

Grundy County 2021 REAP Plan



2017-2021 Resource Enhancement And Protection Plan

Approved: January 10, 2017

Prepared By:



INRCOG
Iowa Northland
Regional Council
Of Governments

TABLE OF CONTENTS

Overview	1
Background	1
2021 REAP Planning Process	2
REAP Committee	2
REAP Funding	2
Grundy County Resource Inventory	4
County Parks and Conservation Areas	4
City Resources	6
Historical and Cultural Resources	7
Recreational Trail System	9
Rivers and Lakes	10
Soils	11
2021 REAP Plan Action Steps	12
Mission Statement	12
Focus Area 1: Recreation	13
Focus Area 2: Wildlife Habitat	15
Focus Area 3: Water Quality	16
Focus Area 4: Education and Cultural Resources	17
Appendixes	18
Appendix 1 – Grundy County Profile	19
Appendix 2 – Historical REAP Funding for Grundy County	22
Appendix 3 – Grundy County Parks and Conservation Areas	25
Appendix 4 – Grundy County Watersheds	26
Appendix 5 – Grundy County Soils	27
Appendix 6 – Grundy County Soil Land Capability Class Map	28
Appendix 7 – Grundy County Trail Map	29
Appendix 8 – Regional Trail Map	30
Appendix 9 – Regional Bike Plan	31
Appendix 10 – Iowa American Discovery Trail Map	32
Appendix 11 – REAP Goals Trail Maps	33
Appendix 12 - Grundy County Bicycle Wayfinding Concept	37
Appendix 13 – Potential Funding Sources	38
Appendix 14 – Reference Documents and Additional Resources	40

OVERVIEW

Background

In May of 1989, the Iowa Legislature established the Resource Enhancement and Protection (REAP) Act with overwhelming bipartisan support. REAP is a state program which, as the name implies, invests in the enhancement and protection of the state's natural and cultural resources. Iowa is fortunate to have a diverse array of natural and cultural resources, and REAP is likewise diverse and far reaching. Depending on the individual programs, REAP provides money for projects through state agency budgets or in the form of grants. Several aspects of REAP also encourage private contributions that help accomplish program objectivesⁱ.

REAP is funded from the state's Environment First Fund (Iowa gaming receipts) and from the sale of the natural resource license plate. The program is authorized to receive \$20 million per year until 2021, but the state legislature sets the amount of REAP funding every year. In 2016, REAP was appropriated \$16 million. When combined with REAP license plate revenue and interest income, the program's total budget was approximately \$16.5 million.ⁱⁱ

In its 26 years of existence, REAP has benefited every county in Iowa in supporting over 14,500 projects with more than \$264 million in investments; Grundy County has received over \$900,000 in REAP funds.

REAP is divided into seven categories which are as follows:

- Open space preservation
- Land conservation
- Land management
- Historical preservation
- Open space acquisition and development
- Native roadside vegetation
- Soil and water enhancement

Each county in Iowa is required to have a REAP Committee to review and approve REAP grant applications. In the same year REAP was created, various members of local organizations joined together to create the Grundy County REAP Committee. In the years immediately following the REAP Act of 1989, REAP Committees across Iowa remained active and worked diligently towards improving and protecting the natural and cultural resources in their county. During the mid-90s, many REAP Committees became less involved in the grant review process.

2021 REAP Planning Process

Grundy County recognizes the importance of having an involved REAP Committee for the revitalization and preservation of its natural areas. In 2016, the Grundy County Conservation Board (GCCB) took proactive steps to redevelop a fully functional REAP Committee. The GCCB contracted with the Iowa Northland Regional Council of Governments (INRCOG) to lead a strategic planning process with the REAP Committee to develop a new five-year plan.

The REAP Committee held their first planning strategy meeting for the development of the 2021 REAP plan in June 2016. Invitations to participate were extended to the Board of Supervisors, the County Conservation Board, schools, city mayors and parks departments, historical organizations, economic development groups, as well as environmental and outdoor recreational groups. A total of four planning sessions were held June through October 2016. At these meetings, committee members developed a mission statement, goals, and projects. Members were encouraged to propose projects within the county that would be eligible for REAP funding within the next five years. All recommended revisions and additions incorporated into the draft document were approved by the committee.

The Grundy County Conservation Board, which initiated and funded the development of this plan, approved this plan at their January 10, 2017 Board Meeting.

Grundy County REAP Committee

One of the primary responsibilities of the Grundy County REAP Committee is to develop a plan to use the financial resources provided by the REAP Act. The plan should guide achievement of the goals set forward by the 1989 Iowa General Assembly as well as to develop a conservation and land ethic that will improve the quality of life for citizens of and visitors to Grundy County.

Currently, the REAP Committee meets to determine upcoming REAP projects and address the critical environmental needs in the county. Special meetings may also be held to make revisions to the REAP Plan as necessary. Members of the Grundy County REAP Committee can be found in Appendix 11. Additional members serve on the committee periodically, as membership is flexible in order to include multiple interest groups at different times.

REAP Funding

The state's annual REAP allocation is divided among various types of programs. From 1990 through 2014, Grundy County, and entities within, have received \$915,653 in REAP funds. A list of historic REAP funding in Grundy County is located in Appendix 2. The various REAP programs include:

City Parks and Open Space (15 percent of REAP funds)

This money is available to cities through competitive grants. The City of Grundy Center has received two grants, totaling \$80,670, for acquisition and development of a passive native prairie park.

Conservation Education (first \$350,000 of REAP funds)

A five-member board implements the Conservation Education Program (CEP), who annually allocates approximately \$350,000 in grants for conservation education in Iowa.

County Conservation (20 percent of REAP funds)

This money is available to counties for land easement or acquisition, capital improvements, stabilization and protection of resources, repair and upgrading of facilities, environmental education, and equipment. State funds are distributed to all counties as well as on a per population basis. Since REAP's inception, Grundy County Conservation Department has received approximately \$486,000 through this program.

Historical Resource Development Program (5 percent of REAP funds)

The State Historical Society in the Department of Cultural Affairs administers this portion of REAP funding. Grants are available to private individuals and businesses as well as non-profit organizations and agencies of Certified Local Governments. In 1993, the Conrad Public Library received funds to purchase a microfilm reader. The City also received \$14,900 in 1996 to establish the Conrad Heritage Hall Museum. The Grundy County Conservation Board has also received funding for climate controlled storage and for historical research into the sport of cornhusking. These public organizations have received a total of \$24,620 for projects from 1990 through 2015.

Iowa DNR Administration (1 percent of REAP funds)

After the \$350,000 Conservation Education allotment, one percent of the remaining funds are transferred to the Iowa DNR to help defray costs of REAP administration.

Iowa DNR Land Management (9 percent of REAP funds)

These funds are available to the Iowa DNR for development and management of state conservation lands. This account serves as a substitute for the state park user permit receipts which were terminated by the legislature when REAP was enacted.

Open Space Acquisition and Development (28 percent of REAP funds)

This money is allocated to DNR for state acquisition and development of land and waters. Half of this money is directed to land acquisition and half to facility developments.

One-tenth of this 28 percent is set aside to cost-share land acquisitions with private organizations. The cost-share arrangement entails 75 percent of the acquisition costs coming from REAP and the other 25 percent coming from private contributions. This program provides an excellent opportunity for private conservation organizations to help provide outdoor recreation opportunities and protect critical habitat. The DNR owns and manages the property that is jointly purchased on behalf of the public.

Roadside Vegetation (3 percent of REAP funds)

These funds are available through the Iowa Department of Transportation for state, county, and city management of roadside vegetation. Grundy County has been awarded funds to support roadside vegetation twice; in 1999 for seeding equipment (\$4,809) and again in 2002 for burn equipment (\$1,321).

Soil and Water Enhancement (20 percent of REAP funds)

This funding source is available to landowners for soil and water conservation and enhancement projects and practices. Project money is directed towards protecting the state's surface and ground water resources from point and non-point sources of contamination. Money to implement management practices is directed towards: reforestation, woodland protection and enhancement, wildlife habitat preservation and enhancement, protection of highly erodible soils, and water quality protection. Since 1990, the Grundy County Soil and Water Conservation District has received allocations totaling \$313,925.

COUNTY RESOURCE INVENTORY

County Parks and Conservation Areas

There are no federal or state parks in Grundy County, however the county has an array of publicly owned open spaces as described in this section of the plan and shown on the County Resource Map (Appendix 3). A summary of county parks and preserve areas are detailed below.

Beaman Arboretum: This five-acre arboretum sits east of Beaman. It was originally planted by Ellis Lepley in 1934 on school property and is an early example of an outdoor classroom.

Beaver Roadside Park: The park is located on Highway 14 approximately one-half mile north of the Highway 20 intersection – north of Grundy Center and south of Parkersburg. The one acre highway stop includes picnic tables, grills, toilets, and a shelter house.

Black Hawk Creek Wildlife Area: This 53-acre area is located approximately one-half mile north of Morrison. Facilities include hiking and self-guided nature trails, suspension bridge crossing Black Hawk Creek, and toilets. The habitat area is a popular destination for hiking, hunting for pheasants, rabbits and partridge, and fishing in Black Hawk Creek

Buckles Wildlife Area: Located north of Highway 175 between Morrison and Reinbeck, this 27-acre tract of habitat offers fishing and hunting for pheasants, rabbits, and partridge.

Copley-Strohbehn Preserve: This 12-acre preserve is sits northwest of Reinbeck, north of Highway 175.

Grundy County Lake: This 40-acre lake was created by the Iowa Department of Transportation (IDOT) in 1999 when barrow material was needed for highway construction. The now 255-acre park opened in 2003 and includes a boat ramp; trees and native prairie grasses; shelters; picnic facilities; 61-site modern campground; and the Phil Kruger Memorial trail which circles the lake and connects the park with nearby Dike.



Entrance Sign at Grundy County Lake

Green Wing Wetland Area: The Green Wing Wetland is a 17-acre wildlife/hunting area located north of the Copley-Strohbehn Preserve. Hunting of whitetail deer is by bow hunting permit only that is issued by the Conservation Board.

Herbert Gutnecht Park: This park is located between Morrison and Reinbeck at the junction of Highway 175 and County Road T-55. It is one acre in size with five designated campsites. There is no charge for overnight camping. There is also hand pumped running water, picnic tables, and a shelter. The restroom is a pit type with handicapped accessibility. Adjoining the edge of the park is the Pioneer Trail.



Ida M. Miller Memorial Park: This two-acre highway rest stop includes tables, grills, toilets, and a shelter house and located along Highway 175, eight miles west of Grundy Center.

J.H. Roadman Memorial Park: This ten-acre roadside park is named in memory of J.H. Roadman and contains two small fishing ponds as well as a self-guided interpretive trail. Facilities found there include picnic tables and grills, pit toilets, playground equipment, and a shelter with electricity which can be rented.

Reinbeck Greenbelt Area: Located in the City of Reinbeck, this 67-acre greenbelt provides camping, fishing, hunting for pheasants, rabbits, and partridge. It also has space available for snowmobiling, hiking, equestrian trails, and a horse riding arena. There are also 25, 50 and 100 yard shooting ranges and a field archery range.

Shearn Memorial Park: This one-half acre roadside park has picnic tables, water, toilets, and a shelter house. The park is located between Morrison and Grundy Center at the corner of Highway 175 and Q Avenue.

Stoehr Fishing Area: On this five-acre area you will find two spring-fed fishing ponds that are about one acre each in size. Facilities here include a shelter house with electricity, picnic tables, pit-style toilet, and a fishing pier - all are handicapped accessible. Grills are available for cooking out and the area allows overnight camping. Fish species stocked in the ponds include channel catfish, largemouth bass, and bluegills.

Wolf Creek Recreation Area: This 93-acre multi-purpose recreational area provides visitors with opportunities to enjoy picnicking, hiking, hunting for rabbits and pheasants, and fishing. Other amenities include a shelter house, playground equipment, pit toilets, and 22 designated camping areas, eleven of which have electric hookups.

Wolfe Family Preserve: This 19-acre tract is located one mile east of Grundy Center. The Pioneer Trail winds through the stately Bur Oak Trees and past the man-made wetland found in this area.



City Resources

City of Beaman: Located downtown, Beaman City Park contains several mature trees and includes a shelter house, picnic tables, band shelter, and playground equipment.

City of Conrad: Four Season Park, located on Lillian Street adjacent to the water tower, includes playground equipment, open space, and a baseball diamond. Oakland Trail Park is located west of Grundy Avenue and can be accessed via Comet Trail. The scenic park includes picnic areas and a deck overlooking Wolf Creek. Reunion Park is located on Main Street and features a shelter house, picnic tables, open space, restrooms, playground equipment, aquatic center, basketball court, and a sand volleyball court.

City of Dike: City Park offers a shelter, memorial building, nature trail, playground, grills, picnic tables, and open areas. The shelter can be reserved through the city.

City of Grundy Center: The city has four parks, including Liberty Park, featuring tennis courts, playground, shelter house, and bathroom facilities; Orion Park is home of the Herbert Quick Schoolhouse, a shelter house, as well as playground and bathroom facilities; Bel Pre Park; Fantasy Funland; and Kiwanis Park, a head of the Pioneer Trail.

City of Morrison: The city is home of the following county resources: Grundy County Conservation offices, Grundy County Museum, and a portion of Pioneer Trail, stretching from Reinbeck to Grundy Center.

City of Reinbeck: Elmwood Park, pictured to the right, offers soccer, baseball, and softball fields along with a swimming pool, basketball, tennis courts, and playground equipment. Strohbahn Park, a favorite of residents and wildlife, combines the solitude of Black Hawk Creek with undeveloped woodlands.



Elmwood Park, Reinbeck

City of Wellsburg: The community is home to two parks. Memorial Park, located on Washington Street, features an enclosed shelter house, bathrooms, open space, and a playground area. Blythe Memorial Park is located in between the city swimming pool and Meadowbrook Golf Course. The park has a small open shelter, play area, and a sand volleyball court.

Historical and Cultural Resources

City Libraries: There are five public libraries in the county, located in the cities of Beaman, Conrad, Dike, Grundy Center, and Wellsburg. The Kling Memorial Library in Grundy Center has a “Local History Room” including historical plat maps, cemetery records, as well as microfilm and digitized copies of the Grundy Center Newspaper, from 1868-2008.

Chris Neessen House: Located in Wellsburg, the house earned a spot on the National Register of Historic Places in 1984. The house is recognized for its architectural significance. The National Register nomination papers state that the house, “...is a remarkably well preserved example of Prairie School design.”

Grundy County Barn Quilts: “The Barn Quilt concept was brought to Grundy County, Iowa in the fall of 2003 as a way to bring visitors off of newly completed Highway 20 and back into the heart of Grundy County. Designed to highlight the rural, agricultural heritage of Grundy County, as well as the important folk art of quilting, the Barn Quilt Loop features large patchwork quilt blocks that have been painted onto the sides of barns and other farm buildings in the area. These designs range in size from 8'x8' to 12'x12' and are painted either directly onto the sides of the buildings, or onto a plywood frame and mounted to the side of the structure.”ⁱⁱⁱ

Grundy County Courthouse: Located in Grundy Center, the county courthouse was built in 1891. According to Iowa Judicial Branch, “In 1857 a building for county business was built and it was known as the ‘Old Cheese Box’. It was the only county courthouse in the state of Iowa that was octagonal in shape. This eight-sided building served the county for forty years until the second and present courthouse was finished in 1891. This imposing stone castle was constructed for \$45,532.48. The contractor used the best materials and workmanship so that even today, the courthouse is in nearly its original state.” The facility was placed on the National Register of Historic Places in 1981.

Grundy County Museum: The Grundy County Museum grounds are located in Morrison as part of the County Conservation Office. Historical Buildings include:

Colfax #3: Originally located in Colfax, the one-room school house is one of the earliest in the county, having been constructed in the 1870s. The building was moved to the museum grounds, restored, and finished to the 1880-1900 period.

Heritage Center and Agricultural Hall: The museum features interpretive displays, including: “From Grassland to Granaries”, a 90-foot diorama depicting the transformation of Grundy County from prairie to farmland. The location also features a portion of a house from 1900 and a salvaged barn, originally built in 1899. The building is also houses the Grundy County Conservation Offices.

Museum Building: This portion of the grounds includes displays of a wide variety of artifacts from Grundy County’s cultural past as well as natural history displays, wildlife mounts, and an aquarium room.

Peck Log Cabin: William Peck is credited as the first permanent white settler in Grundy County, having moved to the county in 1853. The log cabin Mr. Peck lived in when he first settled was dismantled, restored, and moved to the museum grounds in 1978. The cabin is furnished as it might have looked in 1853. ^{iv}

Silos & Smokestacks: The non-profit organization was created to support development of regional heritage tourism and share the story of American agriculture. Silos & Smokestacks is a 37-county region in Northeast Iowa covering over 20,000 square miles. A federally designated National Heritage area, it functions as an Affiliated Area of the National Park Service.



Recreational Trails

The current shared-use trail network in Grundy County is shown in Appendixes 7 and 8. The majority of trails are off-road facilities connecting parks and other outdoor recreation destinations. Most trails are eight to ten feet in width and are hard-surfaced with concrete or asphalt. Some portions of trails are granular limestone products. There are a number of gaps in regional trails, which require users to use on-road accommodations. One of the goals identified in this planning process is connecting existing trails and developing direction signage for on-road accommodations. Appendix 10 is a Preliminary Concept Map identifying the location and type of signage.

American Discovery Trail: The American Discovery Trail (ADT), a nationally significant trail encompassing over 6,800 miles across 15 states, is the only coast-to-coast non-motorized trail in the nation.

The ADT travels through the southern half of the county using a combination of shared county roads as well as Pioneer Trail and Comet Trail. The trail crosses into Grundy County in the southeast corner of the county, traveling west from the City of Hudson with on-road accommodation (sharing) on County Road D35. The shared roadway portion of the trail turns south until reaching Morrison, where it links with the Pioneer trail, connecting to Grundy Center, northwest of Morrison. The trail exits on the south side of Grundy Center, sharing County Road T37 until reaching Beaman. From Beaman, the ADT connects to Pioneer trail, which travels between Beaman and Conrad. From Conrad, the trail continues west, sharing County Road D67, into Hardin County. A map of the portion of the ADT that travels through Iowa is located in Appendix 9.

Comet Trail: This multi-purpose recreational trail, which was formerly a railroad bed, has trailhead locations at Wolf Creek Recreation Area, Beaman, and Conrad. Starting from inside the park, a 0.5 mile spur of the trail uses a 72' suspension bridge to cross Wolf Creek and intersects with the main trail. From this intersection, the trail runs west to the towns of Beaman and then on to Conrad. The trail runs east 1.5 miles towards the town of Gladbrook. In total, the Comet Trail is 6.5 miles long. Outdoor recreation opportunities on the trail are hiking, running, biking, and cross country skiing. No motorized vehicles of any sort are allowed on the trail and there are no horses allowed. Hunting is also prohibited. An abundance of wildlife can be observed along the trail including whitetailed deer, ringneck pheasant, and numerous rabbits and songbirds.



Pioneer Trail: This trail was once an active railroad bed that served as a vital link to the largely agricultural communities of Holland, Grundy Center, Morrison, and Reinbeck. Today the trail stretches for 12 miles from Reinbeck to Holland connecting these four towns. The Pioneer Trail has a surface of crushed and compacted limestone. Outdoor recreation activities include hiking, running, bike riding, and cross country skiing. Horseback riding is allowed along a mowed grass trail that parallels the limestone trail. Activities that are prohibited are all motorized vehicles and hunting. There are eight Conservation Board areas that are easily accessible from the trail. These include the Holland Marsh, Wolfe Family Preserve, Shearn Park, Grundy County Heritage Museum, Buckles Wildlife Area, Gutknecht Park, Copley-Strohbehn Preserve, and the Reinbeck section of the Grundy County Greenbelt.

Phil Kruger Memorial Trail: The Phil Kruger Memorial Trail loops entirely around Grundy County Lake with a spur that connects to the campground. The asphalt surface trail connects to another trail maintained by the City of Dike that goes through town to the recreational complex.

Rivers and Lakes

The major water resources of Grundy County include Black Hawk Creek, Beaver Creek, Grundy County Lake, and the Stoehr Fishing Area. The county's drainage basins and watershed are shown on Appendix 4.

Black Hawk Creek: Originating northwest of Holland, Black Hawk Creek is a tributary of the Cedar River. From Holland, the stream flows southeast through Grundy Center, Morrison, and then Reinbeck. From Reinbeck, the creek changes directions, to the northeast, and travels through the City of Hudson (approximately eight miles northeast of Reinbeck, in Black Hawk County) to the Cedar River in Waterloo. Black Hawk Creek is home to river otters, badgers, beavers, fox, coyote, mink, and deer. The creek also provides seasonal habitat for Iowa waterfowl.

Although not a state designated water trail, the portion of the creek from Grundy Center to Waterloo is popular among kayakers and canoers. The creek's beds and banks are privately owned.

Grundy County Lake: Located southwest of the City of Dike, adjacent to Highway 20, Grundy County Lake is a popular destination for people who enjoy fishing for black crappie, bluegill, channel catfish, largemouth bass, and walleye. The 40 acre lake has a maximum depth of 30 feet. Other amenities at the lake include a picnic area, beach, trails, playground, restrooms, fishing jetting, accessible pier, boat access and a hard surfaced boat ramp.

Stoehr Fishing Area: Located southeast of Wellsburg, the area is home to two spring-fed fishing ponds, approximately one-acre each in size. The recreation area includes a shelter house, picnic tables, toilets, and a fishing pier – all of which are handicapped accessible. The site also has grills, open space, and allows overnight camping.

Soils

As with many counties in the state, one of Grundy County’s most valuable resources is the rich soil upon which it sits. The soils and drainage patterns of Grundy County have provided an excellent base for the Midwest agriculture.

Grundy County is one of the most intensely farmed counties in the state. A 2009 Iowa State University Extension county profile determined that 315,968 of the county’s 321,629 acres, or 98 percent, of land in Grundy County was farmland.^v

There are seven major soil types existing in Grundy County. Table 1 provides descriptions of these soil types. Seventy-five (75) percent of the planning area has soils with slopes of 5 percent or less. See Appendixes 5 and 6 for maps of Grundy County soils and land capability class.

Table 1: Grundy County Soil Types	
Soil Type	Description
Marshan-Coland-Flagler	Nearly level to moderately sloping, poorly drained and somewhat excessively drained soils that formed in loamy sediment underlain by loamy, sandy, or gravelly alluvial sediment; on stream benches and bottom lands.
Cresco-Kenyon-Clyde	Nearly level to strongly sloping, moderately well drained and poorly drained soils that formed in loamy sediment and the underlying glacial till; on uplands.
Dickinson-Sparta	Nearly level to strongly sloping, well drained to excessively drained soils that formed in loamy and sandy material; on uplands.
Dinsdale-Klinger-Maxfield	Nearly level to moderately sloping, well drained, somewhat poorly drained, and poorly drained soils that formed in loess and the underlying glacial till; on uplands.
Mt. Carroll-Downs-Garwin	Nearly level to steep, well drained and poorly drained soils that formed in loess; on uplands.
Kenyon-Clyde-Floyd	Nearly level to stronger sloping, moderately well drained to poorly drained soils that formed in loamy sediment and the underlying glacial till; on uplands.
Rockton-Ostrander	Nearly level to moderately sloping, well drained soils that formed in loamy sediment and the underlying glacial till and limestone residuum; on uplands.

2021 REAP PLAN ACTION STEPS

The mission of the Grundy County Resource Enhancement And Protection (REAP) Committee is to preserve and enhance the county's natural resources while improving the quality of life of Grundy County residents.

Based on the charge of the REAP program and the Grundy County REAP Committee's mission statement, the committee identified four county-wide focus areas: Recreation, Wildlife Habitat, Water Quality, and Education and Cultural Resources. For each of these focus areas, the committee developed general policy goals. Under some goals, more specific action steps are detailed as well. This section of the plan articulates the four focus areas and the goals and objectives.

Focus Areas

- 1) Recreation**
- 2) Wildlife Habitat**
- 3) Water Quality**
- 4) Education and Cultural Resources**

Focus Area 1: Recreation

A) Connect regional multi-use recreational trails

- 1) Complete section of Pioneer Trail through Wolfe Family preserve, connecting the cities of Grundy Center and Reinbeck.

Located just southeast of Grundy Center, there is currently a gap in the Pioneer Trail through the Wolfe Family Preserve, approximately 0.75 miles long. See page 35, of Appendix 11, for a map the project location.

- 2) Connect uncompleted section of Pioneer trail, west of Reinbeck, between Highway T55 and the City of Reinbeck

Complete missing trail link, approximately one mile in length along Black Hawk Creek, between the western edges of the city limits of Reinbeck to a finished portion of Pioneer Trail at Gutknecht Roadside Park. See page 36, of Appendix 11, for a map the project location.

- 3) Develop and place signage along regional trails informing users of distances, approximate travel time, and location information

Trail route direction and interpretive signage should be placed along key locations of county trails to assist trail users with navigation and provide environmental and natural history education.

- 4) Develop and place signage along on-road bicycle routes which currently connect local and regional trails

Due to gaps in regional trails and communities, trail users (primarily bicyclists) often must travel on-road from one trail to the next. Signage should be developed and placed along select roadways directing on-road bicyclists to trail routes. See Appendix 12 for a Preliminary Concept map for on-road bicycle signage locations.

B) Develop recreational trails systems within cities

- 1) Further develop the City of Reinbeck's trails system to provide greater connectivity to the Pioneer Trail

Increase connectivity between Pioneer Trail, Reinbeck Shooting Range, Elmwood Park Trail, and downtown area.

C) Pave high use trail areas

- 1) Section of Pioneer Trail within Grundy Center

The 12-mile trail stretches from Holland, southeast through Grundy Center, Morrison, to Reinbeck. A majority of the trail is crushed limestone. The portion of trail still needing to be paved in Grundy Center is approximately 0.85 miles and is located on the eastern edge of the city. See page 37, of Appendix 11, for a map the project location.

- 2) Section of Comet Trail within the City of Conrad

The 6.5 mile Pioneer Trail enters Conrad on the north end of town, and from Conrad travels east, through Beaman, to the Wolf Creek Recreation Area. The high use section includes the portion of trail which travels around the western and southern edges of Conrad and serves a part of the city's trails system. See page 38, of Appendix 11, for a map the project location.

D) Develop new and modernize existing Campgrounds and Systems	
1) Add primitive camping area at Grundy County Lake	<i>The 225 acre recreational area includes a 40-acre lake, boat ramp, hiking/biking trail, shelter and picnic areas, and 61 modern camping facilities.</i>
2) Implement online reservation system	<i>Explore opportunities to set up an online camping registration system. Potential options include a reservation system through mycountyparks.com or through the county's website.</i>
3) Develop a campground in Strohbehn Park in Reinbeck	<i>Located along the north side of the city limits, the park features undeveloped woodland habitat and is bisected by Black Hawk Creek. The Reinbeck Shooting Range is located immediately to the south of the park and the Pioneer Trail travels along the southern border of the park as well.</i>
E) Construct and maintain recreational infrastructure to meet the needs of county residents	
1) Develop a fish cleaning station at Grundy County Lake	<i>A former borrow pit acquired from the DOT in 2002, Grundy County Lake was stocked with channel catfish, largemouth bass, walleye, crappie, and bluegills. Popularity of fishing, as well as the fish, has grown since developing the need for this project.</i>
2) Upgrade pit toilet facilities at Wolf Creek Recreational Area	<i>East of Beaman, the 93 acre park has 22 camp sites, picnic tables, and grills as well as a shelter house with water and electricity</i>
3) Upgrade playground equipment at Wolfe Creek	<i>The existing composite playground is in need of replacement.</i>
4) Acquire land, as available, for wildlife habitat and public hunting with an emphasis on spaces adjacent to existing wildlife areas.	<i>In order to expand continuous habitat, priority should be placed on acquiring lands adjacent to existing public areas.</i>
5) Maintain Greenbelt Shooting Range in Reinbeck, including: replacing shooting benches; and road, culvert, or other infrastructure improvements to prevent road flooding	<i>The Shooting Range is located in the northwest corner of Reinbeck, next to Pioneer Trail. The popular destination's facilities and infrastructure needs to be maintained and enhance,d as needed, to meet the demand of area residents.</i>

Focus Area 2: Wildlife Habitat

A) Develop and Expand Greenbelts	
1) Include habitat development and/or maintenance along new recreational trail developments	<i>When new recreational trails are being built or existing trails expanded, the project should consider opportunities to plant native species and develop habitat along the trails.</i>
2) Develop greenbelt surrounding North Fork Black Hawk Creek, northwest of Grundy County Lake	<i>Maintain and expand areas of undeveloped land. Developing and maintaining greenbelts are important in providing wildlife habitat, vegetation, and open space.</i>
3) Develop greenbelt around the South Fork of Beaver Creek	
4) Develop greenbelt between Reinbeck and County Road T55	<i>CR T55 (U Avenue) is a north/south road. The road passes west of Reinbeck while crossing Black Hawk Creek. An opportunity for a greenbelt has been identified between Elmwood Park (on west end of the City) and CR T55.</i>
B) Manage Invasive Species	
1) Remove Honey Suckle in county-owned woodlands	<i>Exotic Bush Honeysuckles are native to Eurasia and can generally be described as deciduous shrubs ranging from six to 15 feet in height. Varieties of honeysuckle are most often found on forest edge, pasture, roadsides, upland habitat and woodlands. Invasive honeysuckles, which spread rapidly, form dense shrub layers which crowd and shade native plant species. The plants are also known to release chemicals toxic to some native species.^{vi}</i>
2) Monitor for Emerald Ash Borer in county and cities as well as begin treatment/removal of Ash trees	<i>Emerald Ash Borer is a beetle, native to Asia, which feeds off of ash species. The beetle has been found in counties adjacent to Grundy County. Ash trees will need to be removed and replaced in key locations along trails and in public parks to ensure public safety and future enjoyment of these areas. Lost ash trees should be replaced with a variety of tree species to promote diversity to help limit the effects of future tree insect or disease outbreaks.</i>
C) Improve county-owned timber stand	
	<i>Manage county-owned woodlands to promote faster and better growth, low thinning, cull tree removal, and invasive species removal.</i>
D) Continue and expand native planting program along secondary roads	
	<i>Of land that is owned by the county, a significant amount is the roadways and right-of-ways along roads. Because of this, native plantings, which provide critical habitat, should be promoted. County roads are managed by the county's Secondary Roads/Engineering Department.</i>

Focus Area 3: Water Quality	
A) Coordinate locally and regionally to address water quality and flood mitigation improvements at the watershed level.	<i>Regional partnerships will be needed to implement watershed initiatives</i>
1) Participate in and support the regional efforts of the Cedar River Watershed Coalition, specifically the Middle Cedar Watershed.	<i>The Cedar River Watershed Coalition's purpose is to facilitate cooperation within the watershed and to organize and advocate for land practices and policies that will reduce future flood damage and improve water quality.</i>
B) Acquire and restore wetlands	<i>Over the past 150 years, over 90 percent of wetlands in Iowa have been drained for agriculture and development.^{vii} Wetlands serve as the buffer between land and water. Wetlands provide habitat for plants and animals, provide pollutant/sediment filters from runoff, and mitigate flooding being able to hold excess water.</i>
1) Restore silted wetland areas at Grundy County Lake	<i>Adjacent to Grundy County Lake southwest of Dike, see Appendix 3 for location.</i>
C) Promote land management practices to improve water quality and mitigate flooding	<i>Work with private land owners, the Grundy County Conservation Board, Soil and Water District, Iowa State Extension Services, and other agencies or nonprofit organizations to purchase easements or promote and implement programs to establish land areas to serve as buffers along water for both urban and rural land uses.</i>
1) Hold events with demonstrations and testimonials of best practices	<i>Sponsor demonstration projects and testimonials featuring management practices; continue to hold events at county fair.</i>
D) Include water quality and storm water management considerations in new development agreements	<i>To prevent and reduce runoff through infiltration practices in order to improve water quality, reduce stream bank erosion, control local flooding.</i>

Focus Area 4: Education and Cultural Resources	
A) Add full-time naturalist position for County Conservation Board	<i>Due to demand, GCCB naturalists currently focus their resources on providing on-site and as-requested programming. A new naturalist position is needed to focus on outreach programs, classroom presentations, and local events.</i>
B) Develop Wayside visitor centers along recreational trails system	<i>Establish locations along county trails providing users with location and route information as well as information about the environment and natural history of the area.</i>
1) In Morrison, along Pioneer Trail	<i>The 12 mile Pioneer Trail stretches from Reinbeck to Morrison, Grundy Center, and Holland. It is also part of the nationally recognized coast-to-coast American Discovery Trail.</i>
C) Preserve and Restore historic buildings and culture throughout the county, including	<i>Maintaining historic structure, culture, and traditions are important in preserving the county's history.</i>
1) Morrison Post Office and Church	<i>The city supports the preservation of these two buildings which hold historical significance to the town of Morrison.</i>
2) Develop monument/museum in Reinbeck featuring the historical importance and influence of railroads on the city and region	<i>The railroad was a key driver in development of the City of Reinbeck as well as the county as a whole. The Chicago & North Western (C&NW) Railroad that passed through town was abandoned in the 1980s. After the closure, Pioneer Trail was developed and now travels atop the former railroad line.</i>
D) Maintain and further promote the Grundy County Museum Grounds in Morrison	<i>The museum includes a wide variety of artifacts from Grundy County's cultural past and also includes natural history displays of wildlife mounts and aquariums.</i>
1) Update Brick School House's taxidermy mounts	<i>The aged taxidermy mounts are in need of refurbishing or replacement.</i>
E) Preserve and digitize newspapers and other public records to retain the county's history.	<i>Update historic documents, including digitizing records to preserve and increase their availability to the public.</i>

APPENDIXES

Appendix 1 – Grundy County Profile.....	19
Appendix 2 – Historical REAP Funding for Grundy County.....	22
Appendix 3 – Grundy County Parks and Conservation Areas.....	25
Appendix 4 – Grundy County Watersheds	26
Appendix 5 – Grundy County Soils.....	27
Appendix 6 – Grundy County Soil Land Capability Class Map	28
Appendix 7 – Grundy County Trail Map	29
Appendix 8 – Regional Trail Map	30
Appendix 9 – Regional Bike Plan.....	31
Appendix 10 – Iowa American Discovery Trail Map	32
Appendix 11 – REAP Goals Trail Maps	33
Appendix 12 - Grundy County Bicycle Wayfinding Concept.....	37
Appendix 13 –Potential Funding Source	38
Appendix 14 –Reference Documents and Additional Resources.....	40

APPENDIX 1: GRUNDY COUNTY PROFILE

County Overview

Grundy County was formed on January 15, 1851, and became self-governing in 1856. It was named after Felix Grundy of Tennessee, a statesman, Senator, member of the House of Representatives and Attorney General under President James K. Polk.

Grundy County is located in the Northeastern quadrant of the State of Iowa. The county includes a number of incorporated cities including, in alphabetical order: Beaman, Conrad, Dike, Grundy Center, Holland, Morrison, Reinbeck, Stout and Wellsburg. The county's population is the sixty-fourth largest in the state with 12,453 residents (2010 Census). Grundy Center is the county seat, located near the center of the county, at the junction of State Highways 14 and 175.

Climate

The county experiences cold, snowy winters with humid, hot summers. The climate is located in the polar front zone, the battleground of polar and tropical air masses. Being far removed from moderating influences of a large body of water, seasonal contrasts are quite distinctive and weather highly variable. Ample precipitation throughout the year is increased in the summer by invading maritime tropical air masses from the Gulf of Mexico. Cold winters are dominated by continental polar masses from the arctic regions.

The annual precipitation ranges from about 31.5 inches to 32.5 inches. Approximately 71 percent of a year's precipitation falls during the months of April through September. Precipitation can be expected to exceed one-half inch or more 20 days per year, and one-tenth inch or more 56 days a year. Precipitation can occur in amounts of multiple inches within one hour or less during intense rainstorms. These storms, usually associated with extreme humidity, are capable of causing extensive damage to infrastructure. Oftentimes it is the intensity of these rainstorms that are as telling as the frequency or duration. An extremely intense rainfall can render detention basins and small streams useless due to the extreme speed of onset of surface flow.

The annual temperature range is large, typical of a continental climate, with January, the coldest month, averaging 18.6 degrees Fahrenheit. July is the warmest month averaging 74.3 degrees Fahrenheit.

Natural Environment

The county's terrain is generally a flat to rolling slope topography that characterizes the agricultural areas of northeast Iowa. There are several areas of steeper than normal slope with these being dispersed throughout the county adjacent to watercourses. The highest elevation in the county, at 1,151 feet above mean sea level, is near the central-western border with Franklin County, and the lowest elevation, 885 feet above mean sea level, is found in the northwestern corner of the county.

The most visible geographic feature within the county is Beaver Creek and Black Hawk Creek. Beaver Creek does not flow through any cities and Black Hawk Creek flows through Grundy Center, Morrison, Reinbeck and Dike. See Appendix 4 for a map of watersheds within the county.

Vegetation

The vast majority of rural Grundy County is planted or sowed for corn and soybeans. According to a 2009 Iowa State University Extension survey, 98 percent of the county’s land area (315,968-acres) is farmland. Grass and brush are present in uncultivated and undeveloped areas of the county. Trees and grasses are often incorporated with otherwise urbanized areas in the county for aesthetics, shade, or erosion control.

Due to the farming nature of the county, there are problems associated with cultivation methods used in the rural areas. The high percentage of cultivated land and the relatively low percentage of conservation methods used in farming cause excessive runoff to occur during rain events. This can lead to problems including flooding, phosphate and nitrate levels, sedimentary, as well as erosion and silting in and around bridges and drainage ditches.

Population

Table 2 illustrates the population trends for Grundy County, its incorporated communities, and the State of Iowa for the past 30 years. From 1980 through 2010, the county population decreased by nearly 14 percent, from 14,366 to 12,453 residents.

Table 2: Population Trends in Grundy County, Iowa					
Community	1980 Population	1990 Population	2000 Population	2010 Population	% Change 2000-2010
Beaman	219	183	210	191	-9.0
Conrad	1,133	964	1,055	1,108	+5.0
Dike	987	875	944	1,209	+28.1
Grundy Center	2,880	2,491	2,596	2,706	+4.2
Holland	278	215	250	282	+12.8
Morrison	146	125	97	94	-3.1
Reinbeck	1,808	1,605	1,751	1,664	-4.9
Stout	190	192	217	224	+3.2
Wellsburg	761	682	716	707	-1.3
Grundy County (Unincorp. Area)	5,964	4,697	4,533	4,268	-5.8
Grundy County (total)	14,366	12,029	12,369	12,453	+0.7
State of Iowa	2,913,808	2,776,755	2,926,324	3,046,355	+4.1
<i>Source: U.S. Census Bureau</i>					

Economy

As Table 3 reveals, a large percentage of Grundy County residents are employed in the education, health and social services industry, similar to the rest of the State. Grundy County has four public school districts providing K-12 education and employment. These districts include: BCLUW (Conrad) Community School, Dike-New Hartford Community School, Gladbrook-Reinbeck Community School, and Grundy Center Community School.

Table 3: Grundy County Employment by Industry		
Industry	Estimated # of Employees	Percent of
Educational services, and health care and social assistance	1,419	23.2%
Manufacturing	993	16.3%
Retail trade	771	12.6%
Construction	517	8.5%
Agriculture, forestry, fishing and hunting, and mining	505	8.3%
Finance and insurance, and real estate and rental and leasing	358	5.9%
Professional, scientific, and management, and administrative and waste management services	278	4.6%
Other services, except public administration	282	4.6%
Wholesale trade	266	4.4%
Transportation and warehousing, and utilities	250	4.1%
Arts, entertainment, and recreation, and accommodation and food services	247	4.0%
Public administration	161	2.6%
Information	62	1.0%
Total	6,109	100%
<i>Source: American Community Survey 2010-2014 5 Year Averages</i>		

Manufacturing is the second highest industry and employs 16.3 percent of county workforce. There are industrial parks located Grundy County (9.5 acres), Grundy Center (20 acres), and Wellsburg (10 acres). The table also shows the rural environment of the county, with 8.3 percent employment in the agricultural, forestry, fishing and hunting, and mining industry.

Agriculture is a major economic driver for the county. The same extension study found that agriculture provides nearly 30 percent of Grundy County's total workforce, much higher than the 16.5 percent statewide average. In 2009, the total value of Grundy County's agricultural production was \$294.10 million.

According to Iowa Workforce Development data, Grundy County has experienced a decrease in the county's annual unemployment rate since 2010. In 2015, the county's year-long unemployment rate was 3.7 percent.

APPENDIX 2: REAP FUNDING HISTORY

City Parks and Open Space

Recipient: City of Grundy Center

FY	1998	Arboretum & Native Prairie Acq. & Dev.	\$ 49,000
FY	2000	Prairie Passive Park	\$ 32,670
Total:			\$ 81,670

County Conservation

Recipient: County Special REAP Account

FY	1990	Per county allocations	\$ 9,086
FY	1990	Per population allocations	\$ 4,031
FY	1991	Per population allocations	\$ 5,462
FY	1991	Per county allocations	\$ 12,415
FY	1992	Per population allocations	\$ 3,213
FY	1992	Per county allocations	\$ 6,121
FY	1993	Per population allocations	\$ 2,171
FY	1993	Per county allocations	\$ 4,917
FY	1994	Per population allocations	\$ 2,030
FY	1994	Per county allocations	\$ 4,288
FY	1995	Per county allocations	\$ 4,587
FY	1995	Per population allocations	\$ 2,165
FY	1996	Per county allocations	\$ 5,527
FY	1996	Per population allocations	\$ 2,520
FY	1997	Per county allocations	\$ 6,054
FY	1997	Per population allocations	\$ 2,765
FY	1998	Per population allocations	\$ 2,779
FY	1998	Per county allocations	\$ 5,992
FY	1999	Per population allocations	\$ 2,573
FY	1999	Per county allocations	\$ 5,785
FY	2000	Per county allocations	\$ 6,695
FY	2000	Per population allocations	\$ 2,975
FY	2001	Per population allocations	\$ 3,004
FY	2001	Per county allocations	\$ 6,759
FY	2002	Per county allocations	\$ 4,680
FY	2002	Per population allocations	\$ 2,014
FY	2003	Per county allocations	\$ 183
FY	2003	Per population allocations	\$ 78
FY	2004	Per population allocations	\$ 2,894
FY	2004	Per county allocations	\$ 6,782
FY	2005	Per county allocations	\$ 6,705
FY	2005	Per population allocations	\$ 2,881
FY	2006	Per population allocations	\$ 2,995
FY	2006	Per county allocations	\$ 7,007
FY	2007	Per population allocations	\$ 2,935
FY	2007	Per county allocations	\$ 6,901

FY	2008	Per county allocations	\$	9,627
FY	2008	Per population allocations	\$	4,079
FY	2009	Per county allocations	\$	11,130
FY	2009	Per population allocations	\$	4,736
FY	2010	Per population allocations	\$	4,600
FY	2010	Per county allocations	\$	10,858
FY	2011	Per county allocations	\$	9,148
FY	2011	Per population allocations	\$	4,006
FY	2012	Per population allocations	\$	3,147
FY	2012	Per county allocations	\$	7,362
FY	2013	Per population allocations	\$	2,931
FY	2013	Per county allocations	\$	6,891
FY	2014	Per population allocations	\$	3,948
FY	2014	Per county allocations	\$	9,848
FY	2015	Per county allocations	\$	9,653
FY	2015	Per population allocations	\$	3,873

Recipient: Grundy CCB

FY	2001	Black Hawk Creek Recreation Area		\$220,500
			Total	\$486,308

Historical Resource Development

Recipient: City of Conrad

FY	1996	Establish Conrad Heritage Hall Museum		\$ 14,900
----	------	---------------------------------------	--	-----------

Recipient: Conrad Public Library

FY	1993	Purchase Microfilm Reader		\$ 1,950
----	------	---------------------------	--	----------

Recipient: Grundy CCB

FY	1991	Climate controlled storage		\$ 5,970
FY	1995	Research sport of cornhusking		\$ 1,800
			Total	\$ 24,620

Roadside Vegetation

Recipient: Grundy County

FY	1999	Seeding equipment		\$ 4,809
FY	2002	Burn equipment		\$ 1,321
			Total	\$ 6,130

Soil and Water Enhancement

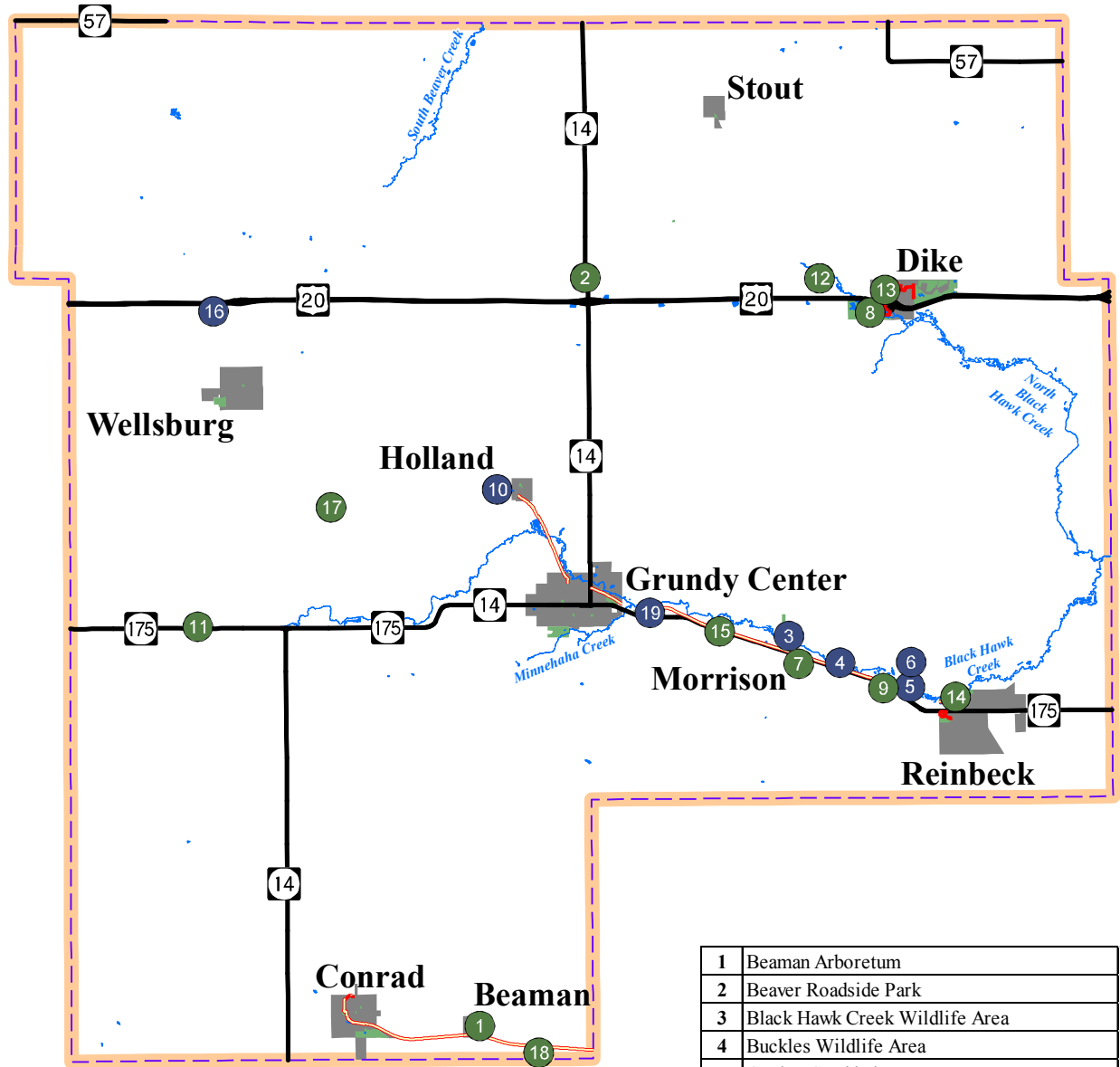
Recipient: Soil and Water Conservation District

FY	1991	Allocations for practices		\$ 7,530
FY	1992	Allocations for practices		\$ 4,099
FY	1992	Forestry & native vegetation		\$ 872
FY	1993	Forestry & native vegetation		\$ 920

FY	1993	Allocations for practices	\$ 530
FY	1994	Allocations for practices	\$ 4,723
FY	1994	Forestry & native vegetation	\$ 843
FY	1995	Forestry & native vegetation	\$ 3,101
FY	1995	Allocations for practices	\$ 1,693
FY	1996	Forestry & native vegetation	\$ 2,652
FY	1996	Allocations for practices	\$ 4,500
FY	1997	Allocations for practices	\$ 4,608
FY	1997	Forestry & native vegetation	\$ 1,826
FY	1998	Forestry & native vegetation	\$ 1,144
FY	1998	Allocations for practices	\$ 5,121
FY	1999	Minnehaha Creek	\$ 12,781
FY	1999	Forestry & native vegetation	\$ 2,424
FY	1999	Allocations for practices	\$ 4,551
FY	2000	Forestry & native vegetation	\$ 1,757
FY	2000	Minnehaha Creek	\$ 25,924
FY	2000	Allocations for practices	\$ 6,715
FY	2001	Allocations for practices	\$ 3,276
FY	2001	Forestry & native vegetation	\$ 4,964
FY	2001	Minnehaha Creek	\$ 32,799
FY	2002	Forestry & native vegetation	\$ 4,987
FY	2002	Minnehaha Creek	\$ 29,588
FY	2002	Allocations for practices	\$ 1,722
FY	2003	Forestry & native vegetation	\$ 2,654
FY	2004	Allocations for practices	\$ 7,968
FY	2004	Forestry & native vegetation	\$ 5,257
FY	2005	Forestry & native vegetation	\$ 7,005
FY	2005	Allocations for practices	\$ 7,940
FY	2006	Forestry & native vegetation	\$ 2,010
FY	2006	Allocations for practices	\$ 8,041
FY	2007	Allocations for practices	\$ 7,370
FY	2007	Forestry & native vegetation	\$ 2,457
FY	2008	Allocations for practices	\$ 16,979
FY	2008	Forestry & native vegetation	\$ 4,158
FY	2009	Allocations for practices	\$ 11,978
FY	2009	Forestry & native vegetation	\$ 3,997
FY	2010	Forestry & native vegetation	\$ 4,100
FY	2010	Allocations for practices	\$ 12,300
FY	2011	Forestry & native vegetation	\$ 3,277
FY	2011	Allocations for practices	\$ 12,008
FY	2012	Forestry & native vegetation	\$ 2,476
FY	2012	Allocations for practices	\$ 7,429
FY	2013	Forestry & native vegetation	\$ 2,218
FY	2013	Allocations for practices	\$ 6,653
		Total	\$313,925

Total REAP Allocations in Grundy County

\$912,653

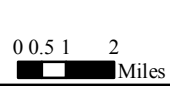


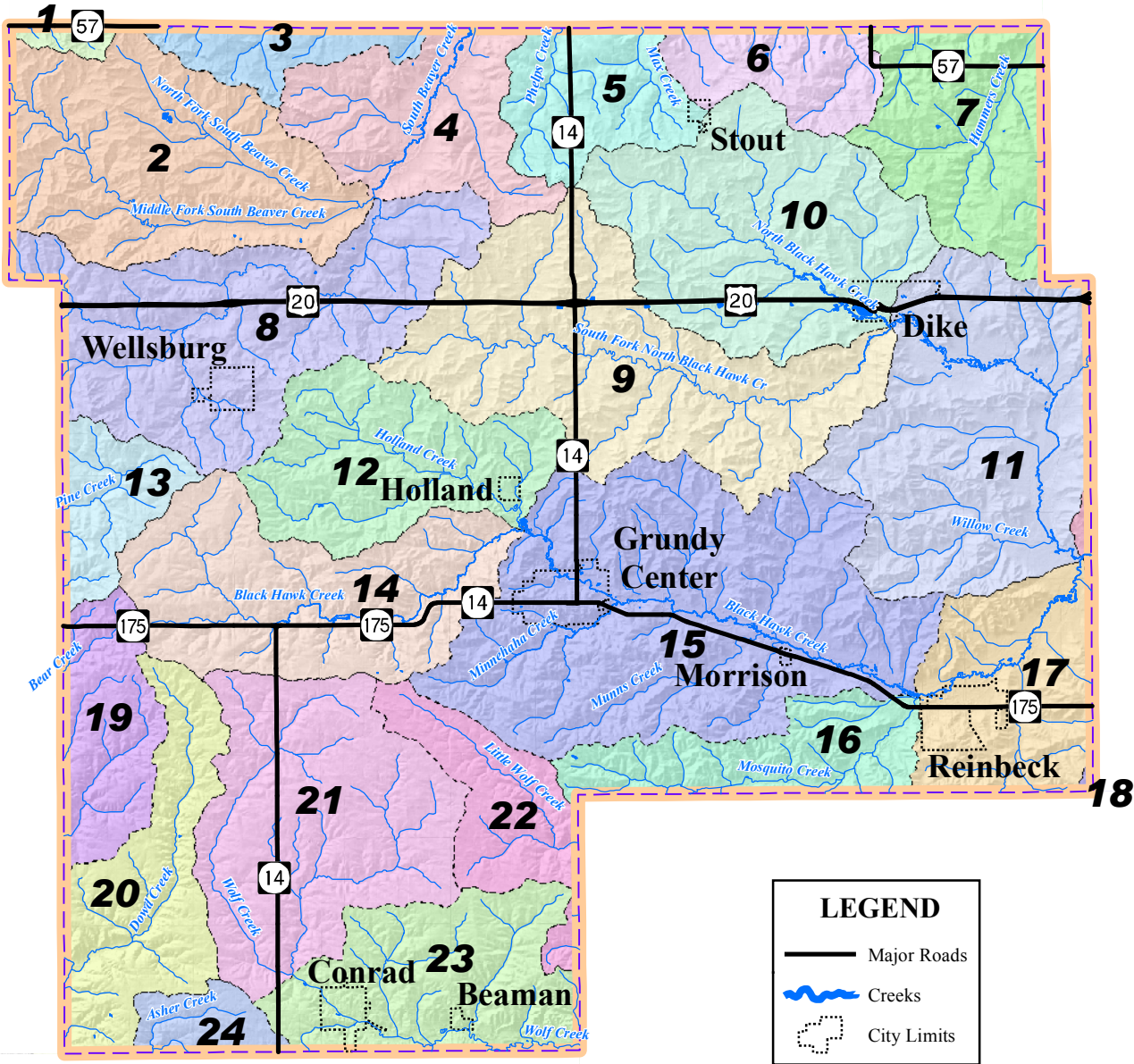
1	Beaman Arboretum
2	Beaver Roadside Park
3	Black Hawk Creek Wildlife Area
4	Buckles Wildlife Area
5	Copley-Strohbehn Preserve
6	Green Wing Wetland
7	Grundy County Museum and Conserv. Office
8	Grundy County Lake
9	Herbert Gutknecht Roadside Park
10	Holland Marsh
11	Ida M. Miller Park
12	J.H. Roadman Park
13	North Black Hawk Creek Park
14	Reinbeck Greenbelt Area
15	Shearn Memorial Park
16	Southfork Wildlife Area
17	Stoehr Fishing Area
18	Wolf Creek Recreation Area
19	Wolfe Family Preserve

LEGEND

Major Roads	Park Type
Hard Surfaced Trail	Parks
Granular Trail	Wildlife Areas
Creeks	Recreation Areas
City Limits	

The map does not represent a survey, no liability is assumed for the accuracy of the data delineated herein, either expressed or implied by INRCOG.
 © (June 2016) Iowa Northland Regional Council of Governments
 Please call 319-235-0311 to obtain permission for use.





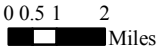
LEGEND

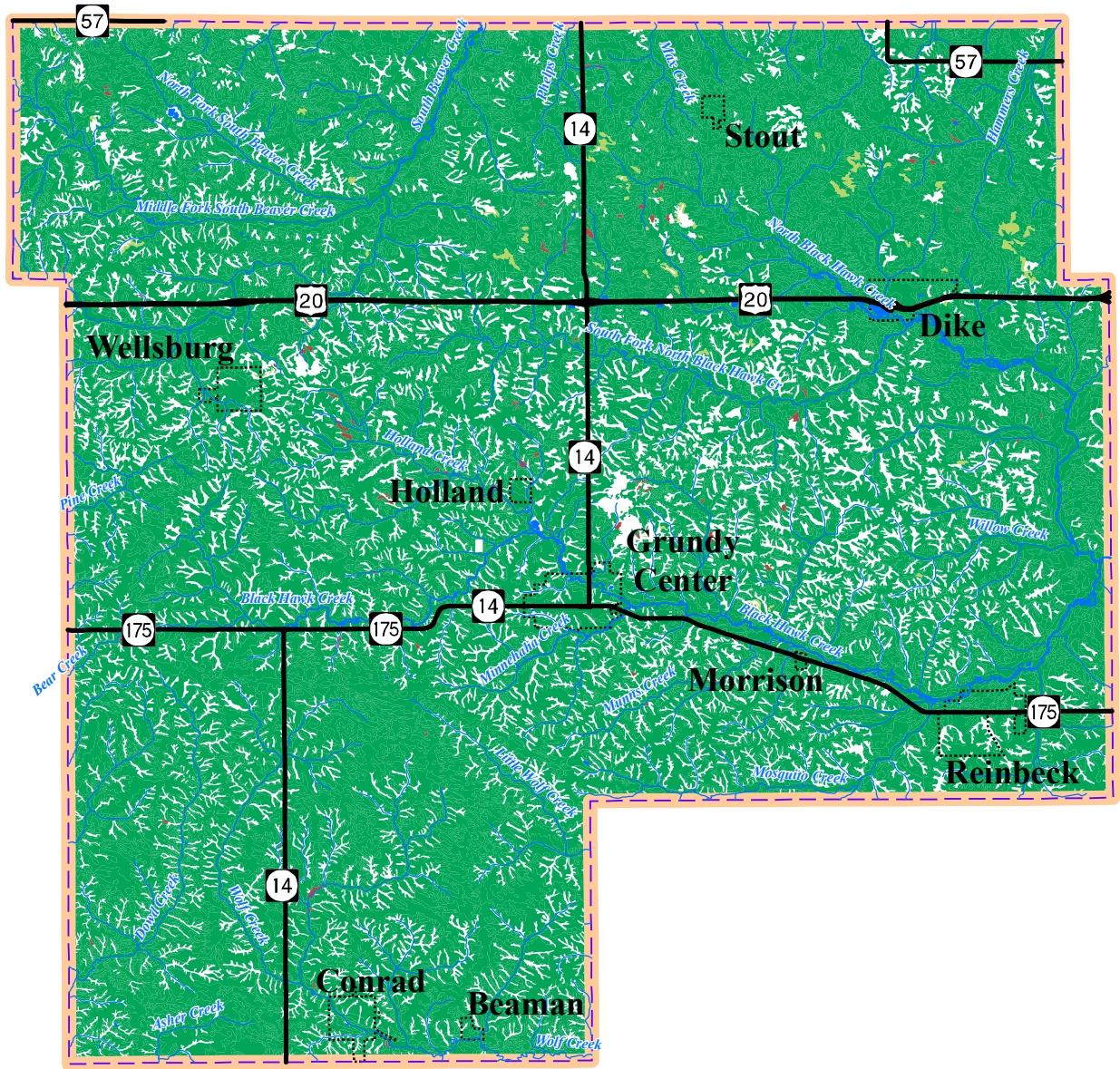
- Major Roads
- Creeks
- City Limits




STREAM NAME	TRIBUTARY TO	STREAM NAME	TRIBUTARY TO
1. Beaver Creek	Upper Beaver Creek	13. Pine Creek	Honey Creek
2. Middle Fork South Beaver Creek	South Beaver Creek	14. Holland Creek	Upper Black Hawk Creek
3. Gran Creek	Upper Beaver Creek	15. Minnehaha Creek	Upper Black Hawk Creek
4. Lower South Beaver Creek	South Beaver Creek	16. Mosquito Creek	Upper Black Hawk Creek
5. Phelps Creek	Lower Beaver Creek	17. Little Wolf Creek	Upper Black Hawk Creek
6. Max Creek	Lower Beaver Creek	18. Twelvemile Creek	Wolf Creek
7. Hammers Creek	Lower Beaver Creek	19. Bear Creek	Honey Creek
8. Upper South Beaver Creek	South Beaver Creek	20. Dowd Creek	Honey Creek
9. S. Fork N. Black Hawk Creek	North Black Hawk Creek	21. Wolf Creek Headwaters	Wolf Creek
10. Upper N. Black Hawk Creek	North Black Hawk Creek	22. Little Wolf Creek	Wolf Creek
11. Lower N. Black Hawk Creek	North Black Hawk Creek	23. Upper Wolf Creek	Wolf Creek
12. Holland Creek	Upper Black Hawk Creek	24. Asher Creek	Timber Creek





The map does not represent a survey, no liability is assumed for the accuracy of the data delineated herein, either expressed or implied by INRCOG.
 © (June 2016) Iowa Northland Regional Council of Governments
 Please call 319-235-0311 to obtain permission for use.

Hydrologic Units (Watershed) Data Source: U.S. Department of Agriculture, Natural Resources Conservation Service 2003



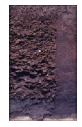


-  City Limits
-  Creeks
-  Major Roads

- Soil Taxonomy Order**
-  No Data
 -  Alfisols
 -  Histosols
 -  Mollisols



Alfisols – These soils result from weathering process that leach clay minerals and other constituents out of the surface layer and into the subsoil, where they can hold and supply moisture and nutrient to plants. They formed primarily under forest or mixed vegetative covers and are productive for most crops. Alfisols make up about 10 percent of the world’s ice-free land surface.



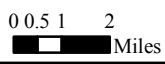
Histosols – Have a high content of organic matter and no permafrost. Most are saturated year round, but a few are freely drained. Histosols are commonly called bogs, moors, peats, or muck. Histosols form in decomposed plant remains that accumulate in water forest litter, or moss faster than they decay. If these soils are drained and exposed to air, microbial decomposition is accelerated and the soils may subside dramatically. Histosols make up about 1 percent of the world’s ice-free land surface.

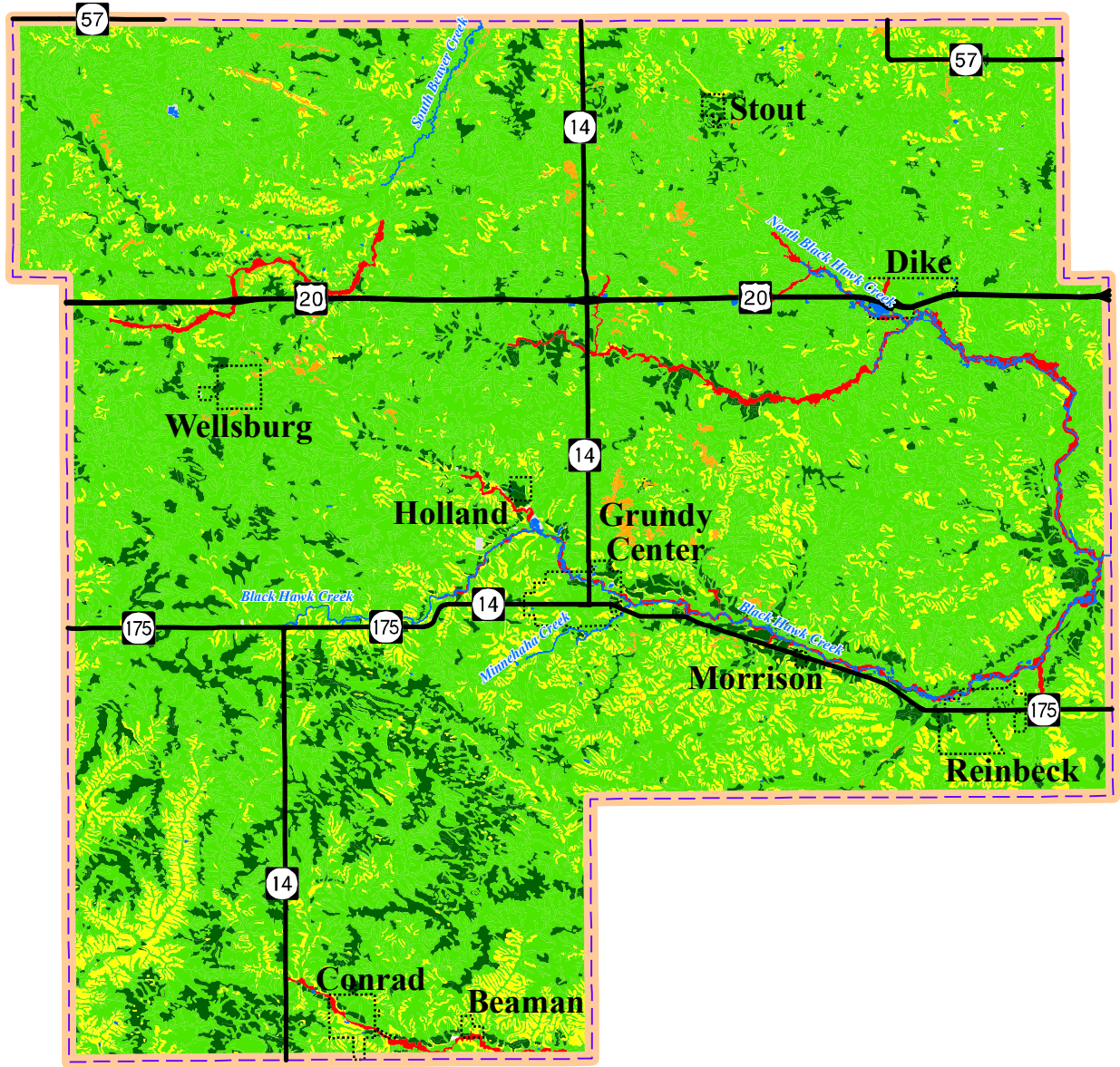


Mollisols – Is common on the Great Plains and the western states. Nearly all Mollisols have a mollic epipedon. Most have supported grass vegetation at some time, although many apparently have been forested in the past. Mollisols are used mainly as cropland. Generally, grains and sorghum are grown in the drier regions and corn and soybeans in the warmer, humid regions.




Soil Data Source: U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic (SSURGO) 8-31-2006




The map does not represent a survey, no liability is assumed for the accuracy of the data delineated herein, either expressed or implied by INRCOG.
 © (June 2016) Iowa Northland Regional Council of Governments
 Please call 319-235-0311 to obtain permission for use.








Land Capability Class

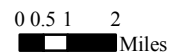
-  City Limits
-  Creeks
-  Major Roads

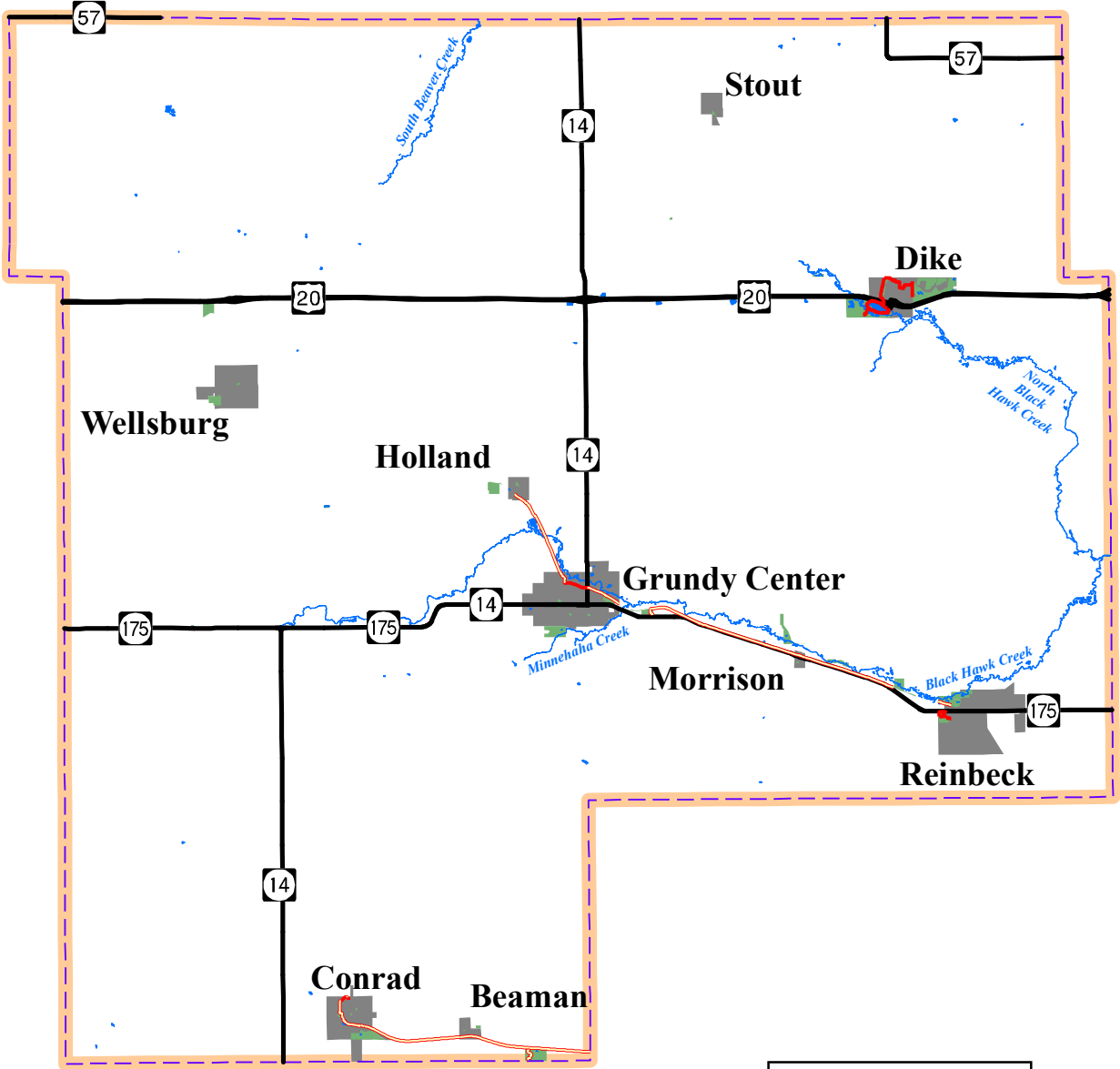
-  Soils have FEW limitations that restrict their use
-  Soils have MODERATE limitations that reduce the choice of plants or that require MODERATE conservation practices
-  Soils have SEVERE limitations that reduce the choice of plants or that require SPECIAL conservation practices, or both

-  Soils have VERY SEVERE limitations that reduce the choice of plants or that require VERY careful management, or both
-  Soils are NOT likely to erode but have OTHER limitations, impractical to remove, that limit their use
-  Soils and miscellaneous areas have limitations that nearly PRECLUDE their use for commercial crop production







Soil Data Source: U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic (SSURGO) 8-31-2006

The map does not represent a survey, no liability is assumed for the accuracy of the data delineated herein, either expressed or implied by INRCOG.
 © (June 2016) Iowa Northland Regional Council of Governments
 Please call 319-235-0311 to obtain permission for use.

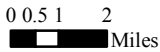


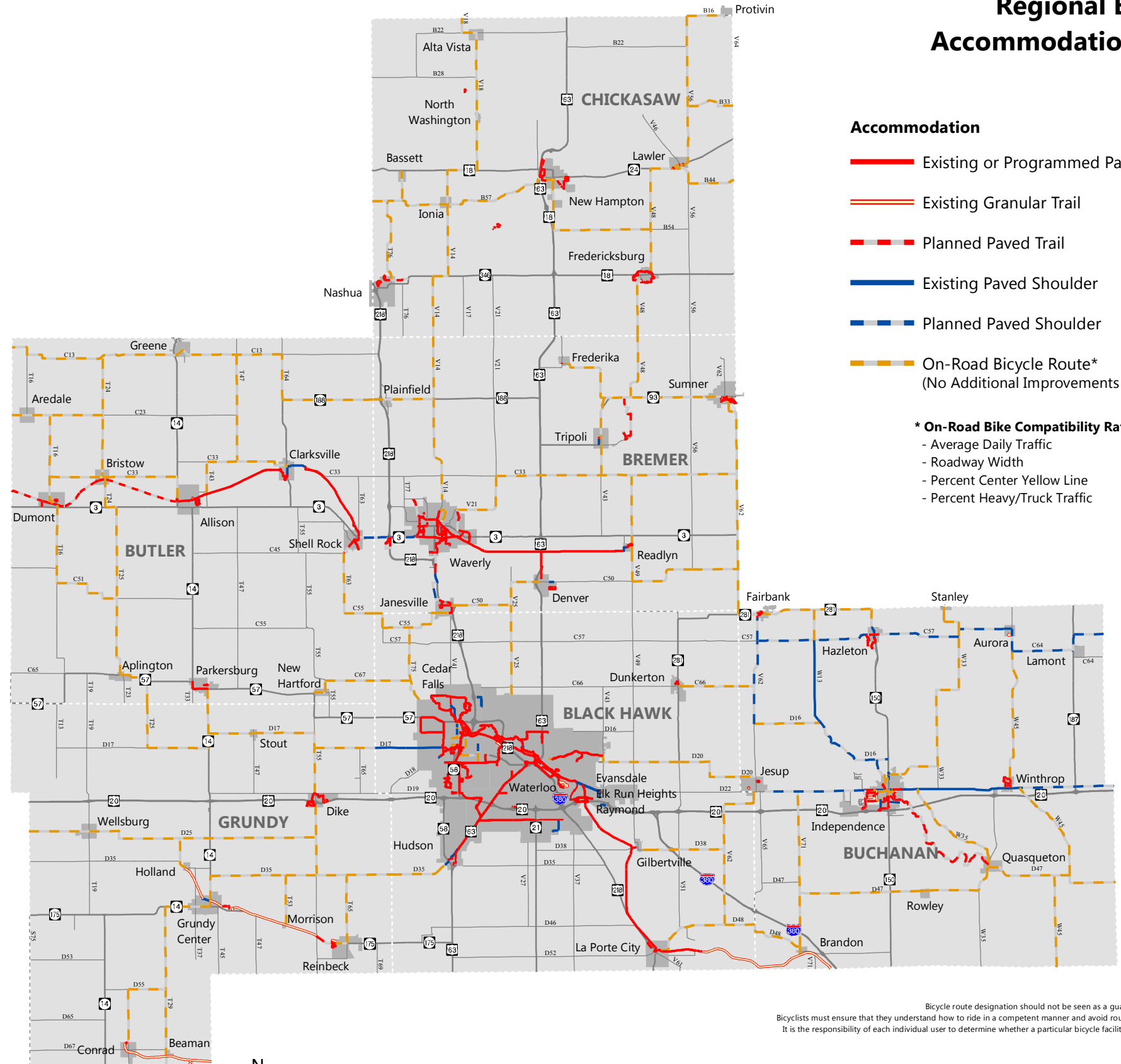
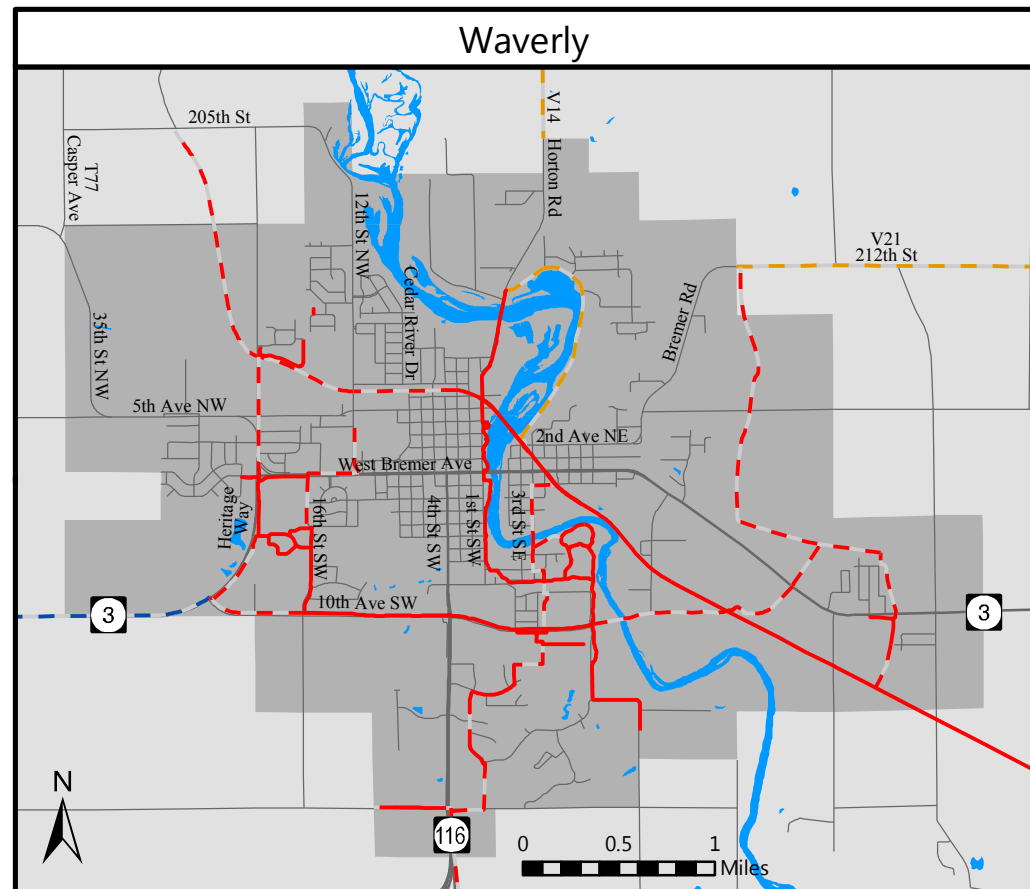
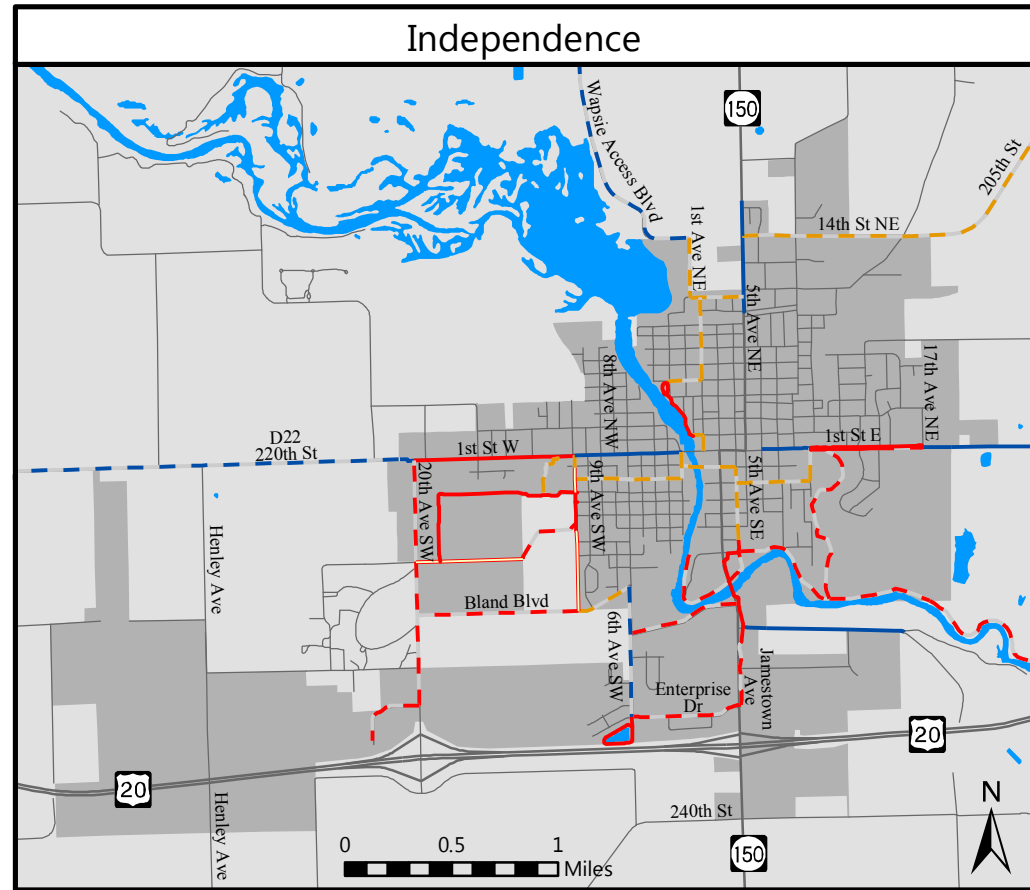


LEGEND

-  Major Roads
-  Hard Surfaced Trail
-  Granular Trail
-  Creeks
-  City Limits
-  Recreation Areas

The map does not represent a survey, no liability is assumed for the accuracy of the data delineated herein, either expressed or implied by INRCOG.
 © (June 2016) Iowa Northland Regional Council of Governments
 Please call 319-235-0311 to obtain permission for use.





Regional Bicycle Accommodation Plan

Accommodation

- Existing or Programmed Paved Trail
- Existing Granular Trail
- Planned Paved Trail
- Existing Paved Shoulder
- Planned Paved Shoulder
- On-Road Bicycle Route* (No Additional Improvements Required)

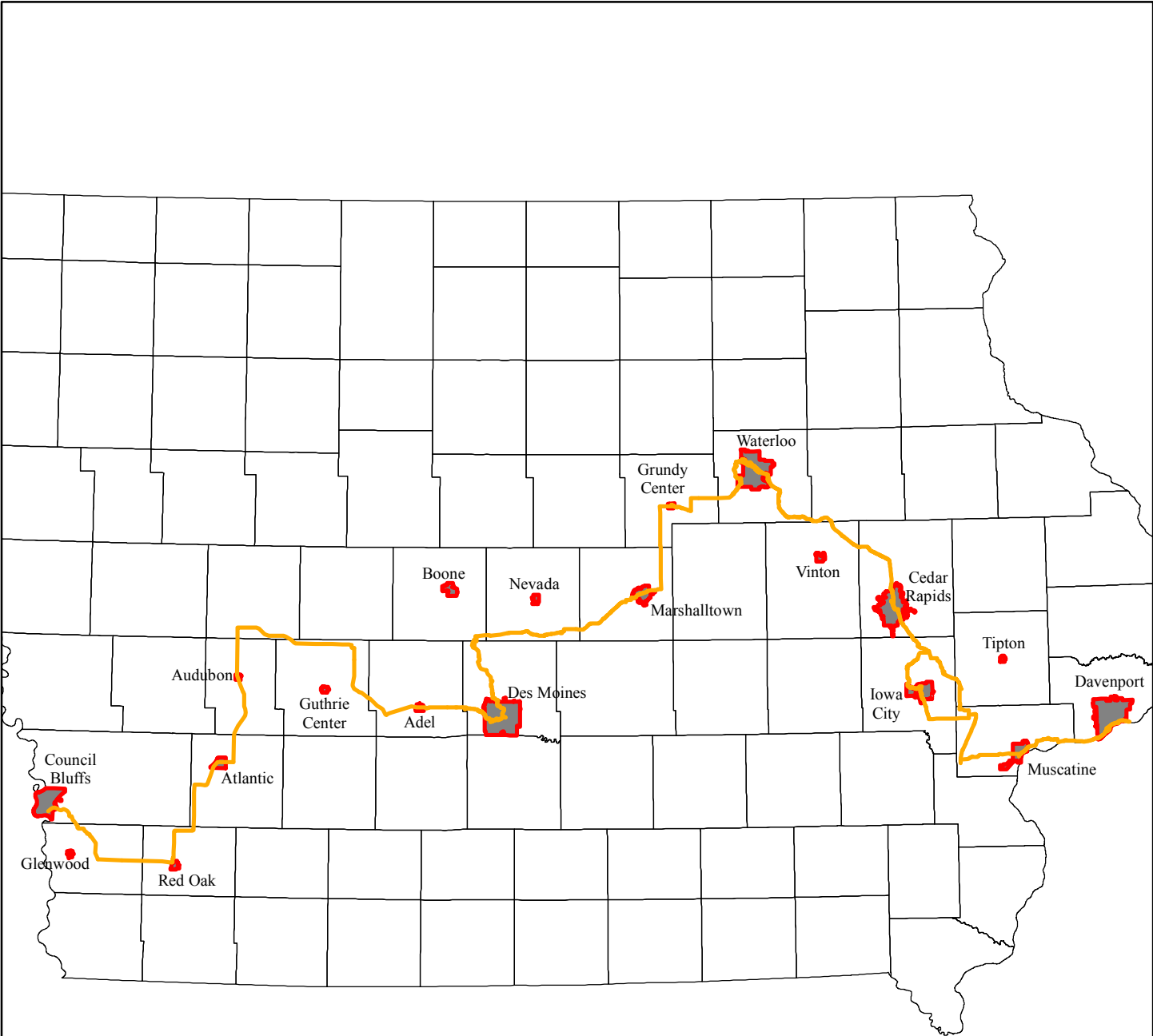
* On-Road Bike Compatibility Rating Factors:

- Average Daily Traffic
- Roadway Width
- Percent Center Yellow Line
- Percent Heavy/Truck Traffic

Bicycle route designation should not be seen as a guarantee against injury. Bicyclists must ensure that they understand how to ride in a competent manner and avoid routes with heavy traffic. It is the responsibility of each individual user to determine whether a particular bicycle facility is suitable for them.

The map does not represent a survey, no liability is assumed for the accuracy of the data delineated herein, either expressed or implied by INRCOG. © (Oct. 2015) Iowa Northland Regional Council of Governments. Please call 319-235-0311 to obtain permission for use.

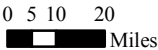




LEGEND

— American Discovery Trail

The map does not represent a survey, no liability is assumed for the accuracy of the data delineated herein, either expressed or implied by INRCOG.
 © (June 2016) Iowa Northland Regional Council of Governments
 Please call 319-235-0311 to obtain permission for use.



APPENDIX 11: REAP PLAN REFERENCE MAPS

Figure 1

Location: Pioneer Trail, east of Grundy Center

Project: Complete approximately 0.75 mile missing section of Pioneer Trail which passes through the Wolfe Family Preserve

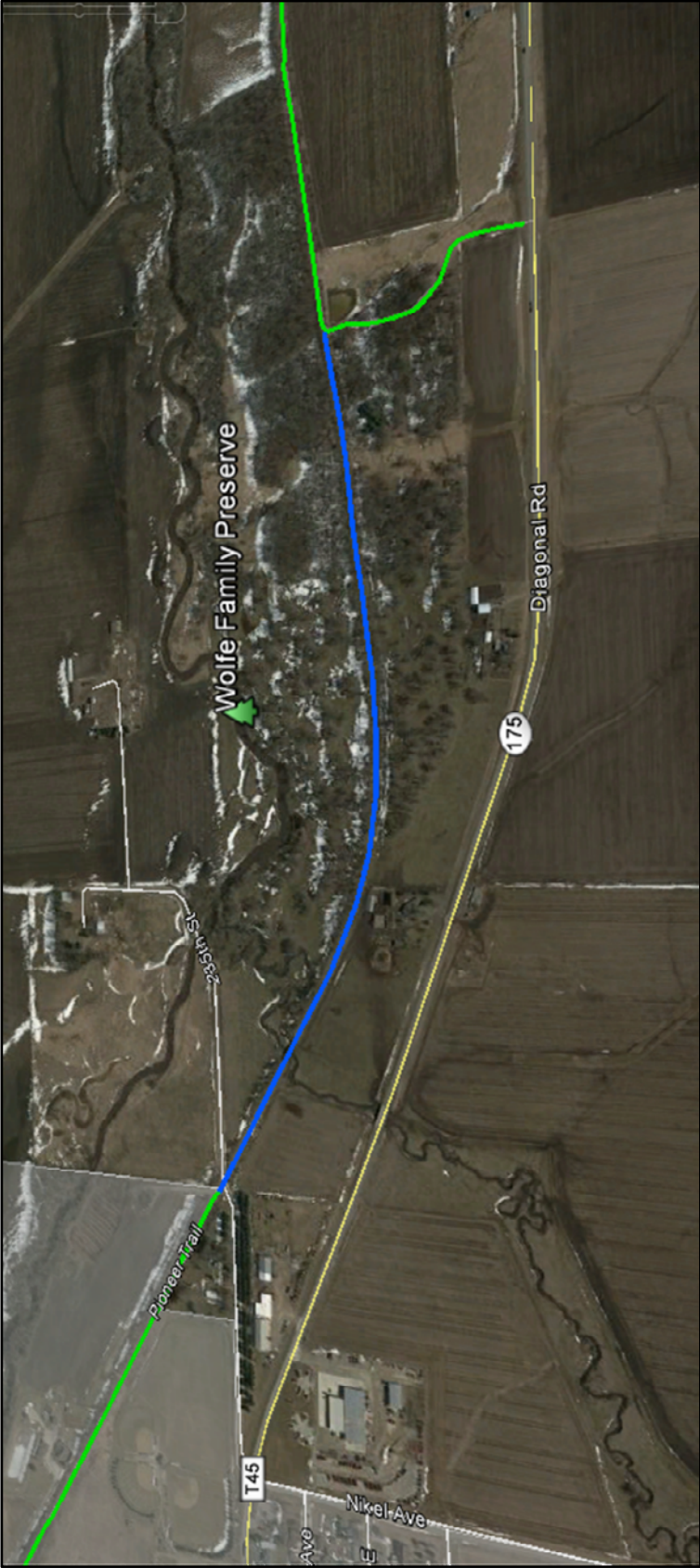
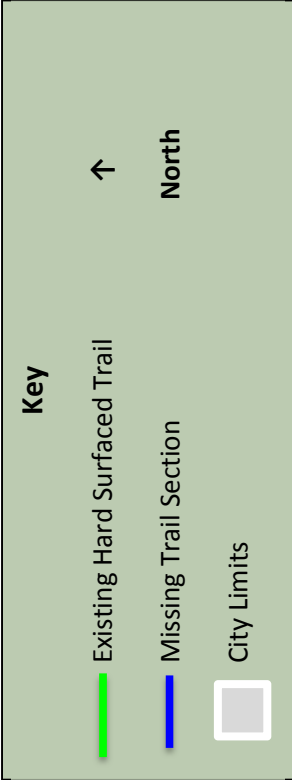


Figure 2

Location: Pioneer Trail, northwest of Reinbeck

Project: Complete approximately 1.1 mile missing section of Pioneer Trail, from the western Edge of the City of Reinbeck to County Road T55.

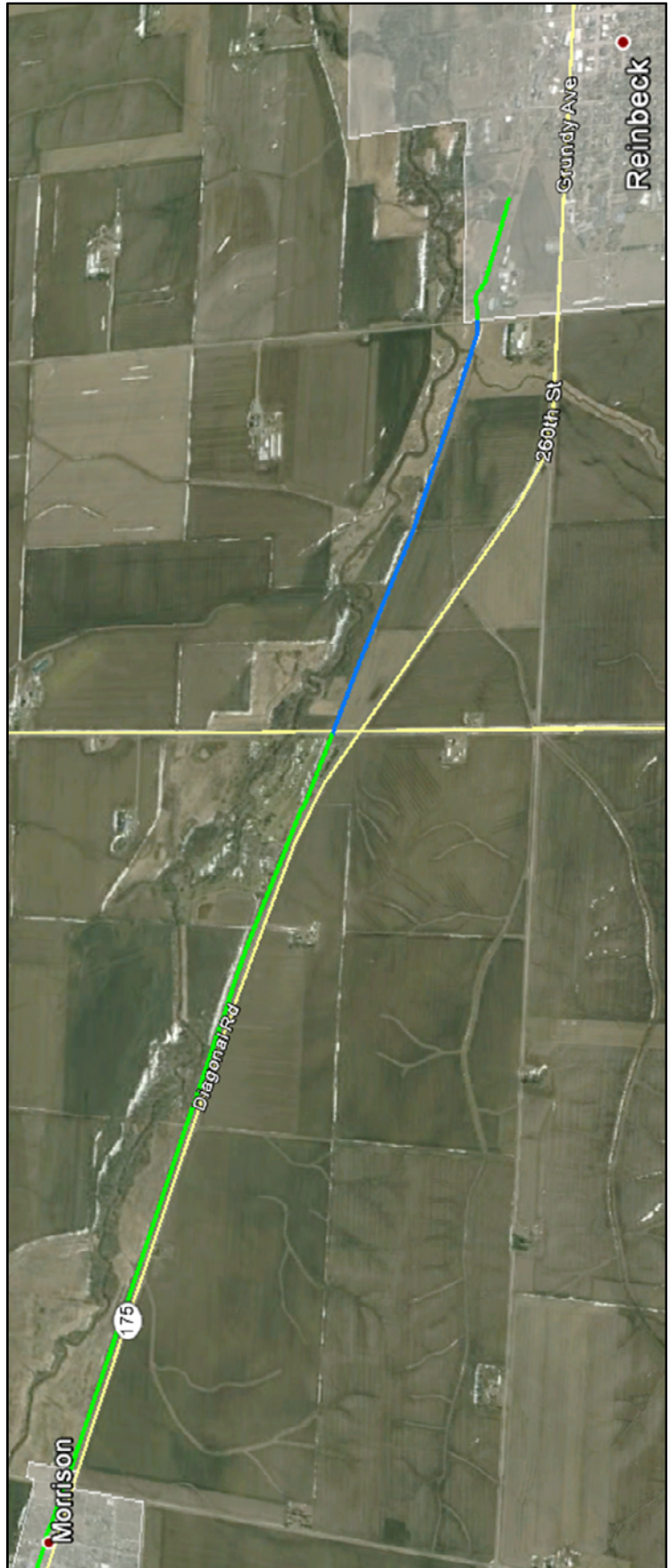
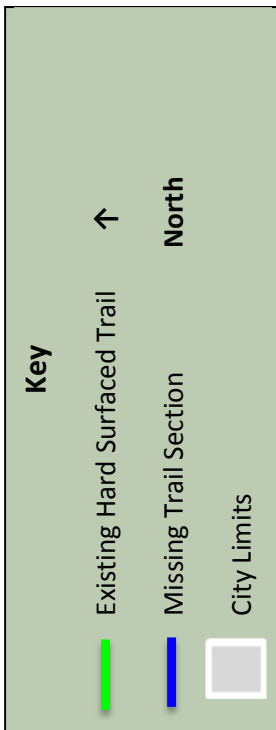


Figure 3

Location: Pioneer Trail, within City of Grundy Center

Project: Pave highuse portions of Pioneer Trail within the City of Grundy Center.

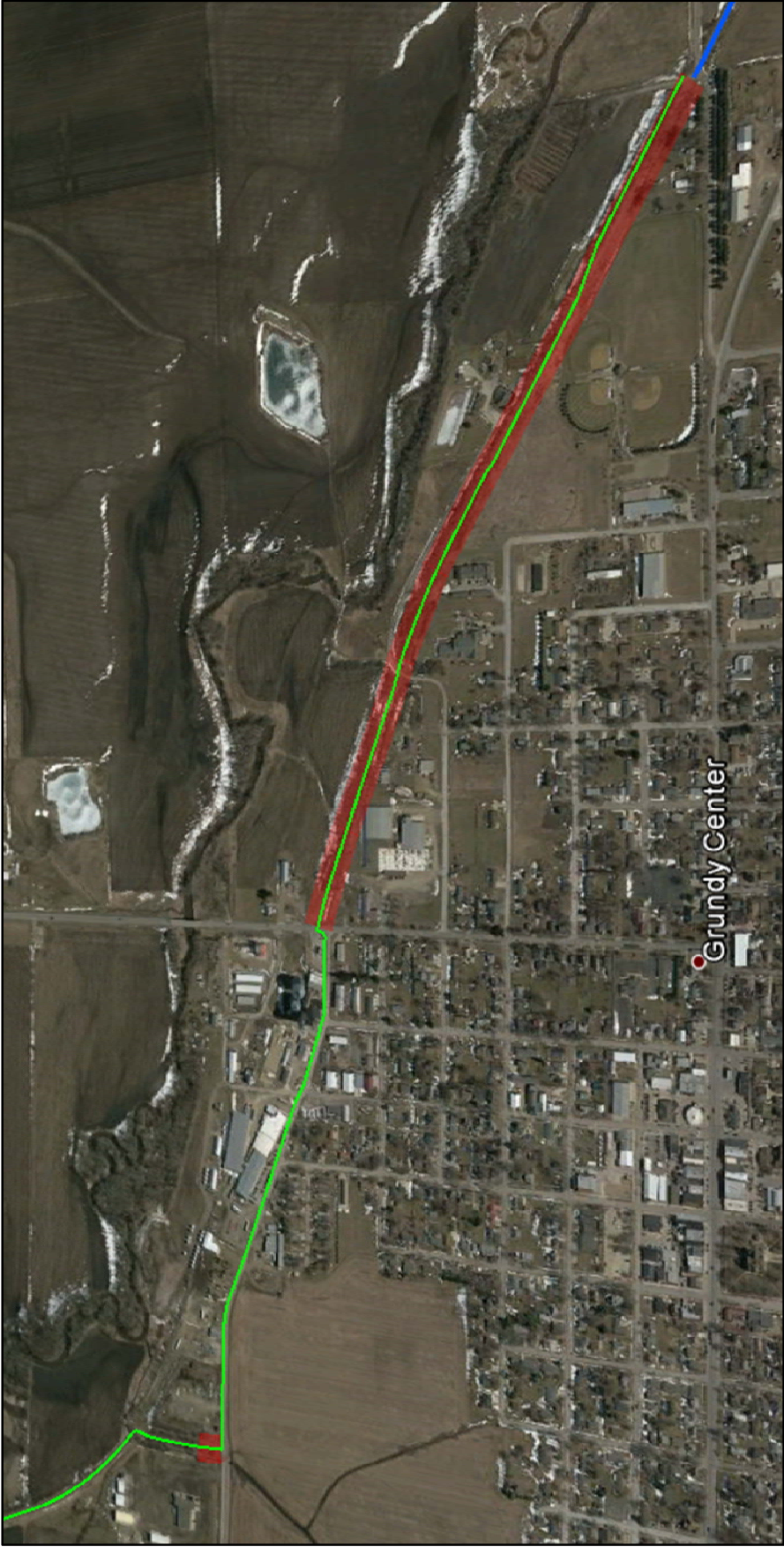
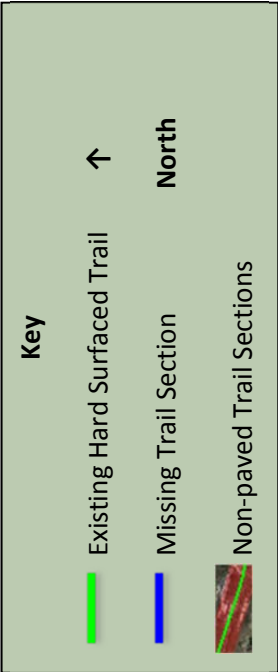


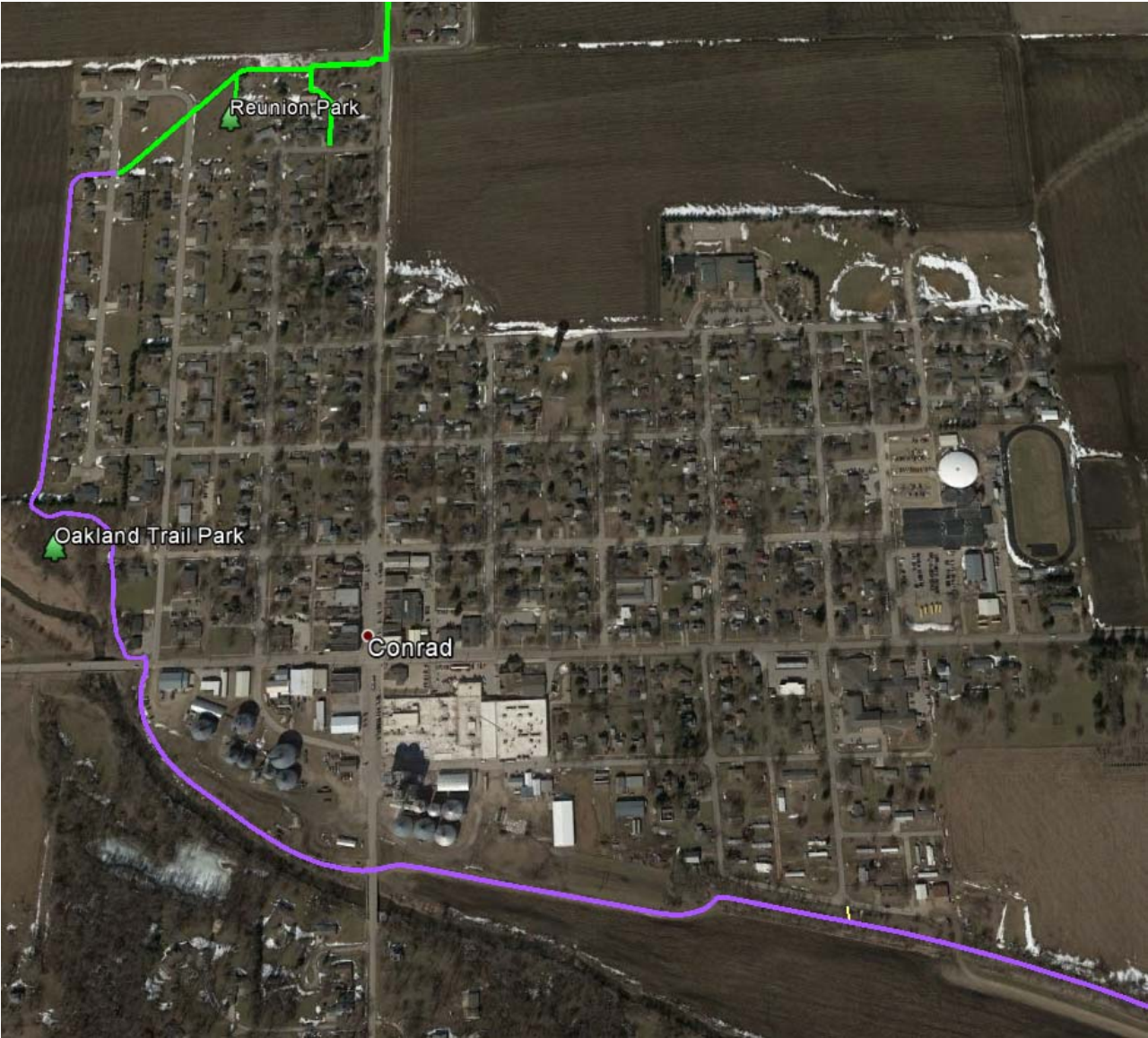


Figure 4

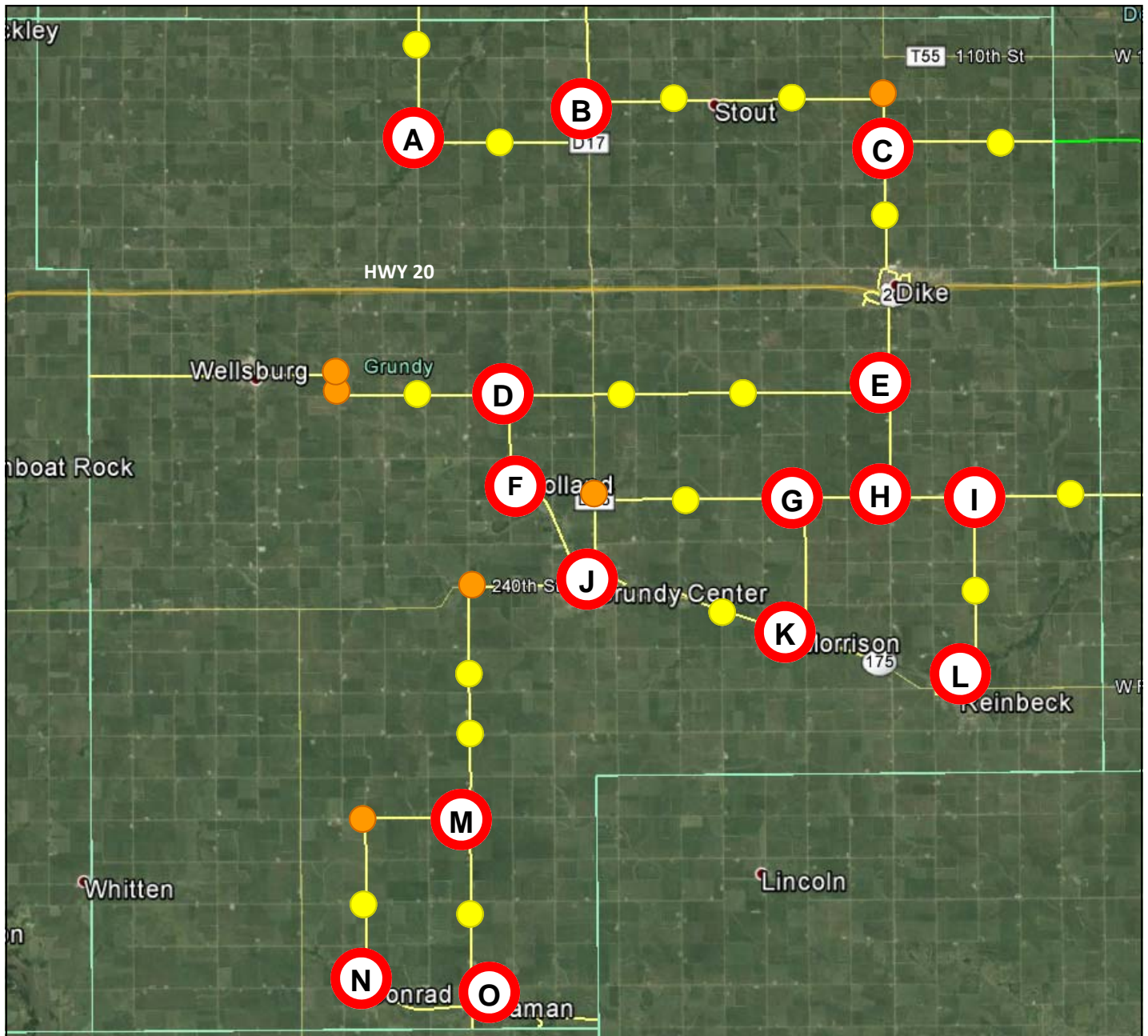
Location: Commet Trail within the City of Conrad

Project: Pave granular sections of trail within city limits

Key	
 Existing Hard Surfaced Trail	↑
 Existing Granular Trail	North



APPENDIX 12: Grundy County Bicycle Wayfinding Preliminary Concept



Decision Sign	MAP KEY	
	Turn Sign	Confirmation Sign



APPENDIX 13: POTENTIAL FUNDING SOURCES

This section includes a summary of potential government funding sources, in addition to the REAP program, for the plan's identified projects.

Community Attraction & Tourism Program (CAT)

The CAT program is an opportunity for cities, counties, and non-profit organizations to ask for financial assistance for vertical infrastructure projects including museums, recreation centers, aquatic centers, sports arenas, and other attractions. Applications are submitted to the Iowa Economic Development Authority and the Vision Iowa Board on a quarterly basis. Applicants are reminded that the Vision Iowa Board will require city, county, and private funding for each project.

Federal Recreational Trail Program

This program provides funding for the development and maintenance of motorized and non-motorized recreational trails and trail-related projects. Public agencies and private organizations are eligible to sponsor projects, however, private sponsorship do require a public agency co-sponsor. A minimum 20 percent match is required and trails resulting from successful applications must be maintained as a public facility for a minimum of 20 years. Applications for the program are typically due in the fall.

Resource Enhancement and Protection (REAP) Program

REAP offers a variety of grant programs for various government and private entities. Historically, statewide REAP funding has typically varied \$15 million - \$20 million. REAP programs include:

- ❖ State Open Spaces (28%)
- ❖ County Conservation (20%)
- ❖ Soil and Water Enhancement (20%)
- ❖ City Parks and Open Space (15%)
- ❖ Public Land Management (9%)
- ❖ Historical Resources (5%)
- ❖ Roadside Vegetation (1%)
- ❖ Conservation Education (first \$350,000)

State Recreational Trails Program

The State Recreational Trails Program is a funding opportunity for acquisition, construction, or improvement of recreational trails that are open for public use or trails that will be dedicated to public use upon completion. Applications are typically due in the summer.

Land and Water Conservation Fund (LWCF)

The Land and Water Conservation Fund (LWCF) Program is a federally funded grant program administered by the Iowa Department of Natural Resources that provides matching funds of 50 percent for outdoor recreation area development and acquisition. Iowa's cities and counties are eligible to participate. Competition for LWCF funds is intense, but this program provides an excellent opportunity to develop a wide range of outdoor recreational projects that are in high demand. Popular projects in recent years have included skate parks, playgrounds, new and renovated swimming pools, sport complexes, campgrounds and multipurpose trails.

Iowa's Statewide Transportation Alternative Program (TAP)

This source provides funding for surface transportation alternative projects that have a state-wide or multiregional focus on improving transportation. Local governments, including school districts, are eligible to apply. Projects that may be considered for funding include: construction, planning, and design of on and off-road trail facilities; construction, planning, and design of infrastructure projects and systems to provide safe routes to non-drivers; conversion and use of abandoned railroad corridors for recreational trails; construction of turnouts, overlooks, and view areas; general community improvement activities; and various environmental mitigation projects.

Iowa Northland Regional Transportation Authority (INRTA) Transportation Alternative Program (TAP)

The Iowa Northland Regional Transportation Authority (RTA) was established in 1993 under the umbrella of INRCOG to conduct transportation planning and programming for Black Hawk, Bremer, Buchanan, Butler, Chickasaw, and Grundy Counties. The TAP program provides funding to expand travel choices and improve the transportation experience. TAP funding must go towards bicycle, pedestrian, scenic, historic, or other enhancement-type transportation projects.

Iowa Living Roadway Trust Fund

This Department of Transportation (DOT) program provides funding for integrated roadside vegetation management (IRVM) and related practices. Items typically funded by this program include: plant materials; planting and establishment materials; burn equipment; spraying and brush control equipment; seeding and harvesting equipment; GIS and GPS equipment; and IRVM educational materials.

Iowa Clean Air Attainment Program (ICAAP)

This program provides funding for highway and streets; transit; bicycles and pedestrian; and freight projects or programs that support Iowa's clean air quality by reducing transportation related emissions. Criteria require a minimum \$20,000 total project cost with at least a 20 percent local match. Applications are typically due annually in October.

APPENDIX 14: REFERENCE DOCUMENTS AND ADDITIONAL RESOURCES

Reference Documents

- ⁱ Iowa Department of Natural Resources, www.iowadnr.gov/conservation/reap
- ⁱⁱ Iowa Department of Natural Resources, www.iowadnr.gov/conservation/reap
- ⁱⁱⁱ Grundy County Economic Development Alliance, www.grundycountyia.com
- ^{iv} Grundy County Conservation Office, www.grundycounty.org
- ^v Otto, Daniel; Parkinson, Spencer. Grundy County Agriculture. Iowa State University – University Extension. December 2009, www.extension.iastate.edu
- ^{vi} US Forest Service, www.fs.fed.us
- ^{vii} Natural Resource Conservation Service, “Restoring Iowa Wetlands”, www.nrcs.usda.gov

Additional Resources

Grundy County Government.....	www.grundycounty.org
Grundy County Conservation Board	www.grundycounty.org/Departments/Conservation
Grundy County IAGenWeb Genealogy & County History	www.iagenweb.org/Grundy
Grundy County Parks	www.mycountyparks.com/County/Grundy
Iowa Department of Cultural Affairs.....	www.iowaculture.gov
Iowa Department of Land Stewardship	www.iowagriculture.gov
Iowa Department of Natural Resources	www.iowadnr.gov
Iowa Department of Natural Resources – REAP Program	www.iowadnr.gov/Conservation/REAP
Iowa State Historic Preservation Office	www.iowaculture.gov/History
Iowa Nothland Regional Council of Governments (INRCOG)	www.inrcog.org
National Register of Historic Places	www.nps.gov/nr/
Silos and Smokestacks National Heritage Area.....	www.silosandsmokestacks.org
Univserity of Northen Iowa Center for Energy & Environmental Education.....	www.uni.edu/ceee