received this wildlife area of 69 acres from the late Vernon Gunderson in 2001. The upland rolling hills will include a small pond, upland grasslands and excellent wildlife habitat. This is a multi-use area, open to hunting, fishing, and other non-game activities.

I-80 Wildlife Area near Williamsburg: This wildlife area includes thirteen acres of open grassland, owned by the state and managed by the Iowa County Conservation Board. Hunting is permitted in this upland bird habitat.

Lantz Timber Preserve near North English: The Carl Lantz family donated this 20 acre upland timber to the Iowa County Conservation Board to be managed as an oak-hickory timber preserve. It is excellent area for bird watching, spring flowers, and hunting mushrooms.

Laura and Skinny Schlesselman Wildlife Area near Ladora: Once known as the "ballast pit," this 13-acre wildlife area is a wetland habitat and often travelers will see waterfowl and wading birds using the marsh. The area also protects native prairie remnants found between the railroad and highway.

Pheasant Ridge Wildlife Area near Williamsburg: Pheasant Ridge is reconstructed upland grassland acquired in 1998. The Iowa County Pheasants Forever purchased and donated 55 acres to the Iowa County Conservation Board as part of the Lake Iowa Watershed Protection Project. This excellent habitat is open to hunting and other non-game wildlife uses.

Pilot Grove State Preserve near Williamsburg: A wooded knoll, rose from the long stretches of prairie which surrounded it. From 1840's on, it was known as a landmark for pioneers going west across Iowa. The prairie has now given way to cultivated fields, and much of the timber that made up Pilot Grove is also gone. The 7 acre remnant includes an oak-hickory savanna and evidence of wagon trials through the timber. This historical area is owned by the state but managed by the Iowa County Conservation Board as a wildlife preserve.

Simmons Timber Reserve near Marengo: This 97 acre woodland is located along the Iowa River. It was donated to the Conservation Board by the late Lloyd R. Simmons, this area is dominated by cottonwood and silver maple.

Park information courtesy of Iowa County Conservation Board via mycountyparks.com

Johnson County Attractions

Figure 13: Johnson County Courthouse

Johnson County is home to a wide range of historic and listed structures for those interested in exploring the historic architecture of the state's first capital. The county is also home to the University of Iowa, and the accompanying cultural facilities including performance venues, museums, and a wide range of entertainment options.

The Johnson County Conservation board manages 10 parks, conservation areas and river accesses encompassing some 1,562 acres across the county. They manage natural resources and outdoor recreation areas including several native prairies, river access areas, small community parks, and the 1,082 acre F.W. Kent Park. These parks include:

Cedar River Crossing near Solon: Cedar River Crossing Conservation Area is located six miles east of Solon. This 235-acre floodplain is open to the public for hiking, fishing and hunting. A monument on this site commemorates a nearby Indian Ford on the Cedar River.

Clear Creek Area near Tiffin: The Clear Creek Area features riparian timber along Clear Creek. Hunting, hiking, bird watching can all be enjoyed at the Clear Creek Area.

F.W. Kent Park near Oxford: F.W. Kent Park is located three miles west of Tiffin on Highway 6. This park is the home of the Johnson County Conservation Board Headquarters and the Conservation Education Center. The 1,082 acres provide numerous recreational opportunities. The park includes a 27-acre stocked lake with a boat ramp and dock, as well as a beach and delineated swimming area. The park also includes 38 electric and 48 non-electric camp sites. Over 9 acres of grass and crushed limestone hiking trails provide access to the entire shoreline of the lake, and cross over seven historic county road bridges that were carefully restored and moved to the park. The park is also a very popular place for winter recreation, with a well used sledding hill above the lake, and several miles of trails suitable for cross country skiers.

Frytown Conservation Area near Kalona: The Frytown Conservation Area is located ten miles southwest of Iowa City at the junction of Highway 1 and Angle Road. It features 94 acres of wildlife habitat comprised o oak/hickory timber and a 30-acre tree and shrub planting. Trails throughout the area provide access for hikers as well as hunters.

Hills Access near Hills: Hills Access is a 40-acre park located one-half mile east of Hills on 520th Street along the Iowa River. Anglers will find plenty of river shoreline for fishing and a boat ramp access to the river. Facilities include: a campground with thirteen 50-amp electrical sites and 12 primitive sites, pit toilets, picnic tables, a playground, grills, fire slabs and drinking water.

River Junction near Lone Tree: River Junction is a 12-acre area located four miles west of Lone Tree and one-half mile south of Highway 22 on River Junction Road. A boat ramp provides access to the Iowa River and anglers can fish from the shoreline. The area includes picnic tables, a pit toilet and camping.

Figure 14: Restored Prairie, Scott Church Park
Photo courtesy of Johnson County Conservation

Scott Church Park near Iowa City: Scott Church Park is a five-acre roadside park located five miles southeast of Iowa City at the junction of Hwy 6 and American Legion Road. Facilities at this area include a picnic shelter and tables, grills, a swing set, a toilet, drinking water and a reconstructed prairie.

Solon Prairie near Solon: The Solon Prairie is located on East Fifth Street on the east side of Solon. This three-acre prairie relict, which is often overlooked, is a gem which provides its visitors with a dazzling display of color each year. This prairie contains more than 157 native plant species.

Sutliff Access near Lisbon: Sutliff Access is a small, one-half acre area, located nine miles northeast of Solon in the settlement of Sutliff. There is a picnic area and boat ramp which provides access to the Cedar River.

Walker Park near Lone Tree: Walker Park is a three-acre park located 3.5 miles west of Lone Tree in the small town of River Junction. It features a picnic shelter, tables and grills. The Old Settlers Association assists the JCCB with the preservation of a historic log cabin and the 1912 Henry Walker Memorial Building on the site. They also host several special events each year.

Jones County Attractions

Figure 15: Stone City National Historic District

Jones County contains a relatively large number of National Register of Historic Places listings for a non-urban county, including the following: the Anamosa Min Street Historic District, the Anamosa Public Library, the Antioch school 4 miles east of Anamosa, the Dr. Martin H Caulkins House and Office in Wyoming, the Corbett's/Eby's Mill Bridge in Scotch Grove Township, Ely's Stone Bridge northwest of Monticello, Farm Number One of the Iowa Men's Reformatory in Anamosa, the S.S. Farwell House in Monticello, the Freemont Mill Bridge in Anamosa, the John A. Green Estate in Stone City, the Hale Bridge in Hale Township, the Iowa Men's Reformatory Cemetery in Anamosa, the Iowa Men's Reformatory Historic District in Anamosa, the Jones County Courthouse in Anamosa, the Lower Road Bridge in Anamosa, the Moore's Ford Bridge in Monticello, Odd Fellows Hall in Monticello, Rick's Brewery in Anamosa, St Joseph's Roman Catholic Church in Stone City, St Luke's Methodist Church in Monticello, Col. William T. and Elizabeth C. Shaw House in Anamosa, and the Stone City Historic District in Stone City, west of Anamosa.

Jones County Conservation features the Maquoketa and Wapsipinicon Rivers as the two main outdoor recreation natural resources. They currently manage 17 parks, wildlife areas, trails and river accesses throughout the county, encompassing approximately 3,233 acres. Parks include:

Central Park near Center Junction: Located near the center of Jones County, Central Park houses the administrative offices of the Jones County Conservation Board. This 217 acre park includes a 25 acre lake with good populations of largemouth bass, bluegill, crappie, and catfish for those who enjoy fishing. The park also offers around five miles of hiking trails transverse the woodlands, restored prairie, and wetland habitat.

Figure 16: Central Park, Photo Courtesy of Jones County Conservation

Hale Wildlife Area: Hail Wildlife area is a 201 acre preserve between Olin and Wyoming featuring hunting, fishing and undeveloped natural areas.

Jungletown Access is a boat ramp and canoe access point on the Wapsipinicon River between Olin and Oxford Junction.

Mon-Maq Dam: Mon-Maq Dam is a 63 acre site in Monticello that includes historic sites, canoe access, stream fishing and undeveloped natural areas.

Newport Mills Access: Newport Mills Access is an 8 acre site between Anamosa and Olin on the Wapsipinicon River featuring a historic site, boat ramp, canoe access, and stream fishing.

Olin Recreation Area: Located near Olin, the Olin Recreation Area is a 19 acre site of undeveloped forest and wetland areas.

Oxford Mills near Oxford Junction: Oxford Mills is a 16 acre park that includes a picnic area, picnic shelter, electricity, pit restrooms, historic features, a boat ramp, canoe access and stream fishing.

Pictured Rocks near Monticello: Pictured rocks is a 1,138 acre park that features picnic areas, shelters, electricity, primitive restrooms, hiking trails, historic sites, a boat ramp, rock climbing and repelling, canoe access points, stream fishing, hunting and undeveloped natural areas.

Rose Wildlife Area: This 12 acre site features stream fishing and hunting in an undeveloped natural area.

Scotch Grove Prairie: This is a 69 acre undeveloped natural area featuring prairie and hunting grounds.

Stone City Boat Ramp: The Stone City Boat Ramp is located near the historic site of Stone City west of Anamosa, and includes boat and canoe access as well as fishing.

Supples Access: Supples Access is a canoe access point for the Maquoketa River.

Whitewater Canyon: Located between Jones and Dubuque Counties, this 562 acre park provides nature trails, stream fishing and hunting in undeveloped natural areas.

136 Access: the 136 Access is a small canoe access into the Maquoketa River.

Linn County Attractions

Figure 17: Eastern Iowa Observatory

Linn County is the largest county in the region by population, and as such offers a wide variety of activities. Cedar Rapids is home to Kirkwood Community College, and includes attractions such as the Cedar Rapids Museum of Art, the Paramount Theatre, and Grant Wood's original studio. Cedar Rapids is the home of the Cedar Rapids Kernels baseball team (Class-A LA Angels affiliate team) and the Cedar Rapids Rough Riders USHL hockey team. Other communities in the county offer historic main streets such as Mount Vernon, Lisbon and Marion.

The Linn County Conservation Board has acquired 28 areas totaling 7,015 acres of recreational facilities. In addition to the parks, natural areas, preserves and historic sites, Linn County is home to the Wikiup Hill Outdoor Learning Center near Toddville, and the Eastern Iowa Observatory and Learning Center near Mount Vernon. Other parks include:

Abbe Creek School Museum: Constructed in 1856, the historic Abbe Creek School is believed to be the oldest standing brick school house in Iowa. It is managed by the Linn County Conservation Board and is open & staffed on Sunday afternoons from 1:00 - 4:00 PM during the months of June, July & August.

Figure 18: Trails at Wickiup Hill Conservation Center, Photo Courtesy of Linn County Conservation

Blue Creek Natural Area: Acquired in 2006 as a gift from the Robert L. Laker Estate, this 70 acre natural area was formerly known as "Lakers Acres". The area is managed for wildlife and good conservation and forestry practices. The hunting of deer is prohibited on this property as it is a sanctuary for deer finding refuge here during all deer hunting seasons. The Linn County Conservation Department, in consultation with the Iowa Department of Natural Resources, may conduct and manage a controlled deer harvest to control the number of deer if necessary to prevent damage to natural resources or to adjoining property. This natural area is open to all other pursuit of game species during the appropriate seasons.

Buffalo Creek Park: Nestled along Buffalo Creek in northeastern Linn County, rolling wooded knolls of oak and hickory combine with the open meadows adjacent to the stream valley to provide habitat for a unique variety of flora and fauna. Wild turkey, deer, nesting Canada geese, beaver and fox are but a few of the species of wildlife that inhabit the park. Among many other wildflowers, one of the largest populations of blue belles in the area can be found in this 128-acre park. Includes

a campground, sanitary dumping station, trail, dam & walkway, playground, horseshoe courts, picnic areas, and dog exercise area.

Chain Lakes Natural Area: Chain Lakes is a 373 acre natural area featuring the Chain Lakes Bridge (listed on the National Register of Historic Places). The area contains wetlands and is bisected by the Cedar River. Other features of the area include: primitive restrooms, boat ramp access to the river, hiking, fishing from the historic bridge and shorelines, and public hunting.

Goose Pond Natural Area: Goose Pond is a 269 acre natural area SW of Center Point and near Pleasant Creek State Recreation Area.

Harold and Ruth Rehrauer Natural Area: Located SE of Coggon, this is an 80 acre natural area.

Hitaga Sand Ridge Prairie Preserve: Hitaga is a 156 acre prairie preserve in northern Linn County.

J. Harold Ennis Preserve: This preserve is a 33 acre nature area with hiking trail along the Cedar River in southern Linn County.

Jay G. Sigmund Memorial Site: This site was donated in honor of the author Jay G. Sigmund and is located just north of Waubeek on the Wapsipicon River.

Matsell Bridge Natural Area: Rich in history, the Matsell Bridge Natural Area is the largest Linn County area at 1758 acres. Diverse in terrain and habitat, Matsell Bridge is home to many species of native Iowa wildlife and plants. The area contains numerous "one-of-a-kind" facilities within the Linn County Park system: shooting ranges, primitive year-round cabin, equestrian camping and unique historical features.

Millard Preserve: This 10 acre preserve was donated to the county conservation board by the Millard Family. It Features a unique glacial marsh wetland.

Morgan Creek Park: A wide variety of natural and recreational features can be found at Morgan Creek County Park, located off of Worcester Road in southwest Linn County. Steep wooded hills in the east and gently rolling hills in the west, combine with the stream valley of Morgan Creek to create habitat for a wide variety of flora and fauna. Deer, squirrels, pheasants, fox, nesting bluebirds, beaver, raccoons, snow trillium and native prairie grasses are just some of the natural features found in this 230-acre park. Morgan Creek has several great features in addition to the wonderful wildlife habitat - including the Morgan Creek Arboretum, modern campground, reservable open shelter, playground, and extensive trail system - including groomed cross-country ski trails.

North Cedar Natural Area: this 56 acre natural area along the Cedar River includes restroom facilities and a public boat ramp.

Otter Creek Natural Area: The Otter Creek Natural Area was donated to the Linn County Conservation Board in November 2009 by Kesler's Otter Creek Farm. This 37 acre natural area becomes the 28th area that is managed by the Conservation Department.

Palisades-Dows Preserve: This is a 162 acre preserve and home to the Eastern Iowa Observatory and Learning Center (EIOLC).

Palo Marsh Natural Area: Palo Marsh is a 144 acre natural area just north of Palo.

Paris Bridge Natural Area: This park provides canoe access to the Wapsipinicon River near the historic 1876 Paris Bridge.

Figure 19: Canoeing at Pinicon Ridge Park
Photo Courtesy of Linn County Conservation

Pinicon Ridge Park: This 925-acre park along the Wapsipinicon River has long been admired for its scenic natural beauty. The hilly, heavily wooded area is divided by the river and home to many species of wildlife. Beginning as a rural picnic ground in the 1960s, Pinicon Ridge Park has been developed into a modern recreation area - a regional destination for many outdoor enthusiasts. There are two entrances to the park, one each on the north and south side of the Wapsipinicon River. Access to the south entrance is off Maine Ridge Road from Hwy. 13, and then turning north (right) on Horseshoe Falls Road. This side of the park is home to the lodges and shelters, wildlife exhibit, watercraft rentals & canoe trips, the landmark observation tower, disc golf, hiking trails and the group camp complex. The north entrance is also accessed from Hwy 13 by going west on Valley Farm Road, and turning south (left) on Flying Squirrel Trail. You will find our main campgrounds and cabin complex on this side of the river, along with hiking trails and a hunting/dog exercise area.

Rock Island Botanical Preserve: The Rock Island Botanical Preserve is a 100 acre preserve in NE Cedar Rapids.

South Cedar Natural Area: This 162 acre natural area is located along the Cedar River southeast of Cedar Rapids. Severely damaged during the 2008 flood, access to the primitive camping area of the park was closed, as was use of the original boat ramp in the area. While closed to vehicles, this area of the park is still open to hiking, fishing, etc. The newer boat ramp, with adjacent parking has been repaired and reopened.

Washington County Attractions

Figure 20: Downtown Washington

Sites listed on the National Register of Historic Place in Washington County include Blair House in Washington, Smith Wildman and Jennie (Hearne) Brookhart house in Washington, the CM and StP Railroad Underpass in Washington, the Jonathan Clark Conger House in Washington, the Gracehill Moravian Church and Cemetery in Washington, a polygonal barn outside of Wellman, the Joseph Keck House in Washington, the Kurtz House in Washington, the Pilotburg Church in Wellman, St Mary's Parish and Church buildings in Riverside, the Winfield Smouse House in Washington, the Frank Stewart House in Washington, the Washington County Courthouse in Washington, and the Alexander Young Cabin in Washington.

The Washington County Conservation Board manages 18 parks, water recreation accesses, trails and natural areas encompassing 2,097 acres around the county. These sites include:

Brighton Boat Access: Brighton River Access is a 23 acre park owned by the IDNR, and was acquired and constructed in 1988. The WCCB leases this access for purposes of maintaining it for the public, and the current lease will expire in 2011. Brighton Boat Access is open to public hunting, and features a concrete boat ramp, primitive camping and pit toilets.

Brinton Timber: At 332 acres, Brinton Timber is the largest preserve maintained by WCCB. Acquisition began in 1967, and the last addition was made in 1993. Features include primitive camping, pit toilets, picnic tables, trails for hiking, biking and equestrian use.

Clemons Creek Wildlife and Recreation Area: Located 2 miles west of Washington, the Clemons Creek Wildlife and Recreation Area is a 290 acre reserve that has been developed through support of the Fish and Wildlife Service, Ducks Unlimited, DNR Habitat Stamp Grant, the Izaak Walton League, Pheasants Forever, and the Wild Turkey Federation. The park includes grasslands, prairie remnants, wet prairie, upland and lowland timber and a large marsh. Amenities include hunting, a shooting range, primitive camping, hiking and equestrian trails and pond fishing.

Crawford Pond: Crawford Pond is a stocked pond that includes largemouth bass, bluegills, crappies, read-eared sunfish and channel catfish. The facility is leased without charge to WCCB. Picnicking is allowed but camping is prohibited.

English River Wildlife Area: Located at the junction of the North English and South English Rivers, the English River Wildlife area covers 782 acres of marshes, bottomland timber, crops and grassland. The Wildlife Area is well suited to hunting, trapping, hiking and horseback riding. Facilities include primitive campgrounds, river fishing and archery.

Fern Cliff: Fern Cliff is a 56 acre wooded multi-use area located west of Crawfordville. Amenities include primitive camp grounds, pit toilets, one shelter, picnic tables, hiking trails, river fishing and archery.

Foster Pond: Foster pond is part of one of the oldest farms in Washington County. It includes a 4 acre fishing pond on a 12 acre site.

Foster Woods: This 20 acre primitive camp ground includes pit toilets, a shelter, picnic tables, trails for hiking and biking, pond fishing and bow hunting.

Hayes Timber: This is a 33 acre wooded area with hiking trails located within the city limits of Washington. The timber is bordered by the Kewash Nature Trail and the city's 14 acre prairie restoration.

Kewash Nature Trail: The Kewash Nature Trail is a 14 mile former railroad right of way that connects the towns of Washington and Keota. It traverses a variety of landscapes from woodland to native prairies with scenic views. The trail has a crushed limestone surface and is open from 4:30am to 10:30pm. Parking, restrooms, water and playground facilities are available in Sunset Park in Washington. Additional parking, restrooms and water are also available midway along the trail in the town of West Chester and at the trail's west end in Keota.

Marr Park: Marr Park is the WCCB's main camping facility, and includes modern and primitive campgrounds, drinking water, showers, flush toilets, picnic tables and 5 shelters. The 125 acre park is located one mile west of Hwy 218 on Hwy 92.

McKain's River Access: This river access includes a concrete boat ramp, pit toilets and a primitive campground. Bow hunting is allowed on the 10 acre site.

Rubio Wildlife Area: Rubio is a 103 acre wildlife area made up of floodprone grassland from the Skunk River with some lowland timber. Rubio is primarily a hunting area.

Schmitter Heritage Area: the 80 acre Schmitter Heritage Area was donated to the WCCB in 1997. The majority of the area is grassland though a few small woodlands dot the area. The terrain is generally quite steep and can be difficult for hiking.

Sockum Ridge: This 213-acre park is an actively managed woodland and includes several primitive camp grounds with pit toilets, trails for hiking, bikes and equestrian use, pond fishing and bow hunting.

The National Scenic Byways Program is run by the US Department of Transportation's Federal Highway Administration. The program recognizes, preserves and enhances selected roads throughout the US, with a substantial level of local involvement. Roads included in the program include those that have interesting natural vistas or manmade panoramas, including urban light displays, and ancient through modern historical or cultural significance. Two sections of byways exist within Region 10; the Grant Wood Scenic Byway in Jones County and the Iowa River Valley Scenic Byway in Iowa County.

The Grant Wood Scenic Byway runs from the Mississippi River westward toward Bellevue State Park south of Bellevue, Maquoketa Caves State Park near Maquoketa, and the Wapsipinicon State Park near Anamosa. The area is known for its natural beauty, including rolling hills, caves and river valleys, as well as the limestone architecture in Stone City, near Anamosa.

REGIONAL TRAILS NETWORK

NATIONALLY SIGNIFICANT TRAILS

American Discovery Trail

The American Discovery Trail (ADT) is the nation's first coast-to-coast, non-motorized recreational trail. The trail has two routes through the central portion of the country, and the northern segment passes through the ECICOG region. At the time this plan was completed, the trail was in various stages of planning and construction, with some segments fully completed, while land for other segments of the trail has yet to be secured.

Figure 21: American Discovery Trail

According to the ADT's trail directory, the trail enters Iowa in Davenport along a converted rail line. The route goes through downtown Davenport utilizing the Riverfront Trail. Moving westward, the ADT follows Highway 22 through Wildcat Den State Park to Muscatine, and then onward toward Conesville where the ADT links to the Hoover Nature Trail. The Hoover Nature Trail is planned to head north through Nichols and West Liberty, and then on to the President Herbert Hoover Birthplace National Monument in West Brach, in Cedar County. The trail then heads into Johnson County, passing near the unincorporated villages of Oasis and Morse before heading toward Solon. From Solon, the trail connects northward into Linn County, where it joins the Corridor MPO's trail system.

Throughout the metro area of Linn County, the ADT is a hard surfaced trail. Through the central portions of Cedar Rapids, the trail runs along the riverfront before heading northward and connecting to the Cedar Valley Nature Trail near Hiawatha. The Cedar Valley Nature Trail is a 52 mile long trail that connects Cedar Rapids and Waterloo, and is one of the nation's first rail-trail projects. The trail generally follows the Cedar River, and passes through restored rail depots in Center Point and Gilbertville. The Cedar Valley Nature Trail ends near Deerwood Park in Evansdale. At this point, the ADT will continue as the Cedar Prairie Trail, a still-developing trail segment, which will take the trail into Waterloo to join the Cedar Valley Lakes Trail and the George Wyth Memorial State Park trail system. This junction will be the northernmost point in the ADT system. From Waterloo, the trail continues westward toward Marshalltown and then on to Des Moines, Atlantic and finally Council Bluffs.

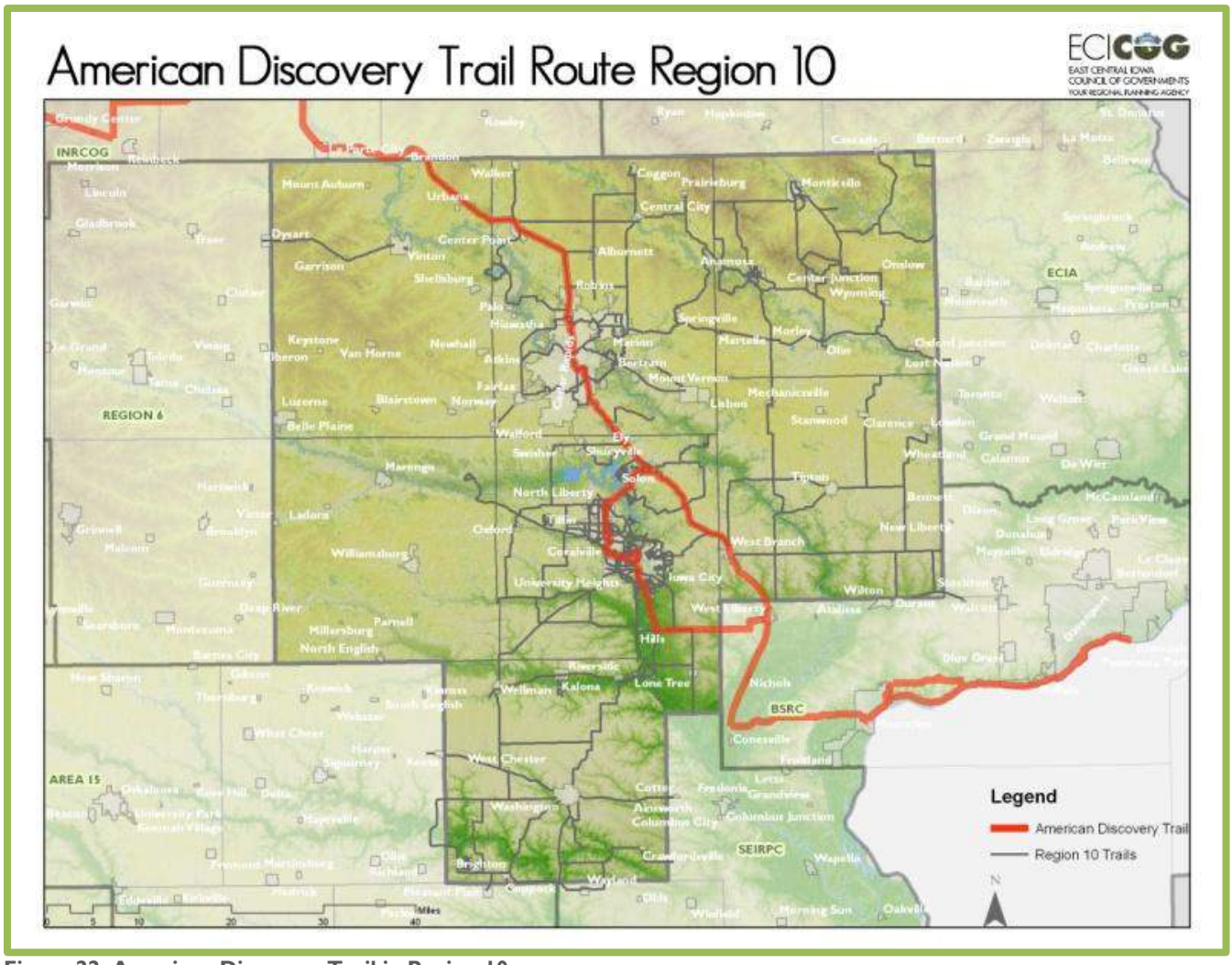


Figure 22: American Discovery Trail in Region 10

Completing segments of the American Discovery Trail through the ECICOG region as well as completing a trails network surrounding and supporting the ADT is a priority of region's trail plan. To accomplish this task, ECICOG and the Iowa Northland Regional Council of Governments (INRCOG), home to the Waterloo MPO, have taken on a joint project in partnership with local Conservation Boards and elected officials to coordinate the funding of the Cedar Valley Nature Trail and the surrounding trails network.

Figure 23: ADT in Iowa

Mississippi River Trail

The Mississippi River Trail (MRT) is another nationally significant trail located relatively near the ECICOG region. Although the MRT does not pass through Region 10, planned segments of the MRT are within driving or cycling distance from the region, and various local trails committees within ECICOG have identified connections to the MRT as adding value to the growing trails system in Region 10.

The MRT is primarily a bicycling route that begins at the headwaters of the Mississippi River at Lake Itasca, Minnesota, and runs south along the Mississippi to the delta at the Gulf of Mexico in Louisiana. The 3,000 mile long route is a combination of bicycle-friendly roads and fully separated multi-use paths.

The MRT connects to the ADT in the Quad Cities, facilitating some connectivity between Region 10 and the MRT. Additional connectivity between the MRT and Region 10 could be facilitated through cooperative planning efforts with communities to the northeast in Region 8, specifically through Dubuque, Jackson and Clinton Counties, and to the southeast in Region 9 through Scott and Muscatine Counties.

Figure 24: Mississippi River Trail

EXISTING TRAILS

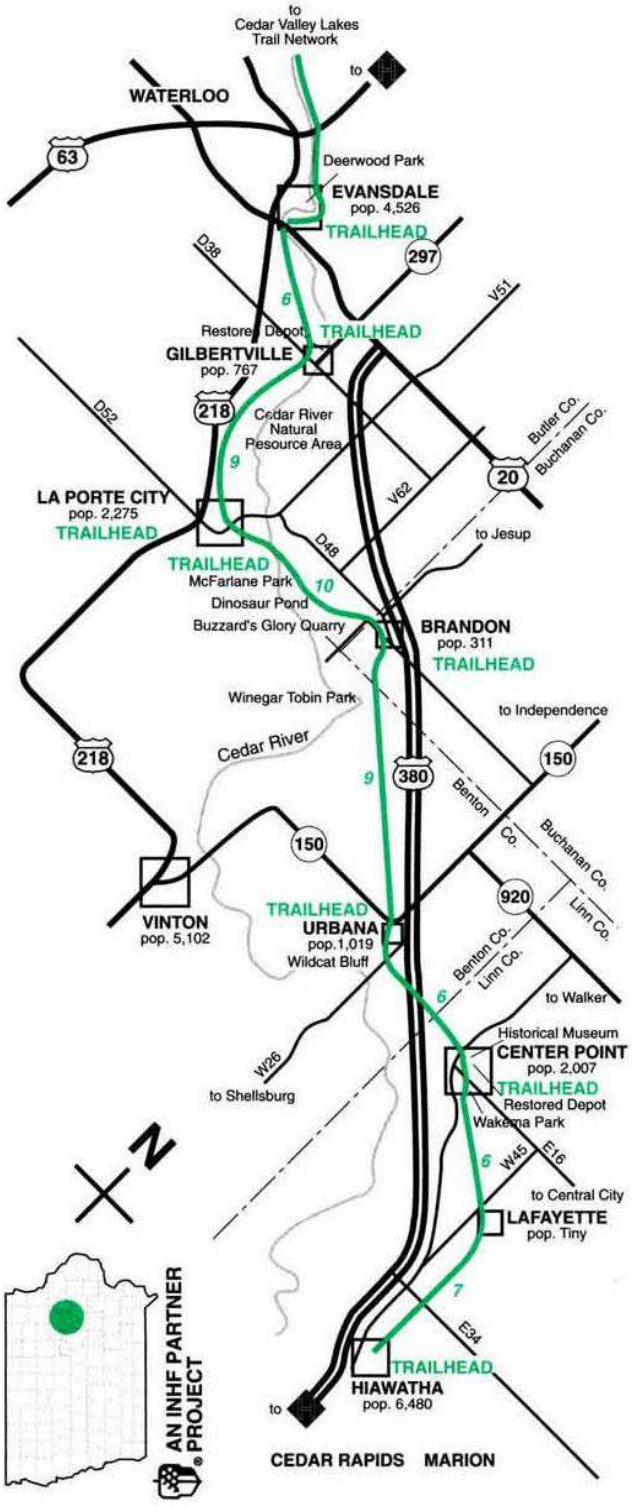
Numerous trails exist within Region 10, many of which primarily serve the communities in which they are located. The trails documented on the following pages are those that are likely to draw users from the region as a whole, and in some cases may have an even more diverse user base. While the following are all trails that do currently exist, many of them are also still in the planning stages, and will one day either be extended or resurfaced.

Three large scale regional trails are partially developed within the region. This includes the Cedar Valley Nature Trail (part of the American Discovery Trail), which is by far the most complete multi-county trail within the region. The Cedar Valley Nature Trail runs 52 miles from Waterloo to Cedar Rapids, and is a combination of hard surfaced trail nearer to the two metro areas and crushed limestone through Benton and Buchanan counties. Paving the entire length of the Cedar Valley Nature Trail is a high priority project for many of the involved conservation boards, and conservation directors, INRCOG, ECICOG, and elected officials have been meeting to coordinate grant applications to pave the remainder of the trail.

The Grant Wood Trail has segments in Linn and Jones Counties, and may eventually run further eastward toward the Mississippi across the abandoned rail bed of the Chicago, Milwaukee, Saint Paul and Pacific Railroad. Volunteers in Jones County saw the potential for a trail when much of the land for the railroad right of way went up for sale. Land for the Linn County segment was assembled by the Linn County Trails Association from 1998 to 2004, and much of the current trail was constructed during this time through volunteer labor and donations. In late 2004, the trail was deeded to the Linn County Conservation Board for further development and maintenance.

The other segment of the American Discovery Trail in Region 10 is the Hoover Nature Trail. The trail is

Figure 25: Cedar Valley Nature Trail



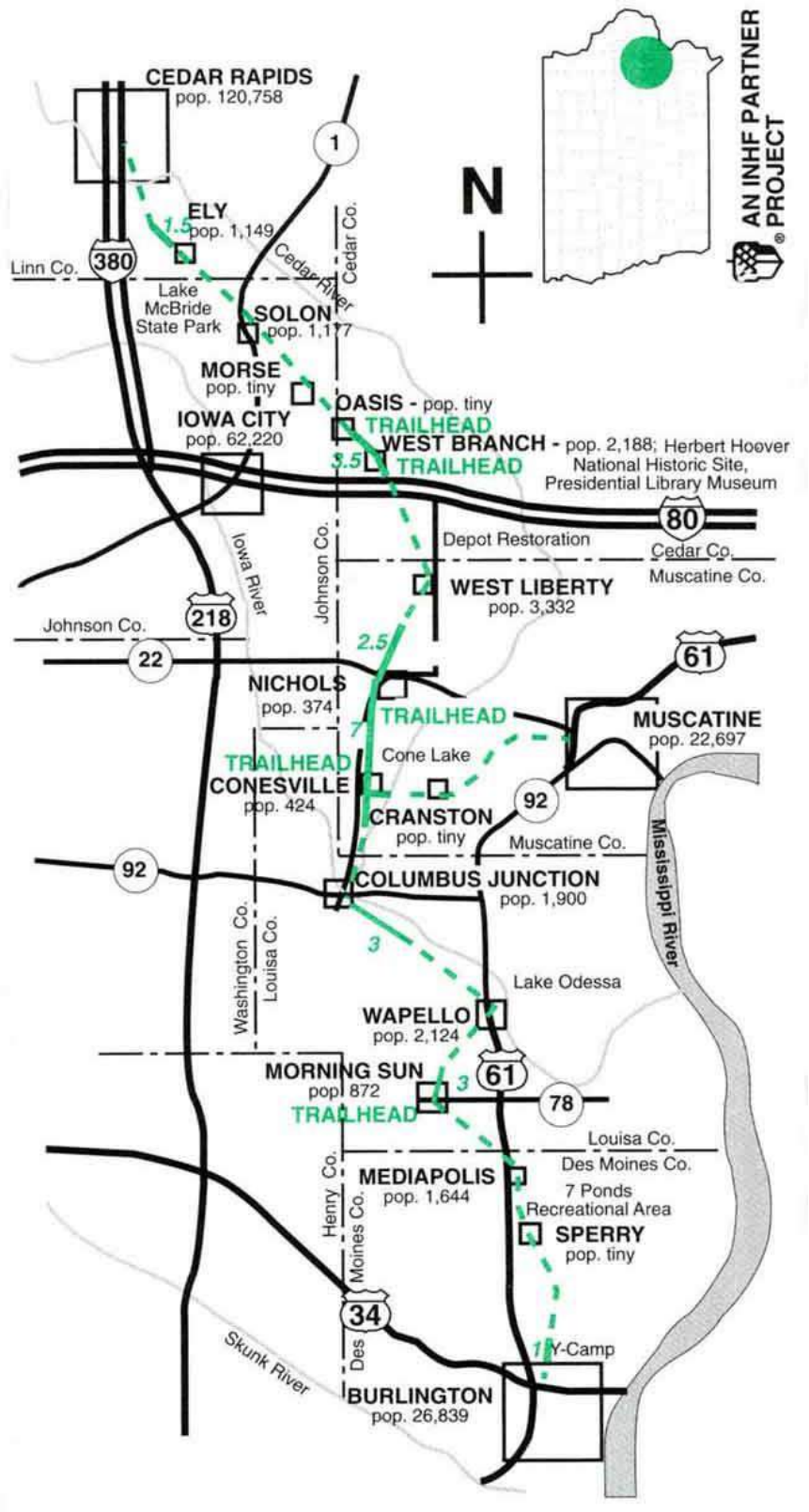


Figure 26: Hoover Nature Trail

intended to span from the south end of Cedar Rapids south and east toward the Mississippi at Burlington. Completed sections in the Cedar Rapids Metro area are paved, while other sections near West Branch in Cedar County are crushed limestone. The trail runs along the abandoned right of way for the Chicago, Rock Island and Pacific Railroad. In the 1980s, the non-profit Hoover Nature Trail Association began purchasing segments of the railroad right of way, and only a few land gaps remain between Cedar Rapids and West Branch

Figure 27: Existing Trail: Cedar Valley Nature Trail, Benton Co

Length: 10 miles in Benton County (52 miles total trail length)

Surface: Crushed limestone

The Cedar Valley Nature Trail in Benton County is owned and operated by the Linn County Conservation Board. Though the CVNT runs through a predominantly agricultural area, the old rail bed that contains the trail is surrounded by trees through most of the county. The trail passes through the city of Urbana, a community of 1,466 (2009 Census estimate) that includes facilities such as restaurants, bars and convenience stores.

Figure 28: Existing Trail: Old Creamery Nature Trail, Benton Co

Length: 14.5 miles

Surface: Crushed limestone, dirt/grass surface through Garrison.

The Old Creamery Nature Trail was made from a converted rail bed running from Vinton (2009 Census population estimate: 5.085) to Dysart (pop. 1,257) and passing through the small town of Garrison (pop. 403). Vinton is the county seat of Benton County, and includes various recreational activities, theatres, restaurants, grocery stores, race tracks, shopping and lodging. Dysart features a historical center, boutique shops, restaurants and a tea room.

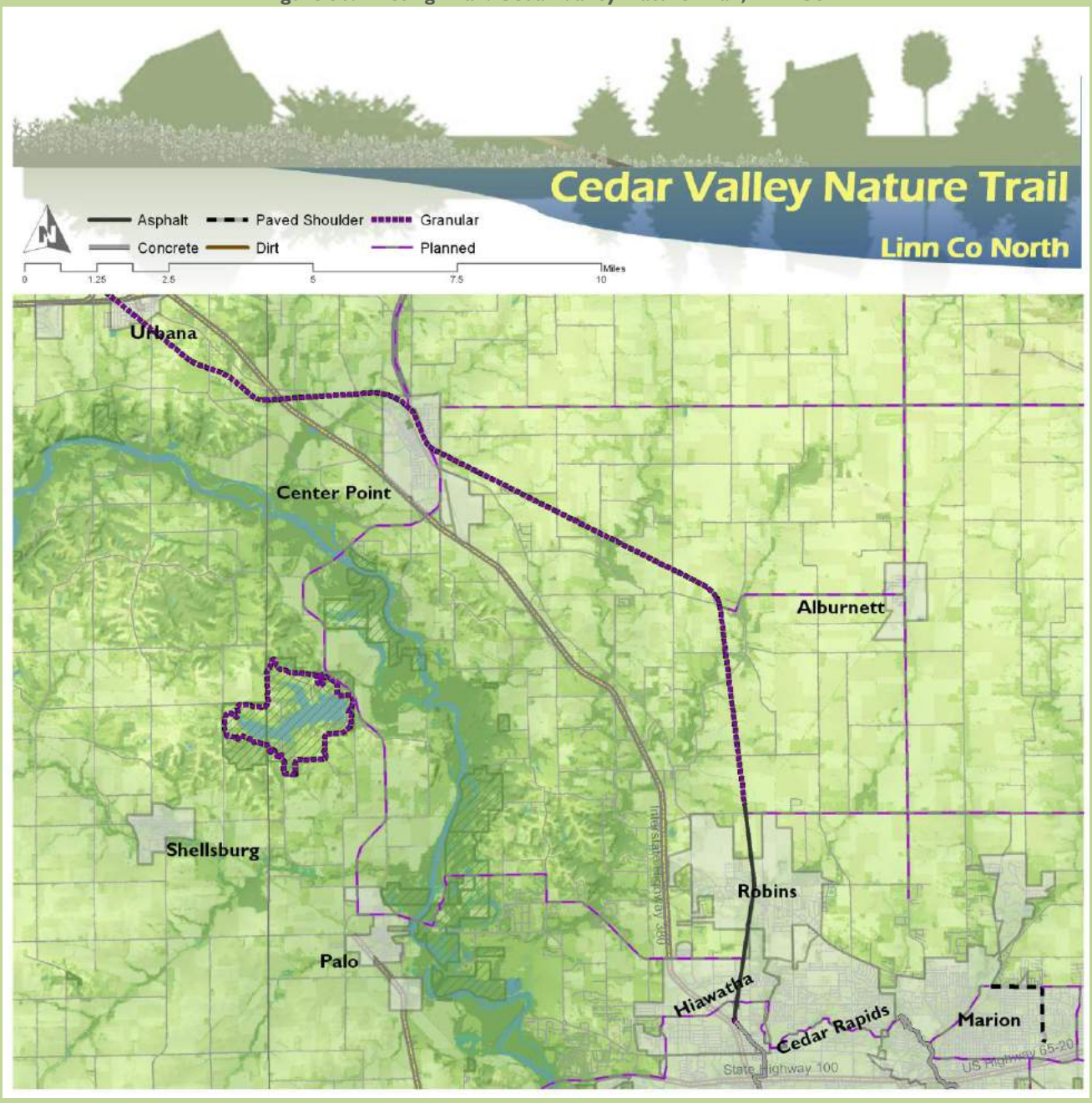
Figure 29: Existing Trail: Kewash Nature Trail, Washington Co

Length: 13.8 miles

Surface: Crushed limestone, asphalt in Washington

The Kewash Nature Trail passes through a variety of landscapes, including restored prairies between Keota (2009 Census population estimate 918) and West Chester (pop. 157), and woodlands between West Chester and Washington (7,204). Washington is the county seat of Washington County, and has a vibrant main street and central square featuring shops, restaurants and accommodations. West Chester has a convenience store, and Keota has numerous local businesses including recreational facilities, restaurants and groceries.

Figure 30: Existing Trail: Cedar Valley Nature Trail, Linn Co



Length: 16.1 miles (Linn Co line to Center Point Road)

Surface: Primarily paved, 5.8 miles crushed limestone at northern end

The Cedar Valley Nature Trail through northern Linn County connects several communities, including Center Point, Robbins, Hiawatha and Cedar Rapids. Restaurants, grocery stores, camp grounds and other amenities are readily available in the surrounding communities. The Center Point portion of the trail is also home to a restored historic train depot, reminding trail users of the origins of the CVNT.

Figure 31: Existing Trail: Grant Wood Trail, Jones Co

Length: 3.5 miles

Surface: Crushed limestone

The Grant Wood Trail in Olin is a completed section of a multi-county planned trail that would connect Cedar Rapids and the Mississippi River. This section of the trail originates in Olin (2009 Census estimated population of 701), which is home to several businesses including a general store, convenience store and a bakery. The trail extends west of town into the rolling countryside along a converted rail bed running along Catfish Creek. The western trailhead is a crushed limestone car park located off of the north side of E45.

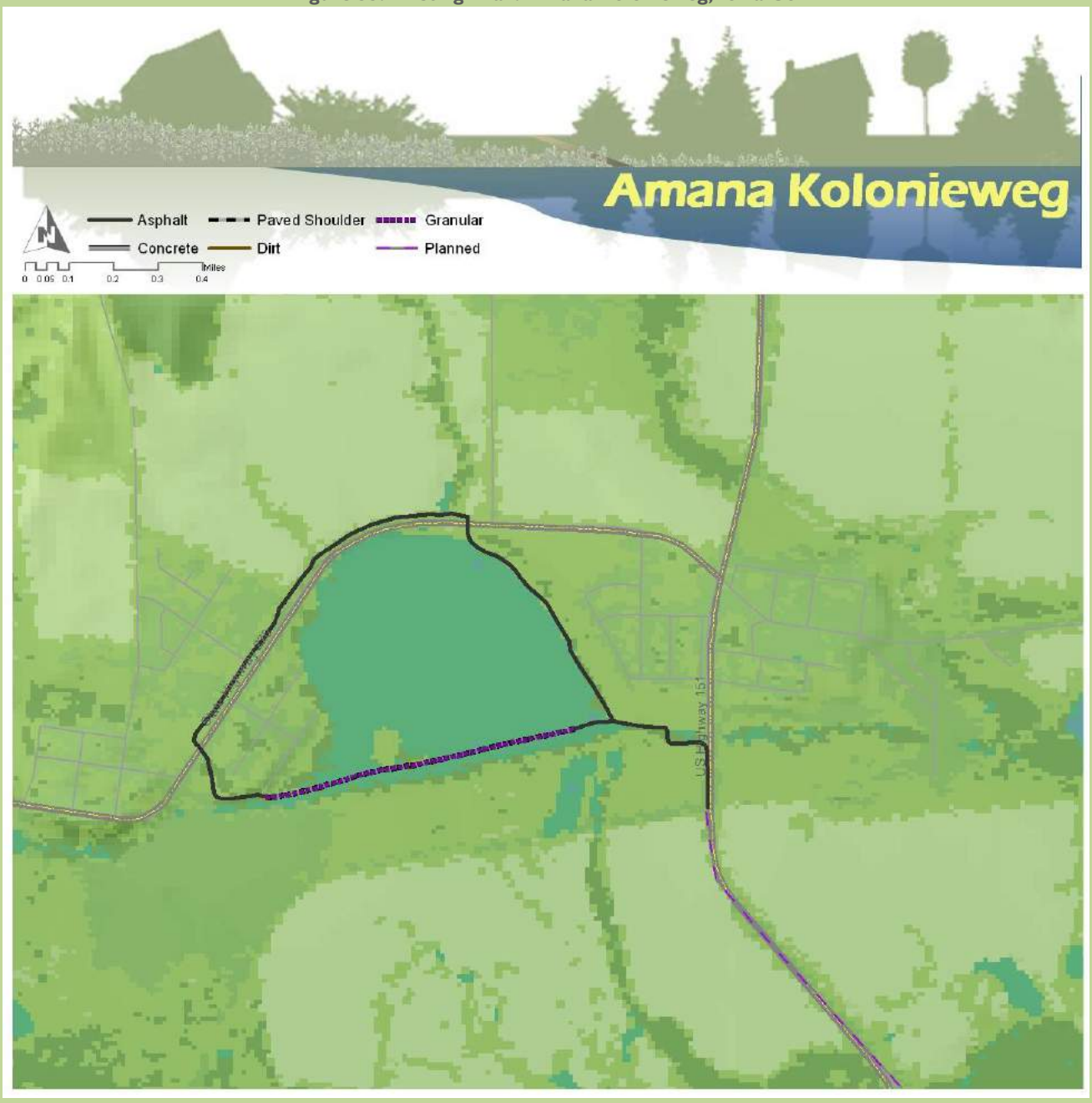
Figure 32: Existing Trail: Sac and Fox Trail, Linn Co

Length: 7.2 Miles

Surface: Crushed limestone

The Sac and Fox Trail is a loop extending off of the eastern edge of the Cedar Greenbelt National Recreation Trail, located between Cedar Rapids and Betram. Approximately half of the trail runs through a forested valley created by Indian Creek, while the remainder of the trail follows the Cedar River. The trail runs nearby the Indian Creek Nature Center, which encompasses 210 acres of woodlands, prairies, wetland and riparian forests crossed by four miles of trails.

Figure 33: Existing Trail: Amana Kolonieweg, Iowa Co

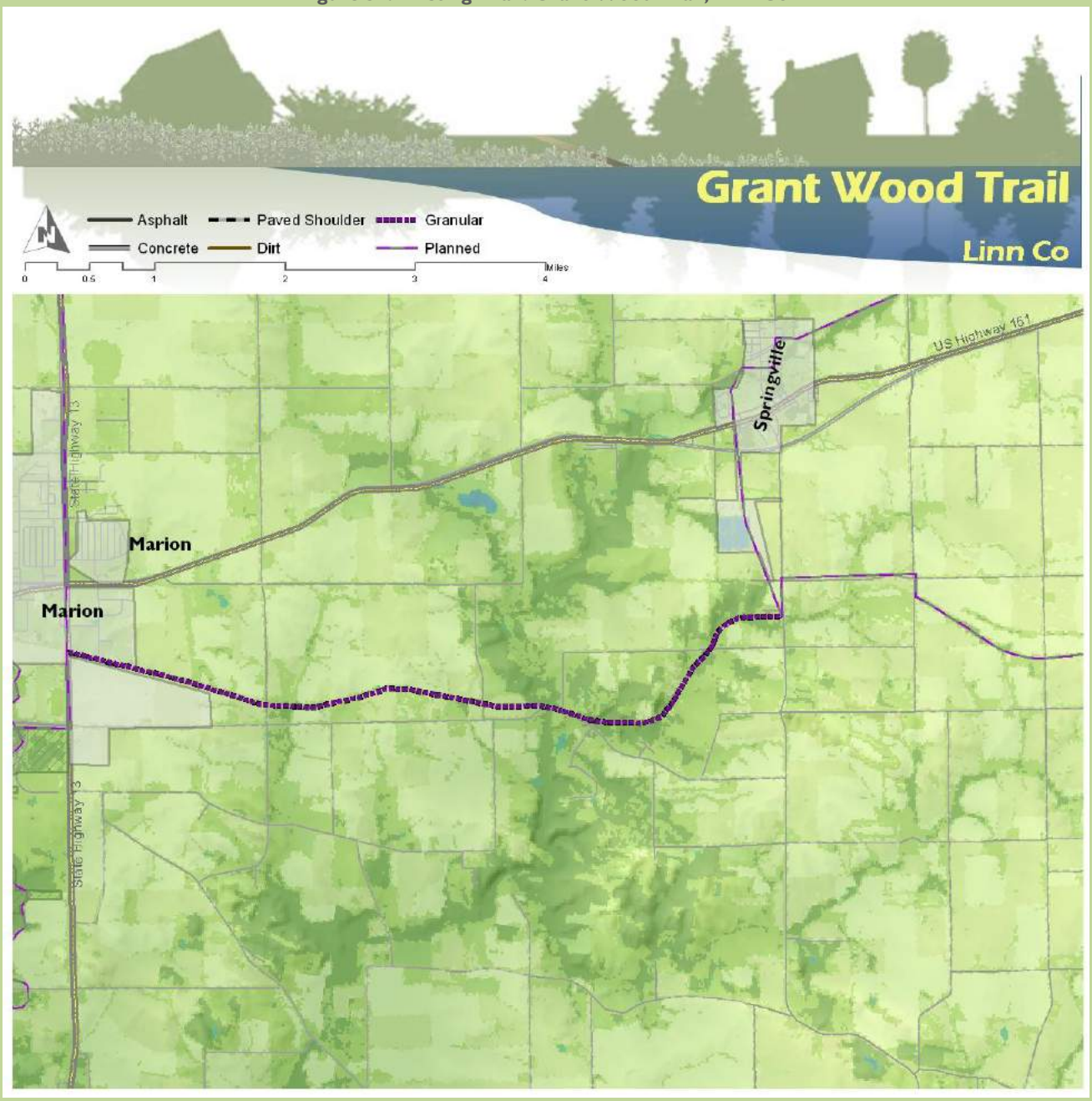


Length: 3.2 miles

Surface: Primarily asphalt with crushed limestone along the south side of Lily Lake

The Kolonieweg connects Amana and Middle Amana with a loop around the scenic Lily Lake. Future plans include extending the Kolonieweg into other Amana communities. The Amana Colonies are one of the larger tourist attractions in the area, providing visitors with German-style restaurants, shops, a brewery and events in a historic setting. Amana includes numerous sidewalks and marked bike lanes, and approximately 20 miles of bike routes are marked on local roads.

Figure 34: Existing Trail: Grant Wood Trail, Linn Co



Length: Non-contiguous 10 mile stretch

Surface: Crushed limestone

The Linn County portion of the Grant Wood Trail was gifted to the Linn County Conservation Board by the Linn County Trails association in 2004. The trail runs along a former rail bed from Marion to Martelle, where the trail will eventually connect to the Jones County segment. Currently, the trail is a 3.25 mile completed section running east from Hwy 13, and short term plans include an underpass under Hwy 13 to connect the trail to existing trails in Marion and Squaw Creek Park.

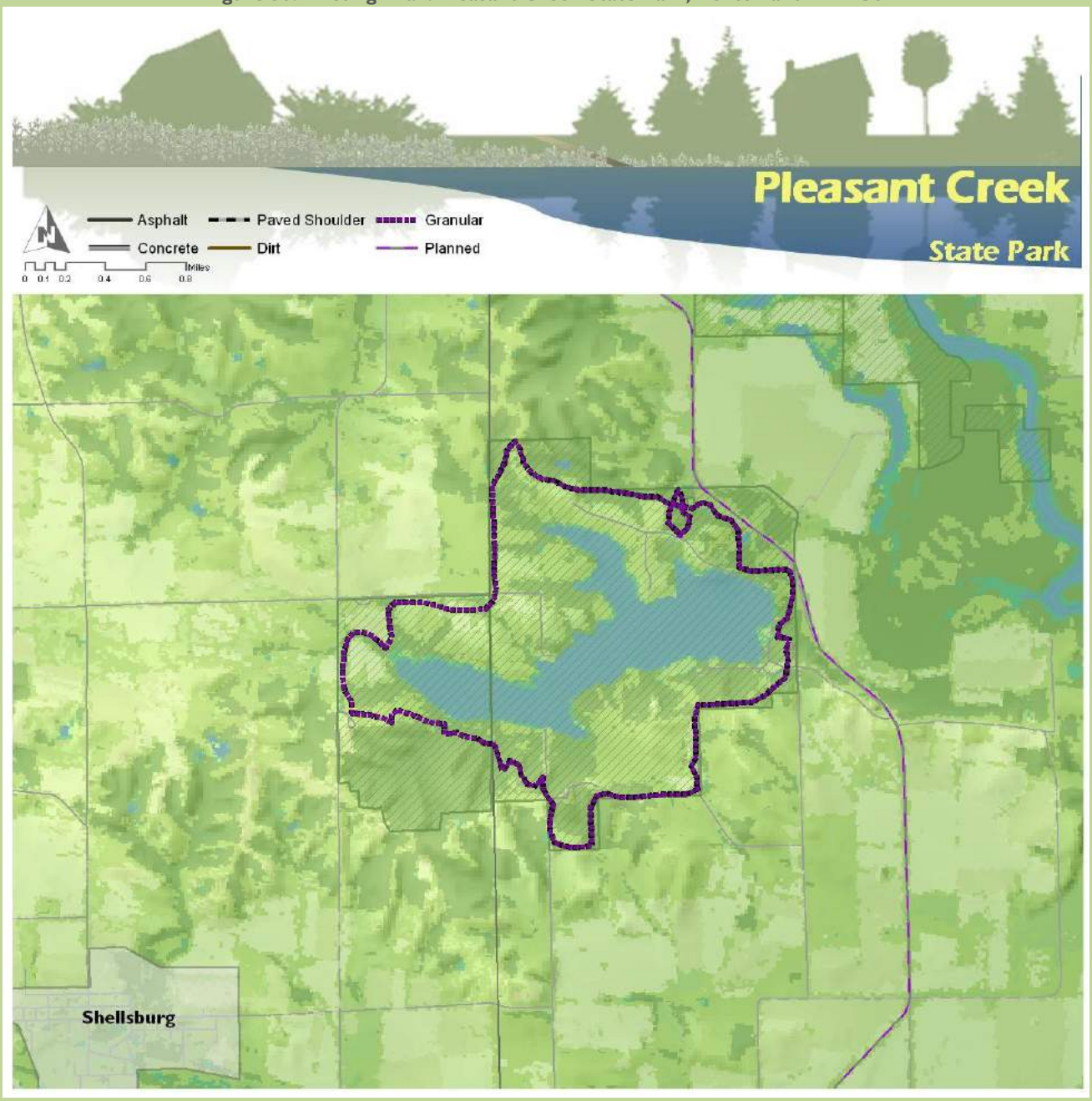
Figure 35: Existing Trail: Lake Darling, Washington Co

Length: 13 miles

Surface: Crushed limestone

Lake Darling is a 1,417 acre park operated by the DNR located in southwestern Washington County. The lake itself is 302 acres with 18 miles of shoreline. Several trails around the lake take hikers through woodlands and reestablished prairie, both with abundant animal life. The park features picnic facilities, camping, cabin rental, swimming, boating and fishing. The town of Brighton (est. 2009 pop. 675) is 3 miles away

Figure 36: Existing Trail: Pleasant Creek State Park, Benton and Linn Co

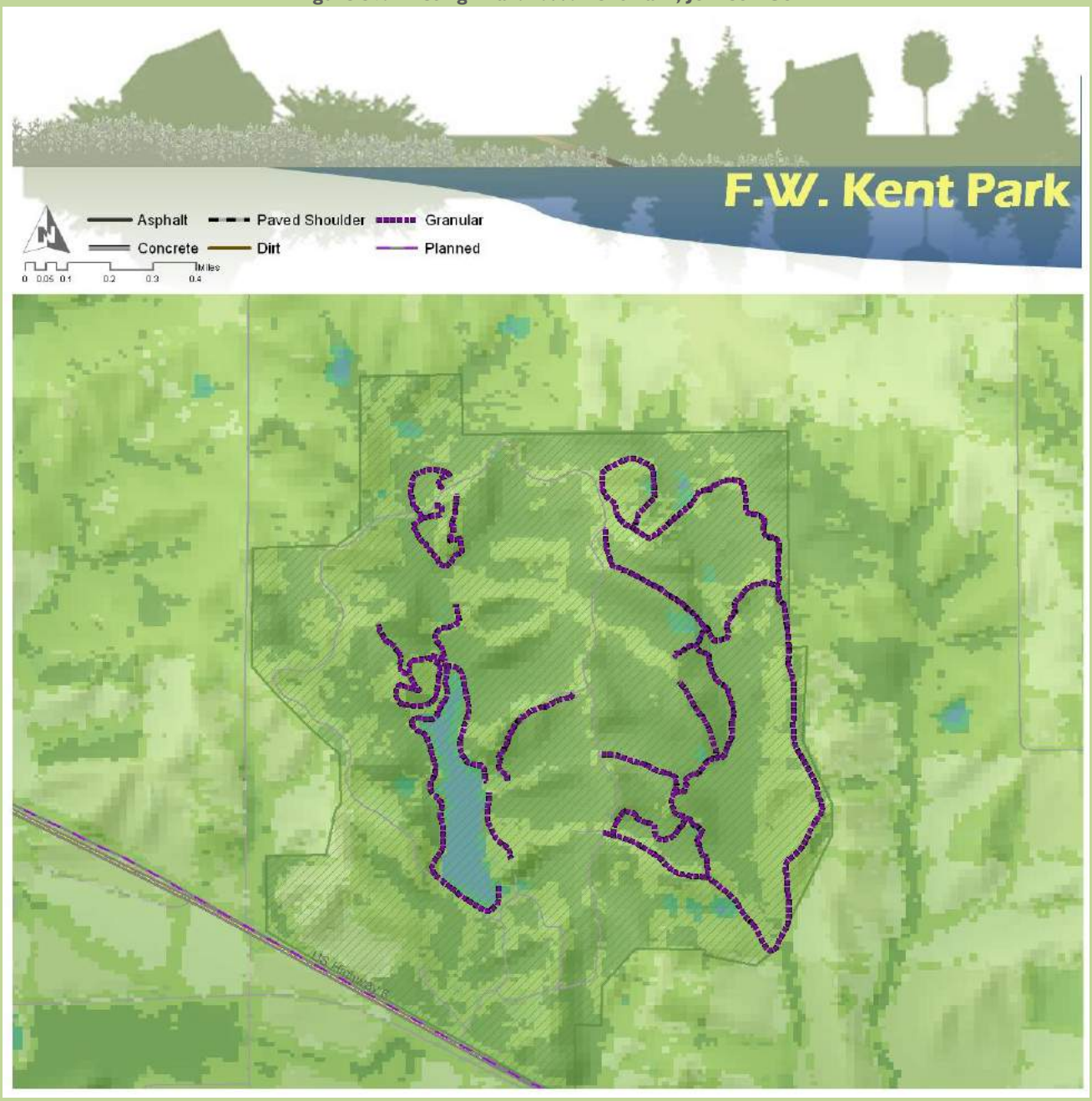


Length: 10 miles

Surface: Crushed limestone

Pleasant Creek State Recreation Area is a DNR managed park located between Shellsburg and Palo. The park is approximately 1,500 acres of mixed woodland and grasslands, and contains a 410 acre lake. Amenities include camp sites and cabins, swimming, fishing, boating and hunting.

Figure 37: Existing Trail: F.W. Kent Park, Johnson Co



Length: 9.5 miles

Surface: Loop around lake us crushed limestone, other areas are grass.

F.W. Kent Park is a 1,082 acre park located 3 miles west of Tiffin, operated by the Johnson County Conservation Board. Park amenities include camp sites, swimming, shelters, a youth camp, a playground, a boat ramp and a Conservation Education Center. The nearest town, Tiffin, offers restaurants, gas stations and convenience stores, and the park is not far from the communities of Coralville, Iowa City and North Liberty that offer a wide range of services, activities, accommodations and amenities.

OTHER USE MODES

During the planning process, the majority of input received was that trails planning efforts should be targeted at people-powered forms of transportation (non-motorized and without emphasis on equestrian provisions). At the suggestion of the Iowa Department of Transportation, use modes outside of those prioritized were identified as an area that could be revisited for further consideration during updates of this document. The specific use modes suggested were equestrian and snowmobile. While snowmobile clubs are very popular throughout Region 10 and often do make use of the regional trails system during winter months, equestrian are predominantly practiced at private ranch facilities, and little overlap has been identified between equestrianism and trails planning at the county or regional level. Although equestrian and snowmobile uses could be incorporated into accommodations for future trails (identified in the Planned Trails section of this document), compatibility concerns do exist between these two use modes and those prioritized during the planning process, and thus the decision to provide equestrian or snowmobile accommodation would need to be made on a case by case basis after careful consideration of specificities of the site and likely trail users.

According to the Iowa DNR's Equestrian Trail Mileage Chart, the only DNR operated equestrian facilities within Region 10 are located at Pleasant Creek State Park (located in Benton and Linn Counties). Approximately 10-14 miles of equestrian trails are available. Horse rentals are not available at this facility. Another public facility is the Sac and Fox Trail in Cedar Rapids (Linn County), and horse riding is permitted on the main trails but not on the Cedar Valley Greenbelt Trails (due to terrain). Horse rentals are not available at this facility. The Matsell Bridge Natural Area in Linn County is the primary equestrian facility operated by a CCSB in the region, with over 10 miles of trails and hitching posts at camp sites. Approximately 25 facilities are located in the region. As these are private facilities, they are not identified in this document, but the bulk of these facilities are located between (and just outside of) the Cedar Rapids and Iowa City metro areas.

Several snowmobile trails exist within Region 10, as detailed on the map to the left. While allowing snowmobiles on paved trails during winter is a maintenance concern, non-paved trails that are not used by cross country skiers may be an option for further development as snowmobile trails. Snowmobile organizations are also playing an important role in the development of rail trails in the region, as few rail trail corridors have warranty deeds (most are quit claim) and thus snowmobile organizations have been used to test the likelihood of neighboring farmers to claim revisionary rights over the land without risking the loss of the large construction cost typically associated with non-motorized trail development. Snowmobile organizations have also shown a willingness to contribute toward brush clearing and other trail maintenance activities.

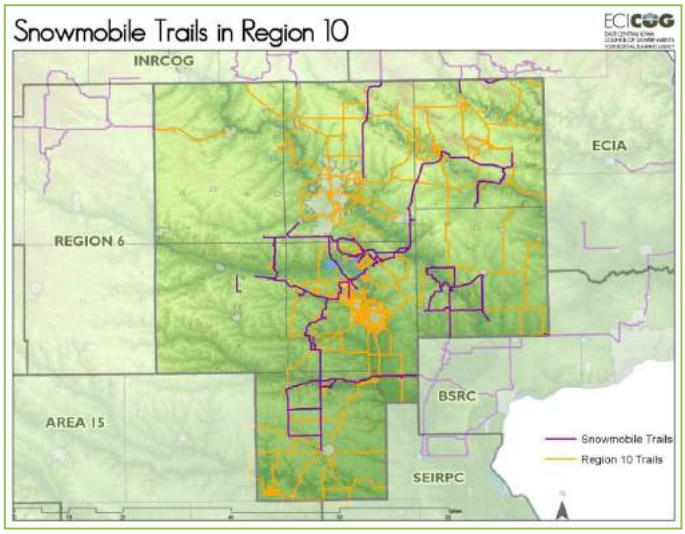


Figure 38: Snowmobile Trails in Region 10

BICYCLE LEVEL OF SERVICE

A Bicycle Level of Service analysis, also referred to as a BLOS, is a quality of service indicator that relates a roadway's conditions to its suitability for bicycle traffic. The BLOS model was developed by a transportation consulting agency and is based on research included n Transportation Research Record 1578 of the Transportation Research Board of the National Academy of Sciences. The development team evaluated over 150,000 miles of urban, suburban and rural roads across North America during the model research and development process. To date, many urban planning agencies and state highway departments are using the BLOS model to evaluate suitability of roadway networks to bike traffic.

The BLOS analysis utilized GIS data provided by the Iowa Department of Transportation (IDOT). It should be noted that the most recent year of available data varied from county to county within the ECICOG region, and thus the BLOS may be more current in some areas than in others. The BLOS was applied only to those roads for which the IDOT had mapped data, and excludes the metropolitan areas of Cedar Rapids (Corridor MPO) and Iowa City (JCCOG). The data provided by the IDOT included centerlines with attribute data, Annual Average Daily Traffic counts (AADT), roadway and shoulder condition, road width, shoulder width and speed limit. Because roadway condition is taken into account, the BLOS ratings provided in this map are not fixed, and a BLOS rating could become more favorable if a road is improved or less favorable if a road is not maintained. AADTs are also generally released for county roads every four years on a rotating schedule through the region, so the BLOS model should be updated every few years.

The Bicycle Level of Service is a linear regression model developed by transportation researchers to provide a discomfort and inconvenience score for bicyclists by taking into account four conditions most likely to impact cyclists:

1.) Peak traffic flow in the outside lane
2.) Speed of traffic and percent heavy traffic
3.) Pavement surface condition
4.) Pavement width available for cycling (both lane width and shoulder are considered)

The rating scale produced by a BLOS analysis provides a higher score for roadways that are not suitable for cyclists and a lower score to roadways that are better suited to cycling. Thus, the first three criteria above are evaluated as criteria that may raise a score, and thus are considered to be negative factors or present challenges to the cyclist. The last factor is presented as a subtraction from the sum of the first three factors, and is thus reflective of perceived opportunities for bicycle travel.

The BLOS equation used in this analysis is presented below. While the general formula remains the same for most locations, a few variables may be changed slightly to reflect a more rural environment, such as the areas of the ECICOG region outside of the metropolitan areas.

BLOS = 0.507 x ln (Vol15/LN)
+ 0.199 x SPt (1+10.38HV)^2
+ 7.066 x (1/PR5)^2 - .0005 x (We)^2
+ 0.76

In the above equation, the following variables are defined as:

Vol15 Directional Traffic volume during peak 15 minute time period

=(AADT x D x Kd) / (4 x PHF)

Where: AADT = Annual Average Daily Traffic count (IDOT data)
D = Directional Factor (set at 0.5 for a rural setting)
Kd = Peak to Daily Factor (set at 0.83 for a rural setting)
PHF = Peak Hour Factor (set at 1.0)

LN Number of directional through lanes (IDOT data)

SPt Effective Speed Limit (IDOT data)

= 1.1199 x ln (SPp-20) + 0.8103

Where: SPp = posted speed limit

HV Percentage of heavy vehicles (IDOT data)

PR5 Pavement condition based on FHWA's 5-point scale

For this analysis, the IDOT's 10 point scale was converted to the FHWA's 5 point scale

We Average effective width of outside through lane

= Width of outside lane (and shoulder) – 10ft

Based on the above equation, roads with a high traffic volume, high speed limits, high volume of heavy trucks and deteriorated pavement receive higher scores. A wide travel lane can compensate to some degree for the above negative factors, and thus roads with wider travel lanes have points subtracted from the first three factors to arrive at the final BLOS score. Scores are then divided into categories that translate to letter grades that are more readily interpreted by cyclists and the general public. The BLOS categories are also follows:

BLOS Letter Grade	BLOS Numeric Score	Description
A	<= 1.5	Excellent bicycle environment
B	>1.5 – 2.5	Good bicycle environment
C	>2.5 – 3.5	Fair bicycle environment Acceptable to experienced and novice bicyclists
D	>3.5 – 4.5	Poor bicycle environment Acceptable to experienced cyclists only
E	>4.5 – 5.5	Deficient cycling environment Unacceptable to any cyclist
F	>5.5	Not safe for cycling

BLOS Summary Table for the Non-Metro ECICOG Region

Table 9: ECICOG Regional BLOS

BLOS Grade	Miles	% Measured Miles	Segments
A	4600.21	56.61%	10630
B	2069.94	25.47%	5988
C	435.08	5.35%	2089
D	91.94	1.13%	440
E	78.9	0.97%	370
F	850.77	10.47%	2839

BLOS Summary Table for Benton County:

Table 10: Benton County BLOS

BLOS Grade	Miles	% Measured Miles	Segments
A	931.11	64.31%	1744
B	160.32	11.07%	453
C	163.07	11.26%	688
D	19.31	1.33%	83
E	13.18	0.91%	43
F	160.86	11.11%	368

BLOS Summary Table for Cedar County:

Table 11: Cedar County BLOS

BLOS Grade	Miles	% Measured Miles	Segments
A	687.11	61.96%	1506
B	284.75	25.68%	796
C	16.77	1.51%	132
D	4.11	0.37%	15
E	3.00	0.27%	13
F	113.15	10.20%	341

BLOS Summary Table for Iowa County:

Table 12: Iowa County BLOS

BLOS Grade	Miles	% Measured Miles	Segments
A	654.03	60.54%	1468
B	246.91	22.85%	676
C	18.77	1.74%	128
D	20.68	1.91%	85
E	20.36	1.88%	95
F	119.65	11.07%	368

BLOS Summary Table for Non-Metro Johnson County:

Table 13: Johnson County BLOS (non-metro)

BLOS Grade	Miles	% Measured Miles	Segments
A	411.19	39.46%	949
B	398.04	38.20%	926
C	105.16	10.09%	357
D	19.87	1.91%	74
E	11.31	1.09%	41
F	96.55	9.26%	375

BLOS Summary Table for Jones County:

Table 14: Jones County BLOS

BLOS Grade	Miles	% Measured Miles	Segments
A	585.19	57.29%	1375
B	273.80	26.81%	844
C	24.18	2.37%	180
D	5.03	0.49%	44
E	12.31	1.20%	46
F	120.92	11.84%	427

BLOS Summary Table for Non-Metro Linn County:

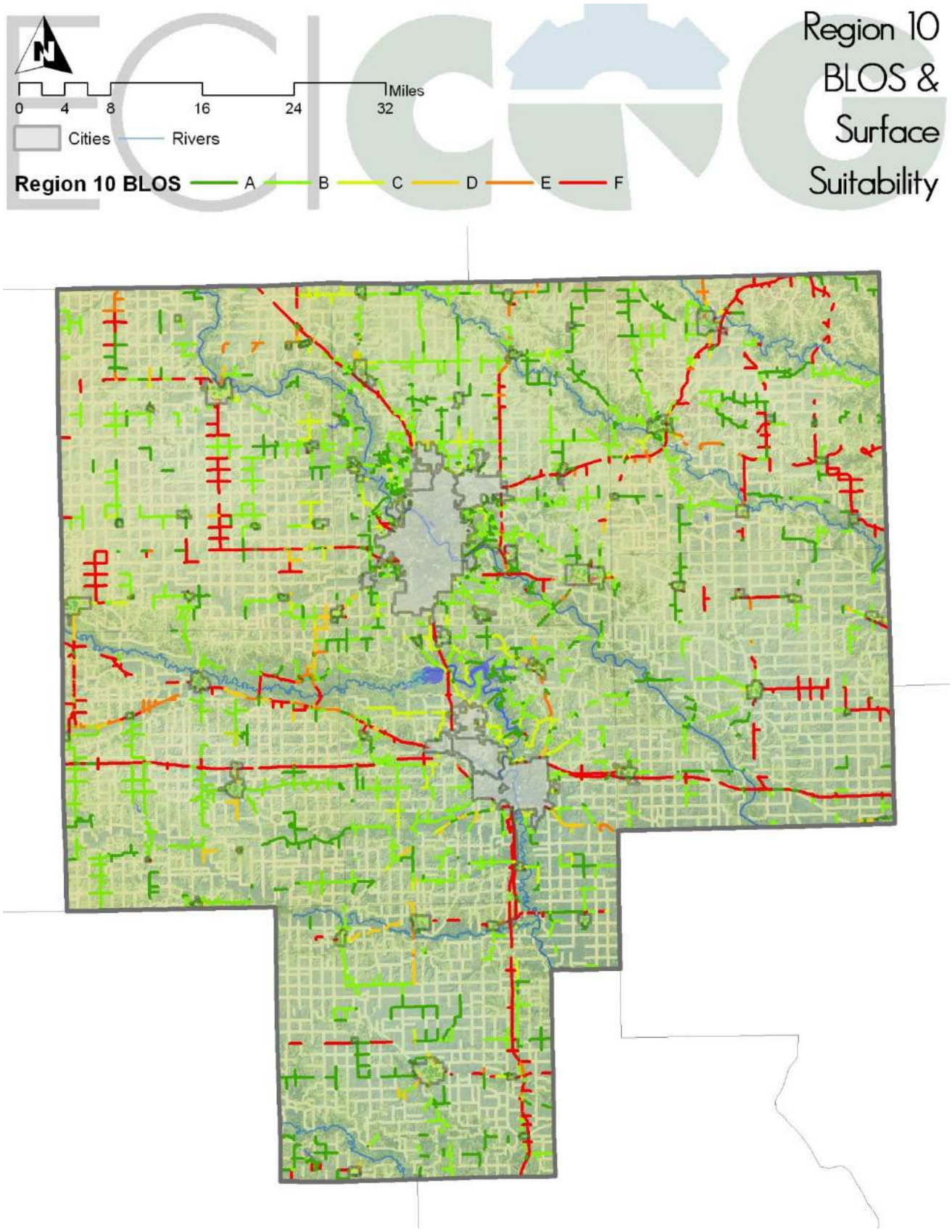
Table 15: Linn County BLOS (non-metro)

BLOS Grade	Miles	% Measured Miles	Segments
A	679.32	51.26%	2056
B	463.43	34.97%	1519
C	75.43	5.69%	403
D	10.38	0.78%	81
E	14.22	1.07%	92
F	82.45	6.22%	466

BLOS Summary Table for Washington County

Table 16: Washington County BLOS

BLOS Grade	Miles	% Measured Miles	Segments
A	652.26	59.25%	1532
B	242.69	22.04%	774
C	31.70	2.88%	201
D	12.56	1.14%	58
E	4.52	0.41%	40
F	157.19	14.28%	494


Region 10
BLOS &
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A
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Figure 39: Benton Co BLOS

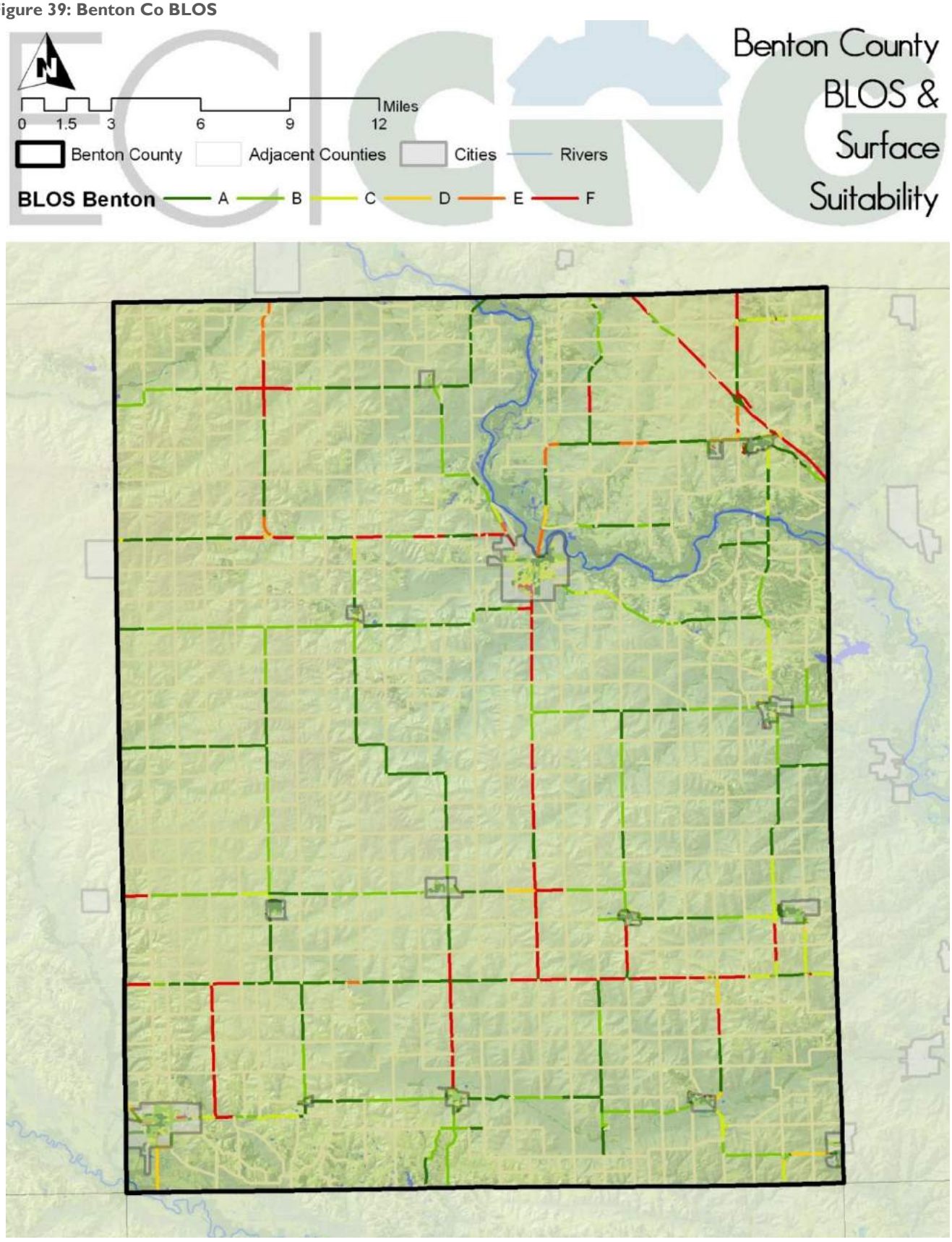


Figure 40: Cedar Co BLOS

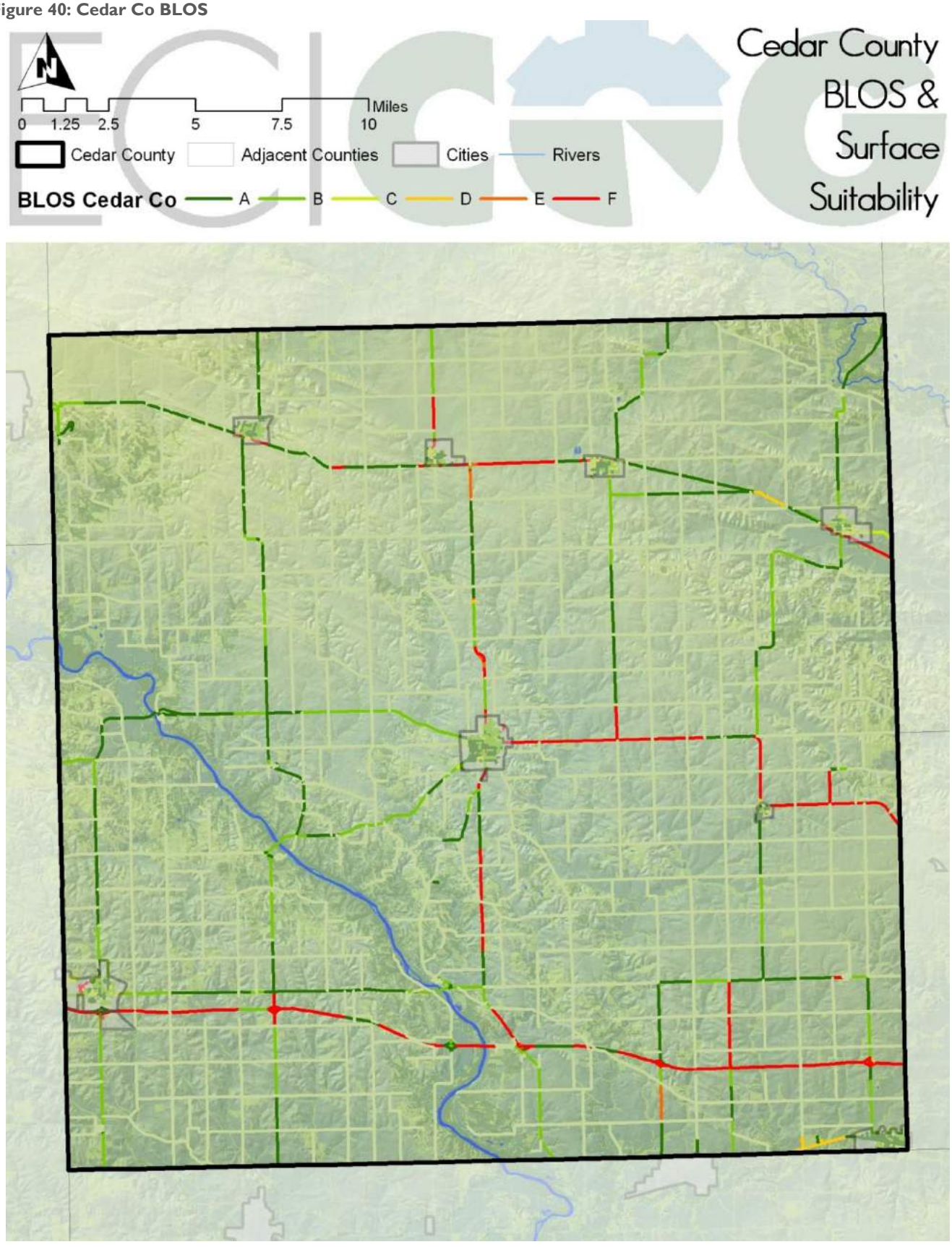


Figure 41: Iowa Co BLOS

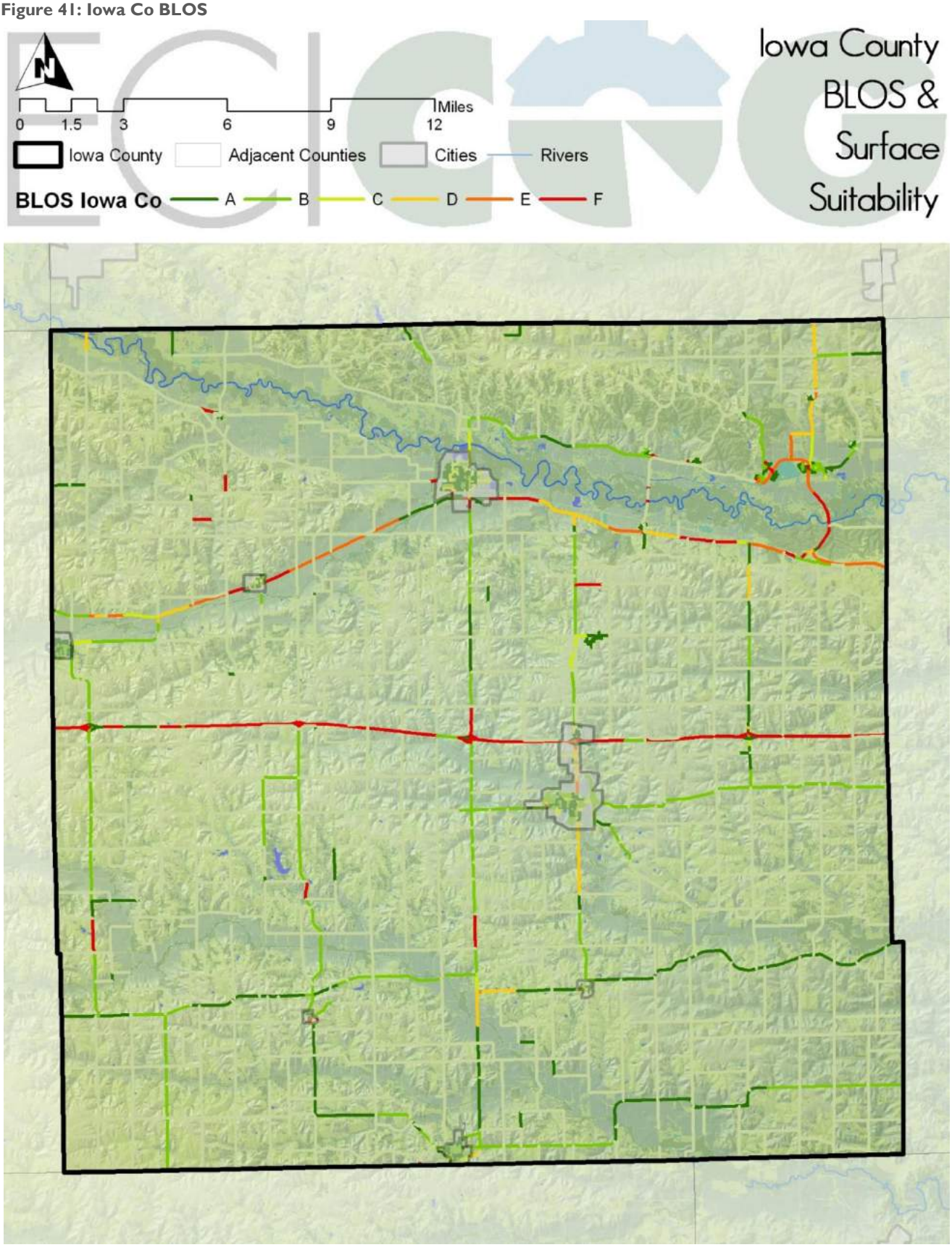


Figure 42: Johnson Co BLOS

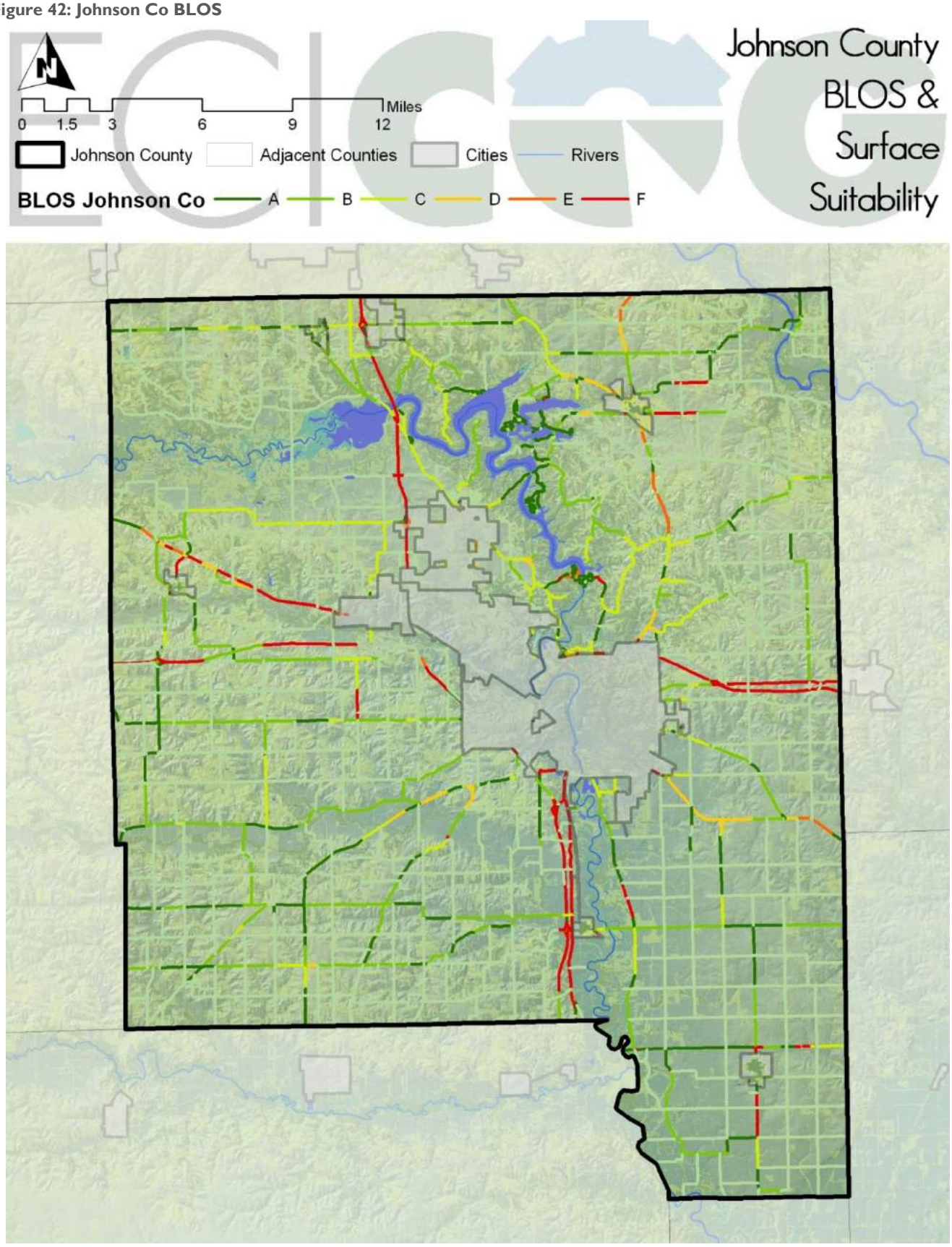


Figure 43: Jones Co BLOS

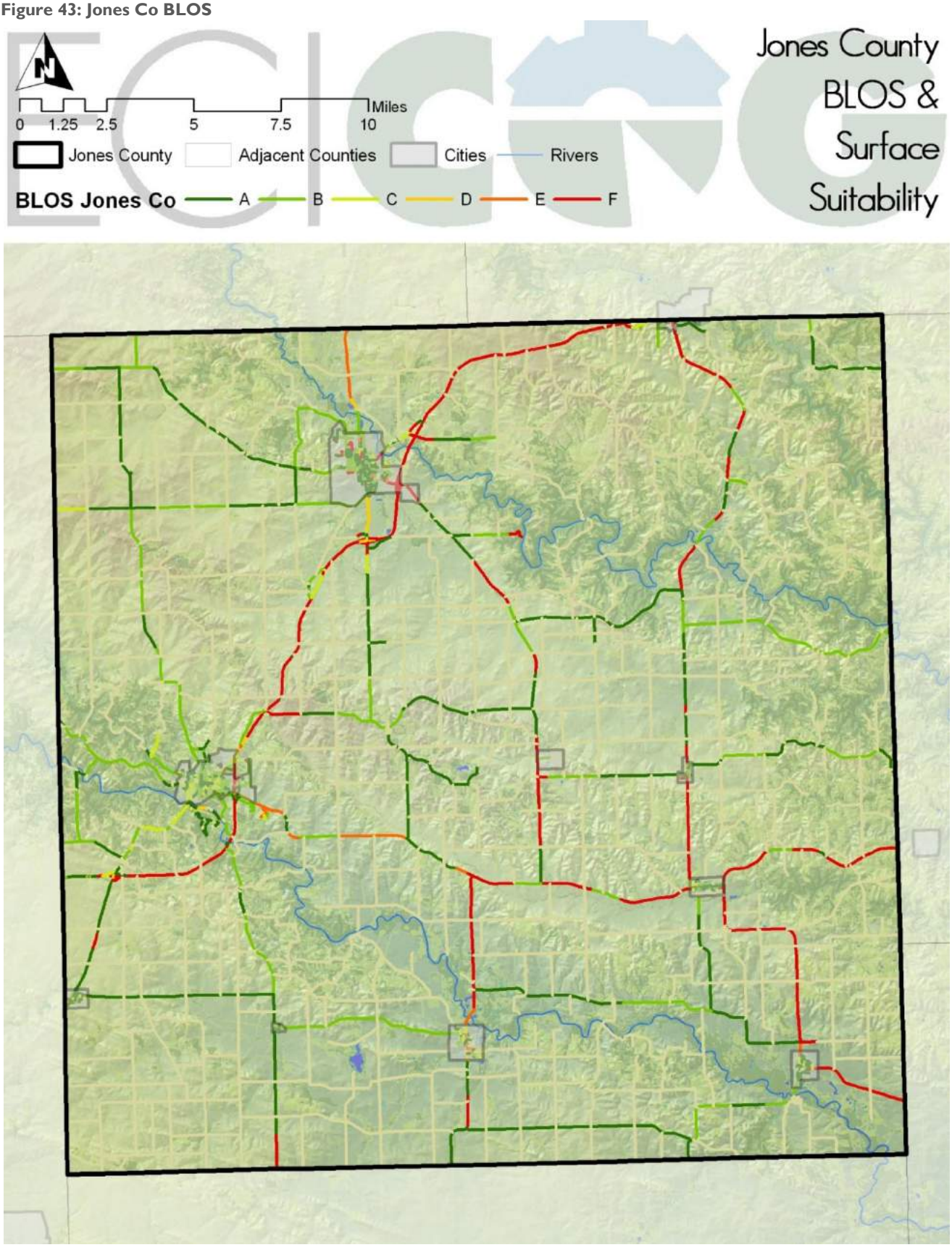
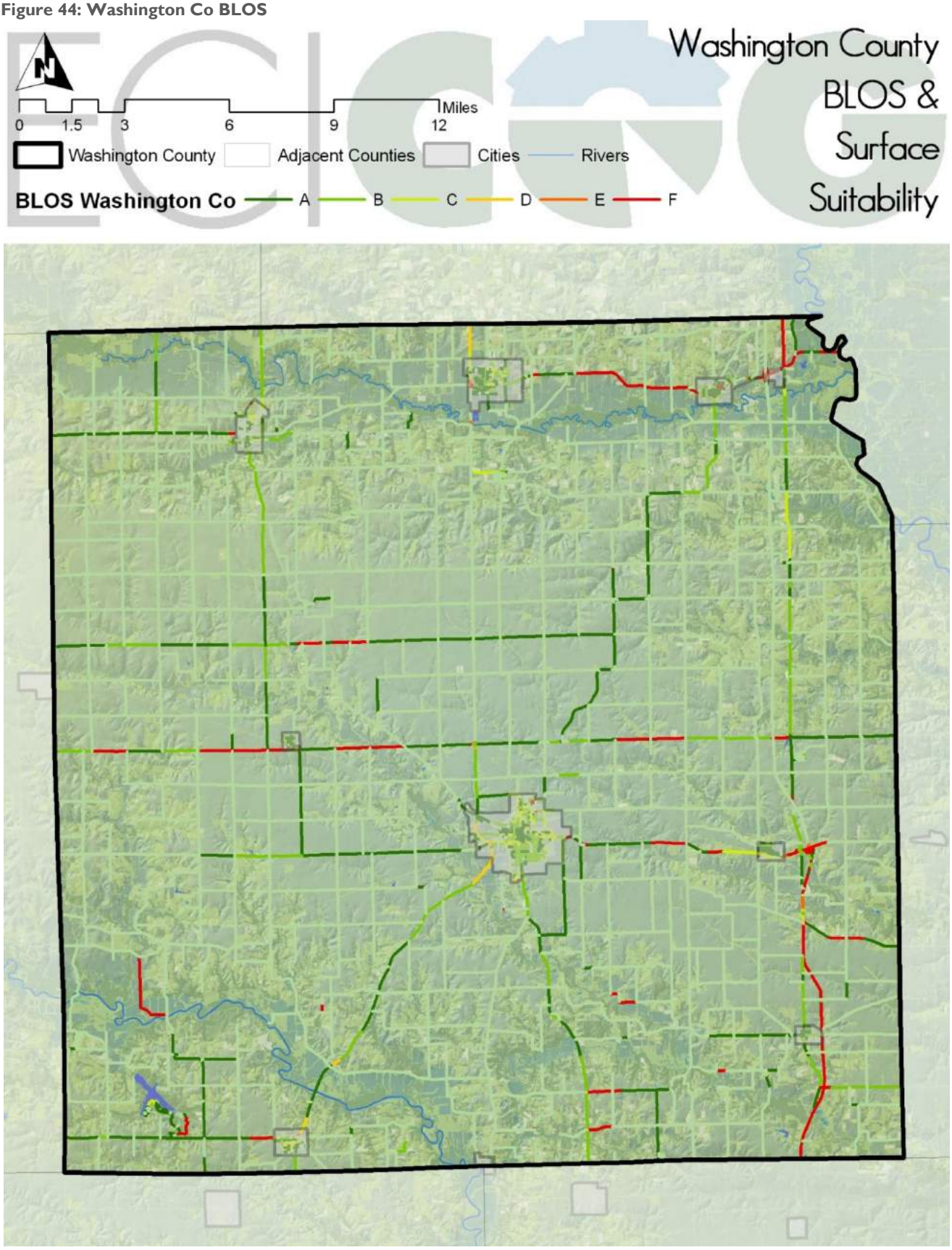


Figure 44: Washington Co BLOS



The BLOS is a tool to assist communities in determining vision corridors for trail development, particularly where trails will be constructed as a paved shoulder or within the right of way of an existing road. It is not intended to inform bicyclists of current road conditions, and a consultation of Annual Average Daily Traffic (AADT) data may be more appropriate for cyclists to use when selecting a route. Aside from the two urban counties in Region 10, most counties do not have a large number of roads suitable for paved shoulder trails based on the BLOS and surface suitability analysis, as shown on the preceding maps. With that factor in mind, the roads identified in the BLOS map could serve as vision corridors for future trail development.

The BLOS analysis used by ECICOG in this plan is similar to that used by CTRE at Iowa State University for the BLOS analysis included in the Mississippi River Trail plan. Although all roads in Region 10 exclusive of the metro areas of Iowa City and Cedar Rapids were analyzed, non-hard surfaced roads were removed from the preceding maps. While the MRT project determined that the lowest acceptable BLOS grade is C, part of the intent of this document is to identify potential future trails, and thus a BLOS grade of C does not preclude a road from becoming a paved shoulder trail facility within Region 10. This is because the BLOS map is a measure of current conditions, and while a higher BLOS rating does indicate conditions are more favorable for trail development, a low score can almost always be improved (with the exception of certain interstates and highways) given a much larger project scope. Development of paved shoulder trails (or other multi-modal accommodations) may be encouraged along stretches of roadway where the BLOS grade is a C or better for safety and fiscal reasons, however when these routes are interspersed with quarter or half mile sections of roadway with D, E or F scores, this does not indicate that the route being examined is not viable.

BLOS analysis is likely to be of greater use to communities in the earlier stages of trails planning. Paved shoulders (and shared roadways, which are not a preferred accommodation type for unincorporated areas), are the most common facility constructed when routes are identified in a BLOS analysis, and such routes are often a good starting point in areas where the history of trails construction and maintenance is limited. The construction process is somewhat streamlined because trail construction can be incorporated into a county engineer's capital improvements program / road plan, and thus the engineering and project administration costs are typically substantially lower than what would be seen with a fully separated trail constructed outside of any road improvement project. This can be very beneficial to communities with less experience in trails construction as project management and construction expertise provided by a county engineer's office is not always present in citizen run trails groups but is critical to an efficient process and will also reduce costs. A fully separated trail constructed within the right of way during a road construction or improvement program would also have many of the same benefits, however these typically come at a higher cost.

Figure 45: Recently Paved Shoulder and Resurfacing Project, Hwy 1 near Solon

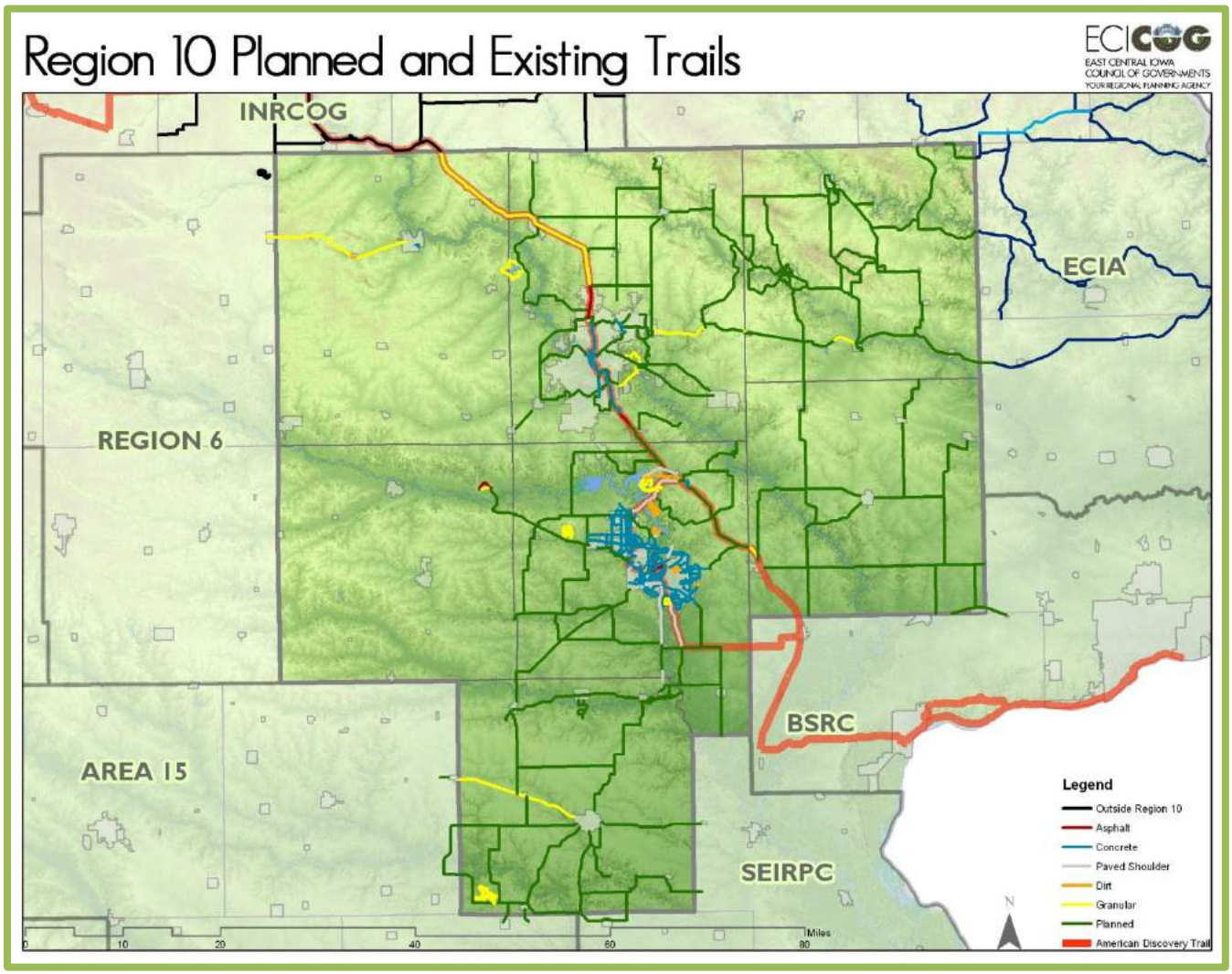
Paved shoulders may also be a good starting point for communities because maintenance costs are substantially lower than for a separated facility. Drawbacks to paved shoulders are typically related to the lower level of safety provided by a paved shoulder as opposed to a fully separated trail. With the added safety concerns comes a reduction in the potential user group of the trail. Although paved shoulders are occasionally used for walking or jogging, the primary user is the cyclist. Additionally, inexperienced adult cyclists (some level B cyclists) and children (level C cyclists)

are not the target audience for paved shoulder, and thus the paved shoulders will only be used by experienced cyclists (level A) and some casual adult cyclists (level B). In most cases, if the route in question is desirable (possibly for its scenic qualities or connecting important destinations), most experienced, level A cyclists will use that route with or without paved shoulders. Thus, the only new users to a paved shoulder trail are likely to be the more confident of the level B cyclists, so the expansion in user group of when providing a paved shoulder is significantly less than that of a fully separate facility. It is important, however, not to use the smaller increase in users as a reason to not provide any cycling facility, as the provision of a paved shoulder also increases safety and enhances the usability of the road for drivers as well by providing room to pass cyclists without crossing into the oncoming lane.

Paved Shoulder for Cycling Before and After

PLANNED TRAILS

The following is a list of trails to be constructed within the region. As many of the communities in Region 10 have a history of trails planning, some of these trails have been documented in other plans. Generalized cost estimates accompany the description of the proposed facility, though it is important to note that these are not detailed engineering estimates, and in some cases actual costs may vary substantially.



NEW OR IMPROVED FACILITIES

The following is a county-by-county summary of either planned (new construction) regionally significant trails, or significant updates (typically resurfacing) to existing regionally significant trails.

Figure 46: Benton County Trails Mileage

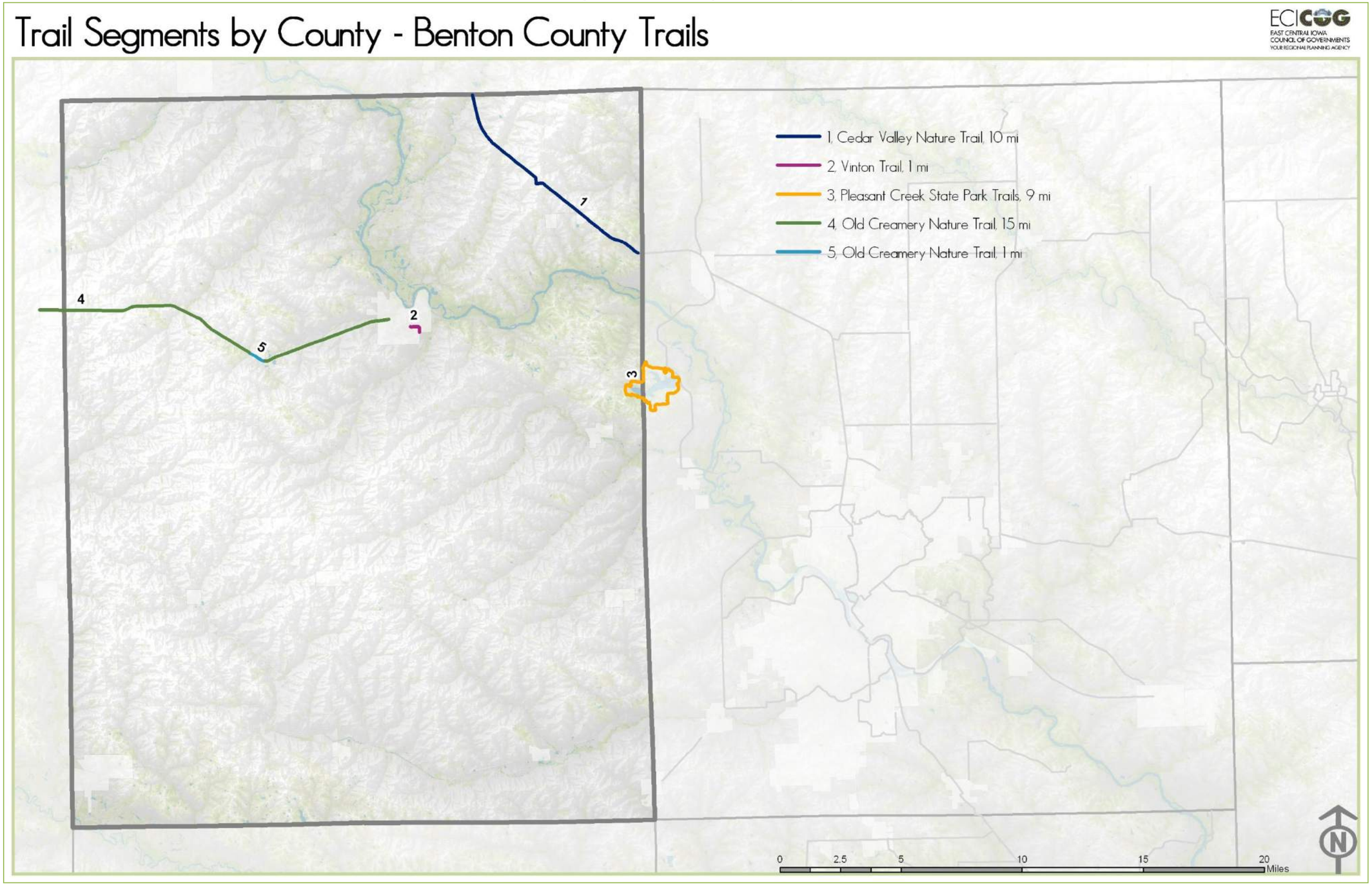
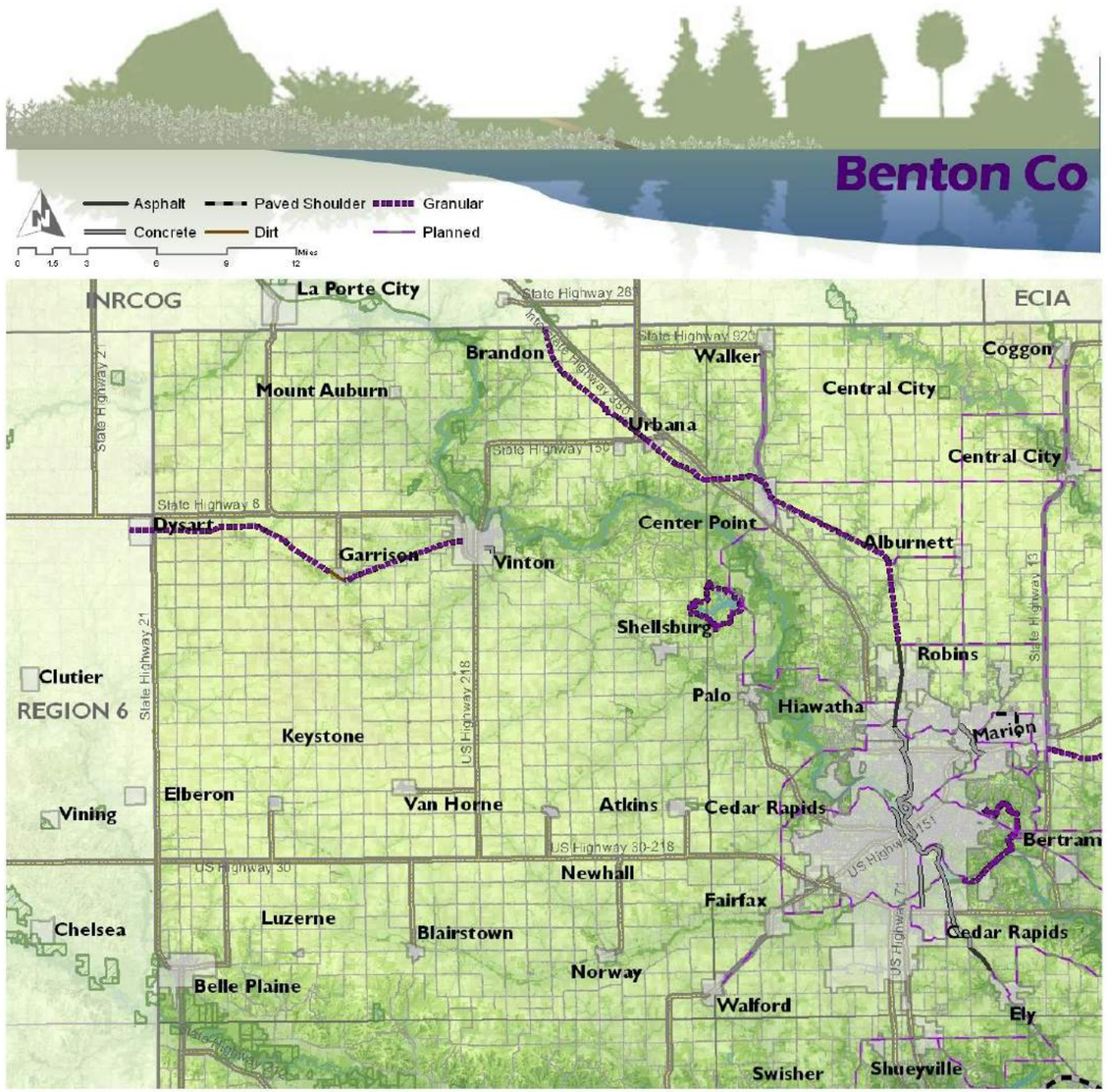


Figure 47: Benton County Trails by Construction Status



Benton County

With one of the smaller populations in the region, financing the local match requirements of trails construction grants is quite challenging for Benton County. As such, efforts in the unincorporated areas will continue to focus on maintaining and upgrading existing facilities and those that have already been planned for, rather than to identify any additional routes in the County at this time. Should financial circumstances change or other funding streams be identified, it would be appropriate to reexamine creating a larger network of trails in the area, and a reasonable starting point would be to connect other communities in Benton County to the Cedar Valley Nature Trail or to Urbana, where a connection to the CVNT could be made.

Cedar Valley Nature Trail

One of the most important projects in this area over the next several years will be paving the Cedar Valley Nature Trail, which is currently crushed limestone in Benton County. Although located in Benton County, the Cedar Valley Nature Trail is owned by Linn County, so financing and maintenance agreements will need to be examined by both counties before they could apply for grants. Cost estimates for this type of work typically range from $200,000 to $250,000 per mile, and although the surface is already graded to allow for the current crushed limestone trail, there is some concern that, because of the dense vegetation in the area, additional construction easements may be needed, and in some cases paving equipment may simply not fit on the trail, which greatly increases construction costs. Multiple areas also need additional drainage work, so the project is likely to trend toward $250,000 per mile. The stretch of the CVNT in Benton County is approximately 10 miles long, so the estimated cost of this paving project is approximately $2,500,000.

Ioway Trails

A segment of the Ioway Trail passes through Benton County, and could be given additional consideration. The alignment is part of Phase Three and Phase Four, and, running west to east, would connect Marshalltown, Montour, Tama, Otter Creek, Belle Plaine and Marengo, thus only passing through a small portion of Benton County. However, this linkage would be beneficial from a regional standpoint as it runs to Marshalltown, and would provide another linkage to the American Discovery Trail. Within the region, the distance from Marengo to Belle Plaine on this route is approximately 14 miles and Belle Plaine to the Benton County line is approximately 2 miles.

Map ID	Name	Miles	Estimated Cost
1	Cedar Valley Nature Trail	10 mi	$2,500,000

Figure 48: Cedar County Trail Mileage

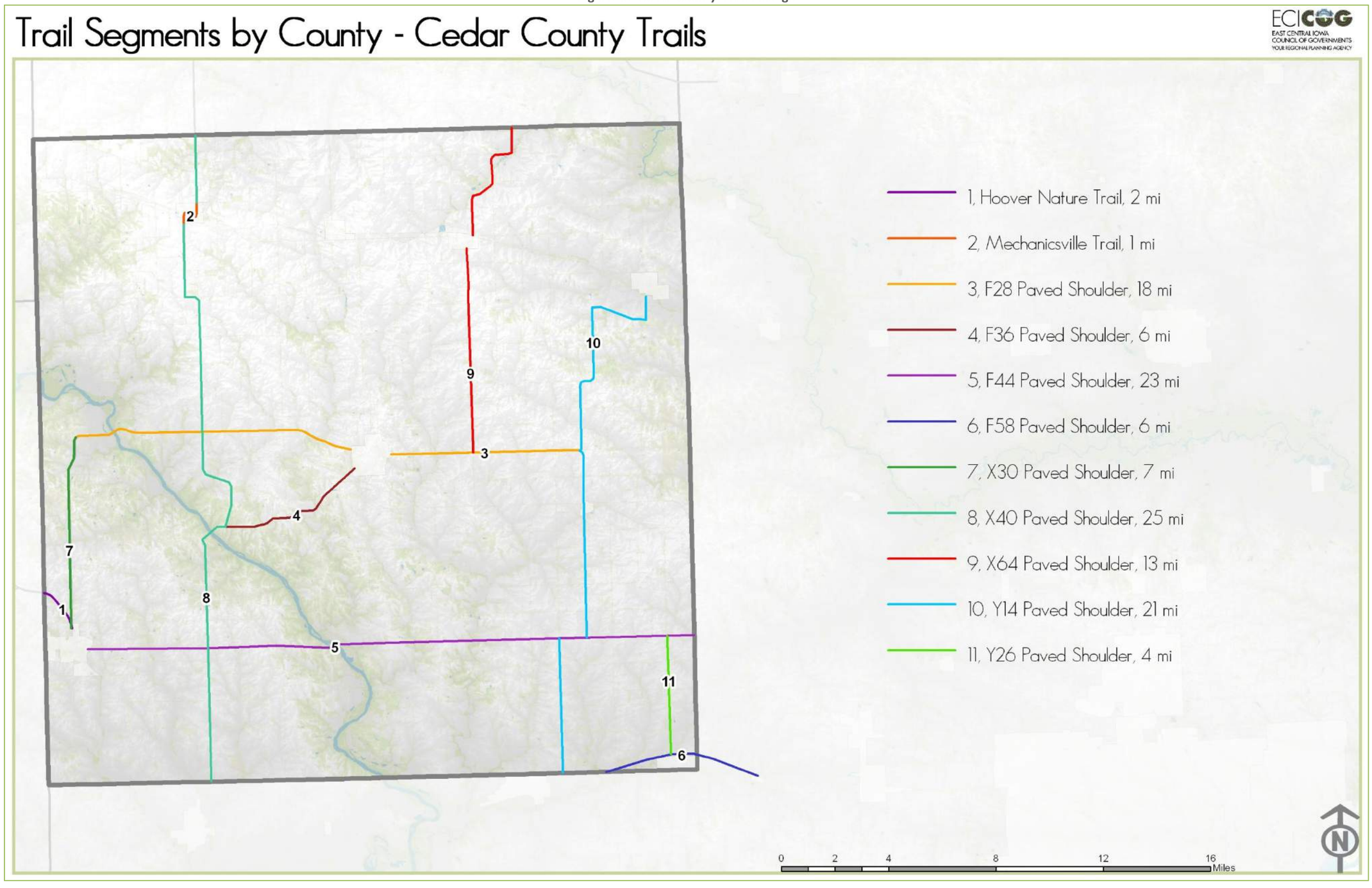
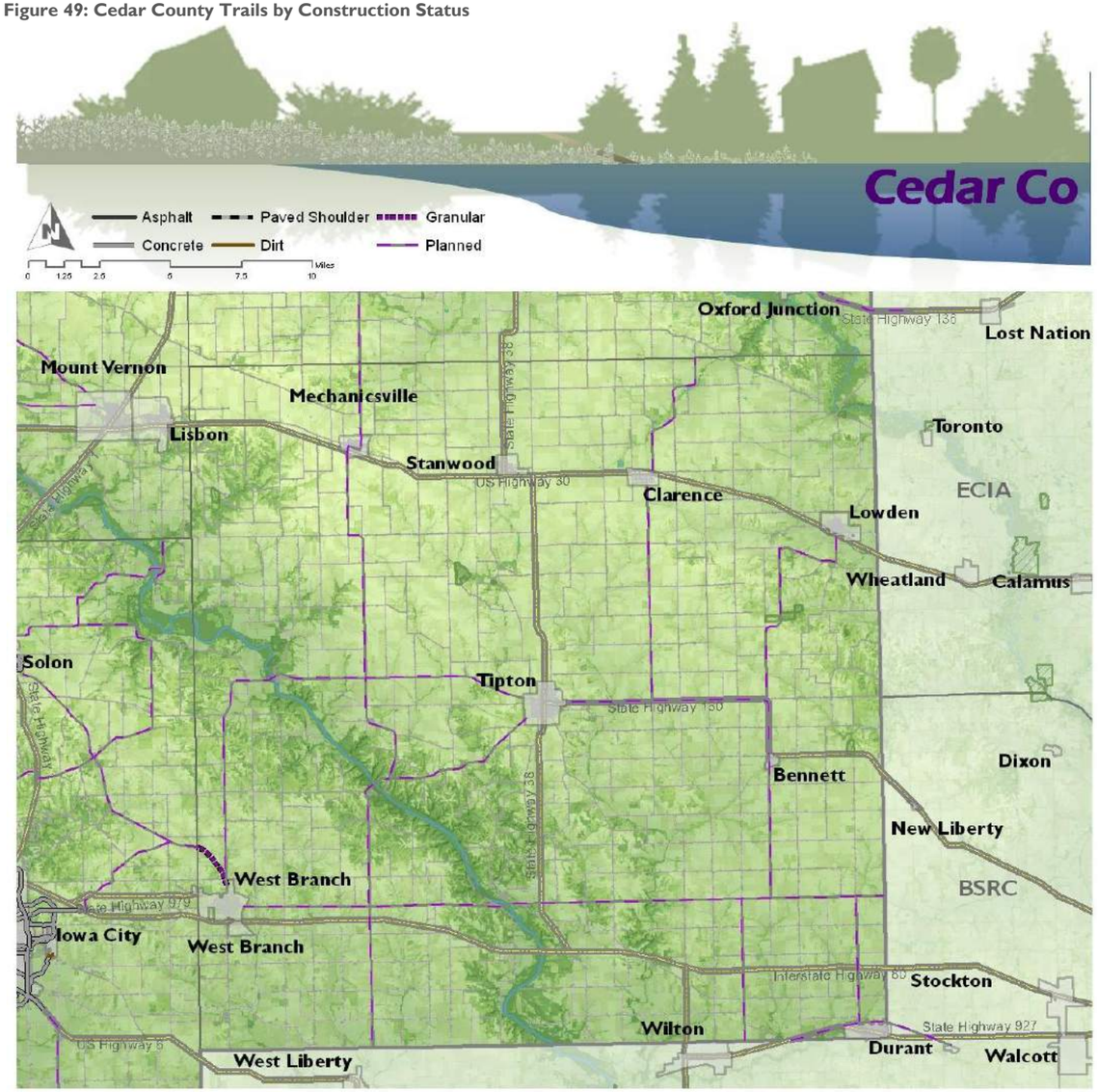


Figure 49: Cedar County Trails by Construction Status



Cedar County

Cedar County has seen an increase in cyclists on county roads in recent years, and paved shoulders are an option to increase safety and perhaps increase more cyclists, (who are generally thought to come from the Iowa City metro area) to come spend a day in Cedar County. Cedar County is also home of the Herbert Hoover Birthplace National Historic Monument in West Branch, which has several paved trails and is located near part of the Hoover Nature Trail.

Paved Shoulders

With the help of the Cedar County Engineer, several potential locations for paved shoulders were identified in Cedar County. These could be tied into the 5 year road plan, and added as roads are resurfaced. A 2001 study by CTRE noted that the estimated reduction in maintenance costs over a 20 year period from the addition of a paved shoulder is approximately $7,000, and the additional cost of adding a paved shoulder ranges from $9,000 to $37,000 per roadway mile depending on width and required amount of regrading.

Hoover Nature Trail

Part of the Hoover Nature Trail is already completed in Cedar County (near West Branch), however it is the intent of this trail to continue running southward and eventually eastward toward Burlington. The accommodation would likely be a fully separated granular trail.

Number	Name	Miles	Estimated Cost
2	Mechanicsville Trail	1 mi	$270,828
3	F28 Paved Shoulder	18 mi	$3,336,126
4	F36 Paved Shoulder	6 mi	$1,074,230
5	F44 Paved Shoulder	23 mi	$4,298,056
6	F58 Paved Shoulder	6 mi	$1,121,019
7	X30 Paved Shoulder	7 mi	$1,366,950
8	X40 Paved Shoulder	25 mi	$4,753,208
9	X64 Paved Shoulder	13 mi	$2,408,014
10	Y14 Paved Shoulder	21 mi	$3,941,391
11	Y26 Paved Shoulder	4 mi	$841,387

Figure 50: Iowa County Trail Mileage

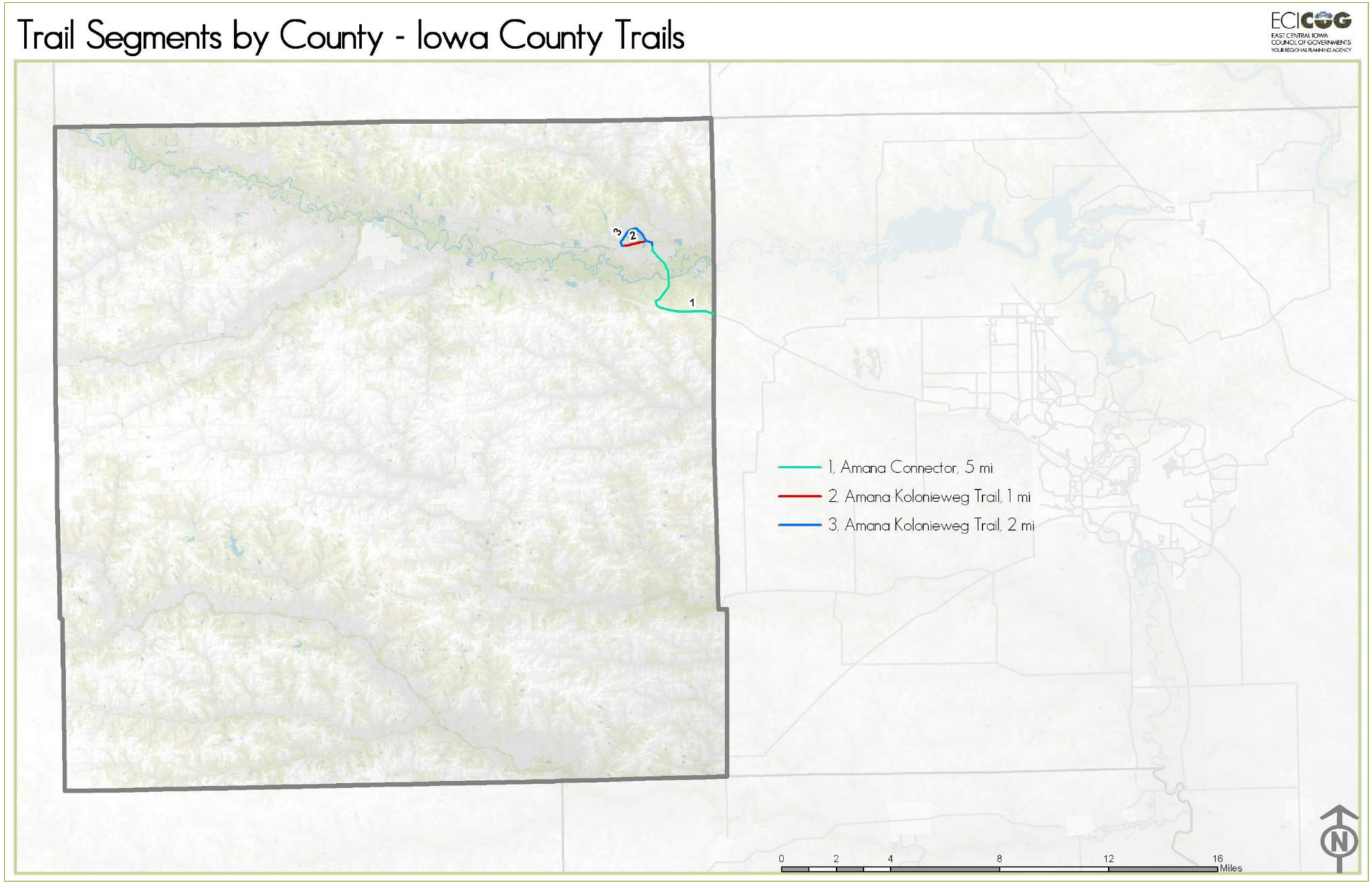
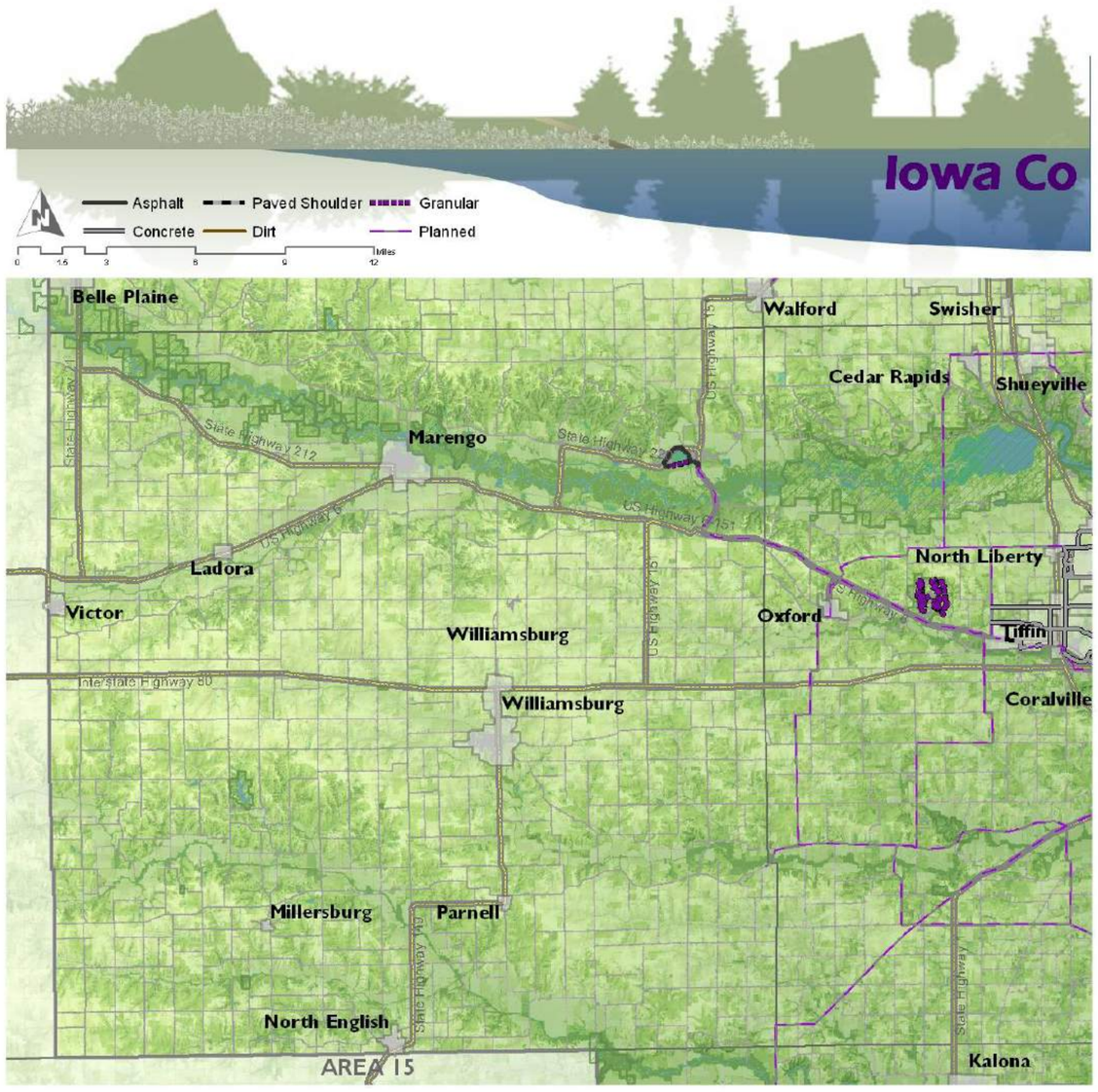


Figure 51: Iowa County Trails by Construction Status



Iowa County

Much of the trails activity in Iowa County is focused around the Amana Colonies. This includes the existing Kolonieweg trail, and new construction of trails to link the various colonies. An additional linkage from Amana to the Johnson County line that would eventually connect to Coralville area is also planned for, though no funding has currently been secured.

Amana Colonies Trails

Within the Amana Colonies, the Iowa Valley RC&D is assisting with the development of a trails network to link the Colonies. The majority of facilities provided by this project are fully separated trails and wide sidewalks.

Ioway Trails

Iowa County contains parts of Phase One and Phase Two of the Ioway Trail. Phase One would connect Marengo to the Amanas along the Iowa River, a distance of approximately 6 miles. Phase Two, parts of which are currently being developed, runs from Coralville to the Amana Colonies (14 miles) and then northward to Walford (8 miles).

Map ID	Name	Miles	Estimated Cost
3	Amana Connector Paved shoulder	5 mi	$1,196,372

Figure 52: Johnson County Trail Mileage

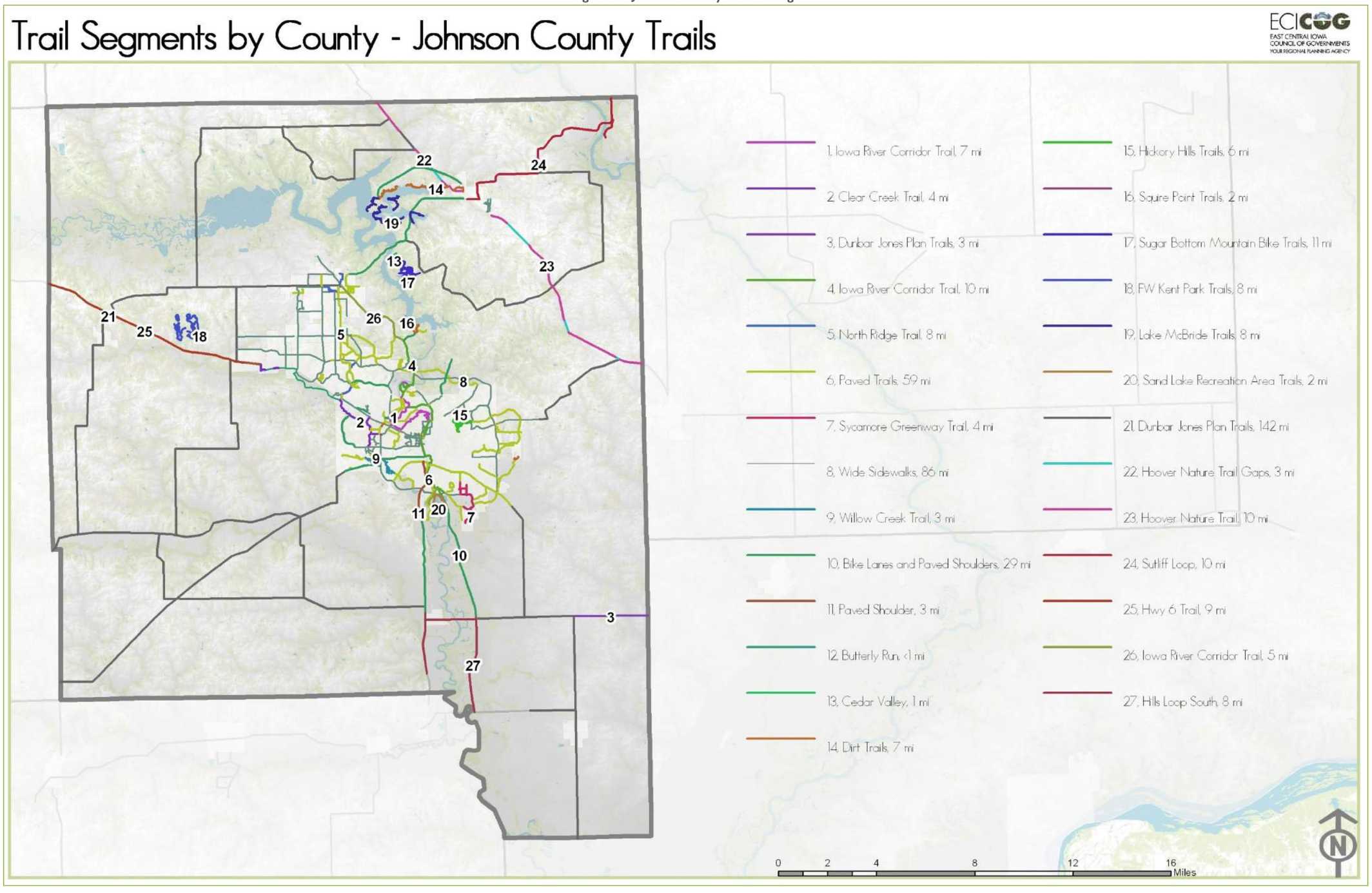
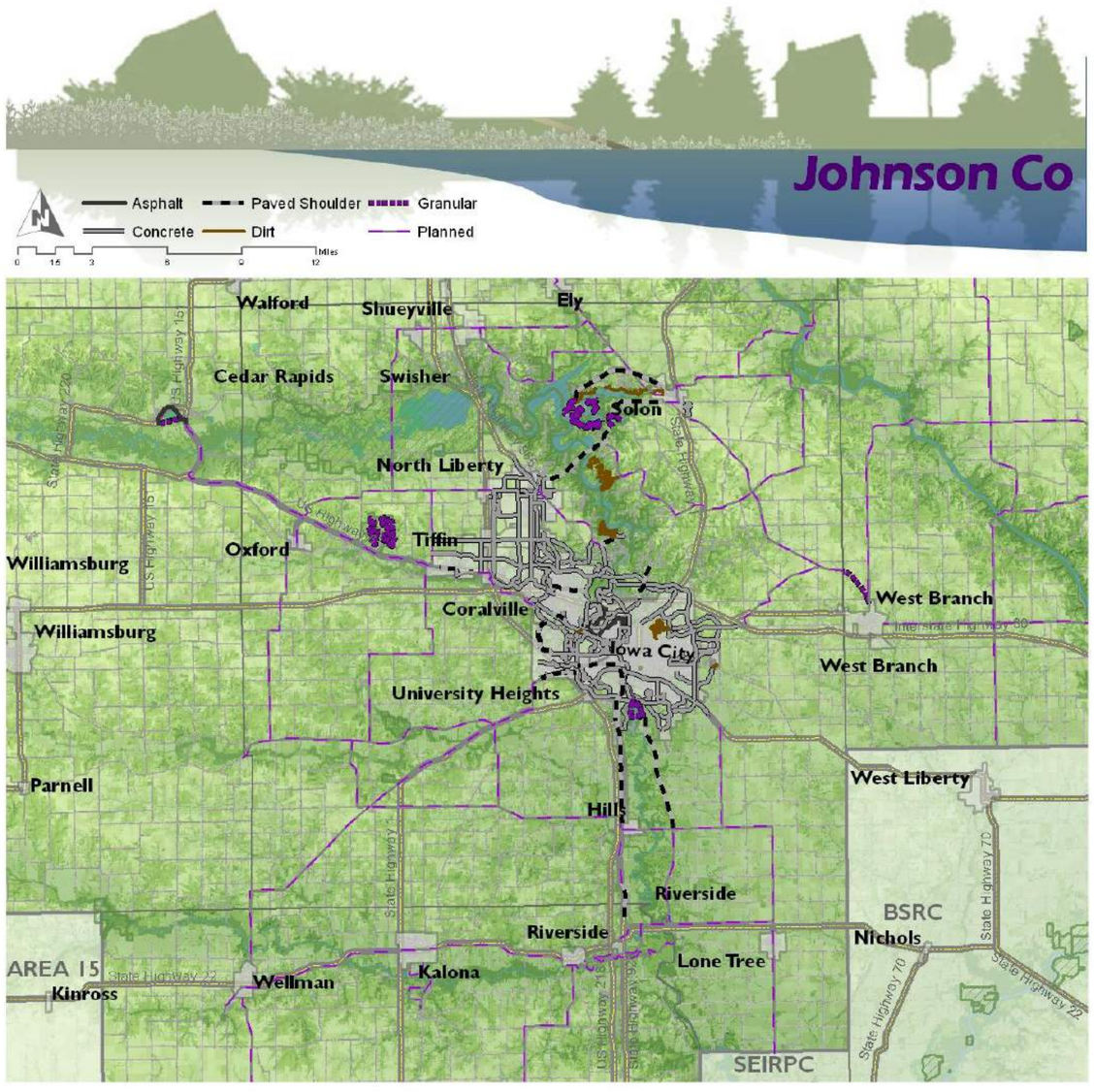


Figure 53: Johnson County Trails by Construction Status



Johnson County Trails

Johnson County has a long history of trails planning, and has its own trails plan prepared by the Johnson County Council of Governments (JCCOG) and adopted by the Johnson County Board of Supervisors in 2006. It is the intention of this document to support those trails in Johnson County that have already been identified. The Johnson County Shared Use Trails Plan should be consulted for more detail on any of the projects in Johnson County, but below is a short synopsis of the higher priority trails yet to be completed from the 2006 plan. While most of the rural trails groups in Region 10 are currently planning for accommodations in the form of paved shoulders, it should be noted that the Johnson County Trails Advisory Committee prefers a fully separate facility whenever possible. This is generally a safer accommodation that will appeal to more use modes, and given the higher number of potential users and higher traffic volumes throughout much of Johnson County, is the appropriate choice for regional trails in this area.

Dubuque Street Trail between Iowa City and North Liberty

This trail (the final part of the Iowa River Corridor Trail), was identified as a two phase construction project, and the first phase has been completed. The remaining phase, Squire Point access to North Liberty city limits (1.9 miles) is very near completion in the fall of 2010. The estimated cost of construction for this project was $380,000 in 2006. This project has been split into two additional sections, the first of which was completed in 2010, with an estimated cost of $365,000 for a trail between West Overlook Road and 275th Street. The second half was planned as a potential stimulus II project for FY2011, and the cost from 275th Street to North Liberty city limits was estimated at $400,000, for a total of $765,000 for completion of this trail.

Mehaffey Bridge Road, North Liberty to Sugar Bottom Road

This is one of the largest projects identified in the Shared Use Trails Plan because trail construction is tied to the reconstruction of Mehaffey Bridge, which is planned to have a trail on one side. The cost for 2 miles of road reconstruction was estimated at $950,000 and the bridge replacement was estimated at $2,500,000, of which the trail cost was estimated at $250,000 in 2006. The bridge replacement project is on the FY11 road plan, and the total for bridge with trail accommodation has increased to $4,400,000. Work on the recreational trail is scheduled for FY14, with an estimated cost of $750,000 (exclusive of bridge work), bringing the total estimated cost for this project to $5,150,000 inclusive of the bridge.

Hwy 6 Trail (within right of way)

This route has been gaining interest in recent years from both Johnson County and Iowa County residents. Although originally identified as Tiffin to Kent Park in the Shared Use Trails Plan, plans for this segment have extended it to become a connection to the Johnson/Iowa County line. Once there, additional trails could be built in Iowa County to connect the Amana Colonies to the Hwy 6 trail. The estimated cost of this trail in 2006 was $500,000, however the trail was just 2.5 miles in length at that time. Extending the trail to the Iowa County line creates a segment approximately 8.7 miles in length, with an estimated cost of $2,175,000. Extending the trail to the east would add approximately 2.5 miles between Tiffin and Coralville, at an estimated cost of $625,000.

Hoover Nature Trail

This segment of the Hoover Nature Trail, part of the American Discovery Trail, has experienced varying degrees of momentum over the past several years. The trail runs along the abandoned right of way of the Rock Island Railroad, and the existing limestone base would likely reduce costs associated with paving this trail were funding available for paving and to complete the remaining land acquisition. Approximately three large gaps still remain, and the cost of acquiring that land is not known. The construction estimate for the 4.25 mile trail segment from Solon to Linn County was $500,000 in 2006. In addition, 3 bridges are needed along the route at an estimated $160,000. More recent developments in the HNT planning process have led to concerns about property ownership rights as

many of the trails segments have been conveyed via quit claim deed rather than warranty deed, and as such, trails development will likely occur slowly in the area with volunteer resources and limited seasonal use, and will not likely involve grant applications in the near future

Deviations from the 2006 Shared Use Trails Plan

After consultation with JCCOG, it was noted that some trails identified as priorities in the 2006 plan are no longer likely to be constructed, and some other trails not identified as high priorities at that time are now the focus of trails development efforts. The Johnson County Board of Supervisors will likely update the trails plan within the next year, and thus the current Shared Use Trails Plan will likely be replaced in 2012. At that time, any new priorities identified in that plan will likely also be considered regional priorities given they are in keeping with the goals of this plan.

Momentum for the extension of the 6 ft wide paved shoulders on either side of Prairie du Chien Road from Newport Road to East Overlook Road has dwindled amid substantial protest from property owners in the area. This is largely because of the perception that the construction of such a wide road would require substantial vegetative clearing, natural habitat disruption and property acquisition, and would substantially reduce the scenic qualities of the area. This corridor is still a popular cycling route, however the road reconstruction project has been removed from the five year construction program.

As interest in the Hwy 6 trail has increased, so has interest in other trail segments that could connect to the Hwy 6 trail on the eastern end. The first of these connections would be the Clear Creek Trail. A significant portion of this trail has already been constructed and is very popular with cyclists and walkers. The connecting segment to the Hwy 6 trail would be approximately 2.75 miles, and given the clearing and grading required in the area, would likely cost approximately $775,000.

Moving to the south and east of the Clear Creek Trail is the Willow Creek Trail, which will eventually connect to the southern end of the Iowa River Corridor Trail. Approximately 1.9 miles of the Willow Creek Trail is complete, with an additional 2.2 miles left to be constructed. Paving for this trail would likely cost approximately $600,000.

The southern end of the Willow Creek Trail then connects to the recently constructed southern portion of the Iowa River Corridor trail, which follows south again to connect to the proposed Sand Road Trail that would connect to Washington County. Sand Road offers 8 foot paved shoulders to 520th Street, and the project would need to be extended approximately 1.6 miles to Hwy 22 to connect to trails near Riverside.

Map ID	Name	Miles	Estimated Cost
21	Dunbar Jones Plan Trails	142 mi	$49,663,080
22	Hoover Nature Trail Gaps	3 mi	$1,672,920
23	Hoover Nature Trail	10 mi	$2,060,476
25	Hwy 6 Trail	9 mi	$3,927,524
26	Iowa River Corridor Trail	5 mi	$2,439,445

All of the above are fully separated, paved, shared use facilities.

Figure 54: Jones County Trail Mileage

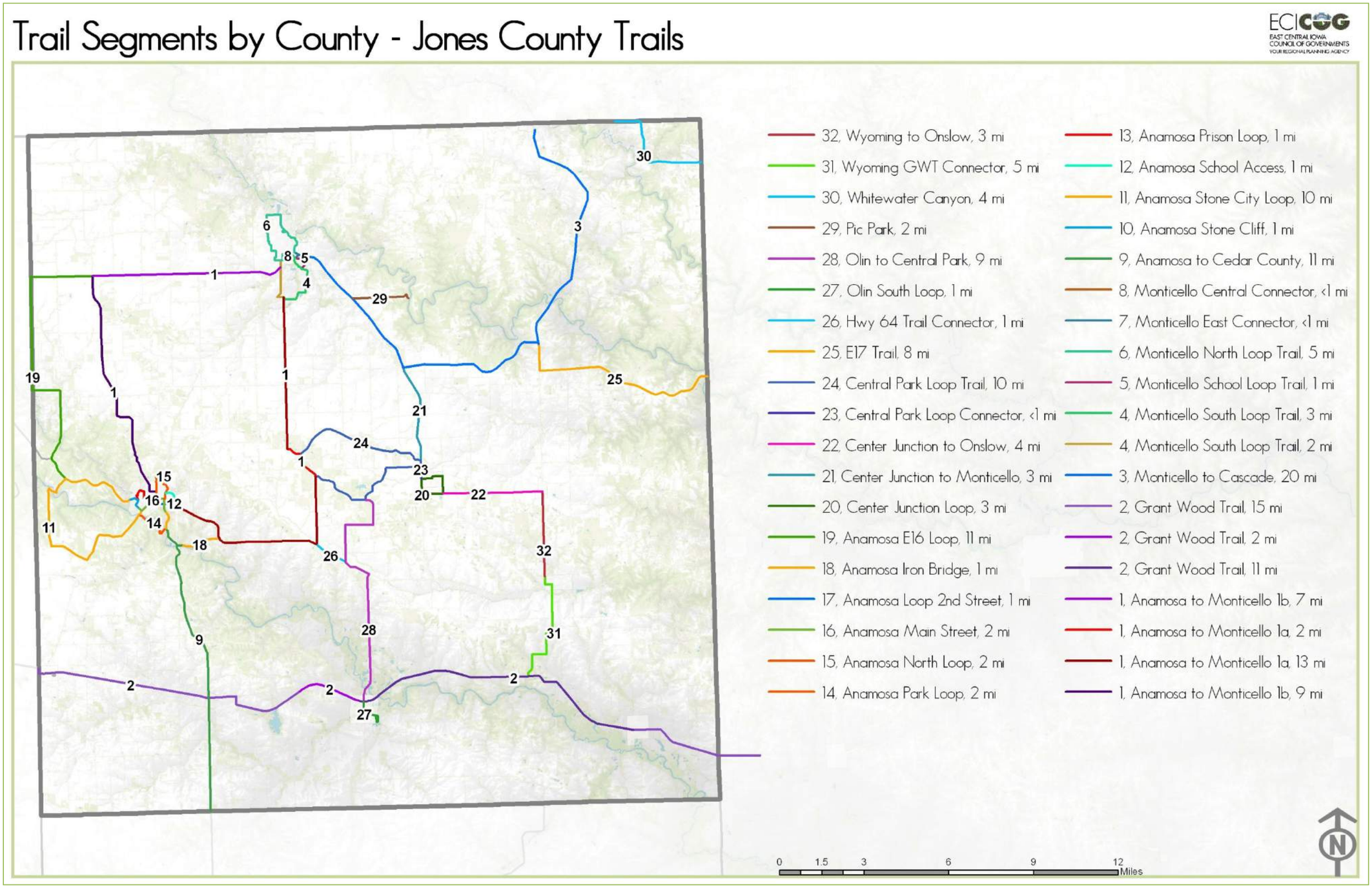
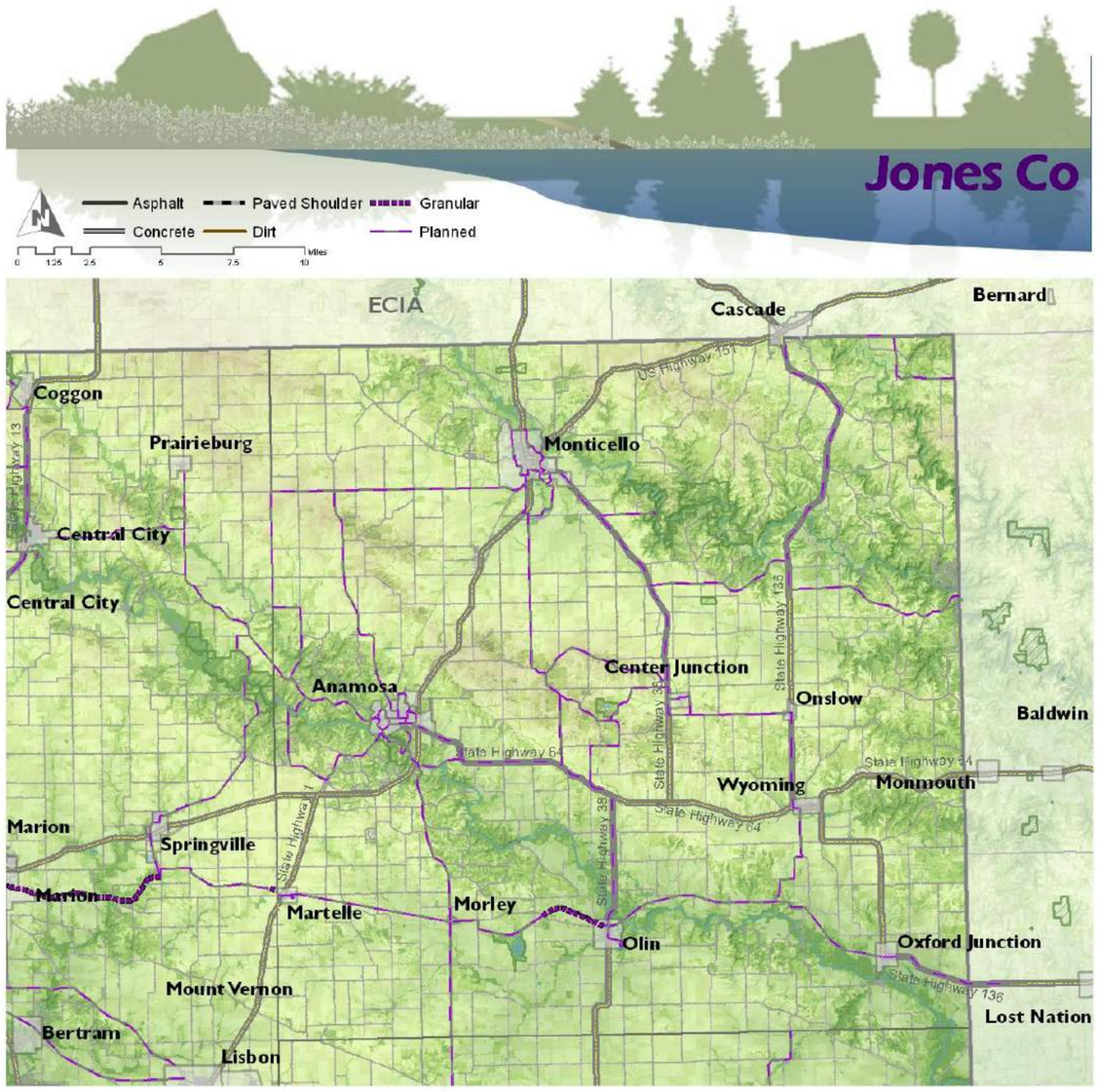


Figure 55: Jones County Trails by Construction Status



Jones County

Jones County has a more substantial history of trails planning than many of the rural counties in the region, but does not yet have an actual trails plan. However, the county was included in a trails map created by ECIA. Jones County has an organized base of volunteers who have been able to fund projects such as the Grant Wood Trail near Olin and the Hale Bridge near Anamosa. Several potential routes were identified in Jones County, but the trails group was not able to decide on an accommodation type for all of the identified routes. Loop trails around Monticello and Anamosa will be constructed as wide sidewalks, and the Grant Wood Trail will continue as a fully separate, crushed limestone trail. Routes that run along highways were those that the group and the county engineer would need to review in greater detail to determine the most appropriate type of accommodation.

Additionally, the trails group views some routes more as vision corridors, particularly the route from Anamosa to Monticello. Connecting these two communities is a high priority for the Jones County trails group, and three options were identified (a series of predominantly straight county roads (1b), a series of predominantly curving county roads (1a), and a fully separated facility along Highway 151(not mapped)). The group would prefer to receive an engineering opinion on the project before selecting a final route between Monticello and Anamosa.

Another priority of the group was connecting the trails in Jones County to those in ECIA, and eventually to the Mississippi River Trail. The most feasible way to do this is to go through Cascade in northeastern Jones County (route 3). The route from Monticello to Cascade should be considered a vision corridor. Highway 151 is again the most direct route, however a fully separate trail would be needed for safety considerations, and the trails group had concerns regarding the cost and feasibility of this option. Another alternative was county road D65, which is the most direct route after Highway 151 but is not entirely paved. This route could be appropriate for a fully separated trail, but resurfacing the entire road and installing paved shoulders is unlikely. The final option would involve leaving Monticello on IA38, then turning east on CH E17, and finally heading north on IA 136. Although this is a paved road with a decent BLOS score, this route is approximately twice as long as the Highway 151 option.

Map ID	Name	Miles	Estimated Cost
1a	Anamosa to Monticello Paved Shoulder	13 mi	$2,850,184
1b	Anamosa to Monticello Paved Shoulder	16 mi	$2,929,756
2	Grant Wood Trail Fully separated, paved, shared use facility	26 mi	$6,409,247
3	Monticello to Cascade Paved shoulder	20 mi	$3,776,087
4	Monticello South Loop Trail Fully separated, paved, shared use facility	5 mi	$1,706,263
5	Monticello School Loop Trail Fully separated, paved, shared use facility	1 mi	$351,857
6	Monticello North Loop Trail Fully separated, paved, shared use facility	5 mi	$2,027,833
7	Monticello East Connector Fully separated, paved, shared use facility	<1 mi	$72,353
8	Monticello Central Connector Fully separated, paved, shared use facility	<1 mi	$44,540
9	Anamosa to Cedar County Paved shoulder	11 mi	$2,025,266
10	Anamosa Stone Cliff Fully separated, paved, shared use facility	1 mi	$245,602
11	Anamosa Stone City Loop Paved shoulder	10 mi	$1,923,419

Map ID	Name	Miles	Estimated Cost
12	Anamosa School Access Fully separated, paved, shared use facility	1 mi	$181,227
13	Anamosa Prison Loop Fully separated, paved, shared use facility	1 mi	$407,404
14	Anamosa Park Loop Fully separated, paved, shared use facility	2 mi	$610,458
15	Anamosa North Loop Fully separated, paved, shared use facility	2 mi	$867,061
16	Anamosa Main Street Fully separated, paved, shared use facility	2 mi	$322,543
17	Anamosa Loop 2nd Street Fully separated, paved, shared use facility	1 mi	$330,817
18	Anamosa Iron Bridge Fully separated, paved, shared use facility	1 mi	$292,412
18	Anamosa Iron Bridge Paved shoulder	1 mi	$272,736
19	Anamosa E16 Loop Paved shoulder	11 mi	$2,008,627
20	Center Junction Loop Fully separated, paved, shared use facility	3 mi	$684,068
21	Center Junction to Monticello Paved shoulder	3 mi	$660,121
22	Center Junction to Onslow Paved shoulder	4 mi	$686,501
23	Central Park Center Junction Connector Paved shoulder	<1 mi	$75,979
24	Central Park Loop Trail Paved shoulder	10 mi	$1,927,628
25	E17 Trail Paved shoulder	8 mi	$1,426,923
26	Hwy 64 Trail Connector Paved shoulder	1 mi	$246,617
27	Olin South Loop Paved shoulder	1 mi	$269,971
28	Olin to Central Park Paved shoulder	9 mi	$1,696,250
29	Pic Park Fully separated, paved, shared use facility	2 mi	$627,398
30	Whitewater Canyon Fully separated, paved, shared use facility	4 mi	$1,300,537
31	Wyoming Grant Wood Trail Connector Paved shoulder	5 mi	$879,373
32	Wyoming to Onslow Paved shoulder	3 mi	$557,047

Figure 56: Linn County Trail Mileage

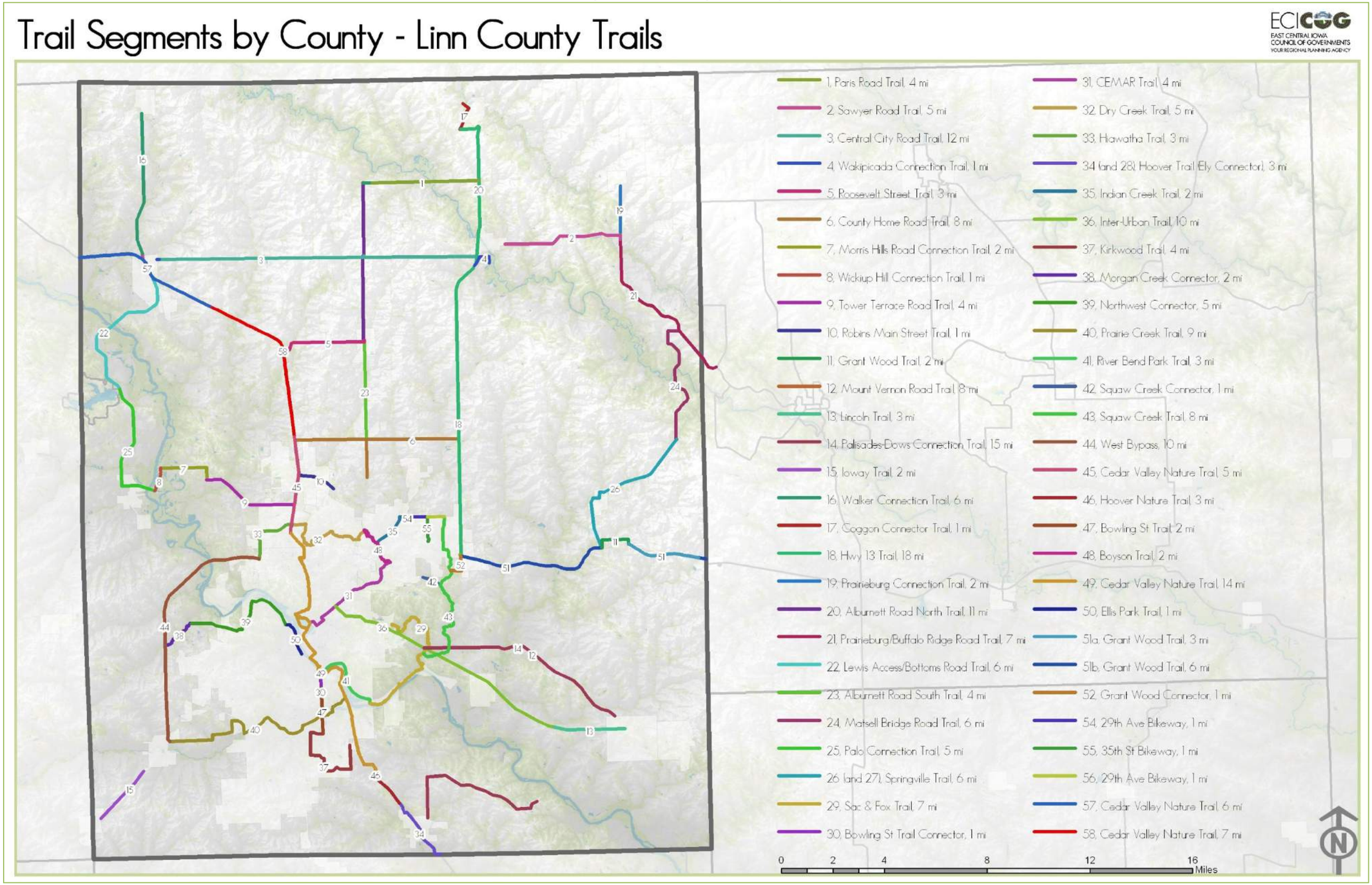
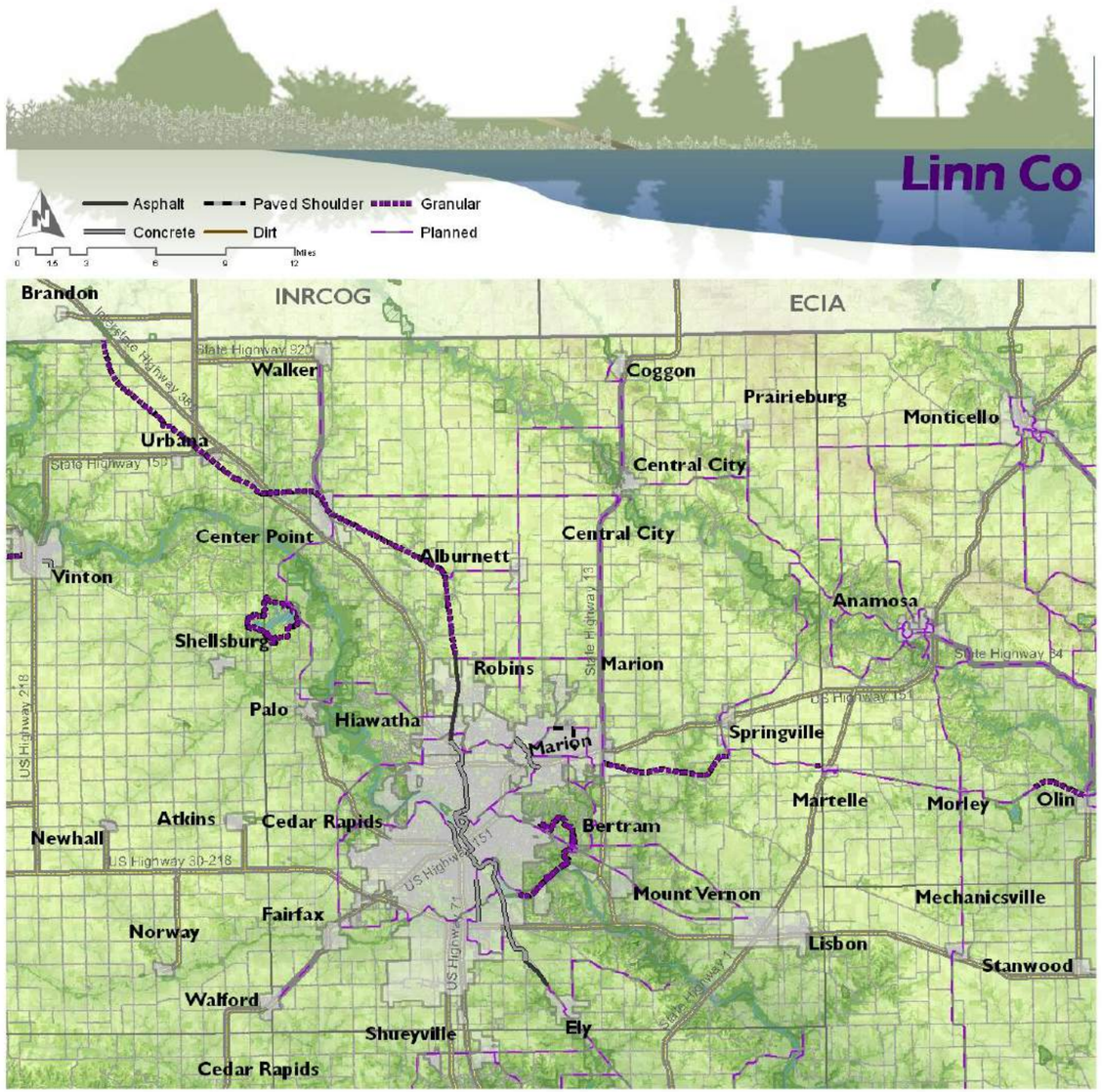


Figure 57: Linn County Trails by Construction Status



Linn County

Outside of the metro areas, Linn County has identified 28 potential trails in the form of vision corridors that amount to 134 miles of trails at an estimated total cost of $40,213,707, or approximately $300,000 per mile. The following trails segments are those identified in the Trail Plan Corridors Summary. As in Johnson County and for similar reasons, the preferred accommodation type in Linn County is the paved, fully separated, shared use trail.

Map Id	Name	Miles	Estimated Cost
1	Paris Road Trail Hwy 13 to Alburnett Road	4.51	$1,353,000
2	Sawyer Road Trail Central City to Prairieburg Rd	4.55	$1,365,000
3	Central City Road Trail Center Point to Hwy 13	12.37	$3,711,000
4	Wakipicada Connection Trail Hwy 13 to Wakipicada Park	1.13	$339,000
5	Roosevelt Street Trail Alburnett to CVNT	3.02	$906,000
6	County Home Road Trail CVNT to Hwy 13	6.41	$1,923,000
7	Morris Hills Road Connection Trail Feather Ridge Rd to Horseshoe Lake Rd, west along Morris Hills Rd to Wickiup Hill Natural Area	2.14	$642,000
8	Wickiup Hill Connection Trail Palo northeast to Chain Lakes Natural Area and Wickiup Hill Natural Area	2.36	$708,000
9	Tower Terrace Road Trail CVNT to Horseshoe Lake Rd	4.80	$1,440,000
10	Robins' Main Street Trail CVNT to Westfield Elementary School	1.34	$402,000
11	Grant Wood Trail Completion of remaining gaps	1.93	$579,000
12	Mt Vernon Rd Trail Indian Creek to Mt Vernon	8.27	$2,481,000
13	Lincoln Trail Along former rail RoW from Smyth Rd to Mt Vernon	2.48	$744,000
14	Palisades-Dows Connection Trail Along Ivanhoe, Prairie School, & Jappa Rds. from Palisades-Dows Preserve to Ely	6.33	$1,899,000

Map Id	Name	Miles	Estimated Cost
15	Ioway Trail Along Hwy. 151 from Walford to Fairfax	2.56	$768,000
16	Walker Connection Trail Along Center Point Rd. from the Cedar Valley Nature Trail to Walker	5.93	$1,779,000
17	Coggon Connector Trail Along Hutchinson Rd. and then RR ROW from Hwy. 13 to Buffalo Creek Park	1.94	$582,000
18	Hwy 13 Trail Along Hwy. 13 from the Grant Wood Trail to Coggon	16.94	$5,082,000
19	Prairieburg Connection Trail Along Prairieburg Rd. from Sawyer Rd. to Prairieburg	1.95	$585,000
20	Alburnette Road North Trail Along Alburnett Rd. north from Alburnett to Paris Rd.	5.62	$1,686,000
21	Prairieburg/Buffalo Ridge Rd Trail Along Prairieburg & Buffalo Ridge Rds. from Sawyer Rd. to the Linn/Jones County line	6.17	$1,851,000
22	Lewis Access/Bottoms Rd Trail Along Lewis Access & Lewis Bottoms Rds. from the Cedar Valley Nature Trail to Pleasant Creek Park	5.75	$1,725,000
23	Alburnett Rd South Trail Along Alburnett Rd. south from Alburnett to the Lowe Park entrance by Oakridge Elementary School	5.10	$1,530,000
24	Matsell Bridge Trail Along Hart, Matsell Park, & Stone City Rds. & Pleasant St. from Buffalo Ridge Rd. to Summer St.	5.39	$1,617,000
25	Palo Connection Trail Pleasant Creek Park south to Palo and the Palo Marsh Natural Area	5.92	$1,776,000
26	Springville North Trail Generally along RR ROW from the Springville Elem. School NE to Stone City Rd, adjacent to Matsell Bridge Natural Area	6.78	$2,034,000
27	Springville Connection Trail Along ROW parallel to Springville Rd. north from the Grant Wood Trail to the Springville Elementary School	1.67	$501,000
28	Hoover Nature Trail Extension of the Hoover Nature Trail south from Ely to the Linn/Johnson County line	0.67	$201,000

Figure 58: Washington County Trail Mileage

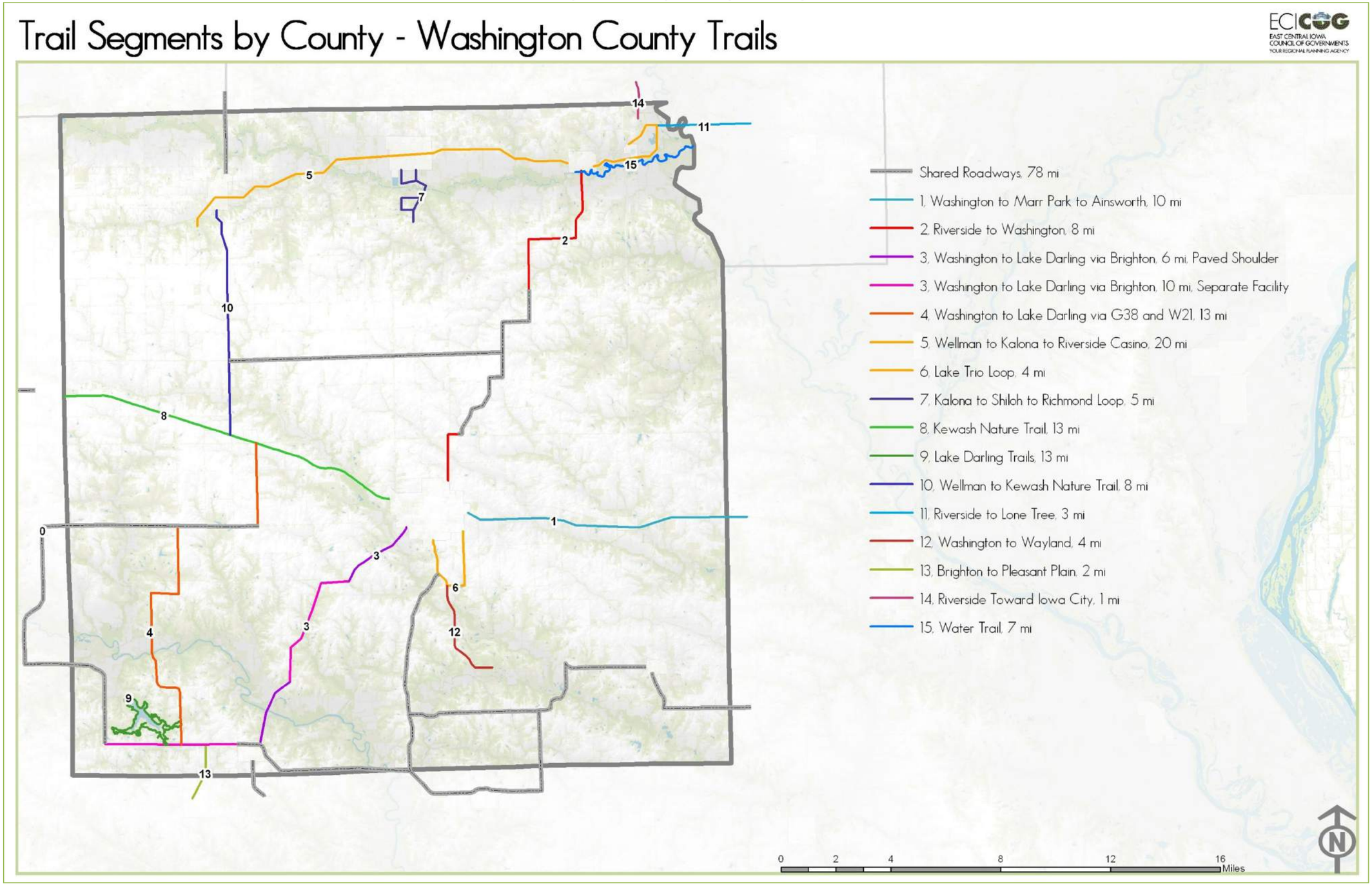


Figure 59: Washington County Trails by Construction Status

Washington County

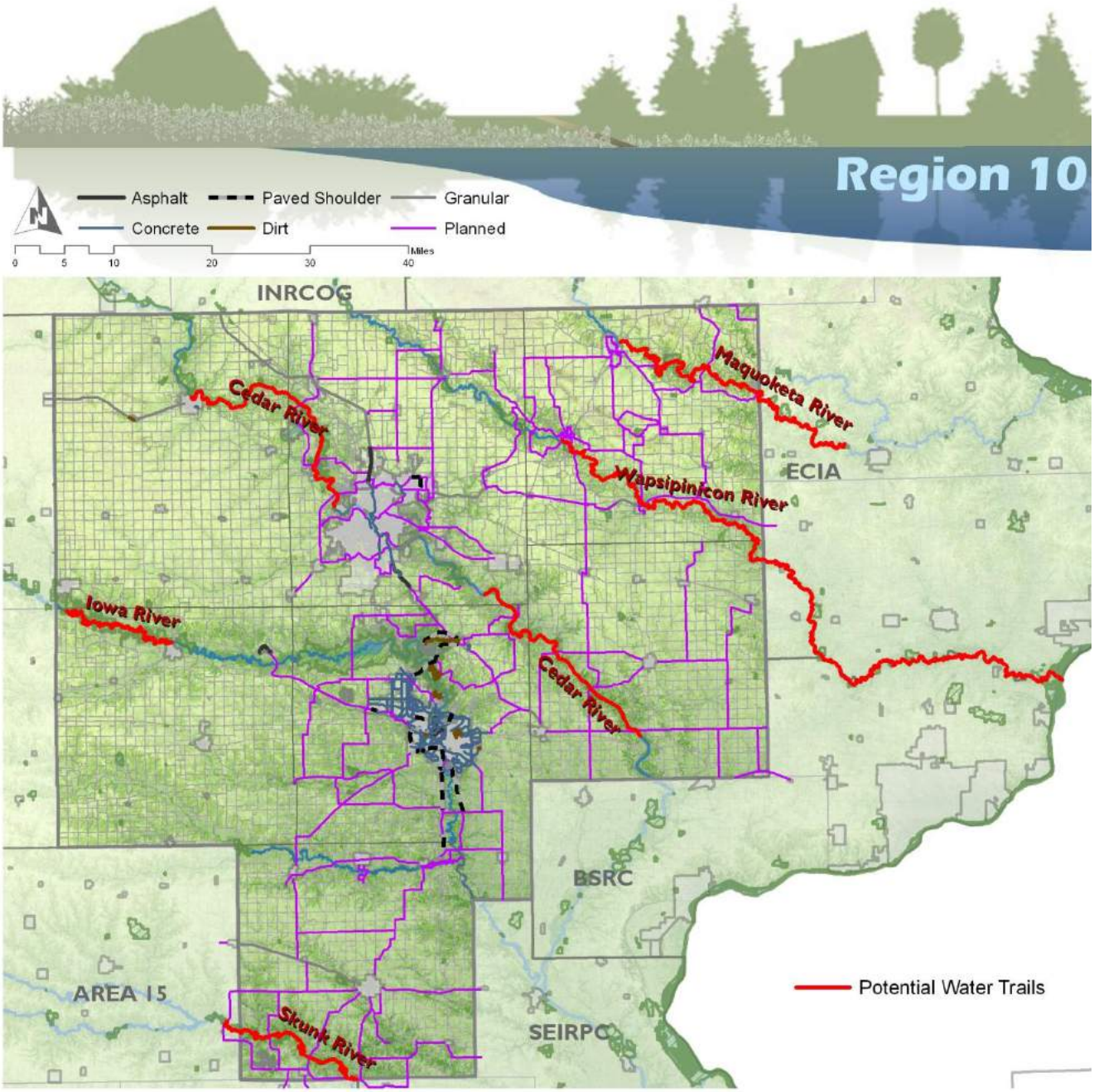
Washington County has a master plan for recreational trails that was created in 2007 by Shoemaker and Haaland. The plan identifies design guidelines and a number of routes using various accommodation types, including the trails outlined in the following table. From a regional planning perspective, it should be noted that the use of the shared roadway in the rural areas without a paved shoulder is not encouraged by this plan except in those instances where terrain geometry makes another alternative infeasible, and in all other instances provision of a paved shoulder (or better accommodation) is strongly preferred. The estimated total cost of these trails is $20.7 million in 2010.

Map ID	Name	Miles	Estimated Cost
1	Washington to Marr Park to Ainsworth Fully separated, paved, shared use facility	10 mi	$2,808,187
2	Riverside to Washington Fully separated, paved, shared use facility	8 mi	$1,403,655
3	Washington to Lake Darling via Brighton Fully separated, paved, shared use facility	10 mi	$2,648,986
3	Washington to Lake Darling via Brighton Paved shoulder	6 mi	$962,094
4	Washington to Lake Darling via G38 and W21 (without loop) Fully separated, paved, shared use facility	13 mi	$2,198,931
5	Wellman to Kalona to Riverside Casino Fully separated, paved, shared use facility	20 mi	$5,310,386
6	Lake Trio Loop Paved shoulder	4 mi	$764,749
7	Kalona to Shiloh to Richmond Loop Paved shoulder	5 mi	$1,310,356
10	Wellman to Kewash Nature Trail Paved shoulder	8 mi	$1,429,025
11	Riverside to Lone Tree Paved shoulder	3 mi	$578,267
12	Washington to Wayland Paved shoulder	4 mi	$685,989
13	Brighton to Pleasant Plain Paved shoulder	2 mi	$565,973

DNR-Identified Canoe Routes

Several rivers within the region have the potential for water trail development. The following river segments have been identified as areas where sufficient portages are present and where water hazards are minimal, and thus these would likely be the easiest areas in which to develop water trails.

Figure 60: Region 10 Water and Surface Trails



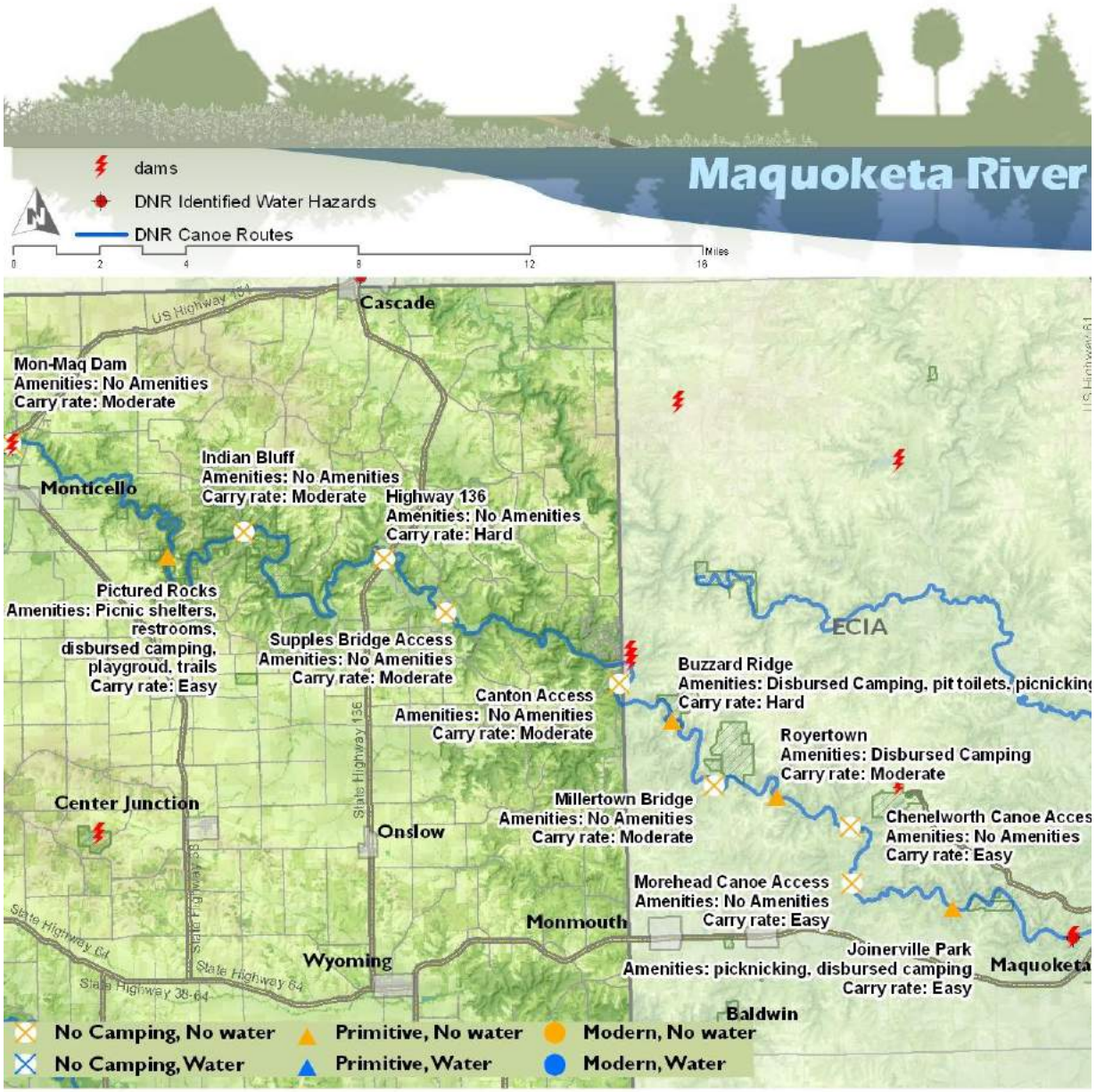
Route 1: Monticello to Maquoketa

The Monticello to Maquoketa route is the longest identified in the region, at just under 45 miles. The route has the potential to begin at Monticello, just downstream of the Mon Maq dam, and end at Joinerville Park, 5.4 miles from Maquoketa. The route cannot stretch all the way to Maquoketa because of the Lakehurst Dam. Carry rates generally span from moderate to hard. Despite high flow rates, traversing the entire route could take two to three days, and additional camping facilities mid-route could enhance the appeal of the route.

Table 17: Maquoketa River Portage Points

Portage Point	Miles	Amenities
Monticello/Mon Maq Dam	--	None
Pictured Rocks	7.8	County park, picnic shelters, restrooms, camping, playground, trails
Indian Bluff	3.8	None
Highway 136	7.8	None
Supples Bridge	3.0	None
Canton Access	6.5	None
Buzzard Ridge	2.4	Disbursed camping, pit toilets, picnicking
Millertown Bridge	3.0	None
Royertown	2.6	Disbursed camping
Chenelworth	2.3	None
Morehead	1.9	None
Joinerville Park	3.5	Picnicking, disbursed camping

Figure 61: Maquoketa River



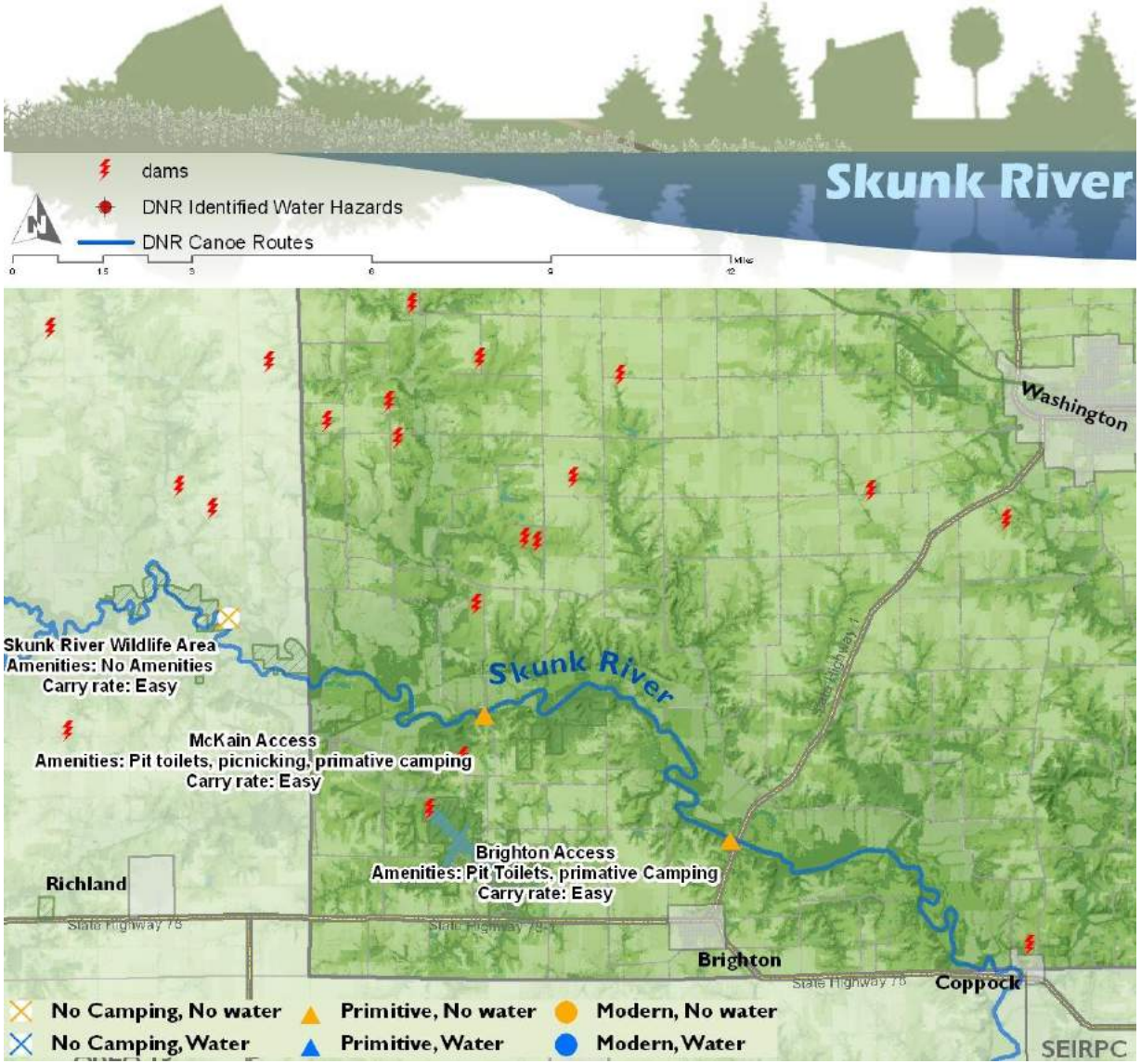
Route 2: Skunk River Wildlife Area to Brighton

The Skunk River crosses through the rolling hills of the southern portion of the region. Identifying an appropriate route along the Skunk River is somewhat challenging due to the current lack of access points. Should additional access points be added, the route could be expanded, particularly to the south to connect to Mount Pleasant. With the addition of a substantial number of additional access points, the route could even begin just north of Oskaloosa. However, the current access points between Oskaloosa and the Skunk River Wildlife Area range from 7 to 16 miles apart and do not offer camping, a situation which is not well suited to the needs of the average paddler. The selected route shown below is rather short and has an easy carry rate over the entire distance. This trip could be appropriate for one full day or two shorter days of canoeing, with camping available at the midpoint at McKain Access.

Table 18: Skunk River Portage Points

Portage Point	Miles	Amenities
Skunk River Wildlife Area	--	None
McKain Access	7.3	Pit toilets, picnicking, primitive camping
Brighton Access	8.1	Pit toilets, primitive camping

Figure 62: Skunk River



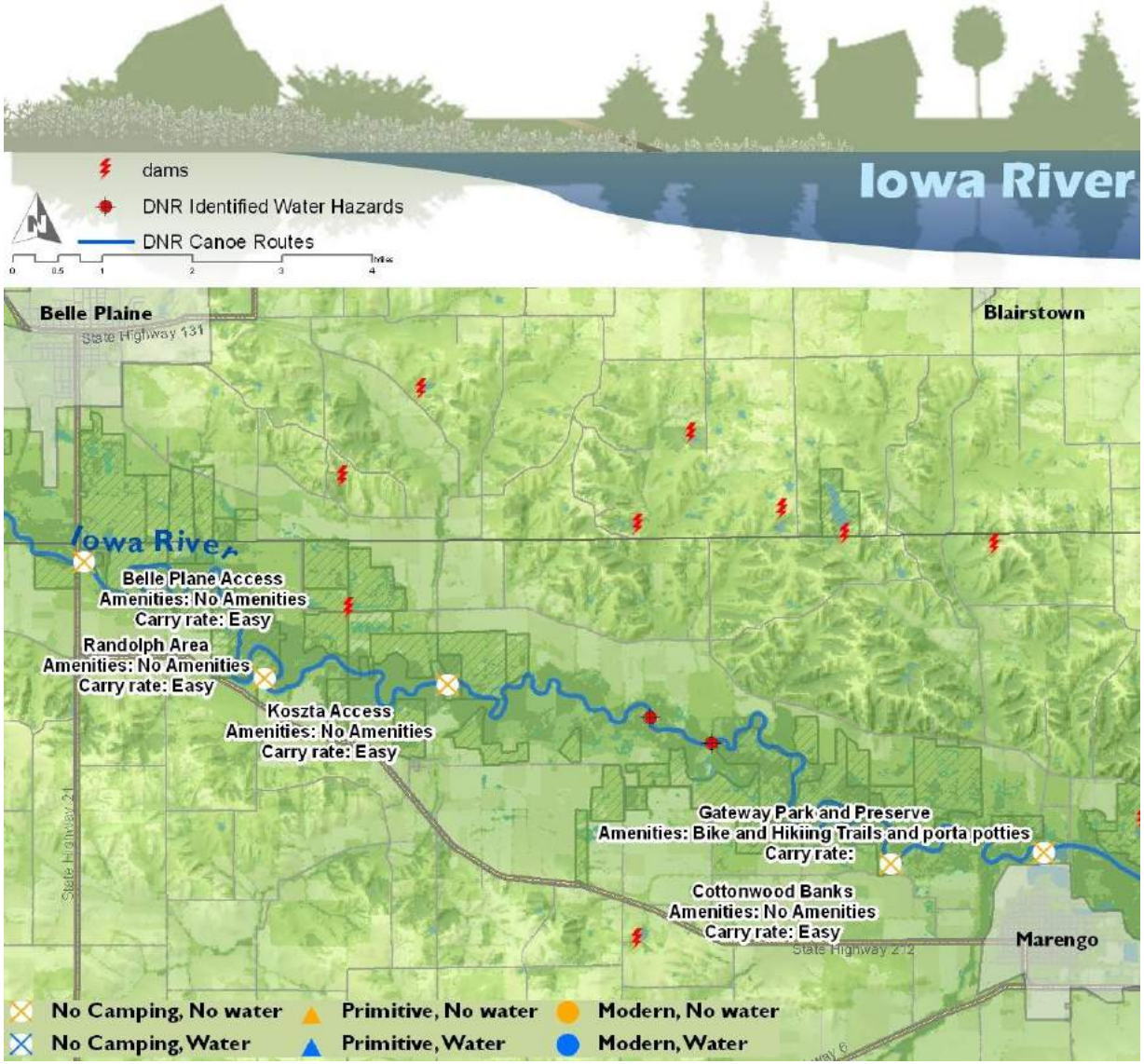
Route 3: Belle Plaine to Marengo

The Iowa River crosses several counties in Region 10, and multiple water trails may be possible along various stretches of the river. One such area that could be developed lies between Belle Plaine and Marengo. Multiple wildlife management areas exist along this densely forested and meandering segment of the river. To further develop this area as a water trail, additional camping sites (and possibly associated amenities) should be added, and another water access point between Koszta Access and Cottonwood Banks would be useful to less experienced paddlers. This stretch also contains two DNR identified water hazards labeled as rock dams, and further analysis of the safety and navigability of this area is needed.

Table 19: Iowa River Belle Plaine to Marengo Portage Points

Portage Point	Miles	Amenities
Belle Plaine Access	--	None
Randolph Area	5.6	None
Koszta Access	3.0	None
Cottonwood Banks	2.7	None
Gateway Park and Preserve	2.7	Bike and Hiking trails, porta-potties

Figure 63: Iowa River Belle Plaine to Marengo



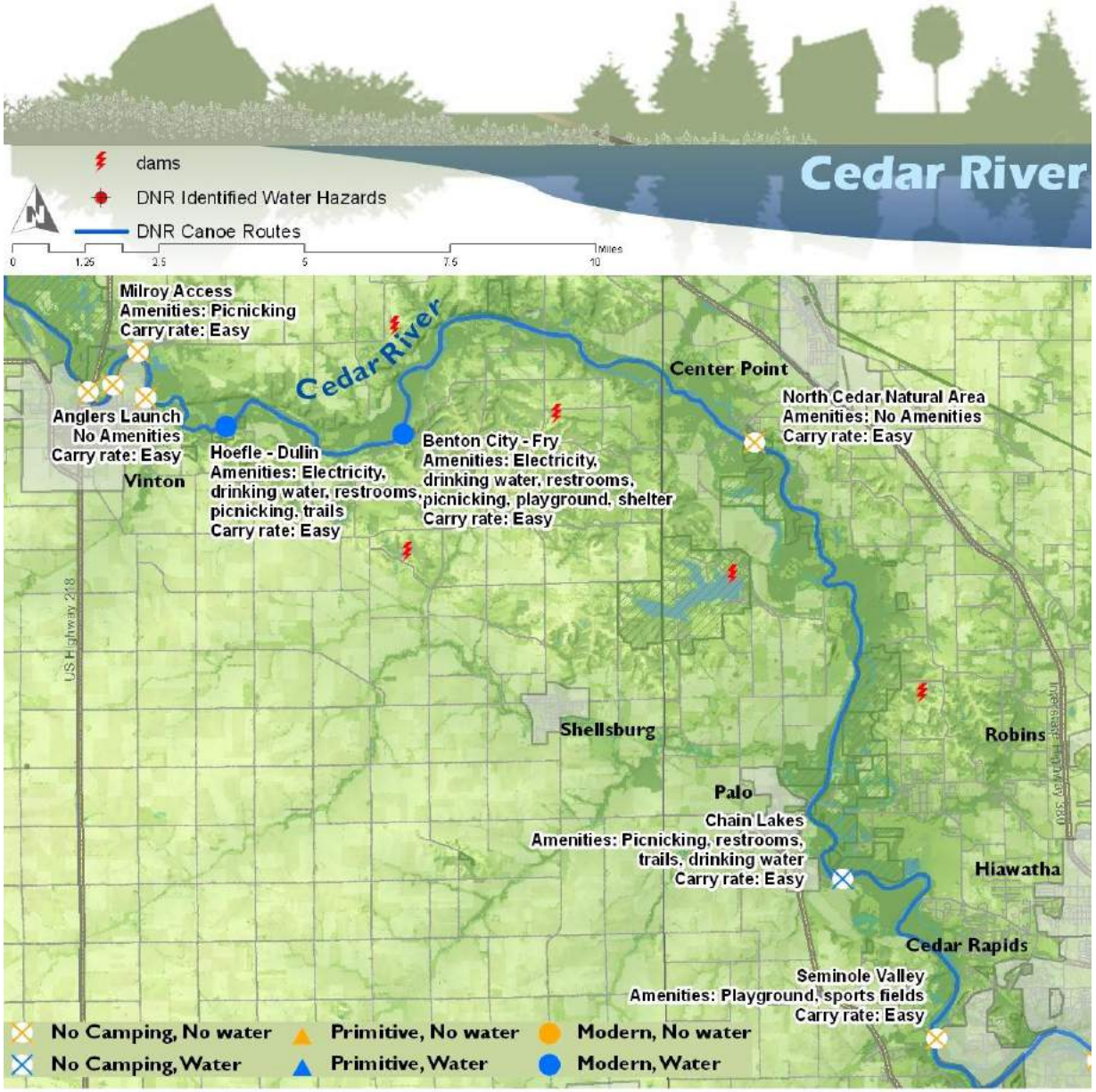
Route 4: Vinton to Cedar Rapids

The Cedar River is another river that presents multiple opportunities for water trail development. The segment from Vinton to Cedar Rapids is particularly promising given the unusual combination of substantial natural areas and close proximity to many towns, including Center Point, Shellsburg and Palo. Two modern campgrounds also exist just downstream of Vinton. The middle of the route could benefit from additional access points with campgrounds. Paddling the entire route would likely be a two day trip with an easy carry rate throughout.

Table 20: Cedar River Vinton to Cedar Rapids Portage Points

Portage Point	Miles	Amenities
Milroy Access	--	Picnicking
Anglers Launch	0.8	None
Hoefle-Dulin	2.0	Modern camping, electricity, drinking water, restrooms, picnicking, trails
Benton City-Fry	3.7	Modern camping, electricity, drinking water, restrooms, picnicking, playground, shelter
North Cedar Natural Area	8.6	None
Chain Lakes	9.4	Picnicking, restrooms, trails, drinking water
Seminole Valley	5.3	Playground, sports fields

Figure 64: Cedar River Vinton to Cedar Rapids



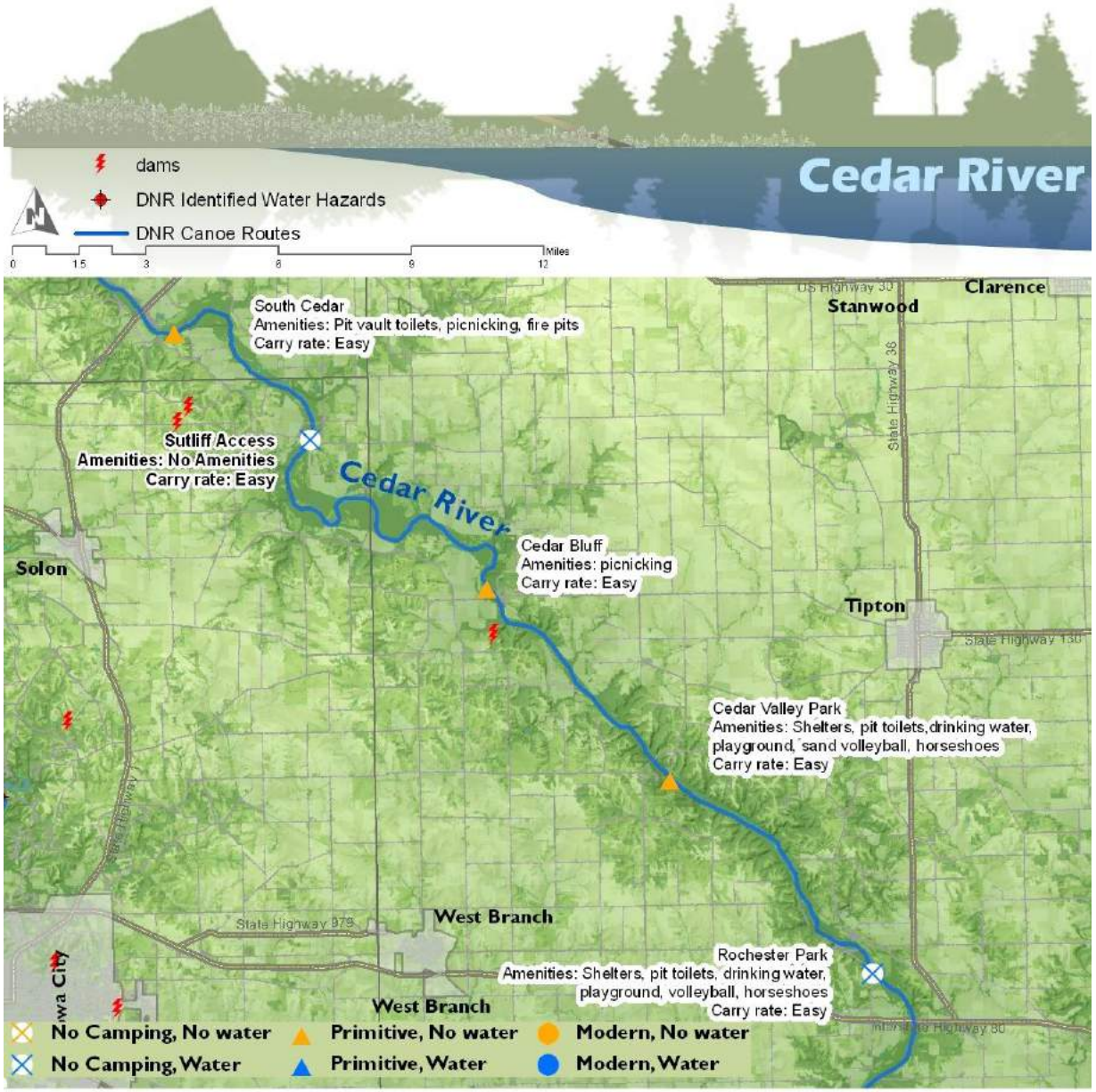
Route 5: Sutliff to Rochester Park

The southern portion of the Cedar River within Region 10 offers perhaps the best selection of parks and camping facilities along the route of any of the identified potential water trails. Distances between water access points are also generally acceptable, although another portage point between Sutliff Access and Cedar Bluff could make the route more appealing.

Table 21: Cedar River Sutliff to Rochester Park Portage Points

Portage Point	Miles	Amenities
South Cedar	--	Pit vault toilets, picnicking, fire pits, primitive camping
Sutliff Access	5.2	None
Cedar Bluff	9.2	Picnicking, primitive camping
Cedar Valley Park	6.2	Shelters, pit toilets, drinking water, playground, sand volleyball, horseshoes, primitive camping
Rochester Park	6.8	Shelters, point toilets, drinking water, playground, sand volleyball, horseshoes

Figure 65: Cedar River Sutliff to Rochester Park



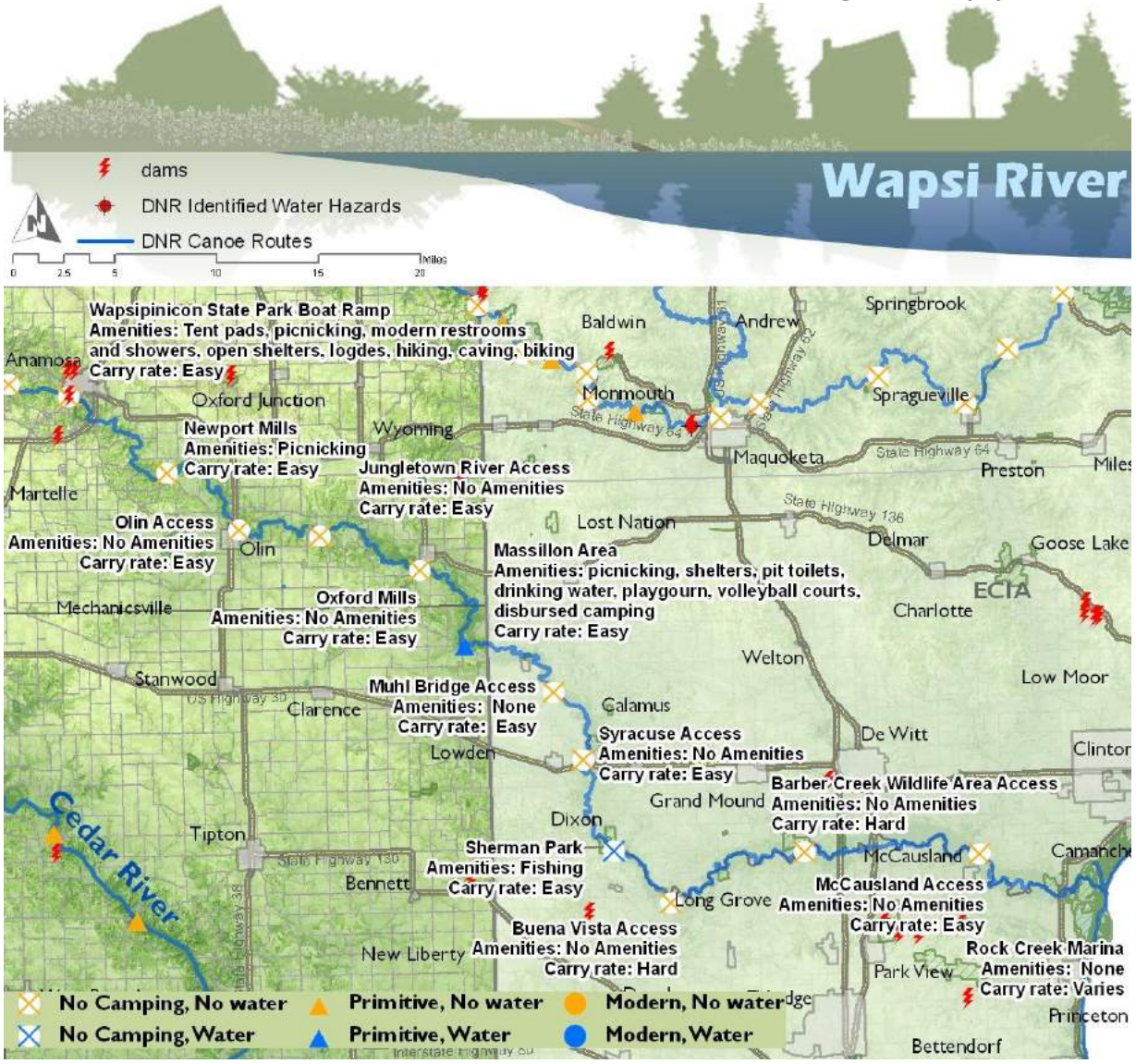
Route 6: Anamosa to Camanche

The Wapsipinicon offers one of the longest stretches of river without dams or other obstructions in the region, and thus has substantial potential for water trail development. Some of the stretches between access points may be longer than would be ideal for some paddlers, and additional amenities, such as camp grounds and water, would make the route more appealing.

Table 22: Wapsi Portage Points

Portage Point	Miles	Amenities
Wapsipinicon State Park Boat Ramp	--	Camping, shelters, lodges, picnicking, modern toilets, showers, hiking
Newport Mills	8.9	Picnicking
Olin Access	7.1	None
Jungletown Access	6.1	None
Oxford Mills	7.3	None
Massillon Area	7.3	Picnicking, shelters, pit toilets, drinking water, playground, volleyball, disbursed camping
Muhl Bridge Access	7.9	None
Syracuse Access	4.8	None
Sherman Park	6.2	Fishing
Buena Vista Access	4.9	None
Barber Creek Wildlife Area Access	10.1	None
McCausland Access	11.9	None
Rock Creek Marina	10.7	None

Figure 66: Wapsipinicon River



DESIGN STANDARDS

The design standards included in this plan are in conformance with those outlined by the Iowa Department of transportation in the online publication "Iowa Trails 2000." The IDOT sets guidelines for design standards according to the specific use mode of the trail, and identifies 11 specific use types:

Hiking/Walking Trails

Pedestrian Trails

Sidewalks

Bicycle Trails

In-Line Skating Trails

On-Road Bicycle Facilities

Mountain Bike Trails

Equestrian Trails

Snowmobile Trails

Off-Highway Vehicle Trails

Motorcycle Trails

Figure 67: Paved trail and trailhead facilities

While all of these types of facilities do exist within the region, the regional trails planning process primarily focused on bicycle trails, pedestrian trails and on-road bicycle facilities. This is due to both the geographic size of the area covered by the trails plan, and identified needs within the region. Additional types of trails should be planned, however other use modes may be better suited to either a local level trails plan or an interest-specific trails plan. With increasing frequency, the facility referred to in a trails plan is a paved facility fully separated from the road corridor. This type of construction is more common in urban areas, where a sufficient user group exists to support this type of design, which is the most expensive form of trail facility. Additional difficulties in the construction of a fully separated trail arise from the need to acquire land outside of the designated road right of way. Beyond the extra cost of land, acquisition outside of the right of way may not always be possible in rural areas due to agricultural protection policies in Iowa. With those circumstances in mind, the Region 10 trail plan is supportive of multiple design options so long as the selected design is appropriate to the site, intended user group, and long term maintenance operations determined for that specific trail segment.

Three types of trails that are appropriate for cyclist and, in some circumstances, pedestrians, are identified by the American Association of State Highway and Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities*. These three facilities are the signed shared roadway, the paved shoulder, and the shared use

path. For regional planning purposes, the signed shared roadway is not ideal, due to the higher speeds and loose roadway surface types generally seen in the rural areas of the region. As described above, shared use paths are supported wherever possible, but construction may be prohibited due to high costs or the unavailability of land when attempting to traverse multi-county distances. Paved shoulders would thus seem to be the most easily implemented option available in the region, as land is frequently available and maintenance costs are much lower than that associated with a separate facility. However, it should be noted that paved shoulders significantly reduce the probable users of a trail, and in some areas may limit trail users to experienced adult cyclists only. To further clarify the two primary trail facilities likely to be constructed on a regional level, the following descriptions are provided directly from the AASHTO Guide:

Paved Shoulder (Bicycle Lane)

> Bike lanes are established with appropriate pavement markings and signing along streets in corridors where there is significant bicycle demand and where there are distinct needs that can be served by them. The purpose should be to improve conditions for bicyclists on the streets. Bike lanes are intended to delineate the right of way assigned to bicyclists and motorists and to provide for more predictable movements by each. Bike lanes also help to increase the total capacity of highways carrying mixed bicycle and motor vehicle traffic. Another important reason for constructing bike lanes is to better accommodate bicyclists where insufficient space exists for comfortable bicycling on existing streets. This may be accomplished by reducing the width of vehicular lanes or prohibiting parking in order to delineate bike lanes. In addition to lane striping, other measures should be taken to ensure that bicycle lanes are effective facilities. In particular, bicycle-safe drainage inlet grates should be used, pavement surfaces should be smooth, and traffic signals should be responsive to bicyclists. Regular maintenance of bicycle lanes should be a top priority, since bicyclists are unable to use a lane with potholes, debris or broken glass. If bicycle travel is to be improved, special efforts should be made to assure that a high quality network is provided with these lanes. However, the needs of both the motorist and the bicyclist must be considered in the decision to provide bike lanes.
>
> Bike lanes can be incorporated into a roadway when it is desirable to delineate available road space for preferential use by bicyclists and motorists, and to provide for more predictable movements by each.
>
> Bike lanes should be one-way facilities and carry bike traffic in the same direction as adjacent motor vehicle traffic. Two-way bike lanes on one side of the roadway are not recommended when they result in bicycles riding against the flow of motor vehicle traffic. Wrong-way riding is a major cause of bicycle crashes and violates the rules of the road as stated in the UVC. Bicycle –specific wrong-way signing may be used to discourage wrong-way travel. However, there may be special situations where a two-way bike lane for a short distance can eliminate the need for a bicyclist to make a double crossing of a busy street or travel on a sidewalk. This should only be considered after careful evaluation of the relative risks and should be well documented in the project file.
>
> On one-way streets, bike lanes should generally be placed on the right side of the street. Bike lanes on the left side are unfamiliar and unexpected for most motorists. This should only be considered when a bike lane on the left will substantially decrease the number of conflicts, such as those caused by heavy bus traffic or unusually heavy turning movements to the right, or if there are a significant number of left-turning bicyclists. Thus, left-side bike lanes should only be considered after careful evaluation. Similarly,

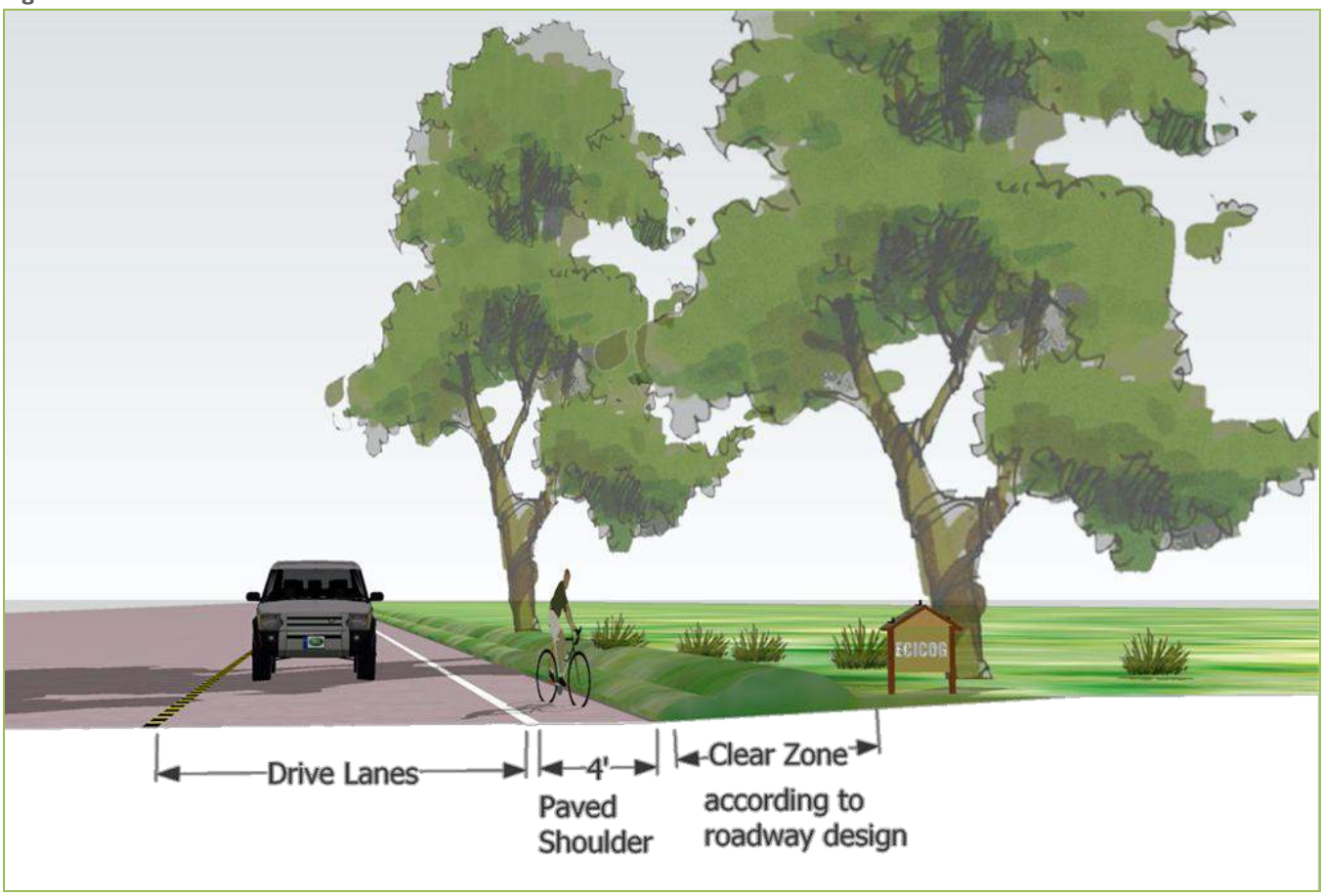
two-way bike lanes on the left side of a one-way street could be considered with a suitable separation from the motor vehicle traffic after a complete engineering study of alternatives and risks.

For roadways with no curb and gutter, the minimum width of a bike lane should be 4 feet. If parking is permitted, the bike lane should be placed between the parking area and the travel lane and have a minimum width of 5 feet. Where parking is permitted but a parking stripe or stalls are not utilized, the shared area should be a minimum of 11 feet without a curb face and 12 feet adjacent to a curb face. If the parking volume is substantial or turnover is high, and additional 1 to 2 feet or width is desirable. Bike lanes should never be placed between the parking lane and curb lane. Bike lanes between the curb and parking lane can create obstacles for bicyclists from opening car doors and poor visibility at intersections and driveways and they prohibit bicyclists from making left turns.

Paved Shoulders, Striping and Resurfacing Before and After

Figure 56 depicts a bike lane on a roadway in an outlying area without curbs and gutters. This location is an undeveloped area where infrequent parking is handled off the pavement. Bike lanes should be located within the limits of the paved shoulder at the outside edge. Bike lanes may have a minimum width of 4 feet, where the area beyond the paved shoulder can provide additional maneuvering width. A width of 5 feet or greater is preferable and additional widths are desirable where substantial truck traffic is present, or where motor vehicle speeds exceed 50 mph.

Figure 68: Dimensions for Paved Shoulders



Wide Paved Shoulders Before and After

Bike lanes should be provided with adequate drainage to prevent ponding, washouts, debris accumulation and other potentially hazardous situations for bicyclists. The drainage grates should be bicycle-safe. When an immediate replacement of an incompatible grate is not possible, a temporary

correction o0f welding thin metal straps across the grates perpendicular to the drainage slots at 4 inch center to center spacing should be considered. A smooth riding surface should be provided and utility covers should be adjusted flush with the surface. Raised pavement markings and raised barriers can cause steering difficulties for bicyclists and should not be used to delineate bicycle lanes.

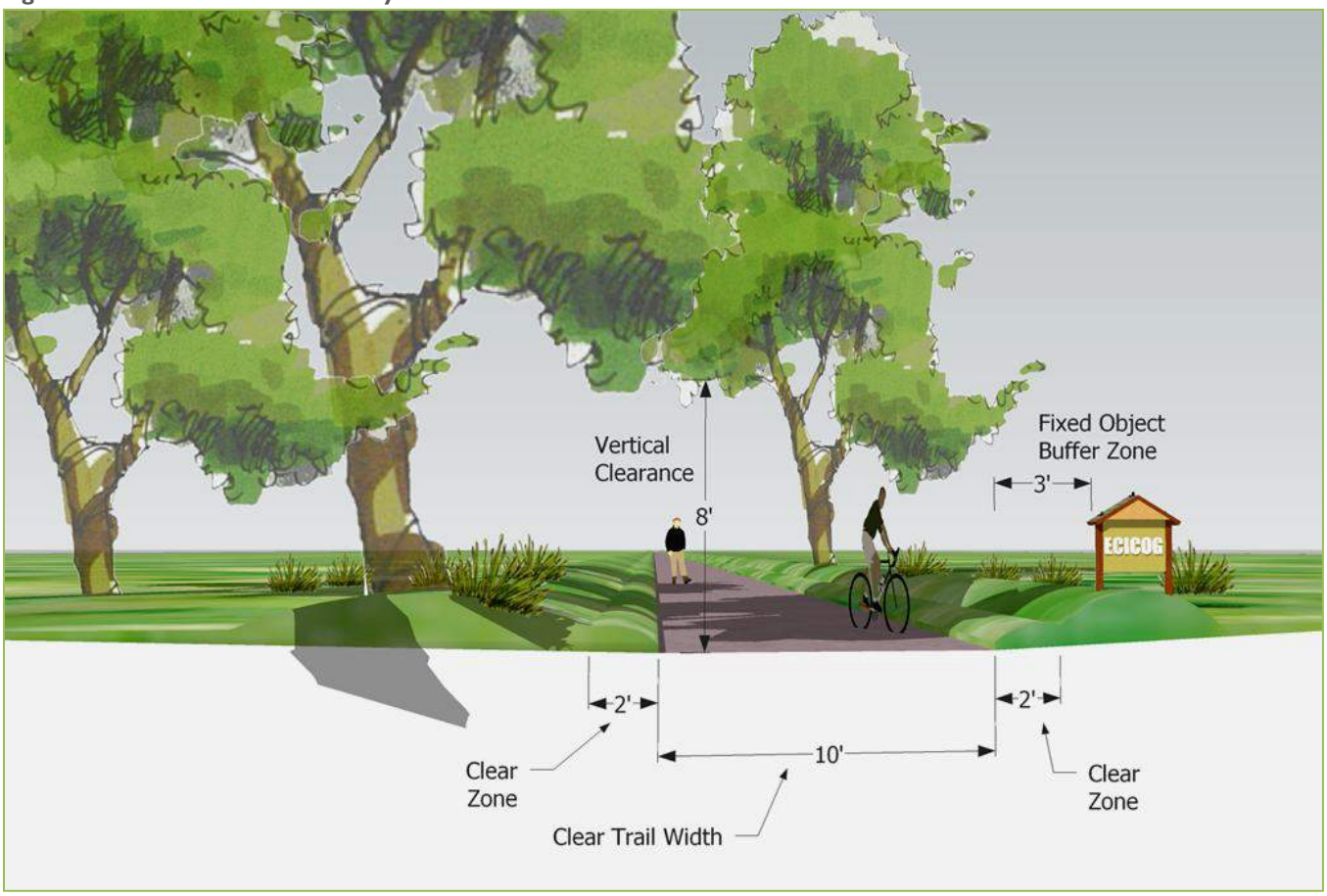
Shared Use Path

Shared use paths are facilities on exclusive right-of-way and with minimal cross flow by motor vehicles. Shared use paths are sometimes referred to as trails; however, in many states the term trail means an unimproved recreational facility. Care should be taken win using these terms interchangeably. Where shared use paths are called trails, they should meet all design criteria for shared use paths to be designated as bicycle facilities. Users are non-motorized and may include, but are not limited to: bicyclists, in-line skaters, roller skaters, wheelchair users and pedestrians, including walkers, runners, people with baby strollers, people walking dogs, etc. These facilities are most commonly designed for two-way travel, and the AASHTO guidance assumes a two-way facility is planned unless otherwise stated.

Shared use paths can serve a variety of purposes. They can provide users with a shortcut through a residential neighborhood (e.g., a connection between two cul0de-sac streets). Located in a park, they can provide an enjoyable recreational opportunity. Shared use paths can be located along rivers, ocean fronts, canals, abandoned or active railroad and utility rights of way, limited access freeways, within college campuses or within and between parks. Shared use paths can also provide bicycle access to areas that are otherwise served only by limited access highway closed to bicyclists. Appropriate locations can be identified during the planning process. Examples of shared use paths are shown below:

Figure 69: Shared use path in West Branch, Cedar County

Figure 70: Trail Dimensions for Bicycle Trails



Shared use paths should be thought of as a complementary system of off-road transportation routes for bicyclists and others that serves as a necessary extension tot eh roadway network. Shared use paths should not be used to preclude on-road bicycle facilities, but rather to supplement a system of on-road bike lanes, wide outside lanes, paved shoulders and bike routes. There are some similarities between the design criteria for shared use paths and highways (e.g. horizontal alignment, sight distance requirements, signing and markings). On the other hand, some criteria (e.g., horizontal and vertical clearance requirements, grades and pavement structure) are dictated by operating characteristics of bicycles that are substantially different from those of motor vehicles. The designer should always be aware of the similarities and differences between bicycles and motor vehicles and of how these similarities and differences influence the design of shared use paths. The remainder of this section provides guidance on each of the factors that should be considered in designing safe and functional shared use paths.

When two-way shared use paths are located immediately adjacent to a roadway, some operational problems are likely to occur. In some cases paths along highways for short sections are permissible, given an appropriate level of separation between facilities.

Some problems with paths located immediately adjacent to roadways are as follows:

1. Unless separated, they require one direction of bicycle traffic to ride against motor vehicle traffic, contrary to the normal rules of the road.

2. When the path ends, bicyclists going against traffic will tend to continue to travel on the wrong side of the street. Likewise, bicyclists approaching a shared use path often travel on the wrong side of the street in getting to the path Wrong-way travel by bicyclists is a major cause of bicycle/automobile crashes and should be discouraged at every opportunity.
3. At intersections, motorists entering or crossing the roadway often will not notice bicyclists approaching from their right, as they are not expecting contra-flow vehicles. Motorist turning to exit the roadway may likewise fail to notice the bicyclist. Even bicyclists coming from the left often go unnoticed, especially when sight distances are limited.
4. Signs posted for roadway users are backwards fro contra-flow bike traffic; therefore these cyclists are unable to read the information without stopping and turning around.
5. When the available right of way is too narrow to accommodate all highway and shared use path features, it may be prudent to consider a reduction of the existing or proposed widths of the various highway (and bikeway) cross-sectional elements (i.e., land and shoulder widths, etc.). However, any reduction to less than AASHTO Green Book (or other applicable) design criteria must be supported by a documented engineering analysis.
6. Many bicyclists will use the roadway instead of the shared use path because they have found the roadway to be more convenient, better maintained, or safer. Bicyclists using the roadway may be harassed by some motorists who feel that in all cases bicyclists should be on the adjacent path.
7. Although the shared use path should be given the same priority through intersections as the parallel highway, motorists falsely expect bicyclists to stop or yield at all cross-streets and driveways. Efforts to require or encourage bicyclists to yield or stop at each cross-street and driveway are inappropriately and frequently ignored by bicyclists.
8. Stopped cross-street motor vehicle traffic or vehicles exiting side streets or driveways may block the path crossing.
9. Because of the proximity of motor vehicle traffic to opposing bicycle traffic, barriers are often necessary to keep motor vehicles out of shared use paths and bicyclist out of traffic lanes. These barriers can represent an obstruction to bicyclists and motorists, can complicate maintenance of the facility, and can cause other problems as well.

For the above reasons, other types of bikeways are likely to be better suited to accommodate bicycle traffic along highway corridors, depending upon traffic conditions Shared use paths should not be considered a substitute for street improvements even when the path is located adjacent to the highway, because many bicyclists will find it less convenient to ride on these paths compared with the streets, particularly for utility trips.

When two-way shared use paths are located adjacent to a roadway, wide separation between a shared use path and the adjacent highway is desirable to demonstrate to both the bicyclist and the motorist that the path functions as an independent facility for bicyclists and others. When this is not possible and the distance between the shared use path and the shoulder is less than five feet, a suitable physical barrier is recommended. Such barriers serve both to prevent path users from making unwanted movements between the path and the highway shoulder and to reinforce the concept that the path is an independent facility. Where used, the barrier should be a minimum of 42 inches high, to prevent

bicyclists from toppling over it. A barrier between a shared sue path and adjacent highway should not impair sight distance at intersections, and should be designed not be a hazard to errant motorists.

Width and Clearance

The paved width and the operating width required for a shared use path are primary design considerations. Figure 18 depicts a shared use path on a separated right of way. Under most considerations, a recommended paved width for a two-directional shared use path is 10 feet. In rare instances, a reduced width of 8 feet can be adequate. This reduced width should be used only where the following conditions prevail: (1) bicycle traffic is expected to be low, even on peak days or during peak hours, (2) pedestrian use of the facility is not expected to be more than occasional, (3) there will be good horizontal and vertical alignment providing safe and frequent passing opportunities, and (4) during normal maintenance activities the path will not be subjected to maintenance vehicle loading conditions that would cause pavement edge damage. Under certain conditions it may be desirable to increase the width of a shared use path to 12 feet, or even 14 feet, due to substantial use by bicycles, joggers, skaters and pedestrians, use by large maintenance vehicles, and/or steep grades.

The minimum width of a one-directional shared use path is 6 feet. It should be recognized, however, that one-way paths often will be used as two-way facilities unless effective measures are taken to assure on-way operation. Without such enforcement, it should be assumed that shared use paths will be used as two-way facilities by both pedestrians and bicyclists and designed accordingly.

Generally, shared use paths should be used to serve corridors not served by streets and highways or where wide utility of former railroad right-of-way exists, permitting such facilities to be constructed away from the influence of parallel streets. Shared use paths should offer opportunities not provided by the road system. They can provide a recreational opportunity or, in some instances, can serve as direct commute routes if cross flow by motor vehicles and pedestrians is minimized. The most common applications are along rivers, ocean fronts, canals, utility rights-of-way, former or active railroad rights-of-way, within college campuses, or within and between parks. There may also be situations where such facilities can be provided as part of planned developments. Another common application of shared use paths is to close gaps in bicycle travel caused by construction of cul-de-sacs, railroads and freeways or to circumvent natural barriers (rivers, mountains, etc.). While shred use paths should be designed with the bicyclist's safety in mind, other users such as pedestrians, joggers, dog walkers, people pushing baby carriages, persons in wheelchairs, skate boarders, in-line skaters and others are also likely to use such paths.

In selecting the proper facility, an overriding concern is to assure that the proposed facility will not encourage or require bicyclists or motorists to operate in a manner that is inconsistent with the rules of the road. The needs of both motorists and bicyclists must be considered in selecting the appropriate type of facility.

An important consideration in selecting the type of facility is continuity. Alternating segments of shared use paths and bike lanes along a route are generally inappropriate an inconvenient because street crossings by bicyclists may be required when the route changes character. Also, wrong-way bicycle travel with a higher potential for crashes may occur on the street beyond the ends of shared use paths because of the inconvenience of having to cross the street. Sidewalks generally are not acceptable for

bicycling. However, in a few limited situations, such as on long and narrow bridges and where bicyclists are incidental of infrequent users, the sidewalk can serve as an alternate facility, provided any significant difference in height from the roadway is protected by a suitable barrier between the sidewalk and roadway.

In addition to standard design guidelines recommended by AASHTO and the Iowa Trails 2000 resource, sustainability and universal design are becoming increasingly important aspects of public infrastructure investments such as trails. Sustainable design and construction principles should be used to ensure that the construction – as well as future trail maintenance – methods reflect the best practices for environmental responsibility while maximizing economic sustainability. Additionally, universal design should be considered to create trails that can be enjoyed by a wide variety of users within each respective, intended user group. Universal design does not mean that every trail should be available for each possible type of trail user, meaning that a cycling trail need not be designed to accommodate equestrians. Rather, universal design acknowledges that all users within a specific mode have different abilities to use the trail.

To maximize the potential user group of a trail, shared use paths should be at least 5 feet in width and provide a 7 foot vertical clearance. A 2 foot shoulder is recommended to keep vegetation at bay. A maximum of 5% vertical grade is acceptable on both access ramps and the trail itself. Paved surfaces are preferred, although compacted, small diameter stone may also be acceptable in areas where paving is not practical. To maintain the integrity of the surrounding natural environment, trails may occasionally deviate from these standards. In these instances, signage should be provided at the trailhead that indicates any potential obstacles along the trail, and where those deviations occur. Beyond the design of the trail itself, provision of additional amenities can also make the trail more user-friendly. Depending on the amount of land available and the location of the trail, restrooms, water fountains and shelters should be considered at trailheads, and benches should be considered at both the trailhead and along expanses of trail greater than 300 feet. New grant funded trails must also comply with ADA requirements.

Trail signage is an aspect of the planning process that may seem simple but does need consideration. A recurring signage problem noted in the region was the creation of non-MUHTC compliant signs, which limits where signs can be placed. Trails groups should always consult with the county engineer before ordering trails signs, both because the county engineer will usually be able to provide guidance on MUHTC compliance, and also because the county engineer is often responsible for issuing permits to place signs in the road right of way. User-friendly placement of trails signs can also present problems for trails planners. By the time signs are ready to be placed, trails planners are often so familiar with the area that sufficient signage to alert those who are not familiar with the area to the precise location of the trail is not provided. Whenever possible, communities should post trails wayfinding signs at the main entrances to the community or in an area of public congregation, such as a central square, to allow visitors to the community to easily locate the trailhead.

Figure 71: Signage

FUNDING OPTIONS

CONSTRUCTION

RPA Region 10 Transportation Enhancements Program
Purpose: Fund projects related to surface transportation that provide for additional uses of infrastructure, or scenic improvements. Funds can be used for bike and pedestrian facilities, safety improvements, educational activities, landscaping and beautification, or preservation and conservation of abandoned rail corridors.
Local match: minimum of 20%
Other requirements: Project must have a total cost of at least $20,000. Project must have a relationship to surface transportation, and should meet the following criteria:
Provide facilities or improve safety for pedestrians and bicyclists.
Acquire and provide for scenic byways and scenic or historic sites
Provide for historic preservation, landscaping and scenic beautification
Cover rehabilitation and operation of historic transportation facilities and museums
Provide for environmental mitigation, archaeological planning and research.
Contact information:
East Central Iowa Council of Governments
700 16th St NE, Suite 301
Cedar Rapids, IA 52402
319-365-9941
For more information: www.ecicog.org
Application deadlines: January of each year

Statewide Transportation Enhancements Program
Purpose: Fund projects related to surface transportation that provide for additional uses of infrastructure, or scenic improvements. Funds can be used for bike and pedestrian facilities, safety improvements, educational activities, landscaping and beautification, or preservation and conversion of abandoned rail corridors
Local match: Minimum of 30%
Other requirements: Project must have a total cost of at least $100,000. Project must have a relationship to surface transportation, and meet the following criteria:
Provide facilities or improve safety for pedestrians and bicyclists
Acquire and provide for scenic byways and scenic or historic sites
Provide for historic preservation, landscaping and scenic beautification
Cover rehabilitation and operation of historic transportation facilities and museums
Provide for environmental mitigation, archaeological planning and research
Contact information:
Iowa Department of Transportation – Office of Systems Planning
Craig Markley
800 Lincoln Way
Ames, IA 50010
For more information: www.ecicog.org
Application deadlines: October of each year

State Recreational Trails Program
Purpose: Provides funds to establish recreational trails in Iowa for the use, enjoyment and participation of the public. Money can be used for trail development.
Local match: Minimum of 25%
Other requirements: Trail must be maintained as a public facility for a minimum of 20 years. Proposed projects should be part of a statewide, regional, area, or local trail plan.
Contact information:
Yvonne Diller
800 Lincoln Way
Ames, AI 50010
515-239-1252
For more information: http://www.iowadot.gov/systems_planning/fedstate_rectrails.htm
Application: July and January of each year when funding is available.

Federal Recreational Trails Program
Purpose: Develop motorized or non-motorized trails and trail facilities
Local match: Minimum of 20%
Other requirements: Proposed projects can include the following:
Maintaining and restoration of existing trails
Development and rehabilitation of trailside and trailhead facilities and trail linkages
Purchase and lease of trail construction and maintenance equipment
Construction of new trails (with restrictions for new trails on Federal lands)
Acquisition of easements or property for trails
Educational programs to promote safety and environmental protection related to trails
Funds may not be used to provide shoulders or sidewalks along roads

Iowa Clean Air Attainment Program
Purpose: Provides funds for projects that maintain a clean air quality by helping to reduce vehicle emissions. Funds can be used for trail development. This program is targeted toward urban areas with high amounts of air pollution.
Local match: Minimum of 20%
Other requirements: Application must show potential emissions reductions resulting from project.
Contact information:
Iowa Department of Transportation District Planner
Catherine Culter
PO Box 3150
Cedar Rapids, IA 52406
For more information:
Application deadline: October of each year

Land and Water Conservation Fund
Purpose: Provides funds for acquisition and development of outdoor recreation areas. Funds can be used for trails development and amenities.
Local match: Minimum 50%
Other requirements: Applicant must be a city or county
Contact information:
Iowa Department of Natural Resources
Sandra Sampson
515-281-8004
Wallace State Office Building

Des Moines, IA 50319
For more information: www.iowadnr.gov/grants/landwater.html
Application deadline: March 15, 2010

Resource Enhancement and Protection Program
Purpose: Provide 100% grants to cities and counties for open space protection and passive outdoor recreation.
Local match: None
Other Requirements: Applicant must be a city. Maximum award amount is based on population.
Contact Information:
Iowa Department of Natural Resources
Tammie Krausman
515-281-8382
Wallace State Office Building
Des Moines, IA 50319

Governmental Resources

National Park Service
Rivers, Trails and Conservation Assistance Program
www.ncrc.nps.gov/rtca
Midwest Regional Office
1709 Jackson Street
Omaha, NE 68102
(402) 221-3350

Federal Highway Administration – Iowa Division
www.fhwa.dot.gov/iadiv
105 Sixth Street
Ames, IA 50010
(515) 233-7300

Iowa Department of Transportation
Office of Systems Planning
www.dot.state.ia.us
800 Lincoln Way
Ames, IA 50010
(515) 239-1669
Programs offered:
Statewide Enhancements Program
Funds available for trail development
Minimum of 25% local match
State Recreational Trails Program

Iowa Department of Natural Resources
www.iowadnr.gov/trails
Wallace State Office Building
900 E Grand Avenue
Des Moines, IA 50319
(515) 242-4727

The Trust for Public Land
Midwest Regional Office
www.tpl.org/tpl/nearu/mwro/index.html
420 N Fifth Street, Suite 856
Minneapolis, MN 55401
(612) 338-8494

FUNDRAISING SOLUTIONS

Prepared by the Iowa Natural Heritage Foundation, January 2007

Change for the Better

Engage a local retail owner to donate $.25 into a jar on the counter for every sale he makes. Have the cashier ask each customer to match his donation. Expand this program to several retailers in all trail linked communities.

Pikes Peak Area Trails Coalition saw approximately $1000 each month from one store.

Challenge Grant

Don't let a big donor, whether a corporation or wealth community member, be the first to donate. Ask such entities if they will match what the community raises over a period of time with a minimum and/or donation.

Pikes Peak Area Trails Coalition raised $27,000 in such a challenge grant.

Businesses behind Communities

Identify a particular supportive business to donate a certain percent of each of their sale profits for one day when the costumer mentions the trail project. This could be a restaurant, retail, or any other service/retail industry. Invite the community to solicit that business heavily on that day. Both the trail and the business win.

Trips for Kids Metro DC participated in this program the Franklin's, a popular pub.

Bike Sales Tax

Ask all the local bike dealers to charge an additional $5 per bicycle sale to raise money for the local trail project. Set a time period to collect such "temporary" tax.

Program implemented in Ketchum, Idaho.

Eating, Drinking and Merriment for the Trail

Pull together local wineries, breweries, bakeries, or other specialty shops to host a tasting event. Encourage the businesses to donate their goods. After all, they will be the ones benefiting when a trail comes through the neighborhood. Advertise a targeted donation amount ($15 a person) with unlimited tasting and fun. All proceeds go to trail development. Again, both the trail and the business win.

Successfully implemented by the Trails and Open Spaces of Colorado Springs.

Woodstock Reincarnated (well… a little less)

Invite local musicians to perform an outdoor day long concert with food and beverage sales. Advertise that all or a percentage of the proceeds will go to trail development purposes. Target your larger audience. Remember, people will travel to use your trail when completed. Utilize their support now.

Successes were seen for this event in Belfast, Pennsylvania.

Dinner with an Auction

Solicit unique and desirable auction items for local crafters and merchants. Sell tickets to the dinner with a key note speaker or presentation on the trail development. Funding will come via the dinner tickets and auction items.

Trails 2000 in Durango, Colorado raised $30,000 from such an event.

Share the Trail Triathlon

Remember that bicycles aren't the only ones pounding the trails. Host a triathlon on the trail, trail right-of-way, or other designated area where bicyclists, equestrians, and runners compete in a race. Charge an entrance fee that can be divided among the winner and trail program or however else designated. Expand the event by enlisting a local restaurant of pub to offer a special on an item where the proceeds go to trail development.

This event was successfully held by the San Juan Mountains Association.

Paving the Way

Invite individuals to purchase or make a requested donation for specific items need for the construction of your community trail. Such examples could be a trail (concrete) segment or boards for bridges. Emboss or engrave community members' names if desired for more significance. Once materials are purchase it is easier to secure a volunteer group or city department to provide labor.

Legacy program implemented for Millbrook Marsh boardwalk in Pennsylvania.

Volunteer for a Bike

Engage a bicycle shop to donate a bike or other appealing prize for a drawing. Each time an individual volunteers a certain amount of time on the trail they are given the chance to enter their name into the drawing. Run the program for a season, host a celebration, and award the selected volunteer.

The Hub Bike Shop of Aspen Colorado participated in this program for its community trail development.

Plantings

• Local utility companies will often provide trees at a low cost or no cost. These can be obtained by trail groups and planted by volunteers along the trail.

Maintenance

• Adopt a Trail program runs with the same principal as Adopt a Highway. Divide your community trail into segments with signs that indicate who is in charge for that health of that area.

Amenities

• Create a "gift catalog" where individuals and families can shop for their donations. They can purchase anything from a water foundation, trail bench, interpretative signs, trees, wildflowers, or kiosks. Suggest that they can also buy a foot of the trail for $100, a ½ mile for $1,500, or a bridge for $5,000. You may not be able to completely cover the cost of the items, but they will leverage the additional funds needed.

Bikes Belong

Bikes Belong is a membership organization comprised of folks from the bicycle industry. Their mission is to encourage and support more bicycles in our communities. Funding from the Bikes Belong grant program is targeted to projects that will generate the most impact in their area. Eligible activities include bicycle trails and other bicycle facility construction.
Awards grants up to $10,000
Deadline: Quarterly (Feb 26, May 30, Aug 27, Nov 26)
Announced: April 30, July 31, Oct 31, Jan. 31
Match: No Match
Website: www.bikesbelong.org
Contact: Elizabeth Train, Grants & Research Director
(303) 449-4893

Hamburger Helper, My Hometown Helper

Hamburger Helper awards grant funding to nonprofit organizations with a goal to improve their community. Funding for trail development or maintenance is eligible. Selection is based on the merit of the project, its impact on the community, and support committed to the project by the community.
Awards grants of $1,000-$15,000
Deadline: The 15th of each month, ends May 15th
Match: No match

Website: www.hamburgerhelper.com

Trees Forever Visioning

The Trees Forever Visioning program provides towns with planning and landscape design assistance. Eligible communities must be smaller than 10,000. Trees Forever Staff and volunteers hold community design workshops and meet regularly with citizens to convey their citywide landscape vision to a series of display boards, conceptual drawings, and an implementation strategy. Greenways and trails can be included in this program
Awards grants: NA
Deadline: October 15
Announced: November
Match: $1000
Website: www.treesforever.org/content.asp?ID=2133
Contact: Pam Helfer
(800) 369-1269
phelfer@treesforever.org

Information on all funding programs was gathered on provided websites. Please be sure to contact specific programs before applying. Details may change each funding cycle.

OTHER RESOURCES

American Council of Snowmobile Associations
www.snowmobileacsa.org
271 Woodland Pass, Suite 216
East Lansing, MI 48823
(517) 351-4362

American Discovery Trail Society
www.discoverytrail.org
PO Box 20155
Washington, DC 20041
(800) 663-2387

American Hiking Society
www.americanhiking.org
1422 Fenwick Lane
Silver Spring, MD 20910
(301) 565-6704

American Trails
www.americantrails.org
PO Box 11046
Prescott, AZ 86304

(520) 632-1140

League of American Bicyclists
www.bikeleague.org
1612 K Street NW, Suite 401
Washington, DC 20006

National Off-Highway Vehicle Conservation Council
www.nohvcc.org
4718 S. Taylor Drive
Sheboygan, WI 53081
(800) 348-6487

Rails-to-Trails Conservancy
www.railtrails.org
1100 17th Street NW, 10th Floor
Washington, DC 20036
(202) 331-9696