



Rock Island County Comprehensive Plan 2020





Rock Island County

Comprehensive Plan

2020

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Chapter 1 Introduction and Vision

Introduction

Rock Island County is in northwestern Illinois, and includes a part of the Quad Cities, Iowa/Illinois metropolitan area (Map 1) of 300,000 residents. Located along the Mississippi River and bisected by the Rock River, the county is characterized by its historical, industrial, and agricultural history, and is host to nationally and regionally known employers, such as Deere & Company, the U.S. Army – Rock Island Arsenal, Trinity-Unity Point Healthcare, and Tyson Fresh Meats.

Chapter 5 supplies a profile of the characteristics of the county. It highlights details on population, employment, economy, education, and other statistics. Chapter 6 offers a summary of the county's natural and agricultural resources.

Comprehensive Plan

The comprehensive plan is a key document for Rock Island County for guiding land regulation and development, coordinating with other jurisdictions, providing the legal framework for zoning decisions, and identifying future needs for facilities and services. The plan determines areas or issues for further study or planning. It documents needs, sets priorities, and notes funding opportunities, such as grants, loans, public-private partnerships, etc. as part of problem-solving and implementation.

How land will be used in the future is a fundamental part to this document. Some

locations have areas with a greater density of urban activity, either residential, commercial, industrial, institutional, or recreational land uses, or a lesser density of activity that may include agriculture and open space. Natural resources affect land use patterns through development limitations due to slope, erosional surfaces, prime farmland, floodplain, wetlands, coal mines, archaeological sites, etc. By planning for the arrangement and intensity of land uses, Rock Island County can reduce costs, which often result when the long-range effects of zoning, subdivisions, and site development decisions are not considered.

The various land uses, and their related activities create greater or lesser need for facilities or services depending on the activities. While one acre of land with new houses generates more total tax revenue to a city or county than an acre of farmland, this does not show the entire picture of a local government's fiscal stability. It costs local governments more to supply services to homeowners than these residential landowners pay in property taxes for street maintenance and law enforcement for instance. In contrast, commercial and industrial land increases the tax base and helps balance local budgets to supply a variety of public services. While one type of land use is not better than another, balancing a variety of land uses in a county and supplying reliable services adds to its stability and quality of life.

This plan will look at strategies for implementation to meet future needs and goals. The course of action for implementation will require periodic review to assess needs, timing, and financial feasibility. In the implementation of projects, careful consideration will be given to full use of existing facilities and funding opportunities.

Public Involvement

Public involvement is essential to building consensus in the planning process. Rock Island County provided multiple opportunities for public input into the first planning process. A visioning workshop was held on September 4, 2019. Participants were invited to share their opinions on what they liked about Rock Island County and its strengths. They also supplied feedback on where development was wanted or needed, and suggestions for improvement for the county in 20-25 years. A summary of that meeting can be found in Appendix A. Two more public meetings were set for September 16 and October 17 that were cancelled due to poor attendance and a meeting location problem. A presentation was made to the Farm Bureau in March 2020 and followed up with a request for input. [Other Opportunities...TBA]

A draft of the plan was available on the county website and available for review at the county office building [where?]. Each of these public involvement opportunities aided in the development of this plan. The

Steering Committee presented a final draft of the comprehensive plan at a public hearing of the Board of Adjustment to ask for more comments and make recommendations to the County Board. County officials used the public comments to shape the final plan. The County Board adopted the plan on TBA.

County Vision and Mission

Within Rock Island County, there is support for agricultural preservation and an emphasis for land development to occur within municipalities. A vision statement has been developed to highlight the future direction of Rock Island County. Residents expressed comments through a public input process, and this input provided the underlying theme for the vision statement as developed with the plan Steering Committee.

County Vision

Rock Island County, Illinois is acclaimed for its historic riverfront communities along the Mississippi River, natural scenic beauty, a vital agricultural and natural resource base, and a strong foundation in industry and commerce as part of the Quad Cities Metropolitan Area.

County Comprehensive Land Use Plan Mission

To guide future land use decisions related to growth and development within Rock Island County unincorporated areas based on the goals and objectives in the Plan.

General Planning Principles

Principles supply a basis for achieving the county goals and objectives. For Rock Island County, the general planning principles work to ensure quality of life and take the best interest of the county as a whole and its residents into account.

Principle #1: General planning principles are basic guidelines to be used by county officials whose decisions or actions may affect existing or future land use.

Each individual, acting on behalf of the county, should consider the goals and objectives of this plan in matters of economic development, rezoning, special use permits, subdivision of lands, or discretionary administrative decisions related to land development.

Principle #2: Economic gain is not to be the only consideration of land use decisions.

By setting up zoning districts, the county has a direct influence on property in unincorporated areas. Since property values are the result of relative market demand, the county's action has an influence on property values in villages and cities in Rock Island County. Because current zoning decisions by the county (either approval or disapproval of a development proposal) further affects these values, the impact of each alternative is to be considered.

Principle #3: The county recognizes the validity of agriculture as an industry.

As with other industry, agriculture has certain optimum locations. The unique physical resources that characterize prime farmland of Rock Island County must be treated with the same stewardship practiced with any other precious limited resource. Agricultural land should be recognized as a vital natural resource of Rock Island County. The greater economics of good stewardship must take priority over the short-term economic interests. The county shall act to assure the long-term agricultural production of the county by encouraging agriculture as the highest and best land use within areas of highly productive agricultural soils. Those choosing to live and work in the rural areas should be aware of and accept normal agricultural nuisances that go with rural living.

Principle #4: The county encourages logical and well-planned development.

County officials should encourage logical, well-planned development. They are responsible for recommending revisions to proposals that promote piecemeal, spot, or ill-conceived development. The Zoning Board of Adjustment, and County Board shall also manage encouraging proper modifications of development proposals and plans to reduce potential conflicts with existing or potential future land uses. The Comprehensive Land Use Plan will be the basis for these recommendations.

Principle #5: The county guides new development into or next to existing communities, whenever possible.

It is more efficient and economical to supply infrastructure and public services – fire and police protection, water and wastewater systems, and roads, among others – adjacent or around where they already exist. The county shall work to minimize public and private sector costs for infrastructure and public services by giving attention to locating development in close proximity to existing infrastructure and public services to the extent of the county's land regulatory authority.

Locations shall be reviewed with respect to economic and environmental effects on adjacent properties. Disruption or fragmentation of agricultural activities are grounds to not allow inconsistent development. Timeliness of each development proposal shall be considered. When a proposal is determined to be premature, exposing adjacent or nearby properties to adverse development pressures, the county may disallow the development proposal on the grounds that the development is not in the best interest of the public.

Where possible, the county will collaborate with other units of local government to encourage mutually agreed on preferred patterns of development, thereby enabling jurisdictions to work with complementary growth goals.

Principle #6: The county discourages incompatible or conflicting land uses.

Recognizing possible problems or nuisances associated with development in rural areas, and to help protect the interests of both agribusiness and homeowners, the county shall discourage incompatible residential and urban encroachment in the proximity of established agricultural and livestock feedlot operations. The county shall also discourage expansion or introduction of feedlot operations without regard for the interests of other property owners. Where proper regulatory abilities are available and unless extenuating circumstances exist, the county should disallow these and similar instances that show substantial potential conflict between existing and proposed development or land uses.

Principle #7: The county encourages the use of conservation practices in land development related to water and land management, pollution control, energy, and minimizing impacts to the environment.

Wise management of resources will allow future generations to enjoy and benefit from their use. Proper land stewardship will reduce externalities for neighbors and people downstream and downwind. Soil fertility and high-water quality will ensure a healthy agricultural economy for future generations.

County Goals

Goals define how Rock Island County will change over time. Goals support the county vision. The Rock Island County land use goals are formed with general planning principles in mind.

Goal #1 Land Use: Target development of land in specific unincorporated areas of Rock Island County that will increase the prosperity of the county as a whole without sacrificing the natural scenic beauty or agricultural and natural resource base for future generations.

General Development Objectives

Encourage development of non-prime farmland unless proximity of prime farmland to infrastructure is considered development appropriate.

Plan new development in proximity to similar uses to maximize the efficiency of public services, to protect and reinforce existing land uses, and protect prime farmland.

Promote financing methods that would allow for the construction of infrastructure improvements, i.e. sewer, water, and street extensions.

Foster an economic development environment that will attract new technological businesses and industry to the area.

Participate in the regional economic development strategy.

Ensure basic infrastructure needs that enable and attract new businesses to find and work in the region.

Promote land uses that will supply necessary support requirements, i.e. affordable housing, schools, roads, etc., for businesses and services that wish to locate in the incorporated areas of the county.

Goal #1 – Continued

Residential Development Objectives

Promote growth of residential development in such a manner that the growth keeps or enhances the existing character of the county yet provides residents with an opportunity to choose from an assortment of residential types, including affordable housing types.

Locate new residential development where sewer and water infrastructure already exists or where it can be extended cost effectively.

Prevent location of residential development that would be inconsistent or incompatible with local or adjacent land uses. Examples of incompatible land uses may include large-scale livestock operations or sanitary landfills.

Allow cluster or conservation housing developments and/or planned unit developments to conserve land area and to offer mixed-use options.

Encourage development of neighborhoods that may include low-intensity commercial establishments for essential services and allow for schools and open space.

Interconnect neighborhoods visually via roads, walkways, bike paths, and open space.
Set aside buffer zones between residential and agriculture lands.
Permit only rural non-farm residential growth in areas that protect rural character.
Discourage residential development on prime agricultural lands, wetlands, and floodplains.
Encourage development of senior housing options in Rock Island County to respond to the aging population.
Commercial Development Objectives
Focus development to existing central business districts (CBD) within Rock Island County where infrastructure and density will better serve business needs.
Discourage scattered distribution of non-farm related commercial activity in unincorporated areas.
Discourage development in unincorporated areas that significantly alters the small town atmosphere of rural living, but allow limited service centers to better support the needs of rural residents.
Industrial Development Objectives
Emphasize the importance of the urbanized areas of Rock Island, Moline, East Moline, Silvis, Milan, and Coal Valley, primarily as the center for government, financial, business, and industrial uses.
Promote an economic development environment that will attract new businesses and industry to the area, and capitalize on key development clusters, such as food production, logistics, advanced manufacturing, healthcare and education. Facilitate basic infrastructure needs that enable and attract new businesses to locate and operate in the region.
Direct land development to areas that will provide necessary support requirements for businesses and services, and to locate in the incorporated cities with existing infrastructure, affordable housing, schools, roads, etc. The purpose of this is so new businesses and residents do not bear the brunt of the tax burden.
Recognize the potential for unique industrial development and target areas of the unincorporated county for potential large-scale specialized industrial development that may not need or should not be near populations centers.
Ensure through planning for future land use an industrial base with enough diversity to supply employment opportunities to county residents, and without adversely affecting other land uses or the environment.

Goal #1 – Continued**Farmland Objectives**

Reduce soil erosion and improve water quality by encouraging farmers to follow soil conservation plans and use soil conservation best practices.

Discourage extension of sewer and water systems that would displace prime farmlands except when near existing infrastructure.

Preserve agricultural land as a critical resource for the use and benefit of current and future generations.

Prevent conflicts and incompatibilities between agricultural and other uses.

Develop strategies that will allow transfer of development rights from prime farmlands to provide agricultural property owners opportunities when development pressure exists while supporting the preservation of prime farmlands.

Identify agricultural land that due to location may be considered for future development and consider benefits of increased density to reduce overall reduction of farmland.

Identify and map all existing large-scale livestock operations and project future growth areas associated with each operation for use in making land use decisions.

Include Agricultural Preservation Areas in the Zoning Resolution.

Other Goals and Objectives in Rock Island County

Although the primary emphasis of this comprehensive plan is to guide how land will be utilized in Rock Island County, there are components of a comprehensive plan that address other aspects of county facilities and services in addition to land use. The following goals and objectives provide additional guidance for Rock Island County officials based on other aspects of county governance.

Goal #2 Economic Development: Attract, retain, and expand businesses within the county.

Economic Development Objectives

1. Emphasize the importance of the urbanized areas of Rock Island, Moline, East Moline, Milan, Silvis and Coal Valley, primarily as the center for government, financial, business, and industrial uses.
2. Acknowledge the importance of agricultural and natural resources to the county economy.
3. Encourage tourism and outdoor recreation within the county as an economic opportunity.

Goal #3 Environment: Preserve and enhance existing natural resources and environmental systems for the benefit of county residents.

Land Management Objectives

1. Ensure the development of the county's Forest Preserve District's lands, zoo, and recreation facilities to preserve these unique natural areas, provide habitat for wildlife; meet the outdoor educational and recreational needs of the county's residents; and promote tourism in the region.
2. Encourage preservation of existing topography, vegetation, and other natural features by using innovative site planning that respects the character of the landscape.
3. Recognize the limitations of the land to support, at varying densities and intensities, differing uses and be aware of the levels of use at which environmental degradation occurs.

Goal #3 – Continued

4. Strengthen use of stormwater and land management practices to reduce soil erosion and improve water quality.
5. Encourage farmers to follow soil conservation plans and increase the use of soil conservation practices such as conservation tillage, conservation easements, and use of cover crops.
6. Preserve, protect, and enhance the historic, scenic, cultural, and architectural character of the county. Avoid new development in areas of high probability for significant archaeological, cultural, or historic features.
7. Avoid new development in areas at substantial risk for coal mine subsidence, land subsidence, landslides, and land slumps due to an underlying shale layer, unstable rock formations or very steep slopes.
8. Strengthen the use of the county Solid Waste Ordinance to ensure the proper storage and disposal of all refuse in the county. Ensure that only properties zoned as authorized salvage yards, waste disposal sites, collection or recycling facilities be permitted to collect or store refuse in the county.

Water Quality and Management Objectives

1. Require land developers and landowners to follow the Rock Island County Storm Water Ordinance or the local city storm water ordinances for all new construction or redevelopments.
2. Preserve and improve watershed quality by minimizing the release of nitrogen and phosphorous into waterways, such as detailed in the Illinois Nutrient Loss Reduction Strategy. Utilize best management practices to reduce nutrient loads from wastewater treatment plants, and urban and agricultural runoff.
3. Encourage the conservation and protection of safe and adequate water supply areas, both above and below ground.
4. Participate in floodplain management best practices to reduce loss of life and property, and encourage new development to locate outside of the 1% flood risk zone.
5. Preserve the role of woodlands and wetlands as essential components of the hydrologic system and as valuable wildlife habitat. Restore and improve degraded wetland and woodland resources where possible.
6. Adopt a countywide erosion and sedimentation control ordinance designed to protect surface waters, drainage systems and infrastructure from excessive soil erosion resulting from construction.
7. Provide protection from degradation for Mill Creek, Copperas Creek, and other rural watersheds as development begins to locate adjacently.

8. Enable the county to follow all federal and state laws and regulations applicable to the National Pollutant Discharge Elimination System (NPDES) permitting requirements for storm water discharges.
9. Facilitate compliance with state and federal standards and permits by owners of construction sites within the county.
10. Incorporate the Rock River Special Area Management Plan(SAMP) into the process of making land use decisions. Examine potential wetland sites and preserve them as an essential part of hydrologic systems. Seek funding sources to retain quality wetlands that are included in the SAMP.
11. Increase the inspection of rural septic systems to protect surface and groundwater.
Water Quality and Management Objectives – Continued
12. Animal waste from household animals should be collected promptly and disposed of properly to not contaminate ground or surface waters. Animal waste, animal carcasses, liquid waste, sewage effluent, or other polluting material from farm operations should be contained to meet state regulations for disposal of animal waste.
13. Promote the proper maintenance of swimming pools, wading pools, ponds, or other natural bodies of water so that it does not harbor mosquitoes, flies, or other animal pests that are offensive, injurious, or dangerous to health of individuals or the public.
Air Quality Objectives
1. Protect the health and welfare of citizens by enforcing the no burn ordinance for refuse, tires, and hazardous materials.
2. Permit burning of landscape waste only at times when atmospheric conditions dissipate smoke and airborne contaminants. The burning operation must not create a visibility hazard on roads, train tracks, airfields, or for air travel.
3. Encourage composting of landscape waste where possible to reduce the need to burn the waste.
4. Consider alternative fuels and vehicles in county fleets that contribute to emissions reduction.
Energy Objectives
1. Incorporate energy reduction and conservation plans into new and reconstructed county buildings and facilities.
2. Encourage alternative technologies and energy sources to reduce energy consumption within the county.
3. Investigate alternative sources of energy supply for county structures and facilities such as geothermal, solar, and wind energy.

Goal #4 Parks and Outdoor Recreation : Capitalize on the scenic, natural beauty of the county by supplying quality parks for active and passive use, and open space and reserved areas for unique and special plant and wildlife habitat.

Outdoor Recreation Objectives

1. Encourage improved access to both Mississippi and Rock Rivers for recreational purposes.
2. Maintain the county's segments of the multi-purpose Mississippi River Trail, and other trail systems to encourage physical activity and enhance tourism within the county.

Parks, and Open Space, Objectives

Introduction and Vision

1. Incorporate the “Greenway Plan” into the review process, and encourage inclusion of designated greenways into the process and use the plan to promote a countywide system of open space corridors.
2. Develop a strategy to buy and protect open space lands.
3. Enhance the existing forest preserve and park system.
4. Preserve and improve river quality to maximize their potential for recreational purposes.
5. Encourage non-acquisition techniques such as easements for conducting open space plans.
6. Support the goals and objectives contained in the Rock Island County Forest Preserve District Plan and its facilities.

Goal #5 Transportation: Support the efficient movement of people and goods to move the economy of Rock Island County forward.

Transportation Objectives

1. Partner with Henry County identifying locations and funding sources for new east river crossing of the Rock River and with Scott County for a new east Mississippi River Crossing as travel demand grows in these areas.
2. Maintain traffic safety on county highways by considering ingress and egress placement, design, and congestion when reviewing parcel splits, subdivision development, and rezonings.
3. Integrate land use and transportation by considering the relationship of future development to various modes of transportation.
4. Encourage joint access off arterial roads for all types of uses, commercial, industrial, and residential and agricultural.
5. Require Right of Way (ROW) dedications as part of subdivision and development in areas of projected growth. Utilize city/village standards if development occurs in extraterritorial jurisdictional areas. Promote safe and compatible development near the airport to allow for future growth.
6. Strengthen public transportation systems and non-motorized transportation, such as multi-purpose trails, within the county.
7. Encourage development of transportation infrastructure that include provisions for public transportation, bicycles, and pedestrians.
8. Support and promote initiatives to bring passenger rail service to the region.
9. Develop an inventory, maintenance program, and schedule of maintenance for all bridges and culverts in the county.

Goal #6 Administration: Operate county government in an accountable manner and promote positive interactions with citizens and other organizations.

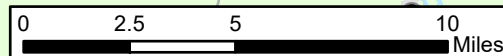
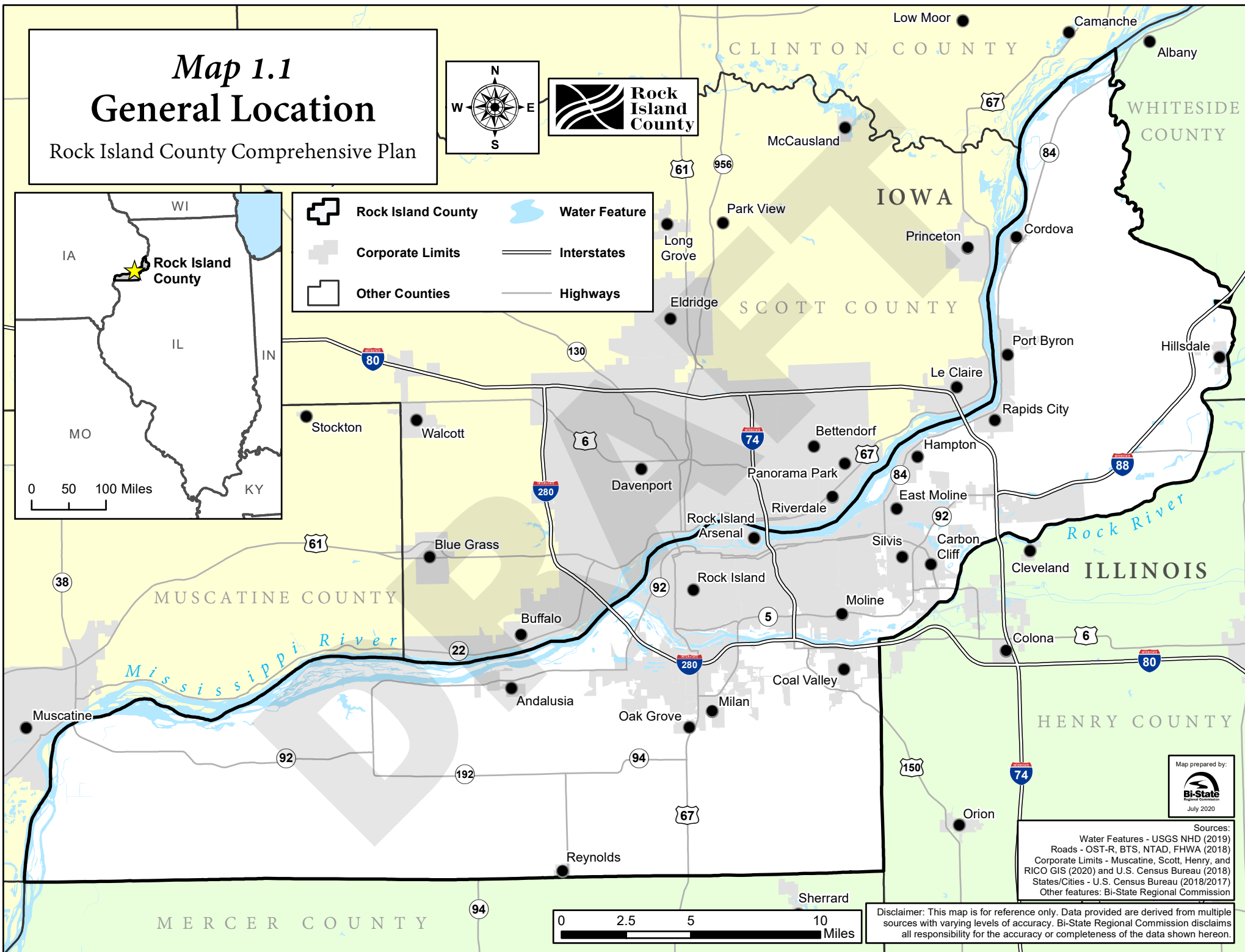
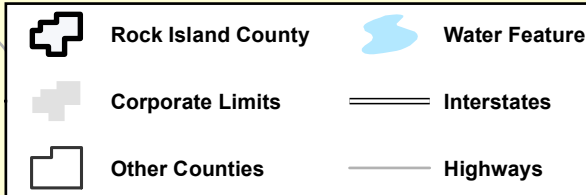
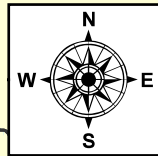
Administrative Objectives

1. Encourage public participation in county planning, decision-making, and implementation processes.
2. Foster policies and programs that ensure the health and well-being of county citizens.
3. Promote, develop, and maintain recreational, cultural, and public use facilities in the county.
4. Support planning activities and ordinance amendments that serve to preserve open space, promote the clustering of development, protect ground and surface water resources, protect wetlands and other sensitive environmental features, and reduce stormwater runoff.

- | |
|---|
| 5. Promote the use of undeveloped county-owned lands for the benefit and convenience of residents and visitors. |
| 6. Promote the re-use of county-owned facilities for the benefit and convenience of residents and visitors. |
| 7. Maintain communication and coordination between county departments and county supervisors. |
| 8. Participate in strategic planning within the region to strengthen communication among the county and municipalities, and find opportunities to share information. |
| 9. Improve public awareness of upcoming events and projects being completed by the county. |
| 10. Minimize potential land use conflicts between cities and the county including issues involving annexation, urban and rural development, code compliance, and fringe area development. |
| 11. Support stable government leadership, consistent decision-making, and efficient processing to inspire and attract investors to the county. |

Map 1.1 General Location

Rock Island County Comprehensive Plan



Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown herein.



Sources:
 Water Features - USGS NHD (2019)
 Roads - OST-R, BTS, NTAD, FHWA (2018)
 Corporate Limits - Muscatine, Scott, Henry, and RICO GIS (2020) and U.S. Census Bureau (2018)
 States/Cities - U.S. Census Bureau (2018/2017)
 Other features: Bi-State Regional Commission

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Chapter 2 Strategies for Implementation

Farmland preservation in concert with an emphasis for land development to be located within or adjacent to municipalities are key elements of this plan. A vision statement has been formulated to capture the view Rock Island County residents expressed through the public input process. The vision states:

Rock Island County, Illinois is acclaimed for its historic riverfront communities along the Mississippi River, natural scenic beauty, a vital agricultural and natural resource base, and a strong foundation in industry and commerce as part of the Quad Cities Metropolitan Area.

The leaders of Rock Island County will use this vision to focus progress toward the goals, principles and objectives, listed in Chapter 1. On the following pages are some of the ongoing, short term and long-term strategies necessary for Rock Island County to accomplish these goals and to achieve the shared vision. Short-term strategies are anticipated to be achieved within the next five years, while long-term strategies will take six or more years to accomplish. It will be up to County leaders

to decide the order in which to address these goals and strategies. Rock Island County leadership is encouraged to share this comprehensive plan with municipalities and work cooperatively on land development occurring in Rock Island County. Leveraging both community and county assets will support economic growth and productivity.

County officials should understand that strategies in this chapter are progressive in nature. They provide a framework for meeting the county goals. Other tasks and requirements may be required of the county in addition to those listed on the following pages. Any updates to this comprehensive plan should include updates to the strategies for implementation, including recognition of milestones and accomplishments.

Many activities can be done without large investment by the county. Yet other activities will require considerable time and funding investment from public and private interests. In the implementation of future projects, careful consideration should be given to the full utilization of existing facilities and funding opportunities.

Land

Chapter 1 outlines the county goals, general planning principles, and objectives. The following implementation strategies are recommended to either facilitate continuation of orderly and efficient growth and development and/or refine how land development and its impacts are facilitated.

Implementation Strategies
Use vegetative buffer zones or greenspace for Major Subdivisions.
Use tools to offset costs for infrastructure improvements due to development. Examples: impact fees, dedications, "cash in lieu of", private-public partnerships, sales tax, user fees, state infrastructure bank, bonds, etc.
Encourage soil conservation practices, erosion management, and sustainable farming practices for ground and surface water quality.
Incorporate best practices from the International Building Code to support resilient development and mitigate natural hazards.
Use GIS mapping to record existing land use by parcel beyond the metropolitan planning boundary.

Environment

The environmental strategies below address protecting and conserving the natural, human, and economic resources of Rock Island County. A healthy environment sets the foundation for a quality life in Rock Island County.

Implementation Strategies
Continue participation in the Community Rating System (CRS) efforts for reduced flood insurance rates for county residents.
Advocate for invasive species management programs within the county.
Incorporate storm water best management practices and exercise funding opportunities that are available to the county to implement best practices.
Create ordinance for steep slope protection and guided development of these areas.
Encourage green infrastructure to reduce impervious surfaces.
Advocate for sustainable farming practices to limit chemical use, reduce air pollutants, and enhance land and water resources.

Agriculture

Agriculture is an important part of Rock Island County's economy. A balanced approach to non-agricultural development is emphasized by this plan. Living and working in unincorporated areas of the county have benefits but also have particular nuisances that are inherent in being an agricultural area, including dust, noise from machinery, among others. Reducing conflicts between incompatible land uses is necessary to maintain the economic vitality of agriculture in Rock Island County.

Implementation Strategies
Use of GIS to locate existing large livestock operations and growth potential areas to reduce residential encroachment.
Consider buffer zones be established in residential areas when adjacent to AG districts.

Transportation

To facilitate the county's economic vitality, a well-maintained, safe, and connected transportation system is needed. County roads move people and goods to and from desired destinations. Investment in this system will be necessary to support county growth and development.

Implementation Strategies
Recognize potential new bridge and road locations as part of land use decision-making.
Encourage moderate-high density residential development in proximity to existing collector streets.
Establish mechanism for developers to fund road improvements on collector and arterial system when impacting transportation network.
Locate commercial and industrial development near transportation services, eg. highways, rail, or river.
Participate in I-80 bridge replacement process.
Monitor East Rock River Bridge future project status and East-West Connector-120 th Avenue through N 1700 Avenue (Turkey Hollow Road to County Highway 12/E. 200 th Street), when development pressure and travel demand support road expansion feasibility
Incorporate road specifications that will result in durable and resilient facilities/structures.
Use Manual of Uniform Traffic Control Devices (MUTCD) guidance for bringing road signs up to federal standards, where needed.
Support implementation of passenger rail service from Chicago to Quad Cities.
Aid Forest Preserve District in maintaining the existing MRT/Great River Trail.
Advocate for reinvestment in the inland river navigation system and terminal access.

Parks, Open Space and Conservation Areas

Key elements of these implementation Strategies are to meet the recreation and open space needs of residents and offer opportunities to visitors to Rock Island County.

Implementation Strategies
Use planning tools for decision-making- County Greenway Plan and Forest Preserve Plan, other related documents.
Investigate floodplain overlay district coverage of wetland areas, expand, or amend to enlarge protection; and fill prohibitions.
Pursue acquisition of properties in areas identified in the Rock Island County Hazard Mitigation Plan to mitigate future damage to property and loss of life.
Support Forest Preserve District in maintaining forest preserves and Niabi Zoo to attract and serve residents.
Develop open space preservation policies for allowance of easement and dedications of land for conservation purposes.
Advocate for Rock Island County Soil and Water Conservation District's flood mitigation programs and other greenway promotion activities.
Review and encourage new privately funded recreation opportunities.
Support removal of the Steel and Sears Dams on Rock River for water recreation safety while considering stream flow impacts, and advantages of pooling behind the dam that supports recreation.

Economic Development

Rock Island County includes a metropolitan area that has global economic connections, and is located along an important river navigation corridor of the Mississippi River. While much of the focus for development in the county will be on unincorporated areas, support for the Illinois Quad Cities and the smaller communities in the county will strengthen the county as a whole. The implementation strategies support growing a diverse economy while protecting prime farmland and monitoring changes in the national economy.

Implementation Strategies
Identify infrastructure needs to attract new business and establish mechanism to fund infrastructure needs. (Impact Fees)
Provide for potential large site industrial growth by identifying industrial growth areas and establishing or protecting zoning districts for this purpose.
Identify existing corridors that are suitable for development based on existing infrastructure and preserve those areas.

Implementation Strategies

Establish an active economic development presence/coordinator in the county department structure.
Capitalize on the natural scenic beauty for recreation and sporting activities.
Promote transition to renewable energy alternatives and support through ordinances that follow best practices, and permit where appropriate.
Support private and public expansion of broadband internet services to all areas of the county.
Monitor linear energy transmissions projects, e.g. pipelines and traditional/alternative energy transmissions, through the county and support where it benefits local development initiatives.

Other Facilities/Services

Implementation Strategies

Require infrastructure (sewer, water, and transportation) needs to be addressed in development plans.
Investigate and pursue Transfer of Development Rights (TDR) and Purchase of Development Rights (PDR) to allow for orderly growth from the urban areas outward.
Review and update County Code of Ordinances into modern codification system per State Statutes

Governance/Finance

The common role of government is to provide a foundation for the collective health, safety, and welfare of its citizens. When providing infrastructure, there is a standard level of service the county government will determine based on the public process. Public participation from a variety of stakeholders will ensure stable governance and attention to how secure and sustainable these functions will be in the future.

Implementation Strategies

Encourage diversity of participation in County governance through elected process, volunteer opportunities and public participation.
Seek innovative revenue sources to supplement and sustain county services and facilities.
Assess obstacles for development in Rock Island County and seek solutions to encourage development.

Partnership/Image

Working collaboratively with various partners will allow the use of talents, perspectives and resources for enhancing the goals and objectives of this plan. It will be important to strengthen the image of Rock Island County to attract new residents and businesses for the long term economic health of the county.

Implementation Strategies

Seek opportunities to partner with federal, state, and local jurisdictions or private partnerships to sustain and enhance services/facilities.

Review vision regularly and align decision-making to the best and highest position to achieve the vision.

Chapter 3 Implementation Tools

The *Rock Island County Comprehensive Plan* contains strategies and recommendations of what is thought to be necessary to make the county function better and to be a better place to live and work. Public funds will likely be spent on various county facilities to complement or support private investments, to meet current and future needs based on this plan. These facilities have been intended to serve the planned pattern of residential, commercial, and industrial development. The efficiency with which future development is served will depend on the coordinated implementation of all elements of this plan.

Use of the Comprehensive Plan

The content contained in this plan guides present and future decisions. It is to be used by county and city officials, other groups, and private individuals interested in future development within Rock Island County. The implementation strategies in this plan indicate what actions or activities must be done to accomplish items outlined, or to ensure that the plan is followed on a day-to-day basis as decisions concerning land development are made.

If planning is to be effective with the goal of improving the county, the comprehensive plan must be prepared in concert with a zoning ordinance, subdivision regulations, official map, building and housing codes, utility specifications, and a capital improvements program or other project budgeting tools. The county's plans and

ordinances governing development are interrelated. If the ordinances are varied to allow development to occur differently than proposed, then streets, county facilities, and utilities may not be adequate to meet county needs.

Carrying out the plan is the responsibility of the County Board. An official map can be used to reflect all proposed streets, parks, schools, and other public facilities indicated in the comprehensive plan. The zoning ordinance and subdivision regulations are designed to guide development of land according to the plan. A capital improvements program outlines major county expenditures according to priorities and locations specified by the plan. A building code and utility specifications promote high quality development and guard against deterioration of the residential developments. These development tools are adopted by ordinance and as such become law, whereas the "Comprehensive Plan" and a "Capital Improvements Program" or list of projects documents are adopted as advisory documents and support decisions related to the ordinances that might be legally challenged. The comprehensive plan should be used to inform officials and the public on all items pertaining to the land development of county. Awareness that a plan exists is the first step in gaining the broad support, without which any plan is rendered ineffective.

The plan should be reevaluated periodically to maintain a realistic relationship between the plan and current trends of development. Revisions may be required as unforeseen development opportunities occur or more thorough analysis of development issues become available.

Other Plans and Guidelines

There are other plans that the county either facilitates or participates. The Rock Island County Hazard Mitigation Plan is a coordinative document that outlines priorities for hazard mitigation for the county and municipalities within the county boundary. The Quad Cities Long Range Transportation Plan is another metropolitan document that addresses roads and trails under the jurisdiction of the county that require coordination with other units of government. These plans and others should be referenced when decisions on land development are being proposed and later implemented.

Coordinated Use of Development Controls

A zoning ordinance, subdivision regulations, storm water and erosion control measures, official map, building code, and utility specifications are commonly referred to as development controls. The adoption and amendment of these controls are the responsibility of the County Board, which acts after reviewing recommendations from the Zoning Board of Appeals. Administration of the regulations is entrusted to an administrative officer, via the County Zoning Staff.

The importance of administration of development controls cannot be over-

emphasized. Even the best regulations are meaningless without strong enforcement. The county and future county residents have much to lose from improper lot layout or substandard construction of structures, streets, or utilities. The best way to avoid such problems is for the County Board to retain a knowledgeable person to coordinate the enforcement of all development controls and to assign that person sufficient resources to carry out these responsibilities.

Zoning Ordinance. The purpose of a zoning ordinance is to eliminate conflicts between land uses and to prevent over-building on a particular building site. Lot size, building height, building setbacks, parking requirements, and a list of permitted uses are specified in the ordinance for each of a series of internally compatible zoning classifications called districts.

The zoning ordinance, unlike many other ordinances, requires constant attention to its administration. The individual primarily concerned with the day-to-day administration of the zoning ordinance is the zoning administrator.

It is important that the Zoning Board of Appeals and County Board evaluate requested zoning changes in light of the comprehensive plan. The county's plans for traffic circulation and other services and for regulation of water supply and wastewater disposal have all been based on the comprehensive plan. Any deviation from that plan might lead to septic systems, water supplies, or streets being inappropriately sized or misplaced. Zoning changes not in conformance with the plan will require revisions of the entire plan or an amendment, and may result in increased

cost to the county due to these land use changes. If the Zoning Board of Appeals feels a requested change is in the best interest of the community and consistent with the plan, it recommends that the County Board adopt the proposed change.

The County Board, after review of Zoning Board of Appeals findings and recommendations, then makes decisions on requested zoning revisions. Special zoning regulations are applied to development in a flood plain to reduce flood hazards. Flood plain regulation is a special type of ordinance, or can be a set of provisions that can be incorporated into the Zoning Ordinance or stand alone. The provisions include the designation of floodways for overland flow of floodwaters and for other limited uses that do not conflict with that primary purpose. The regulations also provide that development outside the floodway, but still within the flood plain, must be constructed above a designated elevation.

Floodplain Ordinance. Since Rock Island County has many watersheds with creeks and rivers, a floodplain zoning ordinance and its provisions are important to enforce in order to protect property and ensure public safety. Rock Island County uses the State of Illinois' model floodplain ordinance which contains standards above the basic National Flood Insurance Program (NFIP) requirements.

For flood mitigation and insurance premium reductions, Rock Island County participates in Federal Emergency Management Agency's Community Rating System (CRS). Participation in CRS means Rock Island County is working proactively to reduce loss of property and lives from flooding events.

The county also participates in a multi-jurisdictional hazard mitigation plan that looks to a floodplain ordinance to mitigate losses due to flooding.

Land Evaluation Site Assessment. In conjunction with land conversions from agriculture to other land uses or with special use permit requests, Rock Island County uses a Land Evaluation Site Assessment (LESA) scoring tool to evaluate the suitability of rezoning agriculture to other uses or within a zone other special uses. The LESA system examines the rezoning of property in conjunction with soils as well as the proximity of the land to public facilities, such as roads, wastewater and water systems, and municipal services. This discourages spot zoning in productive agricultural areas and encourages development near or adjacent to existing infrastructure and services.

Subdivision Regulations. A subdivision ordinance typically applies to new growth and specifically applies to land that is being platted or divided into lots. The primary objectives of a subdivision ordinance are threefold. First, the subdivision ordinance clearly outlines the basic standards to be employed in the preparation of the subdivision plat. Second, the design standards for planning the subdivision are provided so that the general intent and purposes set forth in the *Rock Island County Comprehensive Plan* can be carried out. Third, standards for required public improvements such as street surface, curb, gutter, sidewalk, sewer, and water are referenced and discussed.

Under the procedures outlined in the subdivision regulations, a developer first submits a sketch plan, then a preliminary

plat, and finally a final plat to the zoning official showing the intentions for the land development.

When reviewing the sketch plan and preliminary plat, the county officials should check the county's planning documents to determine whether any projects have been proposed in the area intended to be subdivided. If such a project has been proposed, the zoning officer should inquire whether the responsible agency, such as the County Board, city, or school board, is interested in the site for specific planned purposes or has comments on the development. If the entity is interested in the site, and if the subdivider and the entity can reach a mutually acceptable agreement, the zoning officer will have been successful in its advisory and coordinating capacity.

Official Maps. Planned public improvements may be indicated on specific county maps, such as the zoning map or county highway map for roads. The primary objective of these official maps are to improve the coordination of planned projects and subdivision growth and to accomplish this on a sound basis. Frequently, a very carefully located site for proposed storm drainage trunk line or major road site is lost because development proceeds too rapidly for responsible agencies to begin acquisition efforts.

These maps give the county adequate time for the appropriate governmental agency to acquire the particular site and thereby implement the plan, or to inform the subdivider that the agency is no longer interested in acquiring the site. The fact that such projects are indicated in plans can restrain the subdivider from developing the proposed project site for a period of one

year (from time of application for subdivision approval), during which the agency responsible for such project has the opportunity to commence negotiations or proceedings to acquire the site.

In review of a subdivision, one of the first responsibilities of the county zoning officials is to determine whether any projects indicated fall in the area of the proposed subdivision. In some cases where an additional right-of-way may be needed for a major street improvement in the future, or where a planned project may be located within a proposed subdivision, the county zoning officials can require the additional right-of-way to be designed in such a manner so as to leave the site available for acquisition by the appropriate agency, as outlined in the subdivision ordinance.

Manufactured Home Regulations. Manufactured homes can be an effective means of providing low or moderate-cost housing. To ensure that manufactured home development meets standards consistent with those applicable to other types of housing, it is customary to require them to be constructed in accordance with manufactured home regulations. These regulations contain standards relating to requirements for streets, curbs and gutters, underground utilities, central sewage treatment, central laundry facilities, and proper design to avoid adverse effects on adjacent residential properties.

Building Code. A building code establishes good development standards and ensures minimum standards for residential, commercial, and industrial development. A building code is needed to properly regulate building materials and structural conditions.

Building codes deal with the structural arrangements of materials, and the codes apply to all new construction in the county.

Utility Specifications. Detailed policies and specifications relating to the design and construction of streets, sanitary sewers, water lines, storm sewers, and sidewalks are needed to supplement subdivision regulations. These standards should be in the form of specifications uniformly applied throughout the county. The only way residents of Rock Island County can be assured of uniform, high-quality roadway and utility construction is to adopt and enforce standards that are applicable to all development.

Programming of Capital Improvements

While development controls are effective in guiding private development, they do not provide for construction of public facilities indicated in the plan. An important method of guiding future development of public facilities is a capital improvements program, plan or list of capital projects. A capital improvements program is a suggested schedule for construction of public improvements, such as roads or building improvements, and the financing of proposed projects. Capital improvements programming carries out the comprehensive plan projects by prioritizing and allocating funds for the construction of public facilities proposed by the plan. The program is a tool for translating long-term objectives and plans into implementation, whether they are roads, recreation areas, or other public facilities.

A capital improvement program, when used by county officials, assures that attention is

being given to the county's needs, and that logical steps will be taken to satisfy these needs. Some of the advantages of capital improvements programming include stabilization of the tax rate over a period of years, provision of adequate time for planning and engineering of improvements, assurance that projects will be carried out in accordance with predetermined needs and the community's ability to pay, and coordination among all agencies having responsibility for public facility construction.

For the capital improvements program to be effective, it should be updated annually. This is recommended to occur prior to the consideration of the county's annual budget, so that information contained in the program can be utilized in making decisions on items proposed for inclusion in the budget. Annual updating will assure greater accuracy and allow a continuous schedule of public improvements.

As projects listed in a capital improvements program approach a construction date, the County Board would then initiate detailed planning and feasibility studies to move projects from concept to construction. The purpose is to advance the construction of public facilities in a manner that best serves the needs of the people of Rock Island County.

Cooperation and Assistance of Other Governmental Entities

A number of entities must cooperate in order to implement the *Rock Island County Comprehensive Plan*. The county, school districts, fire districts, drainage districts, municipalities, adjacent counties, and state and federal officials should be aware of the

interdependency of each jurisdiction of government and the benefits that cooperation holds for all area residents.

The county should pursue plan implementation assistance available from various governmental agencies. Federal financial assistance is available for roads, park development, and public safety among other programs. Monies available under such programs will vary over time and emphasis, and the responsible agency should be contacted for specific project eligibility requirements.

Chapter 4 Land Use

Under Construction

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Chapter 5 County Profile

The information in this chapter will help Rock Island County plan for the short-term and long-term needs of its residents. This chapter includes information on population, gender, race, ancestry, age, employment, income, education, and housing. Historical data is included to show Rock Island County's progression as well as some comparisons. Much of the data from this chapter comes from the U.S. Census Bureau, American Community Survey (ACS). All ACS data are survey estimates, and other sources utilized are noted. Detailed profiles for Rock Island County are found at the end of this chapter and provide a large amount of data.

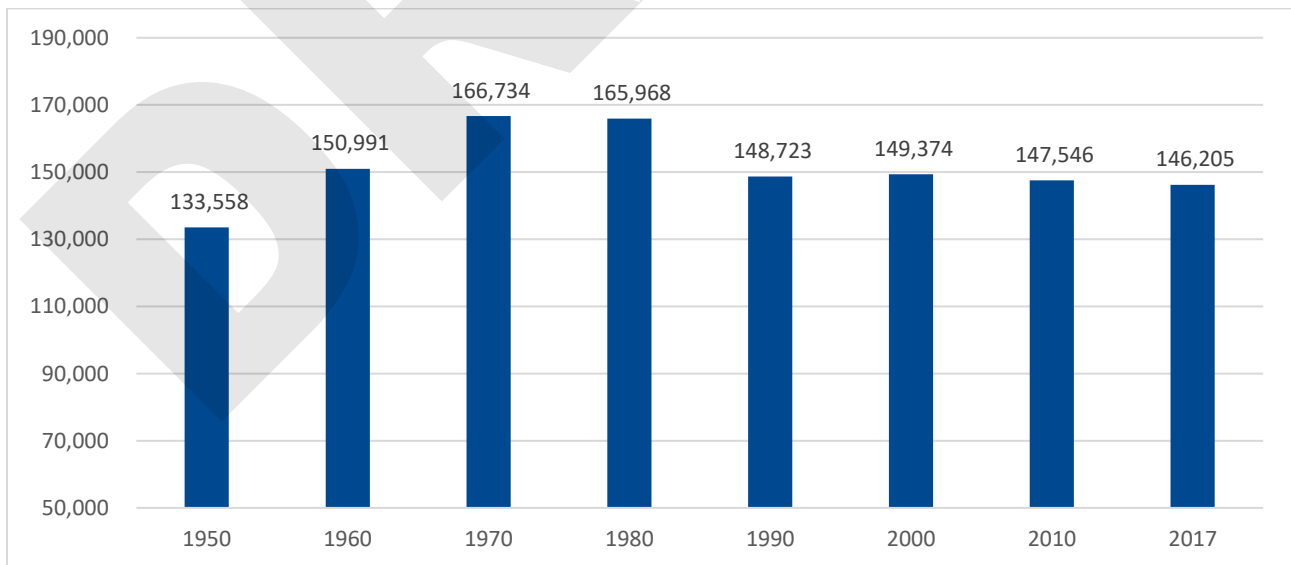
Beyond simply counting the population, demographic data can provide a way for

county officials, planners, and others to identify and analyze detailed demographic characteristics of a population. Quantifying the gender, age, race, and ancestry of a community can help one understand the current and future needs of that community and provide insight into the cultural background of its residents.

Population and Households

In 2017, Rock Island County's population was 146,205. Historically, the county grew steadily from 1950 to 1970 reaching its peak population of 166,734 in 1970. After a bit of a decline from 1970 to 1990, the population has remained fairly stable around 145,00 – 150,000. Figure 5.1 shows the detailed population history.

Figure 5.1 – Historical Population



Source: U.S. Census Bureau, decennial censuses (1950-2010), and 2017 ACS 5-Year Estimates.

County Profile

Rock Island County is home to 15 cities and villages and two Census defined places (CDPs) that range in population from 52 to just over 42,000. The largest municipality in Rock Island County is the City of Moline, which makes up approximately 29.2% of the county's total population. Table 5.1 shows the comparison of all the municipalities within Rock Island County.

Table 5.1 – Rock Island County Populations by Municipality

Year	2000	2010	2017
Rock Island County	149,374	147,546	146,205
Andalusia	1,050	1,178	1,194
Carbon Cliff	1,689	2,134	1,907
Coal Valley	3,606	3,743	3,849
Cordova	633	672	672
Coyne Center	906	829	951
East Moline	20,333	21,302	21,302
Hampton	1,626	1,863	2,091
Hillsdale	588	523	546
Milan	5,348	5,099	5,082
Moline	43,768	43,483	42,644
Oak Grove CDP	1,318	607	712
Port Byron	1,535	1,647	1,825
Rapids City	953	959	1,037
Reynolds	508	539	523
Rock Island	39,684	39,018	38,560
Rock Island Arsenal CDP	145	149	52
Silvis	7,269	7,479	7,586
Total Incorporated	130,959	131,224	130,533
Total Unincorporated	18,415	16,322	15,672
Percent Unincorporated	12.3%	11.1%	10.7%

Source: U.S. Census Bureau, 2000 - 2010 Census, Including revised counts, 2013-2017 American Community Survey 5-Year Estimates. Census Defined Places (CDP) included in incorporated totals.

In 2017 (2013-17 ACS), there were 60,064 households in Rock Island County. Of those households, 37,684 (62.7%) are family households, with 15,375 (25.6%) of those family households having their own children under 18. Comparatively, Illinois has 64.8% family households, with 28.3% with their own children under 18.

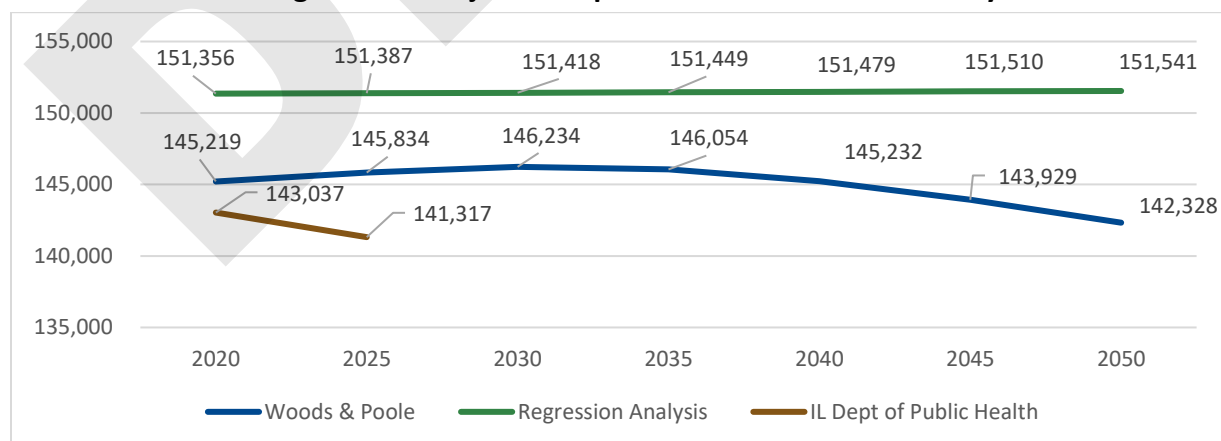
Population Projections

Utilizing projections can help plan for the future needs of the county. Many variables have the potential to affect the future growth and development of an area. Woods & Poole Economics, Inc. uses a regional approach to forecast projection data. This means that the projections are done simultaneously for the U.S., so that changes in one county will affect the growth/decline of another. This is done to more accurately reflect the economic effects of migrating persons. According to data from Woods & Poole Economics, Rock Island County's population is expected to remain relatively consistent over the next 30 years, declining from 145,219 in 2020 to 142,328 in 2050, with an annual average growth rate of -0.07%. Another way to look at future

population growth is to examine historical trends. A projection scenario was modeled using a regression analysis from past Decennial Censuses and the 2017 American Community Survey estimates. The analysis assumes population will follow trends similar to the population patterns from 1950-2017, and anticipates a population change from 151,356 in 2020 to 151,541 by 2050. A third population projection is provided from the Illinois Department of Public Health, although it only provides a 2020 estimated population of 143,037 and a 2025 population of 141,317.

Many factors shape a community's future. Rock Island County will most likely see a stagnant or slight decline in population similar to the estimates found in the Woods & Poole projections and the Illinois Department of Public Health Estimates. Comprehensive planning will help guide continued development in order to fulfill the county's goals for land use, economic development, and natural resource preservation. Figure 5.2 shows population projection scenarios for Rock Island County through 2050.

Figure 5.2– Projected Population of Rock Island County



Source: Woods & Poole Economics, Inc. (2017); Regression Analysis of U.S. Census Bureau data (1950 - 2017), Illinois Department of Public Health, February 2015.

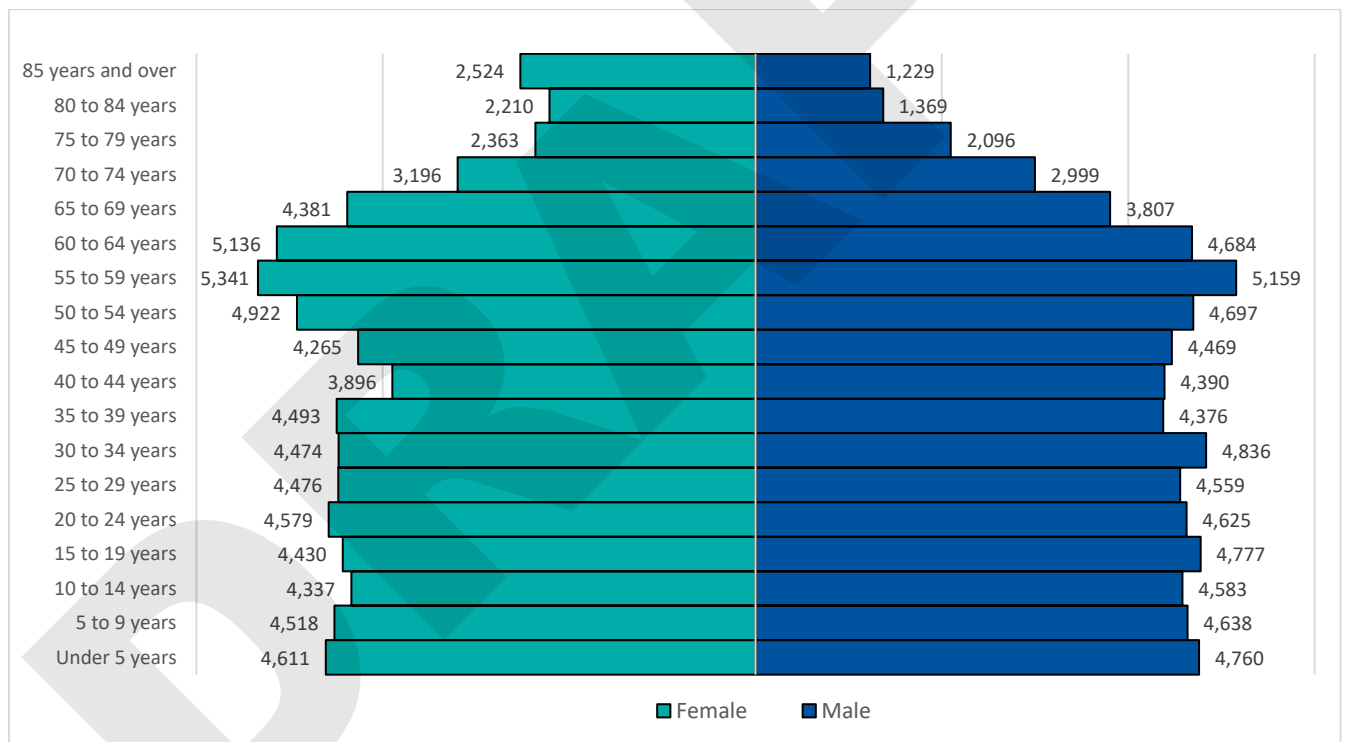
Age & Gender

Rock Island County's population has slightly more females than males. As of 2017, Rock Island County had 49.3% males and 50.7% females. In comparison, Illinois is 49.2% male and 50.8% female. The median age is a statistic that can be used to gauge the overall age of the population. The higher the median age the older a population, and conversely the lower the median age the younger the population. The median age rose from 39.1 in 2000 to 40.0 in 2017.

Similarly, Illinois' median age rose from 34.7 in 2000 to 38.0 in 2017.

The largest age groups in Rock Island County's population are 55-59 (7.2%) and 60-64 (6.72%). As shown in Figure 5.3, Rock Island County has exactly 50% of its population under aged 39 or younger, and conversely has 50% of its population above aged 40 or older.

Figure 5.3 – Population by Age Distribution



Source: U.S. Census Bureau, decennial censuses (1950-2010), and 2017 ACS 5-Year Estimates.

Race & Hispanic or Latino Ethnicity

The Census Bureau tabulates race data into the following general categories:

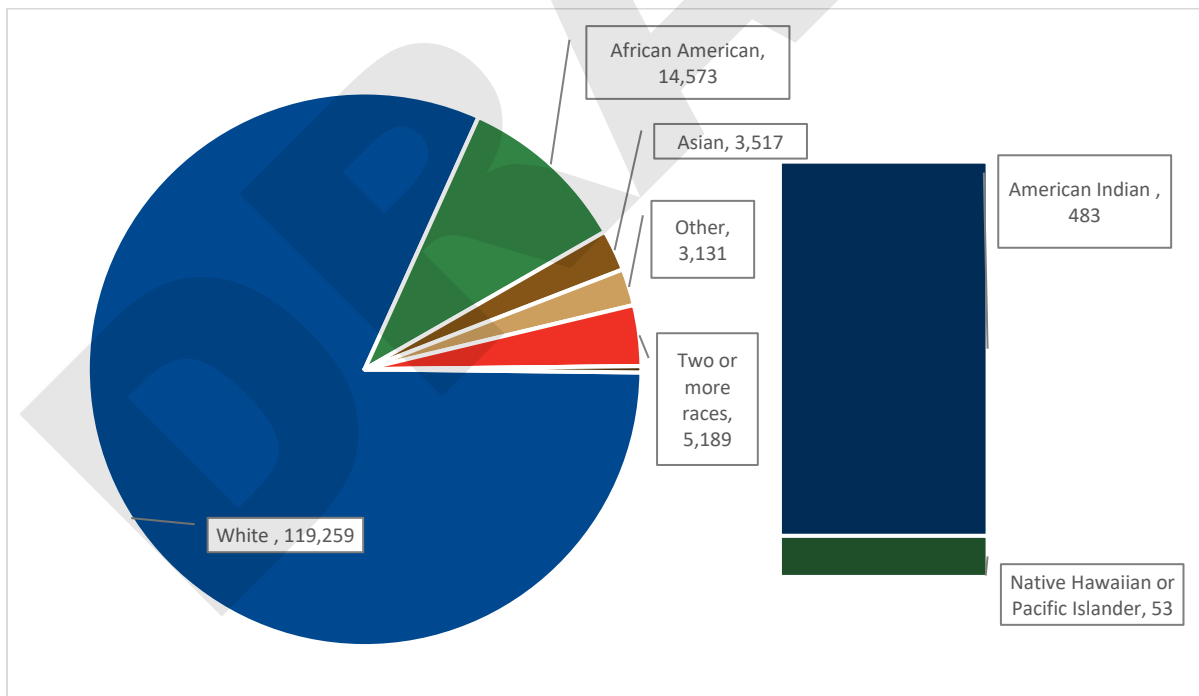
- White alone
- Black or African American alone
- American Indian or Alaska Native alone
- Asian alone
- Native Hawaiian or other Pacific Islander alone
- Two or more races

Rock Island County's 2017 population shows that 86.1% of the population is identified as white alone. The most common single racial minority in Rock Island County are persons of Black or African American race (10.0%), followed by Asian race (2.4%). Illinois' population overall is more diverse with 71.2% identified as white alone followed by 14.2% Black or African American race. Figure 5.4

shows race by category for Rock Island County.

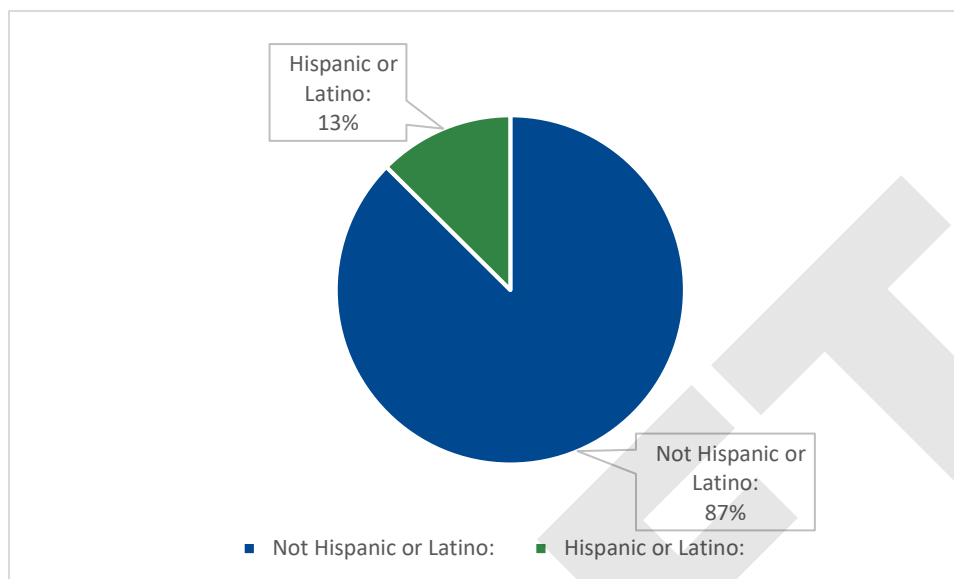
Hispanic or Latino ethnicity can be associated with any race. In 2017, 12.6% of Rock Island County's population identified themselves as Hispanic or Latino (of any race). Comparatively, 17.2% of Illinois population identified themselves as Hispanic or Latino.

Figure 5.4 – Race



Source: U.S. Census Bureau, decennial censuses (1950-2010), and 2017 ACS 5-Year Estimates

Figure 5.5 – Ethnicity



Source: U.S. Census Bureau, decennial censuses (1950-2010), and 2017 ACS 5-Year Estimates.

Ancestry

The U.S. Census Bureau records ancestry in the American Community Survey. Persons can choose from numerous ancestries and may pick more than one. A person's race or ethnic status has no bearing on the ancestries they may choose.

The most common identified ancestry in Rock Island County as of 2017 (2013-17 ACS 5-year estimates) was German (23.9%), followed by Irish (13.1%), English (7.7%), and Swedish (5.9%). This is similar to Illinois' ancestries that show German, Irish, and Polish as the three most commonly reported ancestries with 12.1%, 8.5%, and 4.0% respectively.

Table 5.2 – Ancestry

Ancestry	Estimate	Ancestry	Estimate
German	34,878	West Indian (except Hispanic groups)	212
Irish	19,224	Romanian	204
English	11,324	Czechoslovakian	195
Swedish	8,694	Hungarian	194
American	6,490	Slovak	172
Belgian	5,454	Serbian	166
Italian	4,327	Canadian	147
Polish	3,347	Albanian	123
French (except Basque)	3,288	Eastern European	105
Subsaharan African	2,985	Ukrainian	100
Dutch	2,714	Turkish	84
Scottish	2,131	Northern European	75
Norwegian	2,082	Austrian	74
European	1,387	Portuguese	74
Scotch-Irish	1,343	Finnish	70
Czech	855	Slavic	69
Greek	703	Luxemburger	51
Welsh	686	Pennsylvania German	46
Danish	636	Slovene	46
Arab	520	Bulgarian	45
British	395	Iranian	38
Croatian	392	Armenian	36
Russian	378	German Russian	28
Swiss	378	Latvian	13
French Canadian	371	Australian	11
Scandinavian	307	Brazilian	7
Yugoslavian	284	Other groups	41,631
Lithuanian	228	Unclassified or not reported	29,055

Source: U.S. Census Bureau, 2017 American Community Survey 5-Year Estimates.

Limited English Proficiency

Language spoken at home and the ability to speak and understand English "very well" tells a lot about a community. It is important for communities to know if residents may need extra assistance understanding English. In Rock Island County for the population over 5 years old, 87% of the population speaks English only, and 13% speak a language other than English. Of those residents who speak a language other than English, 5.2% speak English "less than very well." The most commonly spoken other language in Rock Island County is Spanish. Comparatively, of the Illinois residents who speak a language other than English, 8.9% speak English "less than very well."

Table 5.3 – English Proficiency

Total Population 5 years and over	Percent speak English only or speak English "very well"	Percent speak English less than "very well"
136,834	94.8%	5.2%

Source: U.S. Census Bureau, 2017 American Community Survey 5-Year Estimates.

Education

As of 2017 (2013-17 ACS 5-year estimates), 88.8% of Rock Island County's residents aged 25 and older had a high school diploma or higher, and 22.7% of residents had a bachelor's degree or higher. Comparatively, 88.6% of Illinois residents aged 25 and older had a high school diploma or higher, and 33.4% had a bachelor's degree or higher. The tables at the end of the chapter have more

educational attainment data, along with a more detailed data profile of the county.

There are ten school districts located within Rock Island County, which serve 22,618 students pre-kindergarten through 12th grade (2018-19 school year). Additionally there were 13,056 low-income students and 227 homeless students within the county. Table 5.4 shows information by school district.

Table 5.4 – Enrollment Statistics

District Name	School Count	KG-12	PreK-12	Low Income	Homeless
Hampton SD 29	1	212	214	52	0
United Twp HSD 30	1	1678	1678	1004	11
Silvis SD 34	2	581	636	366	1
Carbon Cliff-Barstow SD 36	1	256	274	273	0
East Moline SD 37	6	2567	2700	2682	27
Moline-Coal Valley CUSD 40	15	6962	7243	3958	41
Rock Island SD 41	14	5845	6243	4087	129
Riverdale CUSD 100	3	1076	1157	40	6
Sherrard CUSD 200	5	1343	1395	393	7
Rockridge CUSD 300	5	1048	1078	201	5

Source: Illinois State Board of Education (2013-14 School Year); Graduation rates are for 2013.

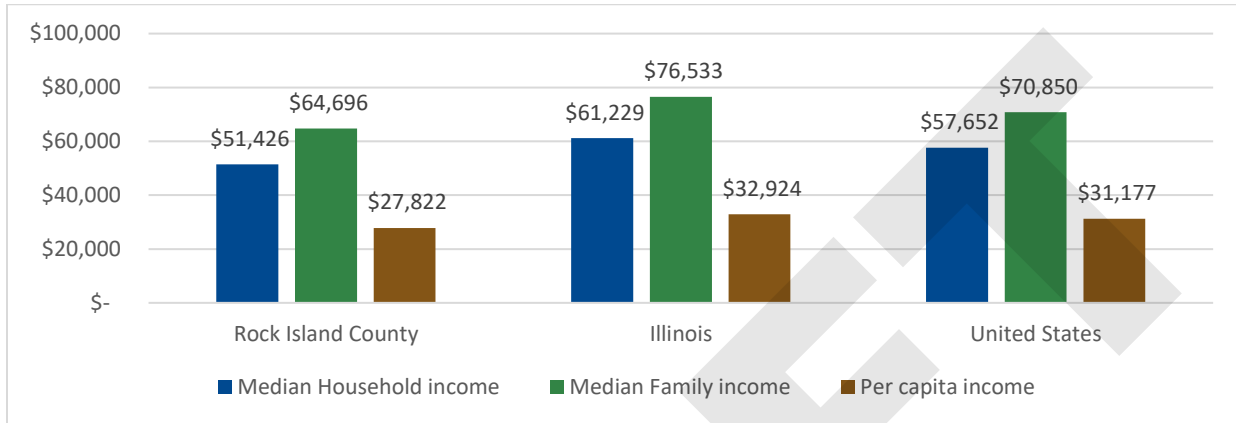
Rock Island County residents have access to several post-secondary educational choices. Located within a short commuting distance from Rock Island County are Augustana College, Black Hawk College, Western Illinois University (QC Campus), St. Ambrose University, Knox College, Monmouth College, Bradley University, and Palmer College of Chiropractic.

Income

Median household income is a standard measure of prosperity of a community. In 2017 (2013 -17 5-year ACS), Rock Island County's median household income was \$51,426, median family income was \$64,696, and per capita income was \$27,822. Rock Island County's income is

slightly lower than the Illinois and U.S. averages. Figure 5.6 shows income in more detail.

Figure 5.6 – Income by Type



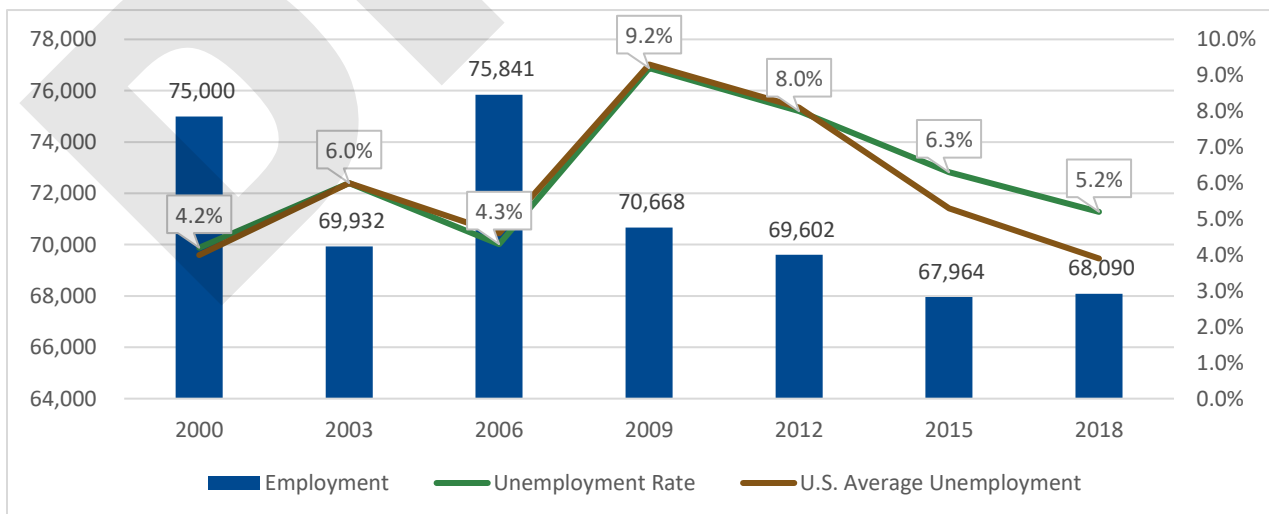
Source: U.S. Census Bureau, 2017 American Community Survey 5-Year Estimates.

Labor Force and Employment

According to the Illinois Department of Employment Securities, Rock Island County's labor force was 68,090 people in 2018, which was a slight decrease from the 2000 total labor force of 75,000 people. Additionally, Rock Island County's unemployment rates have fluctuated over the past 20 years, similar to Illinois and

national trends. Rock Island County's lowest unemployment rate was 4.2% in 2000, while the highest was in 2010 at 9.5%. As of 2018, the unemployment rate was 5.2%, slightly higher than the national average of 3.9%. Figure 5.7 shows the annual average unemployment rates in more detail.

Figure 5.7 – Total Employment and Average Unemployment Rate



Source: Illinois Department of Employment Securities

County Profile

An industry sector is any grouping of private, non-profit, or government establishments that have some type of commonality. The most common industry sector noted in 2017 (2013-17 ACS 5-year estimates) is educational services, health care, and social assistance, which employs 22.3% of the labor force. The next two most common sectors are Manufacturing

(18.7%) and Retail Trade (12.1%). Relatedly, the top three employers in Rock Island County are Deere & Company (farm machinery manufacturing), Rock Island Arsenal (defense manufacturing), and Trinity-Unity Point (health care system). Tables 5.5 and 5.6 list the major industries and employers in Rock Island County.

Table 5.5 – Major Industries in Rock Island County

Civilian employed population 16 years and over	Number	Percent
Agriculture, forestry, fishing and hunting, mining	521	0.8%
Construction	4,181	6.1%
Manufacturing	12,771	18.7%
Wholesale trade	1,646	2.4%
Retail trade	8,283	12.1%
Transportation and warehousing, and utilities	4,364	6.4%
Information	1,133	1.7%
Finance and insurance, and real estate and rental and leasing	2,898	4.2%
Professional, scientific, and management, and administrative and waste management services	5,650	8.3%
Educational services, and health care and social assistance	15,288	22.3%
Arts, entertainment, and recreation, and accommodation and food services	6,138	9.0%
Other services, except public administration	2,910	4.3%
Public administration	2,678	3.9%

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Table 5.6 – Major Employers in Rock Island County

Company	Product/Service	Employees
Deere & Company (All regional locations)	Farm Machinery	7,240
Rock Island Arsenal	Defense Manufacturing	6,163
Trinity-Unity Point (All regional locations)	Healthcare System	3,954
Tyson Fresh Meats	Food Processing	2,400
Black Hawk College	Community College	1,006
Moline Community School District #40	Elementary/secondary school district	1,002
XPAC	Supply-chain Solutions Provider	1,000
HyVee (all Rock Island County locations)	Grocery Store	920
Exelon	Power Plant	800
Walmart (all Rock Island County locations)	Retail	800
Augustana College	Private Liberal Arts & Science College	550

Source: InfoGroup, ReferenceUSA Gov, accessed 2019; individual businesses and organizations.

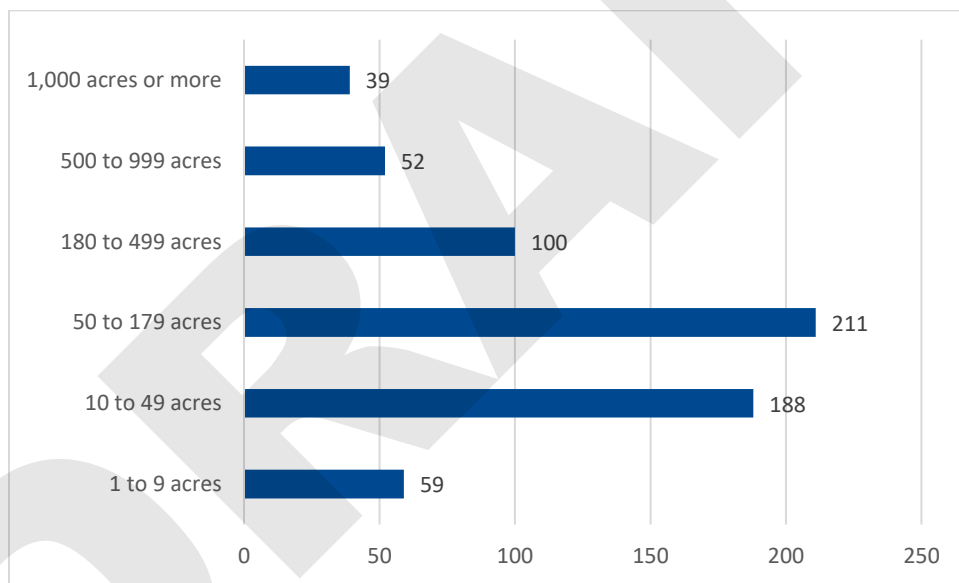
Note: Major employer data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy of the data shown herein.

Farming

According to the 2017 Census of Agriculture, Illinois is trending away from family farms towards more corporate farms. This trend will continue to escalate as the average age of farm operators continues to increase, along with the average size of farms. With the exception of hobby farms (1-9 acres), the only Illinois farms that have increased in number from 2012 to 2017 are those with 2,000+ acres. Relatedly, in Illinois family or individual farms have decreased from 2012 to 2017, whereas corporation and “other” (estate,

prison, grazing, etc.) farms have increased. As of 2017, Rock Island County had 649 farms and 159,583 acres of farm land. The average farm size was 246 acres, although the median farm size was only 79 acres, indicating the number of larger sized farm outliers. The average market value of equipment per farm is estimated at \$179,885,000. A breakdown of farm sizes for Rock Island County is depicted in the figure below. For more details on farming and farm economy, please refer to Chapter 6 for a Resource Profile.

Figure 5.8 – Farms by Size in Rock Island County



U.S. Army Installation - Rock Island Arsenal

The Rock Island Arsenal (RIA) is the largest local employer in the region with 4,523 civilian, 1,051 military, 580 contractors, and induced employment impact of over 14,000 community jobs. Salaries average \$75,989, and the local economic impact is over \$1.2 billion per year. The RIA provides opportunities for state-of-the-art manufacturing, procurement, and service

and supply contracts for local business. To help the RIA be more efficient, local governments are willing to extend potential partnerships with the Rock Island Arsenal and support cooperative agreements for services and commodities, including police and ambulance services, joint purchasing, exchange of water and sewer services, solid waste services, shared river access and use,

tourism, and planning. Providing some of these services to the RIA would potentially keep the installation competitive during a Base Realignment and Closure Commission. In addition, the Garrison is working on a plan for the installation that will integrate the RIA with the larger Quad Cities community, adapting to a 21st century workforce, improving the quality of life, transforming the functionality of the installation, and focusing on infrastructure and sustainability. The recent completion of

Army family housing, with two construction projects totaling over \$46 million, will provide 71 new homes and new infrastructure to improve the quality of life on Arsenal Island. Further, there is the potential for Quarters One and the golf course to be developed into a shared asset with the community through a request for proposal process to create an enhanced use lease arrangement with a private developer.

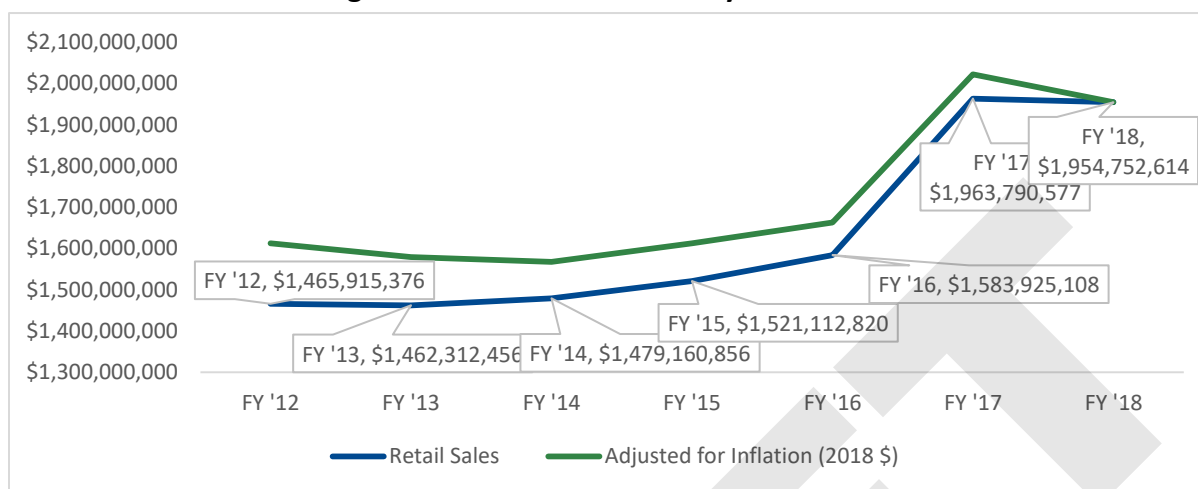
Retail Sales

Data from the Illinois Department of Revenue show that in Fiscal Year 2018, Rock Island County businesses generated approximately \$1.95 billion in retail sales. Over the past 7 years, retail sales have increased by 33.3%, but when adjusted for inflation (2018 dollars), it shows a 21.2% increase. See 0 for more details.

Retail gap analysis for Rock Island County indicates that many retail sectors actually have a strong “surplus” factor, which means that the local supply of these goods and services outpace local demands, i.e. visitors are coming from outside to make

purchases. For example, Motor Vehicle and Parts Dealers have a higher supply than demand, which means that outside visitors are bringing in \$54.6 million from outside to purchase cars and car parts. Similarly, ESRI Community Analyst calculates that Rock Island County homeowners demand \$56.6 million in home furnishings, although only \$29.1 million worth of these goods are supplied locally, which means residents are forced to shop in Iowa or nearby Illinois Counties for this service. Table 5.7 shows the retail market potential for various industries in more detail.

Figure 5.9 – Rock Island County Retail Sales



Source: Illinois Department of Revenue

Table 5.7 – Rock Island County Retail Market Potential

2017 Industry Group	NAICS	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Leakage/Surplus Factor	Number of Businesses
Motor Vehicle & Parts Dealers	441	\$376,765,157	\$431,431,676	\$(54,666,519)	-6.8	111
Furniture & Home Furnishings Stores	442	\$56,638,165	\$29,115,354	\$27,522,811	32.1	30
Electronics & Appliance Stores	443	\$65,423,702	\$53,298,378	\$12,125,324	10.2	32
Bldg Materials, Garden Equip. & Supply Stores	444	\$125,025,623	\$120,369,689	\$4,655,934	1.9	62
Food & Beverage Stores	445	\$292,088,611	\$318,433,032	\$(26,344,421)	-4.3	78
Clothing & Clothing Accessories Stores	448	\$90,465,768	\$42,181,944	\$48,283,824	36.4	58
Sporting Goods, Hobby, Book & Music Stores	451	\$45,154,361	\$44,370,956	\$783,405	0.9	40
General Merchandise Stores	452	\$300,692,874	\$376,741,244	\$(76,048,370)	-11.2	40
Miscellaneous Store Retailers	453	\$65,824,964	\$66,705,734	\$(880,770)	-0.7	114
Nonstore Retailers	454	\$48,772,052	\$15,276,454	\$33,495,598	52.3	13
Food Services & Drinking Places	722	\$189,078,949	\$217,451,166	\$(28,372,217)	-7	384

Source: ESRI Community Analyst, May 2019.

Housing and Building Permits

County Profile

As defined by the U.S. Census Bureau, housing units are physical structures, such as a house, apartment, or mobile home that is occupied or intended to be occupied as living quarters. As of 2017 (2013-17 ACS 5-year estimates), there were 66,063 housing units in Rock Island County, with a median housing value of \$115,600. The housing stock in Rock Island County is generally older with approximately one-third of the total housing units built in 1949 or earlier. Only 7% of the total housing units were built in 2000 or later.

Approximately 90.9% of the total housing units are occupied (9.1% vacant). A low vacancy rate indicates a municipality or

county is a desirable place to live, if the rate falls too low, potential residents might be unable to find a suitable home from a limited supply of housing units. Of the total occupied housing units, 69.0% were owner occupied (31% renter occupied). The tables at the end of the chapter contain further data on the county's housing statistics.

Building permit data gathered by Rock Island County's Zoning and Permit office show that there were 26 new building project permits issued for the fiscal year 2017-2018. This is a slight decrease from the previous year 2016-2017, when 31 building project permits were issued.

Table 5.8 – County Building Projects and Fees

Year	YTD Receipts	YTD Fees	YTD Valuation	YTD New Residences	YTD Fees Waived
2013-2014	1,011	\$263,922	\$23,502,546	35	\$4,460
2014-2015	1,086	\$236,659	\$20,165,321	20	\$11,809
2015-2016	1,573	\$290,112	\$24,019,422	28	0
2016-2017	1,213	\$341,254	\$28,405,690	31	0
2017-2018	1,174	\$393,271	\$39,909,006	26	0
2016-2017	1213	\$341,254	\$28,405,690	31	0
2017-2018	1174	\$393,271	\$39,909,006	26	0

Source: Rock Island County, Building and Development Department

Property Taxes

In 2018, the total property taxes collected in Rock Island County amounted to \$260.12 million. The vast majority of property tax expenditures are allocated to school districts (56%), followed by cities and village governments (15%), and then the county government (13%). According to the Rock Island County Assessor's 2017 Annual Report, the majority of property tax revenue stems from residential properties (62%), followed by commercial properties (20%), and then industrial properties (14%). In 2018, Rock Island County increased property taxes by 6.5%, largely due to an increase in Exelon's property taxes in 2018 (Quad City Times, Kevin Schmidt, Nov 1, 2017). Exelon had planned to close its plant in 2018, but reversed its decision due to the Illinois passage of the Future Energy Jobs Bill (Exelon News Room, 2019).

Table 5.9 – Top 5 Assessed Property Values

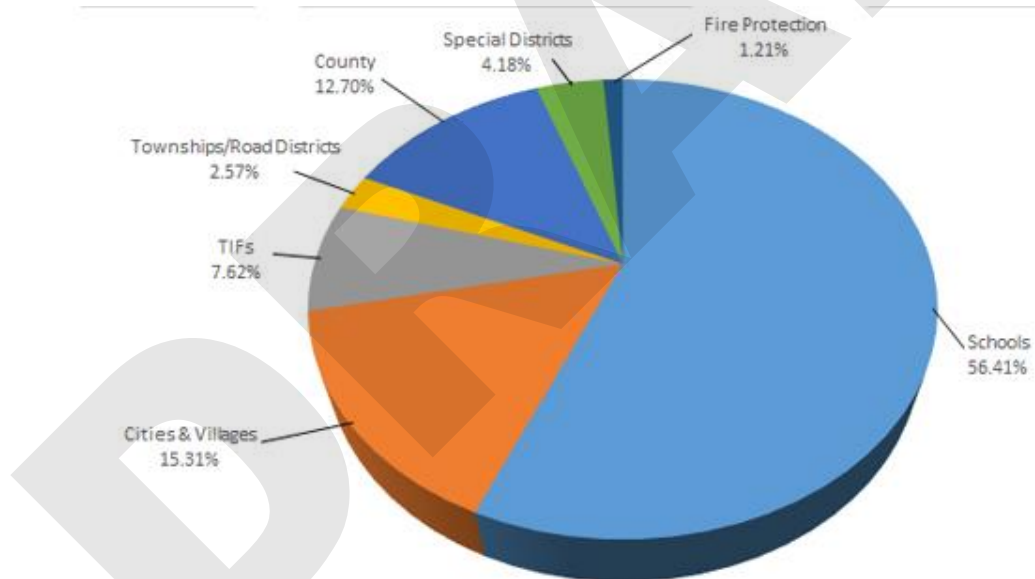
Rank	Property	Assessed Value
1	EXELON GENERATION CO/LLC	\$265,800,000
2	DNC GAMING& ENTERTAINMENT	\$22,716,567
3	DEERE & CO/TAX DEPT	\$14,594,455
4	MACERICH SOUTH PARK MALL	\$10,766,480
5	MINNESOTA MINING & MFG CO	\$8,859,613

Source: Rock Island County Assessor, 2017 Annual Report

Table 5.10 – Rock Island County 2018 Property Tax Expenditures by Category

Schools	\$146,751,377.94	56%
Cities & Villages	\$39,830,919.48	15%
County	\$33,028,870.40	13%
TIFs	\$19,828,514.64	8%
Special Districts	\$10,875,562.77	4%
Townships/Road Districts	\$6,691,885.27	3%
Fire Protection	\$3,154,550.65	1%
TOTAL	\$260,161,680.65	100%

Figure 5.9



Source: Rock Island County Treasurer's Office, Where Your Property Taxes Go

Cost of Living

The Council for Community and Economic Research (C2ER) provides a cost of living index to assess affordability in various metro areas. The total composite score in the Quad Cities Metro area has decreased slightly in the past year from 96.3 to 94.6. The total cost of living for the Quad Cities Metro area is lower than most large sized metro areas in the Midwest, and comparable to similar mid-sized metro areas.

Table 5.11 – Cost of Living Index Scores

Metropolitan Statistical Area	Composite Score	Grocery	Housing	Utilities	Transportation	Health Care	Misc.
Davenport-Moline-Rock Island, IA-IL MSA*	94.6	101.5	83	107.6	105	107.8	93.9
Ames, IA	98	96.1	96.3	90.2	104	100.2	100.3
Cedar Rapids, IA	93.8	95.6	84.6	109	97.4	95.5	95.8
Corpus Christi, TX	95.9	85.5	89.1	136.8	99.3	84.5	95.7
Chicago, IL	123.2	102.7	156.9	93	125.6	101.8	112.4
Des Moines, IA	90.5	95.9	81.8	89.5	102.6	98.7	91.8
Kansas City, MO	95	102.7	84.8	99	94	100.1	99.3
Peoria, IL	95.1	95	82.5	92.6	100.3	98.2	104.7
Rockford, IL	90.8	94	76.8	89.3	103.2	107.2	96.6

Source: C2ER, Cost of Living Index, 2018 Annual Averages.

Note: The U.S. composite score = 100. Scores less than 100 indicate lower costs for consumers.

Peer Comparison

Comparing Rock Island County to other counties in Illinois, Iowa, and Wisconsin that have geographic and population similarities can provide a revealing look at the county's current strengths and challenges relative to its "peers." The counties being compared to Rock Island County are similar in total population and demographic makeup, as well as having similarly-sized largest cities. Compared to its peer counties, Rock Island

County has the highest percent minority population, making it the most diverse of its peers. Rock Island County's educational attainment is slightly lower than its peer counties, both in terms of percentage of high school graduates and percent of those who have attained a bachelor's degree or higher. Refer to Table 5.12 for a peer county comparison.

Table 5.12 – Peer Comparisons

	Rock Island County, IL	Black Hawk County, IA	Peoria County, IL	Scott County, IA	Sauk County, WI
Total Population	146,205	132,960	186,145	171,493	63,340
Total Households	60,064	52,811	74,515	67,100	25,678
Median Age	40	34.9	37	38.1	41.3
Largest City in County	Moline	Waterloo	Peoria	Davenport	Baraboo
City Population	42,644	68,146	115,424	102,268	12,080
Percent of County's total population	29.20%	51.30%	62.01%	59.63%	19.07%
Percent Minority	27.40%	17.80%	23.70%	11.80%	4.00%
Average Household size	2.35	2.37	2.43	2.51	2.43
Median Household Income	\$51,426	\$50,916	\$53,063	\$57,681	\$54,447
Percent in Poverty	14.60%	9.80%	11.30%	8.30%	8.40%
Percent High School Graduate or higher	88.80%	91.10%	90.00%	92.40%	91.00%
Percent Bachelor's degree or higher	22.70%	27.00%	30.20%	31.90%	23.40%
Percent Vacant housing	8.70%	7.80%	11.00%	8.70%	14.90%
Median Housing value	\$115,600	\$139,000	\$128,000	\$153,200	\$172,500
Top 3 Industries of the employed population 16 and over	Educational services, and health care and social assistance (22.3%)	Educational services, and health care and social assistance (25.7%)	Educational services, and health care and social assistance (27.8%)	Educational services, and health care and social assistance (22.8%)	Educational services, and health care and social assistance (19.3%)
	Manufacturing (18.7%)	Manufacturing (17.6%)	Manufacturing (15.7%)	Manufacturing (16.9%)	Manufacturing (16.5%)
	Retail Trade (12.1%)	Retail Trade (13.3%)	Retail trade (10.8%)	Retail trade (11.8%)	Arts, entertainment, and recreation, accommodation and food services (15.2%)

Source: U.S. Census Bureau, American Community Survey 5-year estimates (2013-17)

Future Trends

The following are notable demographic trends with the potential to shape Rock Island County's future growth and demographic makeup. These trends have been identified at both the regional and national levels as having the potential to shape future policy decisions, as well as shaping the growth and development of various communities.

Midwestern Outmigration

According to U.S. Census Bureau data, only two states in the Midwest (South Dakota and North Dakota) had net gains in domestic migration between 2010 and 2015. Population booms in the South and West are commonly thought to be a major factor in this downward trend in net domestic migration. Another common reason for this trend includes the loss manufacturing jobs throughout the Midwest region. According to the Bureau of Economic Analysis, between 2008 and 2017, Rock Island County saw a 6.8% loss in non-farm employment and a 1.8% loss in population.

Aging Population

In combination with outmigration, the number of deaths have already begun to outpace births in every Midwestern state, according to research done by the Midwest Council of State Governments. This is due to the aging Baby Boomer (ages 55 to 73) generation, coupled with a national decline in birth rates. Millennials are now the largest adult generation in the United States and projected by the Census Bureau to overtake Baby Boomers, but the national birth rate reached a record low in 2017

according to the Centers for Disease Control and Prevention.

Changing Families

Along with a declining birth rate, Millennials are also contributing to a national declining marriage rate. Pew Research Center data analysis suggests that only 46% of 25 to 37-year-olds are married. By contrast, the same survey showed 57% of Gen Xers married at that same age, and 62-67% of Baby Boomers. Since 1990, the marriage rate of Americans aged 18 and older has dropped by eight percent.

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Chapter 6 Resources Profile

This chapter is intended to provide detailed information on areas that may be suitable or not suitable for development.

Understanding the characteristics of the resources in Rock Island County will inform land use decision-making. The information can draw attention to critical resources to be preserved or protected, or resources that have economic value and importance. This chapter provides information and data on land, water, natural, and agricultural resources of Rock Island County. There are additional resource references provided in the Appendix for further detail.

The county offers a variety of natural features including rolling hills, river bluffs, woodlands, farmland, extensive floodplains, wetlands, and lakes. The total area of the county is 447.32 square miles or 286,284.8 acres. (Source: Illinois State Geological Survey).

Land Resources

Topography

Topography, or the two-dimensional display of a three-dimensional landscape, is used to help select the best locations for siting building locations, planning roads and bridges, selecting the best farm fields, and a number of other situations. Rock Island County consists of flat upland areas, deeply cut valleys, steep river bluffs, and floodplains. This landscape is the result of glaciations in the recent geologic past and of postglacial stream erosion (Leighton and

Brophy, 1961). The Mississippi and Rock Rivers follow almost parallel paths in the northern half of the county. Mississippi floodplain elevations range from 580 feet above sea level in the northern part of the county to less than 540 feet above sea level in the southwest corner of the county. (Map 6.1)

Upland Plains

Two distinct upland plains, the Coe and Moline Uplands, are found north and west of the Rock River floodplain. South of the Rock River are two narrow upland plains separated by the valleys of the Copperas and Mill Creeks. The southern upland plains are part of the larger Northern Galesburg Plain. Coe Upland is the northernmost upland plain in Rock Island County. This plain sits between the Rock River and Mississippi River floodplains. The Meredosia Valley bounds the Coe Upland on the northeast, the Mississippi River on the west, and the Pleasant Valley on the south.

The Moline Upland is the central and most urbanized of the upland areas in Rock Island County. The Mississippi River bounds the Moline Upland on the north and west. The Rock River bounds it on the east and south, and the Pleasant Valley on the northeast.

The Meredosia Valley and the Pleasant Valley were created by ancient river channels formed by the diversion of drainage by Pleistocene glaciers (Horberg, 1950; Anderson 1968, McGinnis and

Heigold, 1974) The Meredosia Valley is located opposite the Wapsipinicon River in Iowa. It contains the Cordova flats and the Meredosia bottoms and connects with the Rock River valley north of Erie, Illinois. The Pleasant valley is located opposite Duck Creek, in Iowa. It extends from near the Mississippi River in East Moline to the Rock River.

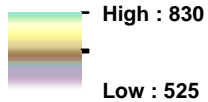
The highest elevation for both the northern upland plains is about 700 feet above sea level. Only the most northern part of the Coe Upland has areas that rise to 740 feet.

This area consists of wind-blown silt (loess) that occurs as northwest to southeast trending ridges, called paha. Paha are common in eastern Iowa; however, the Rock Island County paha are different. This Illinois-type of paha found in Rock Island County consists of the snowmelt ridges with positive relief alternating with the snowmelt-eroded valleys in a contiguous fashion. These valleys were only cut into the cap of loess and not into the underlying till of northwestern Illinois. Paha found in eastern Iowa cut into the underlying till.

Map 6.1 Topographic Map

Rock Island County Comprehensive Plan

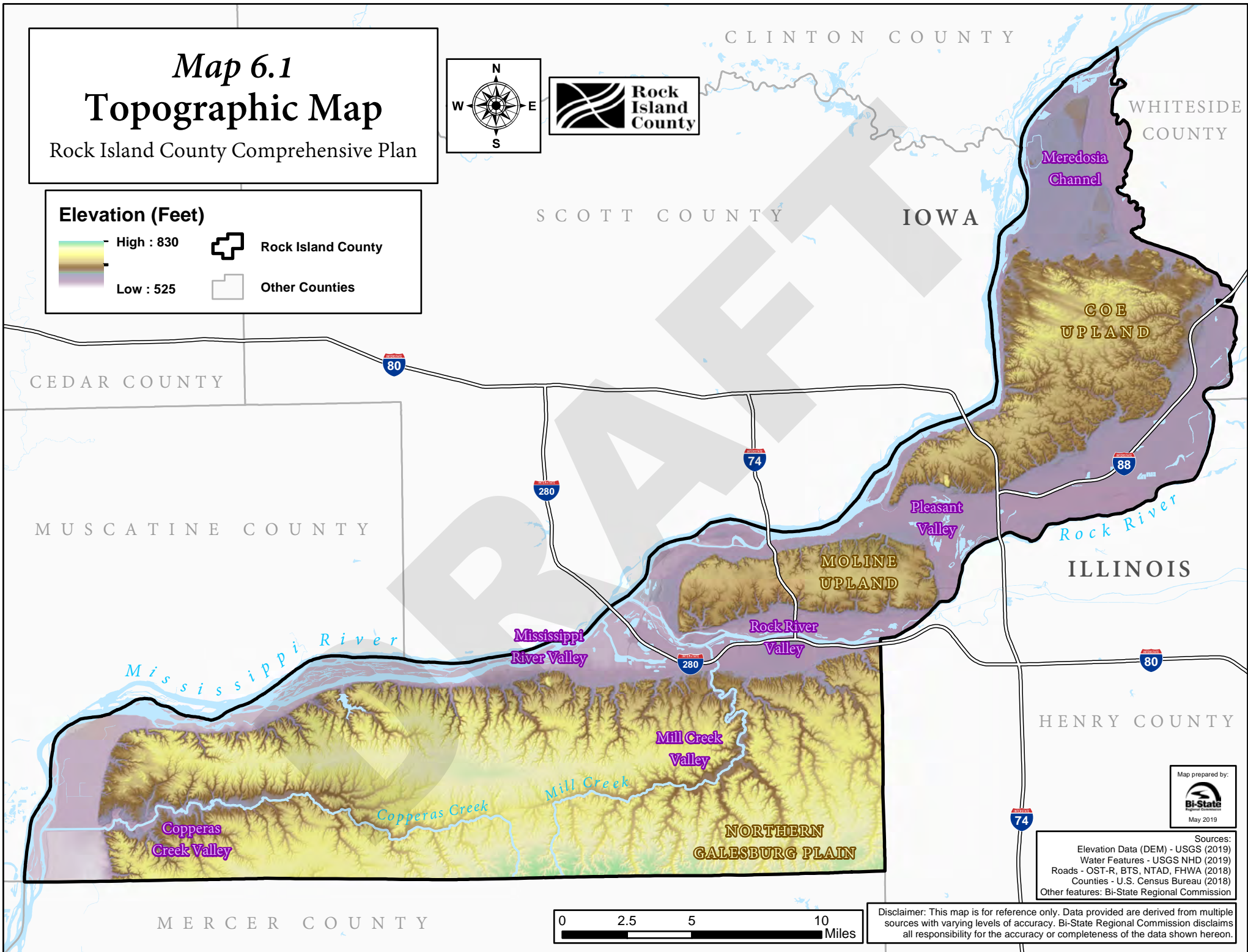
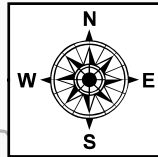
Elevation (Feet)



Rock Island County



Other Counties

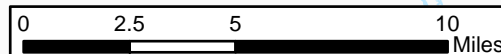


Map prepared by:

May 2019

Sources:
Elevation Data (DEM) - USGS (2019)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.



Lands in the southern and western section of the county, south of the Rock and Mississippi Rivers, consist of two narrow east-west lying upland areas. This area of the county is part of the northern most section of the Northern Galesburg Plain. These two narrow uplands range in elevation from 700 feet to about 810 feet above sea level near the town of Reynolds along the southern border of the county. These two upland areas are dissected by the valleys of the Copperas Creek that flows to the west and Mill Creek, which flows to the east from a common source near Taylor Ridge. The uplands are flat, and they merge with shallow drainage ways that connect with the many small streams that have carved the steep-walled, terraced, ravines surrounding the uplands on all sides. Local relief exceeds 250 feet in many places along the Mississippi River bluffs. These areas also have steep slopes covered in hardwood forests.

Natural Floodplains

The lowlands of the county have floodplains and river terraces. A floodplain is a generally flat area of land next to a river or stream. It stretches from the banks of the river or stream to the outer edges of the valley. The floodplains may be covered by water during times of flood. A floodplain consists of two parts. The first is the main channel of the river or stream itself and adjacent land needed to manage the normal flood level of the river or stream, called the floodway. A floodway on a smaller stream can be seasonal and dry part of the year. Beyond the floodway is the flood fringe. The flood fringe extends from the outer banks of the floodway to the bluff lines of a river or stream valley. The flood fringe may be periodically flooded, but it

does not effectively convey floodwaters. The flood fringe of large rivers also has river terraces. River terraces are former bottomlands that now lie above the reach of floodwaters because new bottomlands have been formed at a lower level due to down cutting by the stream. The flood fringe may extend to an upper river terrace. The broadest floodplains in the county are those along the largest rivers—the Rock and Mississippi. These floodplains contain floodways and flood fringe areas with river terraces. (Map 6.2)

The Meredosia Valley at the northern end of the county and the Pleasant Valley in the central part of the county are also subject to flooding. Both valleys were created by ancient rivers that formed by melting glaciers during multiple glacial periods. No streams flow through either valley, however, large parts are marshy. Neither valley is in the strictest sense, part of the current Rock or the Mississippi River floodplain. Their location, however, made them subject to floods from either of these rivers when these rivers are in extreme flood. The Meredosia channel between the Mississippi River and Rock River was closed by cross dikes after the flood of 1892. Flood water from the Mississippi River in the vicinity of Albany, IL caused significant flooding in the Rock River Valley when it flowed through the old channel. The Rock River in times of flood would flow through this same valley to the Mississippi River. Terraces are common in the valleys of the Mississippi and Rock rivers as well as in the abandoned ancient river channels. Though not as broad as the floodplains of the Mississippi and Rock Rivers, the floodplains of Copperas and Mill Creeks are well defined and display most of the

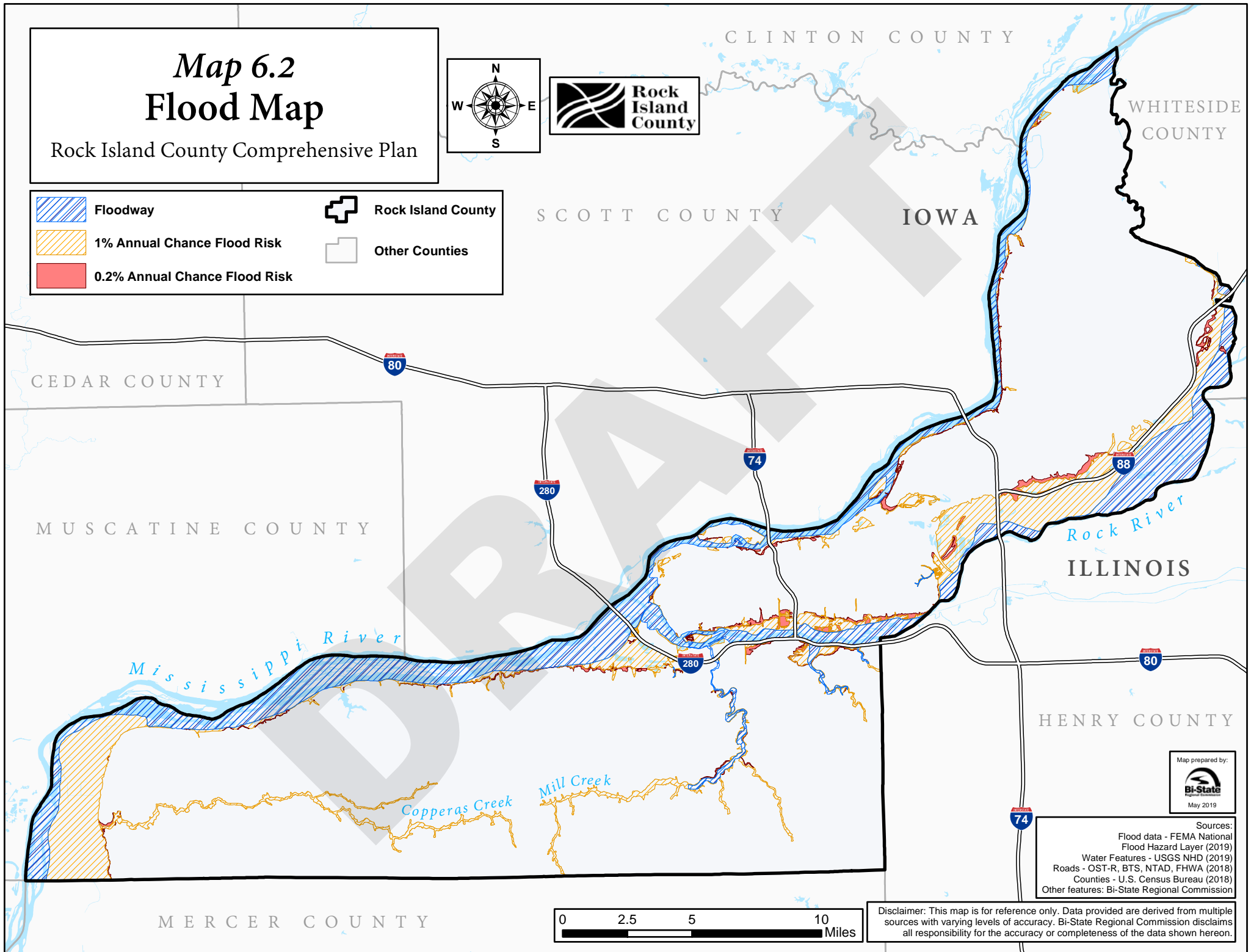
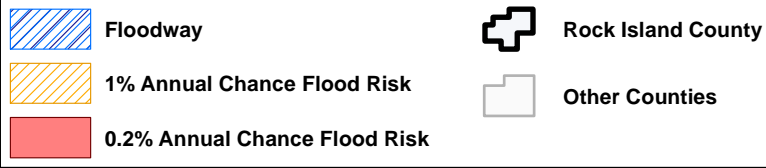
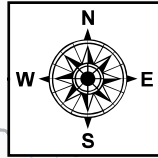
characteristics of those of the major streams, but on a smaller scale. In general, the smaller tributaries have narrow valleys and are without floodplains. The 2016 *Rock Island County Hazard Mitigation Plan Update* has extensive information on the regulated floodplains in Rock Island County.

The topography of an area has an impact on the drainage, erosion of the soil, and deposition of materials in streambeds and valleys. Various combinations of slope lengths, angles, and orientation have an impact on local drainage, erosion, and sedimentation. Human activities can have a significant positive or negative impact on the natural processes.

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Map 6.2 Flood Map

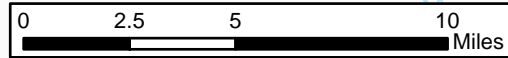
Rock Island County Comprehensive Plan



Map prepared by:

May 2019

Sources:
Flood data - FEMA National Flood Hazard Layer (2019)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission



Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Geology

Three major geological activities have shaped the landscape of Rock Island County: glaciers, rivers, and wind. Gravity and human activities (such as coal and limestone mining) also have changed the landscape of the county. The bedrock consists of Silurian dolomite, Devonian limestone and black shale, and Pennsylvanian sandstone, siltstone, coal, and shale (Anderson 1968, 1980; Larson et al. 1995, Kolata 2005). Understanding what is at or beneath the ground surface can guide siting mining operations, monitoring soil quality, and knowing the risks of unstable bedrock as poor base for development.

Bedrock Formations

The bedrock of the county has an irregular surface and displays uplands and valleys in the same way as the unconsolidated surface materials. (Map 6.3) However, the surface features do not always reflect the features of the bedrock. Beneath the Coe and Moline uplands, bedrock lies at elevations of 600 to 650 feet, and the thickness of the unconsolidated deposits exceeds 200 feet in thickness. The bedrock reaches its highest elevations at over 700 feet in the western end of the county. Many locations in the western part of the county have exposed bedrock, and the unconsolidated deposits are less than 100 feet thick.

The Racine Formation is the oldest exposed rock at the surface in Rock Island County. This rock is a brownish-yellow to gray porous crystalline dolomite that lies in beds ranging from a few inches to several feet thick. Coral reefs found in warm shallow seas of the Silurian Period formed this stone. This stone can be seen in a quarry in the SW ¼ of section 16, T18N, R2E and the former Cordova Quarry at SW ¼ Section 1,

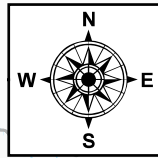
T19N, R1E as well as along outcrops along the Mississippi River bluffs between Rapids City and Cordova. Caves and solutional openings in this dolomite are common along the south bluffs of the Meredosia channel. (Bretz and Harris, 1961)

The Wapsipinicon and Cedar Valley Devonian Age Limestones overlie the Racine Formation. These limestones are found at the surface in the county along the Mississippi River between East Moline and Andalusia and along the Rock River near Milan. The Wapsipinicon Limestone is the older stone. It is fine-grained, light gray, and in places dolomitic. This limestone ranges from six inches to three feet thick. Fossils are rare, but stromatolites are common. The Cedar Valley limestone is coarse grained, shaly, thin bedded, and has an abundance of fossils and no dolomite. Caves are not common in outcrops. However, they have been discovered in engineering borings. On Vandruff's Island, found in the Rock River between Milan and Rock Island, caves filled with shale can constitute 10% of the total volume of rock.

The uppermost and youngest bedrock of Rock Island County consists of the sandstone, shale, and coal of the Pennsylvanian, Caseyville, Abbott, and Spoon formations. These rocks crop out in the flood plains and valley walls throughout the county south and west of the Coe Upland. Along the Mississippi River bluffs, downstream from Andalusia and at the Black Hawk State Historic Site in Rock Island have the best exposures of these formations. The most common rocks are gray to black, structurally weak claystone, shale, and siltstone. Sandstone in places as much as 20 feet thick and coal are also important constituents. These layers have iron sulfides.

Map 6.3 Geology & Coal Mines

Rock Island County Comprehensive Plan



Major Rock Type

- Dolostone
- Limestone
- Shale

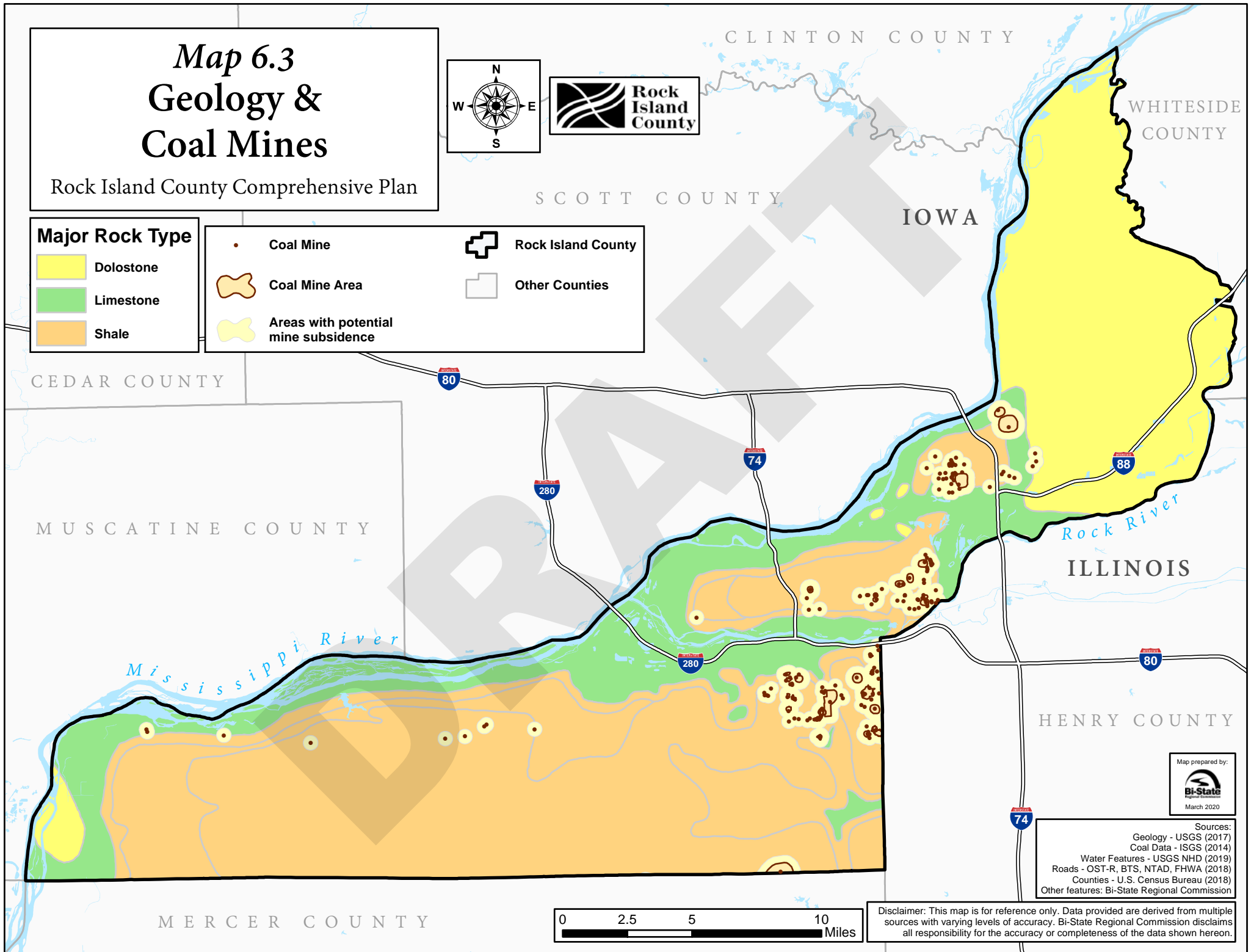
- Coal Mine
- Coal Mine Area
- Areas with potential mine subsidence



Rock Island County



Other Counties



Map prepared by:

March 2020

Sources:
Geology - USGS (2017)
Coal Data - ISGS (2014)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

0 2.5 5 10
Miles

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These Pennsylvanian layers require special attention when determining the suitability and use of land in Rock Island County. These layers are widespread in the county. They have been and still are useful sources of clay and coal. On the negative side, these layers are unstable on hillslopes, are a barrier to the downward movement of water, and release sulfurous compounds when exposed to the air.

Glaciers moved across Illinois several times. Later erosion removed deposits of earlier glaciations. The last two glacial episodes are the Illinois and Wisconsin, respectively. These glacial episodes lead to the deposition of considerable amounts of sand and gravel that were then covered by windblown loess (or silt). Loess is the important parent material for the topsoil in the county.

Unconsolidated Deposits or Glacial Drift

The glacial drift in Rock Island County is classified into three categories:

- **Glacial till** – a mixture of sand, silt, pebbles, boulders, and clay deposited as glacial ice melted
- **Outwash and Alluvium** – silt, sand, and gravel deposited in floodplains by water from melting glaciers and post-glacial streams
- **Loess and Dunes** – silts and sands formed from water-laid materials on the floodplains and blown on the uplands by the wind

These drift deposits are the principal materials where man's activities occur today and are of primary importance in the county. Due to the many combinations of physical properties of the various

unconsolidated deposits in the county, on-site sampling is necessary to determine suitability of soil in a specific location for any specific purpose. Glacial drift ranges in thickness from less than 25' to nearly 400' in the county. (Map 6.4)

Soils

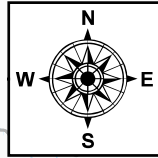
Upland Plains Deposits

Throughout the upland areas of the county lies the windblown fine-grained Peoria Loess at the surface. It ranges in thickness from 50 feet in the northeast to less than 20 feet in the southwest. The loess is thickest southeast of Cordova in the northern Coe upland where it forms elongated northwest to southeast trending ridges, or dunes, called pahas. This is the only place in the county that the loess creates a landform. The loess covers the rest of the county in a uniform layer. It is highly eroded by many streams.

These soils require sound land use and management practices to control erosion. New development should have erosion control measures implemented to prevent more damage to the landscape of the county. Gullies can develop quickly in this soil and are not easy to repair. Farming of narrow ridge tops should be discouraged, as the fields do not have enough transition zones to retain water, or to keep it from entering hillside drainage channels. Conservation tillage practices are important to support the topsoil. Slow permeability is a trait of these soils. Standing water can be found in areas with a high-water table or during heavy rains. Much of these soils in the county have been drain tiled, which the soils respond well to, but this increases runoff and can overwhelm the streams and drainage ditch system creating another management issue.

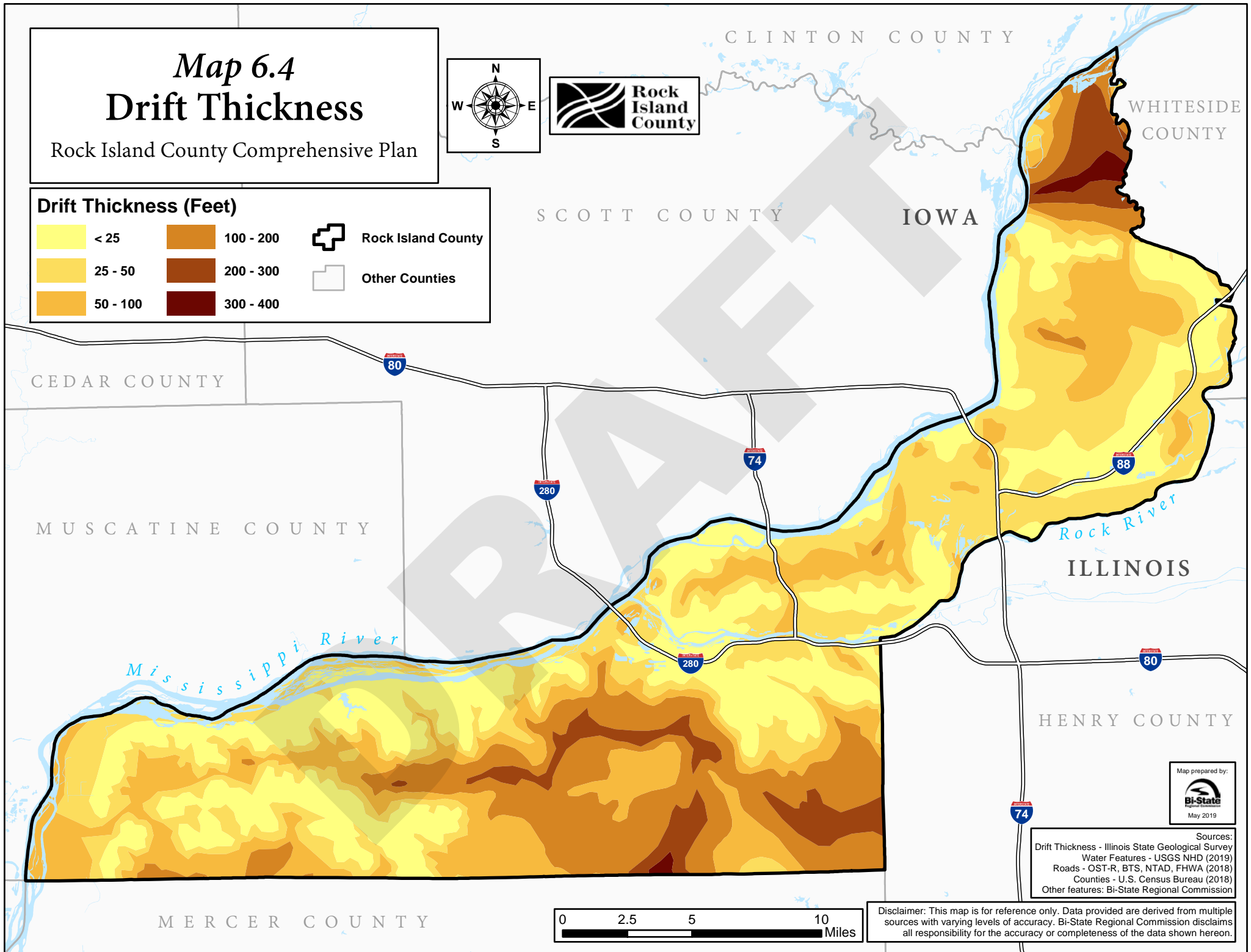
Map 6.4 Drift Thickness

Rock Island County Comprehensive Plan



Drift Thickness (Feet)

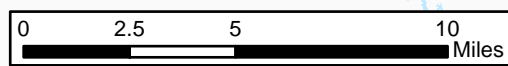
	< 25		100 - 200		Rock Island County
	25 - 50		200 - 300		Other Counties
	50 - 100		300 - 400		



Map prepared by:

 May 2019

Sources:
 Drift Thickness - Illinois State Geological Survey
 Water Features - USGS NHD (2019)
 Roads - OST-R, BTS, NTAD, FHWA (2018)
 Counties - U.S. Census Bureau (2018)
 Other features: Bi-State Regional Commission



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Map 6.5 Slope

Rock Island County Comprehensive Plan

Slope (Degrees)



High : 73.8

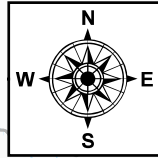
Low : 0



Rock Island County



Other Counties



CLINTON COUNTY

WHITESIDE COUNTY

SCOTT COUNTY

IOWA

CEDAR COUNTY

MUSCATINE COUNTY

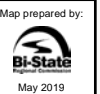
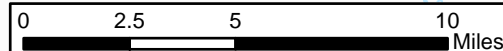
Rock River

ILLINOIS

Mississippi River

HENRY COUNTY

MERCER COUNTY



Sources:
Slope - Bi-State Regional Commission;
derived from USGS DEM (2019)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

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Steep Valley Sides Deposits

The Loess uplands are found significantly higher than the floodplains in the county. Loess soils are vulnerable to erosion during heavy rains and by water flowing through the many ravines and tributary valleys in the county. Two of these tributaries the Mill and Copperas Creeks are large enough to have floodplains of their own as well as many small tributaries and ravines. Ravines in the county are less than four miles long with steep gradients. Many of these steep valley sides exceed 70% slope. Twenty-nine percent of the land area of the county is subject to serious soil erosion in addition to restrictions and challenges for construction of buildings due to steep slopes. (Smith et al. 1925) See Map 6.5 for locations of these steep slopes.

The Pennsylvanian shale layers found in many locations in the county are subject to slumping in most outcrops and ravines. Not only have upland soils and trees moved down these steep slopes, houses and other buildings have shown slippage when built in areas of steep slope underlain with shale. Springs and seeps can be found along the slopes where the Loess layer meets the shale layer. North of Rapids City, the steep valley sides usually consist entirely of Peoria Loess overlying Silurian Dolomite. The shale layer is missing. Areas of excessively drained soils can be found on steep slopes throughout the county. The 2016 *Rock Island County Hazard Mitigation Plan* has more information on landslides and slumps in the county. (Map 6.5)

Sand Dune Deposits

Sand dunes are not an extensive terrain feature in Rock Island County. However, Sand Dune Deposit areas occur at both the

northeastern and southwestern extremities of the county. The dunes consist of fine-grained, well-sorted Parkland Sand that usually overlies and are associated with the sandy materials of the Equality and Henry Formations. These formations always form terraces; therefore, the dunes are found on terraces. The dunes are subject to blowing and are still forming in areas where vegetation is minimal.

River Terrace Deposits

River terraces occur low on the valley sides next to the floodplains in the county. They are flat to gently sloping, and are underlain by sand and silt. These terraces sit above the reach of current-day floodwaters. The highest terraces are the oldest, and successively lower terraces are younger. At an elevation of 650 feet, the oldest and highest terrace in the county is composed of fine sand and silt. It was the source of the oldest sand dunes in the county. This terrace consists of two parts. The first is composed of fine sand of the Equality Formation. It is the floor of the glacial Lakes Milan and Cordova that occupied the Rock and Mississippi Valleys.

A younger terrace at an elevation of 600 to 610 feet is widely distributed in the northeast half of the county, particularly in Cordova Township. This terrace is composed of sand, gravel, and silt of the Henry Formation and is younger than the terraces at 650 feet. The youngest terrace is found at 580 to 590 feet. It is similar in origin to the 610' terrace but is less extensive.

Floodplain Deposits

Cahokia Alluvium underlies the floodplains in the county. The alluvium is composed of

river-deposited clay, silt, sand, and minor amounts of gravel, which often holds an abundance of organic material. Silty and sandy deposits dominate major drainage ways and floodplains (lowlands). These materials differ significantly in their permeability, erodibility, and physical and chemical characteristics. By affecting water table elevation, erosion, sedimentation, and water chemistry, these differences create localized habitats. They also create localized issues for farmers trying to work the soil and for the construction of buildings and roads. Floodplain soils are often hydric, have standing water from heavy rainfalls or snowmelt, or often flood for weeks at a time. These floodplains have natural levees and sandbars that are only submerged in times of flood. See Map 6.2 for location of the floodplains.

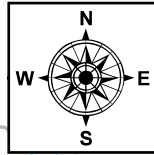
According to the Illinois Department of Natural Resources Lower Rock River

Assessment, the windblown loess; gravely, sandy glacial outwash; sand dunes; glacial till consisting of intermingled clay, sand, gravel, and boulders; and alluvium are the dominant parent materials of the soils in Rock Island County.

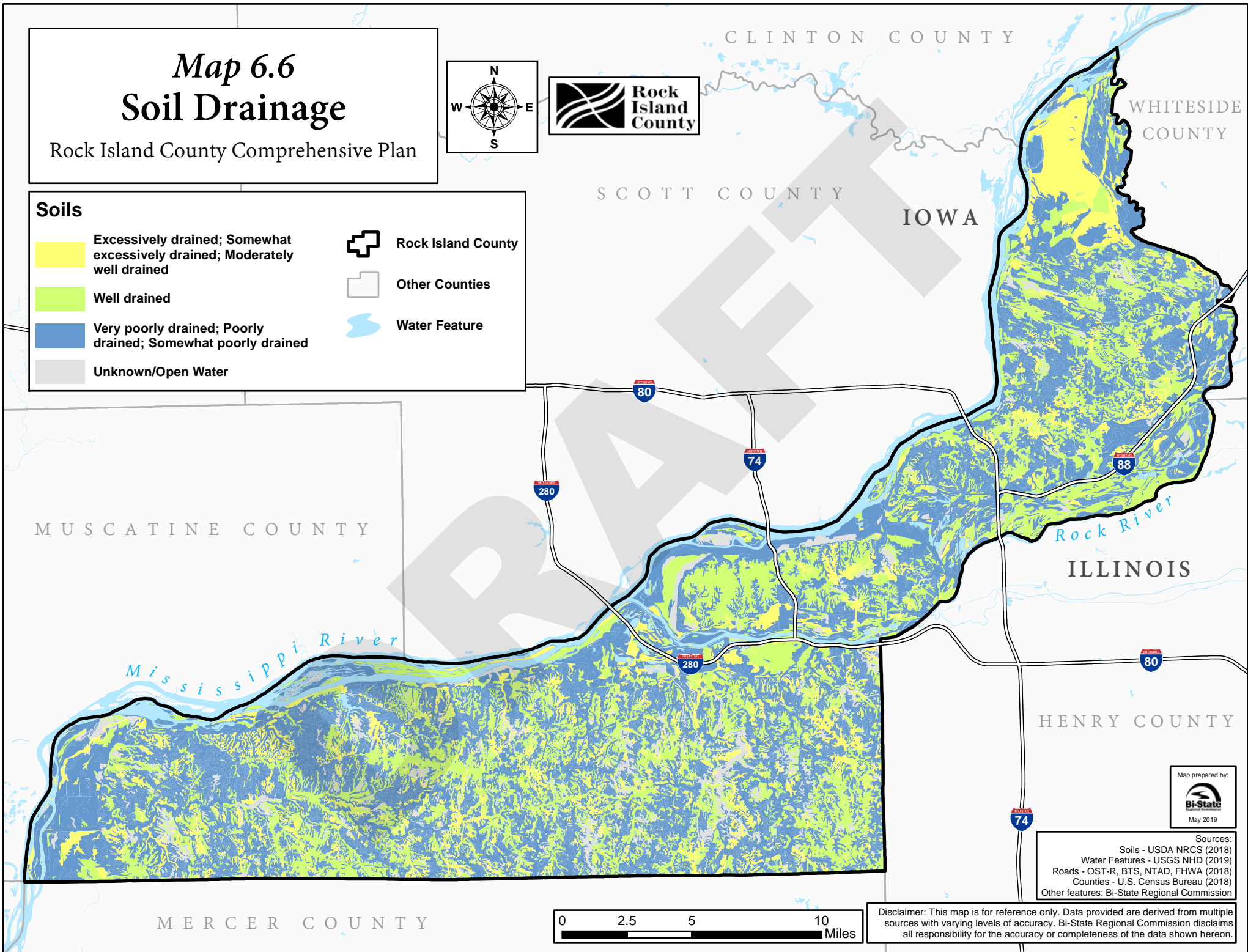
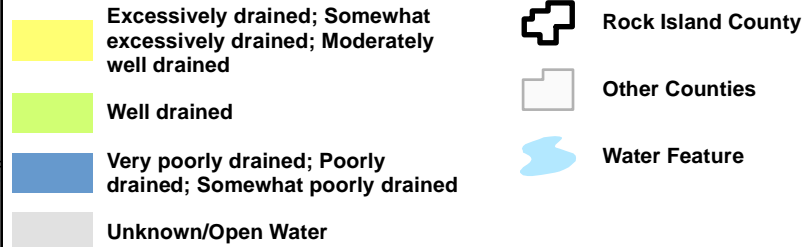
Many areas in the floodplains of the county have drain tile and drainage ditches. This can increase runoff into the larger streams and increases the flooding potential in the floodplains. It also creates channel widening, bank erosion, and sediment loading of the lowland areas. The very northern part of the county has floodplain soils with a high content of sand and excessive drainage. See Map 6.6 for the various soil drainage patterns in the county. For additional reference, hydric soils (Map A.2) and topographic wetness index (Map A.3) maps are provided in the Appendix for additional reference when siting development and supporting infrastructure.

Map 6.6 Soil Drainage

Rock Island County Comprehensive Plan



Soils

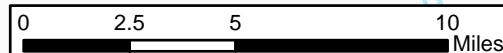


Map prepared by:

May 2019

Sources:
Soils - USDA NRCS (2018)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

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Mineral Resources

The mineral resources of Rock Island County consist of limestone and dolomite, sandstone, coal, sand, clay, and gravel.

Limestone

The bedrock over most of Rock Island County is sandstone and shale of Pennsylvanian age. In a limited area near Rock Island, Moline, and Milan, and along the Mississippi River bluff between Port Byron and Cordova there is limestone that is considered useful sources of stone to be used for buildings and roads.

The limestone near Rock Island and Moline is of Devonian age. It is variable in the upper part and includes much shaly limestone. The lower part, however, is pure limestone, free from shale. This rock is best exposed and most easily accessible in the Mississippi River flat lands between the towns of Rock Island and Moline and between Rock Island and Milan along the Rock River.

The earliest limestone quarry in Rock Island County belonged to the Bettendorf Stone Company. It was in the flat lands at the base of the Mississippi River bluff in sec. 34, T. 18 N., R. 1 W., in the current-day city of Moline. This quarry was first run as a pit mine and then was converted to an underground mine. By 1925, the quarry entry had been worked back into the bluff about 150 to 200 feet, and three main underground rooms were begun. The daily production of the quarry was about 150 tons. The stone was of Devonian age, the Wapsipinicon limestone, and was a fine-grained, dense, yeast-colored, semi-lithographic rock, in beds one to five feet thick. The underground quarry is still in

existence under a residential area of Moline. However, its entry has been sealed and no known maps exist showing its underground extent.

The Riverstone Group of Moline, Illinois quarries grey limestone between Rock Island and Milan on Vandruff's Island in the middle of the Rock River at their Allied Stone Quarry. Limestone and dolomite are quarried at the Midway Stone Quarry between Barstow and Joslin. The rock exposed in a quarry between Port Byron and Cordova is of Niagara age and is a porous, heavy-bedded, brown dolomite. The Mill Creek Limestone Quarry, Milan, formerly the Collinson Quarry has been in existence and mining limestone for 90 years.

Sand and Gravel

The Cordova area in the northern part of Rock Island County has mineral deposits dominated by sand. The thick sand layer forms dune topography south and east of Cordova. This sand has been used in building and road construction. Thick sand deposits have also been mined in various locations near the mouth of the Rock River and on Big Island. Lakes now occupy these former dredge areas. The gravel is part of the outwash left behind by the glaciers. It is found in the stream valleys that served as their meltwater outlets. Building and landscaping materials are a current use of these gravels. A quarry for sand and gravel is in the Cordova area. Sand and gravel mining took place in several places in the Rock River Valley and near Cordova.

Clay

The county does have clays and several types of shale. These clays and shales are

called underclays as they lie under the coal deposits of the county. This clay is suitable for structural clay products such as bricks, stoneware, sewer pipe, drain tile, flowerpots, art pottery, bonding clay, and lightweight aggregate. The former Argillo Clay Works in Carbon Cliff and the former Black Hawk Clay Manufacturing Company in Rock Island used clay from the east and southwest ends of the Moline Upland. No clay is mined in the county today; however, many of the clay deposits are of commercial quality.

Coal

Coal is also a mineral resource found in Rock Island County. It underlies parts of the Moline Upland and the bluffs south of the Rock and Mississippi Rivers. This coal is referred to as the Rock Island (No. 1) Coal and is part of the northwestern margin of the Eastern Interior Coal Province. The tectonic setting is the shelf area between the Mississippi River Arch and the LaSalle Anticlinal Belt. This coal lies in narrow troughs, and it varies in thickness from 49 to 60 inches. Few outcrops of coal remain in the county today, due to extensive mining from the late 1800s to the 1940s. Local county place names like Coal Valley, Carbon Cliff, Silvis, Prospect Park, Coal Creek, Coaltown Road, and Coaltown Slough are all associated with the early coal mining in the county.

The 2010 Keystone Coal Industry manual listed a 2009 estimate of 62 million tons of recoverable coal resources still available in the county. An estimated 42 million tons of coal were thought to be surface mineable or strippable. The manual defines strippable coal resources as mapped coal greater than 18 inches thick and with less

than 150 feet of overburden. Underground coal resources include all mapped coal more than 28 inches thick and greater than 150 feet deep. The old mining district surrounding the Coal Valley area had deposits of coal as much as 96 inches thick. Much mining took place; however, in 1969 it was estimated that 42 million tons of coal remained in the ground. Residential development in Coal Valley since 1969 has reduced the availability of some of this coal for mining. Other possible thick coal deposits are still in the western part of the county in Section 31, T. 17 N., R.3 W. and Section 36, T. 17 N., R.4 W. Other areas west of Milan do not appear promising. Along the north bluff of the Rock River near Moline, East Moline, and Silvis, coal deposits are about 48 inches thick. However, not enough information exists to determine the remaining size and shape of these deposits. Residential and commercial development also ends mining of this resource in this area. North of East Moline and Carbon Cliff, there is limited data on the outlier of the No. 1 Coal. This location may have significant coal reserves as 42-48 inches of coal is shown in the data from the former small mines that were in the area.

Mine subsidence is potential hazard in the county where undermined areas could pose a danger for subsidence. Rock Island County is one of 34 counties in Illinois where state statute requires Mine Subsidence Insurance be included on both residential and commercial insurance policies. The policyholder can waive this coverage. See Map 6.3 for location of abandoned coalmines and potential subsidence areas in the county.

Rock Island County has 13,529 acres of land affected by abandoned underground coal

mines. As of 2009, the Illinois State Geological Survey Circular 575 showed there were 4,978 housing units in Rock Island County that have exposure to mine subsidence. See the 2016 *Rock Island County Hazard Mitigation Plan Update* for more information on land subsidence and landslides in Rock Island County.

Water Resources

Surface Water

Surface water includes rivers, lakes, streams, and ponds. Surface waters of the county cover 24 square miles or 5.2% percent of the total 428 square miles surface area and supply a more readily accessible water supply than do groundwater wells to the larger communities in the county. See Map 6.7 for watersheds, impaired water bodies, and drainage districts in Rock Island County. In addition to being a water supply, surface water can provide scenic beauty, and it can also present certain hazards to property and people living there.

Rivers

The Mississippi River forms the western boundary of Rock Island County for 63 river miles and consists of a series of pools controlled for river navigation by locks and dams. Pool 14 is between Port Byron, Illinois, and LeClaire, Iowa and above Lock and Dam 14. Pool 15 is found between Bettendorf, Iowa and Moline, Illinois and is above Lock and Dam 15. Pool 16 borders the western part of the county from Rock Island to Lock and Dam 16 at Muscatine, Iowa. Pool 17 borders the county south to the Mercer County line.

Many islands dot these pools with the largest ones on the Illinois side of the river being Arsenal Island and Campbell's Island. Arsenal Island is a restricted U.S. Military Base, the Rock Island Arsenal. Campbell's Island has many homes and the Campbell's Island State Historic Site. This island floods often. Credit Island is one of the largest islands on the Iowa side of the river. It is primarily used for recreational purposes as it also floods. The Mississippi River is the water source for potable water for the cities of Rock Island, Moline, and East Moline, which supplies water to Hampton and other rural areas of Rock Island County.

The Rock River is the second largest river associated with Rock Island County and makes up part of its northeastern border. The Rock River originates in the Horicon Marsh in Dodge County, Wisconsin, and flows in a southwesterly direction to the Mississippi River at Rock Island. This river drains 9,549 square miles and 9.5% of the land area in Illinois. This low gradient river drains 70 square miles in the central part of Rock Island County.

There are two dams found on the Rock River. Near Milan, there is the Steel Dam on the southern channel and the Sears Dam on the northernmost channel of the river. The Rock River is a recreation resource for small boats and anglers. It is not entirely navigable from the mouth to upstream of Milan because of the dams.

The river is prone to extreme weather. It can flood quickly due to ice jams in winter, and it can become very shallow in times of extended drought. The section from the mouth upstream to Moline does flood due to high water levels on the Mississippi River backing up the Rock River. The Rock River

has a mapped flood plain. See Map 6.2 for locations of these flood-prone areas. The Rock River has seen an increase in flood events with multiple flood events or long-term events occurring in recent years. The Rock has reached flood levels in every month. March followed by February are months with most recorded floods. The floods are due to the thick ice breaking up on the river and forming ice jams that raise the river levels. August and November are the months with the fewest recorded flood events on the Rock River.

Canal

Next to the south bank of the Rock River near Milan is a segment of the historic Hennepin Canal. The Hennepin Canal supplies a wide variety of recreational activities including fishing, boating, picnicking, canoeing, walking, horseback riding, bicycling, camping, and snowmobiling. Hennepin Canal State Park borders the canal. The Hennepin Canal Trail system extends from the mouth of the Rock River for over 100 miles.

Lakes and Ponds

The largest lake in the county is the man-made Lake George at 167 acres. It is found within the 1,480-acre Rock Island County

Loud Thunder Forest Preserve. The Big Branch Creek watershed feeds the lake. This lake is 55 feet deep and has a shoreline of 6.3 miles. In 2018, the lake's dam and spillway were improved. Many smaller lakes and ponds have been constructed in the county.

Creeks

Rock Island County has several larger creeks. The largest is Copperas Creek at 28.69 miles in length. This creek starts in rural southern Rock Island County and flows west to the Mississippi River. Its total drainage area is 73 square miles. The drainage area is entirely rural and 95% agricultural. Mill Creek, which empties into the Rock River at Milan, is the second longest creek in the county. This creek is 22.59 miles long and has a drainage area of 62.4 square miles. On the east side of Milan, at Knoxville Road is a USGS stream gage used to check Mill Creek for flash flooding. The highest streamflow recorded was 9,300 cubic feet/second on April 22, 1973. The highest flood height recorded was 11.73' on April 24, 1965. Mill Creek north of the Knoxville Road bridge is controlled by an earthen flood control levee on both its east and west banks.

Table 6.1 – Creeks and their lengths in Rock Island County.

Creek	Length (miles)	Creek	Length (miles)
Big Branch Creek	5.21	Mill Creek	22.59
Case Creek	10.81	Mud Creek	10.00
Coal Creek	14.01	Sand Creek	4.96
Copperas Creek	28.69	Shaffer Creek	8.91
Canoe Creek	7.51	South Fork Ditch	6.34
Fancy Creek	5.81	Stillman Creek	17.99
Hills Creek	5.39	Sugar Creek	14.71
Kyte Creek	9.82	Zuma Creek	13.44

Drainage Districts

Rock Island County has three drainage districts (also referred to as drain districts or drains).

- **Drury Drainage District** – drains 4,956 acres in Rock Island County
- **Union #1 Sub #1 Drainage District** – drains 3,083 acres in Rock Island and Mercer Counties
- **Zuma-Hampton Townships Drainage District # 1** – drains 4,609 acres in Rock Island County

Pleasant valley lies between East Moline on the Mississippi and extends east to the Rock River valley at Barstow. It connects the Mississippi and Rock River valleys. The elevation of Pleasant Valley is from 20 to 30 feet above the river at either end. The soil is a brown sandy loam with black mixed loam in the low areas. The entire valley is included in the Rock River Watershed and the Hampton-Zuma Drainage District. The Drainage District has 4,606 acres.

Drainage districts manage the construction, maintenance, and repair of drains and levees, and they can engage in other drainage or levee work for agricultural, sanitary, or mining purposes. A board of commissioners governs each district. They do not levy property taxes. However, they may collect assessments on properties within the district, and they have bonding authority. The county clerk serves as chairperson of each district, and the county treasurer serves as district treasurer. Commissioners may petition the court for authorization to appoint a separate treasurer.

In addition to the usual powers of special districts, a district may buy property

through eminent domain; construct, maintain, and repair drains, levees, or other works; and sell its real estate and property. When authorized by the circuit court, the board may construct more drains, alter any drains or pumping plants, buy necessary equipment, and abandon any drain or levee that is no longer of value to the district. Under some circumstances, the district may construct and run sewerage treatment facilities. Map 6.7 shows the representative locations of the drainage districts in Rock Island County.

Special Flood Hazard Areas

Special Flood Hazard Areas (SFHAs) are geographically identified and are associated with regulation of flood prone areas. They are more commonly referred to as floodplains. For Rock Island County, the SFHAs are found near the Mississippi and Rock Rivers and their tributaries. Map 6.2 shows the flood risk areas in Rock Island County. Technical information available to assess the potential for flood damages includes the Flood Insurance Rate Maps (FIRMs), and U.S. Army Corps of Engineers 1% annual chance of a flood event base flood elevations, flood insurance studies, and the accumulated knowledge of county officials.

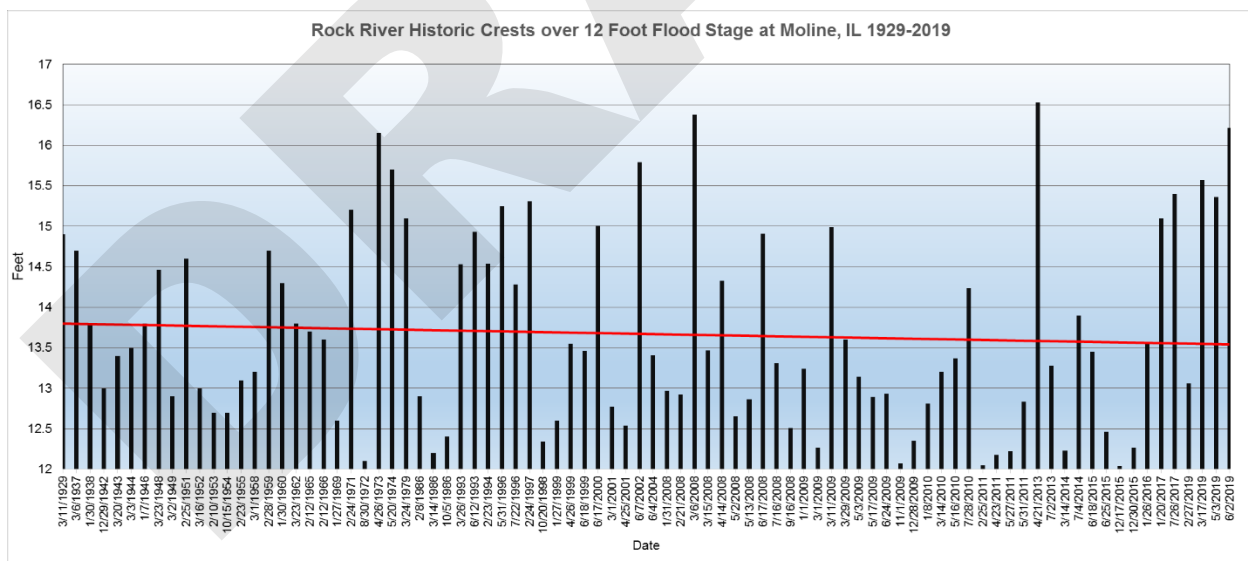
Rock Island County takes part in the National Flood Insurance Program (NFIP), which supplies citizens and businesses in the county access to flood insurance. Rock Island County has a floodplain ordinance and a floodplain manager to ensure proper floodplain management. The county participates in the Community Rating System (CRS), which is tied to the cost of flood insurance premiums in the unincorporated areas of the county. The

NFIP Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed minimum NFIP requirements. Communities that take part in this program can reduce flood insurance premium rates within their community based on the degree to which they exceed NFIP standards. Counties can take part in the program if they are also taking part in the NFIP. Rock Island County takes part in this program and has a class rating of seven for a 15% discount on National Flood Insurance Policies. The City of Moline also takes part in the program. Moline has a NFIP rating of eight.

Rock Island County has perpetually been affected by flooding on both the Mississippi and Rock River. With over 5,000 parcels and 41,310 acres found in the floodplain, flooding affects 14% of the land area in

Rock Island County. Both rivers affect Rock Island County differently. The county's urban communities have reduced flood damage caused by the Mississippi River due to the construction of levee systems and floodwalls, property elevations, or structure removals. In addition, the Mississippi River elevation is controlled by the lock and dam system, which allows for some regulation of the water flow. The Rock River poses the greatest flooding threats to the floodplain residents in Rock Island County because of its variability.

Between June 2000 and June 2019, the Rock River exceeded flood stage 47 times. The trend is for lower but more frequent crests over the twelve-foot flood stage. With all the current residential structures and an ongoing trend toward development, the problems are continually changing.



Source: NOAA National Weather Service Advanced Hydrologic Prediction Service

All communities in the county with identified SFHAs are taking part in the NFIP. While not all streams and creeks have their floodplains identified, they may still be prone to flooding. Residents and businesses who believe they have risk of flooding may obtain flood insurance even if they are not found within the SFHAs.

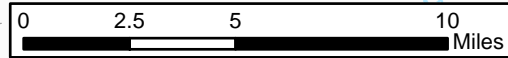
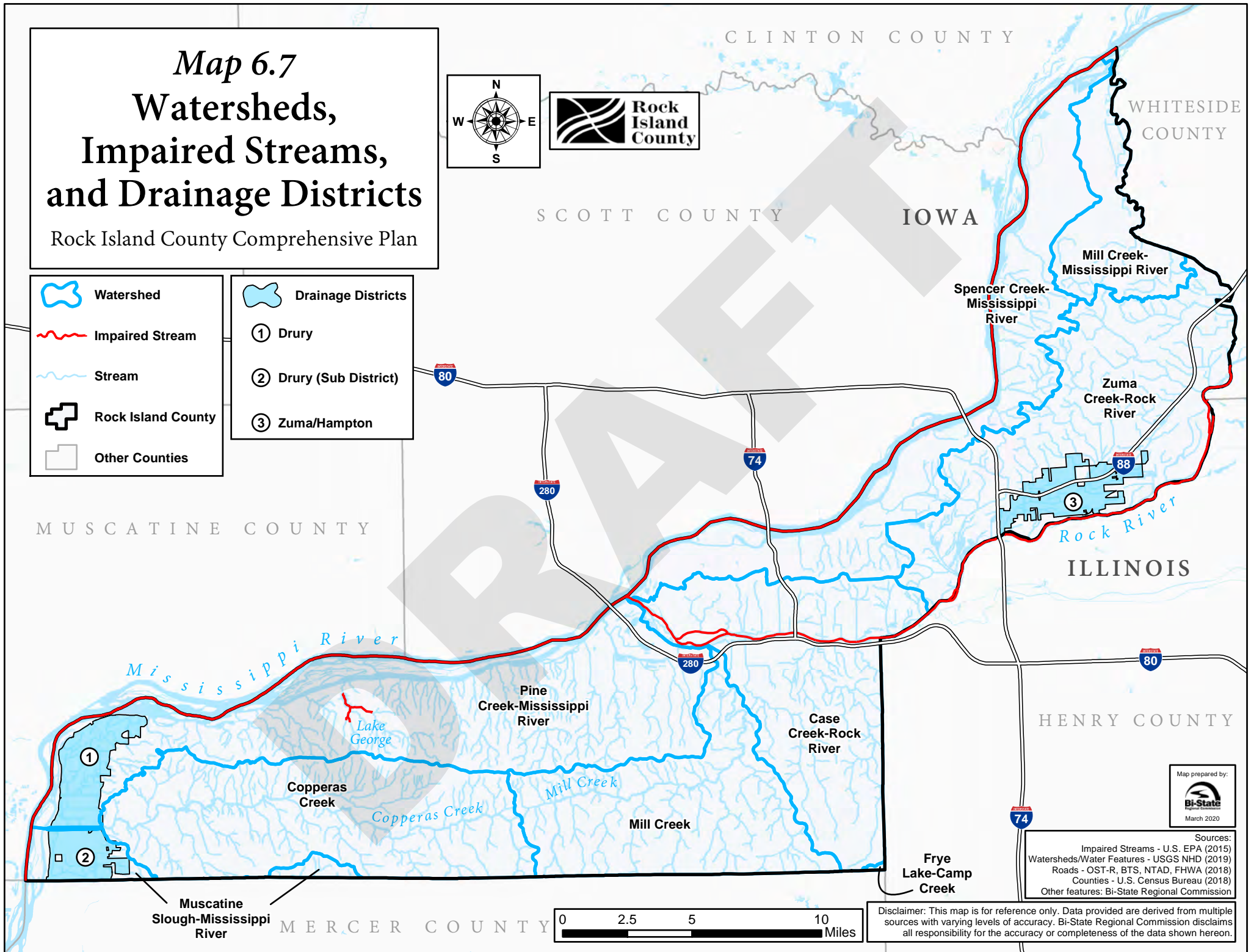
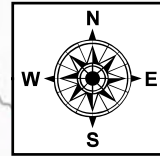
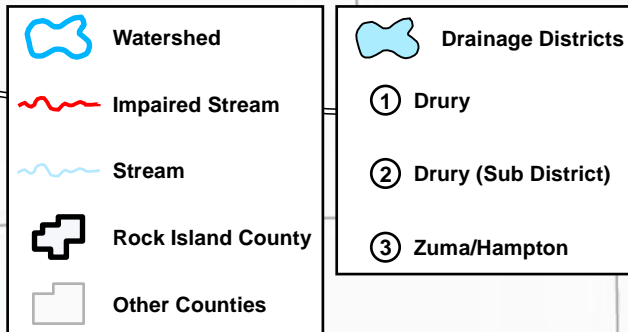
Impaired Waters

According to 2018 Illinois Environmental Protection Agency (EPA) Water Resource Assessment reports, the Rock River, the Mississippi River, and Lake George in Rock Island County have been listed as impaired

at a medium priority. The primary cause of impairment for the fish consumption category for all three water bodies is mercury. The Mississippi and Rock Rivers also list polychlorinated biphenyls as a fish consumption impairment. The Rock River has an impairment for the aquatic life category with an unknown cause. Lake George has impairments for the aesthetic quality category due to phosphorus (total) and Total Suspended Solids (TSS). The Mississippi River has a primary contact recreation category impairment due to fecal coliform levels. Map 6.7 shows the water bodies in the county that are listed as impaired for at least one category.

Map 6.7 Watersheds, Impaired Streams, and Drainage Districts

Rock Island County Comprehensive Plan



Sources:
 Impaired Streams - U.S. EPA (2015)
 Watersheds/Water Features - USGS NHD (2019)
 Roads - OST-R, BTS, NTAD, FHWA (2018)
 Counties - U.S. Census Bureau (2018)
 Other features: Bi-State Regional Commission

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Ground Water

In hydrology, an aquifer is a rock layer that holds water and releases it in appreciable amounts. The rocks have water-filled pores that when connected, allow water to flow through their matrix. These waters can flow to a spring, stream, or a dug water well. According to Illinois State Geological Survey Circular 222, Groundwater Geology of Western Illinois, North Part, the important aquifers of this region are made of sand and gravel, sandstone, limestone, and dolomite (a limestone-like rock rich in magnesium). Sand and gravel deposits are water-yielding because the openings between the individual grains are large enough to allow rapid movement of water. Good water-yielding sand and gravel deposits are composed of grains that are all the same size and coarser than granulated sugar. If substantial amounts of clay and silt are present in the sand and gravel deposits, the openings between the larger grains are clogged, and the movement of water is retarded. The upper bedrock in most of the county is made up of Keokuk-Burlington Limestone that yields good water from crevices. The upper bedrock in the very south-central section of the county is made up of Kinderhook shale. This rock is not water-yielding. The location of this upper bedrock layers can be seen on Map 6.8.

Glacial Aquifers

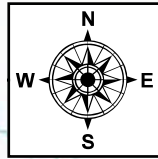
Sand and gravel deposits in western Illinois range in thickness from a few inches to hundreds of feet. Deposits a few feet or thicker are often suitable aquifers for drilled wells. Thinner deposits of sand and gravel in otherwise tight earth materials are suitable aquifers only for dug or augured wells of large diameter. In Rock Island


County, the aquifers are composed of saturated sand and gravel, fractured or jointed limestone and dolomite or sandstone. Groundwater for domestic and farm supply may be obtained in this area from small diameter drilled wells in sand and gravel. Possibilities for municipal or industrial wells are good to excellent, although test drilling is necessary to find the best formation and site for the construction of high-capacity wells. Other sand and gravel beds in the county are found in old streambeds or filling minor valleys. Water from these sources is inconsistent, and water from bedrock sources may be needed.

The best areas in the county to obtain water from sand and gravel aquifers can be found on the very northern tip of the county and on the very western edge of the county near the Mississippi River. Sand and gravel aquifers are thin and of limited areal extent, except for deposits along the ancient course of the Mississippi River in T.20 N. This tract extends eastward into Whiteside County and is one of the primary areas of undeveloped groundwater reserves in the state. Sand and gravel deposits along the Mississippi River west of Rock Island and north of East Moline and along the Rock River are thin. Sand and gravel in the drift in the uplands is discontinuous and thin. A thin deposit of water-yielding sand and gravel of un-determined extent has been penetrated in several wells in the southeastern corner of the county.

Map 6.8 Aquifers

Rock Island County Comprehensive Plan

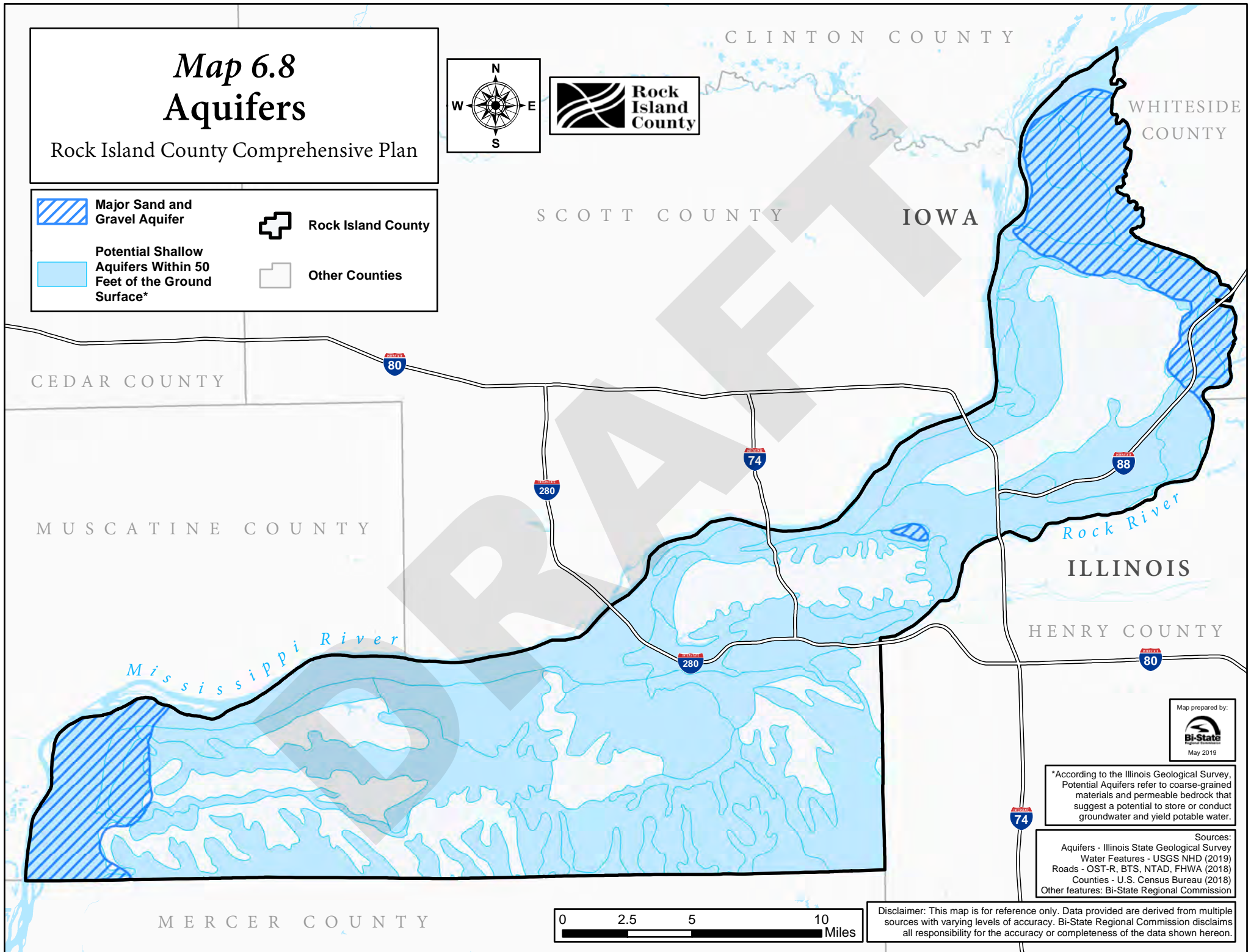


 Major Sand and Gravel Aquifer

 Rock Island County

 Potential Shallow Aquifers Within 50 Feet of the Ground Surface*

 Other Counties



Map prepared by:



*According to the Illinois Geological Survey, Potential Aquifers refer to coarse-grained materials and permeable bedrock that suggest a potential to store or conduct groundwater and yield potable water.

Sources:
Aquifers - Illinois State Geological Survey
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

0 2.5 5 10
Miles

Bedrock Aquifers

Rock Island County has abundant water supply found in two deep bedrock formations of the Cambrian and Ordovician age. According to a 1985 Cooperative Groundwater Report from the Illinois State Water Survey, the Cambrian and Ordovician aquifers average 1,000 feet in thickness. Although many alternating layers of sandstones, limestone, and dolomites impart a heterogeneous character to them, these units are hydraulically interconnected and behave as a single aquifer. Hydraulic properties within the aquifers are affected by local or regional changes in thickness of the Ancell and Ironton-Galesville aquifers. Recharge occurs principally by vertical percolation of precipitation in areas where the Galena-Platteville Unit is the uppermost bedrock.

Cambrian and Ordovician strata include many of the freshwater-bearing rocks in northern Illinois, and many cities, villages, industries, and individuals are dependent on these aquifers. Protection and management of this important groundwater resource is a major concern of state and local planning and management agencies, as well as water regulatory groups. Water yields in gallons per minutes vary according to the rock strata where the water is found. Gallons per minute obtained can range from 50 to 1,500 or more gallons.

The Silurian dolomite, which is reached at depths ranging from a few feet below the surface in the northern part of Rock Island County to about 400 feet in the southeast corner, is the main source of domestic groundwater supplies. Water-filled fractures are most likely to occur in the upper 125 feet of the dolomite, while the lower part is commonly "tight." Well driller's reports show the Devonian limestone, which reaches a maximum thickness of 200 feet in the county, is usually tight and not water-yielding. Many domestic wells in this county obtain water from sandstone, coal, or fractured shale in the Pennsylvanian rocks; although in wells penetrating the Silurian strata, the Pennsylvanian and underlying Kinderhook shales are cased off. Of the deep aquifers in the metro area, the Glenwood-St. Peter, Ironton-Galesville, and Jordan sandstones have supplied water for municipal and industrial purposes.

The 1989 Water Survey Report with projections for water use out to year 2025 does not show any water use or yield problems for Rock Island County's groundwater supply. High yield irrigation wells are common in the northeast corner of the county, with yields of 400 to 1,000 gallons per minute (gpm) or more. Domestic wells commonly tap the Silurian dolomite for yields of 10 to more than 40 gpm, and irrigation wells of 1,000 gpm are common.

**Table 6.2 – County Level Forecast of Water Use in Rock Island County
in Million Gallons Per Day (mgd)**

USGS Historical Estimates				Baseline Projections					Projections with Conservation (trend)				
1985	1990	1995	2000	2005	2010	2015	2020	2025	2005	2010	2015	2020	2025
20.03	17.45	17.42	15.79	18.82	19.26	19.72	20.22	20.75	18.12	17.84	17.58	17.35	17.14

Source: County-Level Forecasts of Water Use in Illinois 2005-2025, Department of Geography Southern Illinois University, Carbondale, IL, January 2005

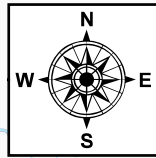
Groundwater Quality

Aquifers found in Rock Island County recharge quickly compared to aquifers in other parts of the state. Therefore, there are low levels of minerals found in the water. The water drawn in the county has more minerals the deeper the source aquifer is found. Water in the drift aquifers in the county tend to have a higher iron content and may require added treatment measures. Ground water contamination can happen from point or non-point sources. Point sources can be a landfill, chemical storage tanks, septic systems, over application of lawn fertilizers and other chemicals, and homeowner disposal of unwanted chemicals, paint, or oil. Non-

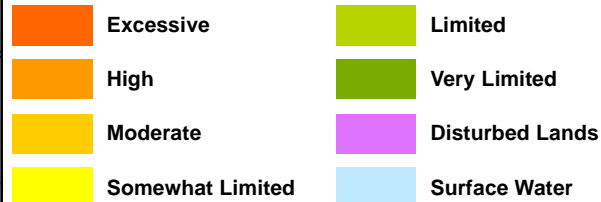
point sources in Illinois include the agricultural use of pesticides and fertilizers. Septic systems in an urbanized area can also become a non-point source of contamination. Maintaining proper setbacks from wells and water sources are important measures that can be taken to prevent groundwater contamination. The greater the depth of the aquifer, the more protection it has from contamination. Rock Island County has large areas of the county with aquifers that have excessive or high sensitivity to contamination. Map 6.9 shows the aquifer sensitivity to contamination by nitrate leaching, and Map 6.10 shows aquifer sensitivity to contamination by pesticide leaching.

Map 6.9 Aquifer Sensitivity to Contamination by Nitrate Leaching

Rock Island County Comprehensive Plan



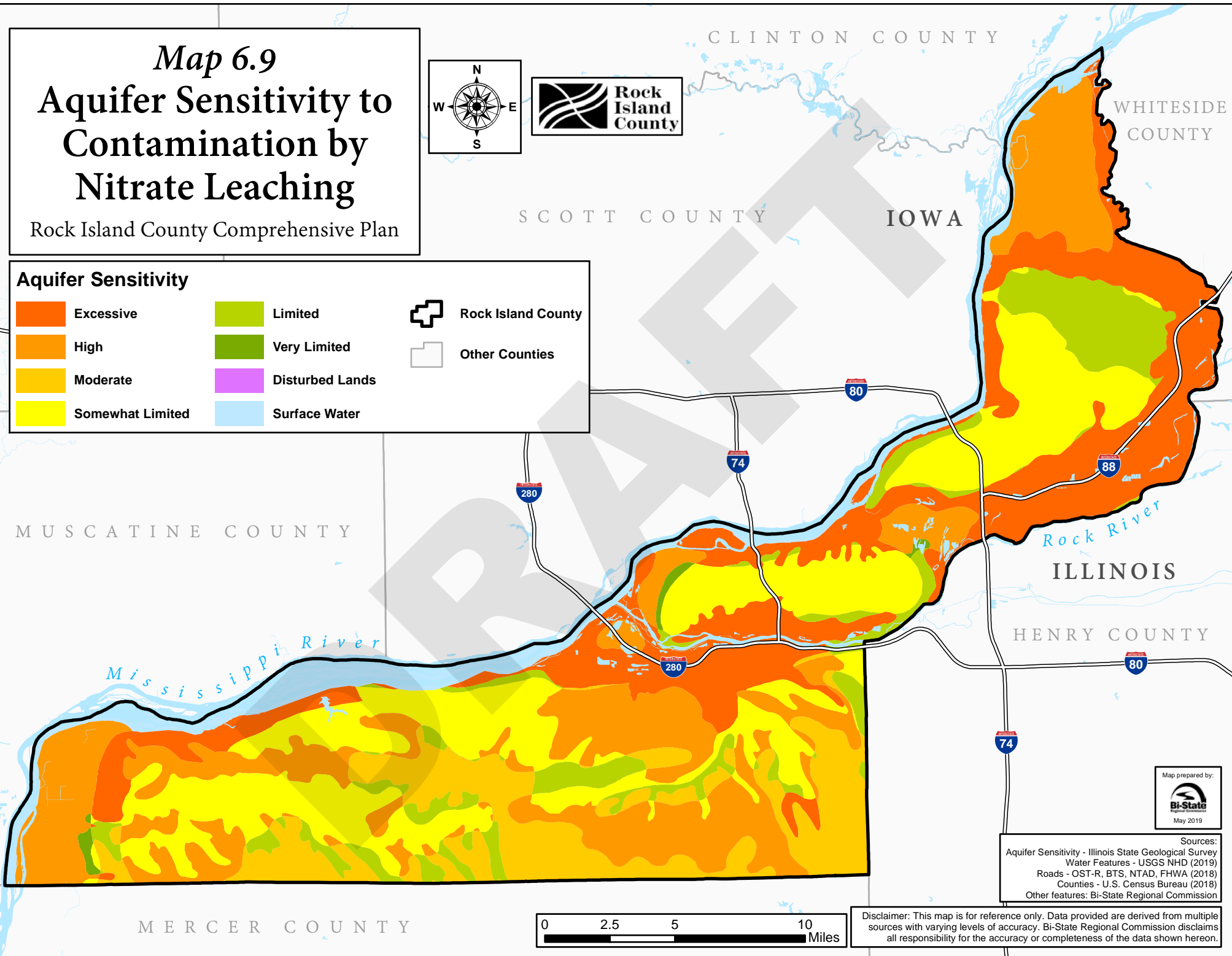
Aquifer Sensitivity




Rock Island County



Other Counties



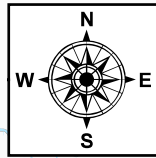
Map prepared by:

May 2019

Sources:
Aquifer Sensitivity - Illinois State Geological Survey
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

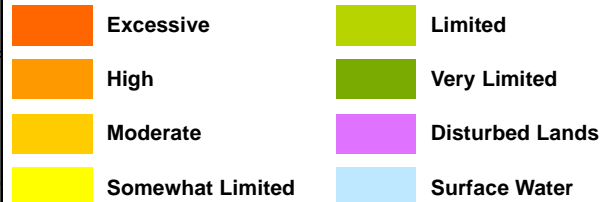
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Map 6.10 Aquifer Sensitivity to Contamination by Pesticide Leaching

Rock Island County Comprehensive Plan



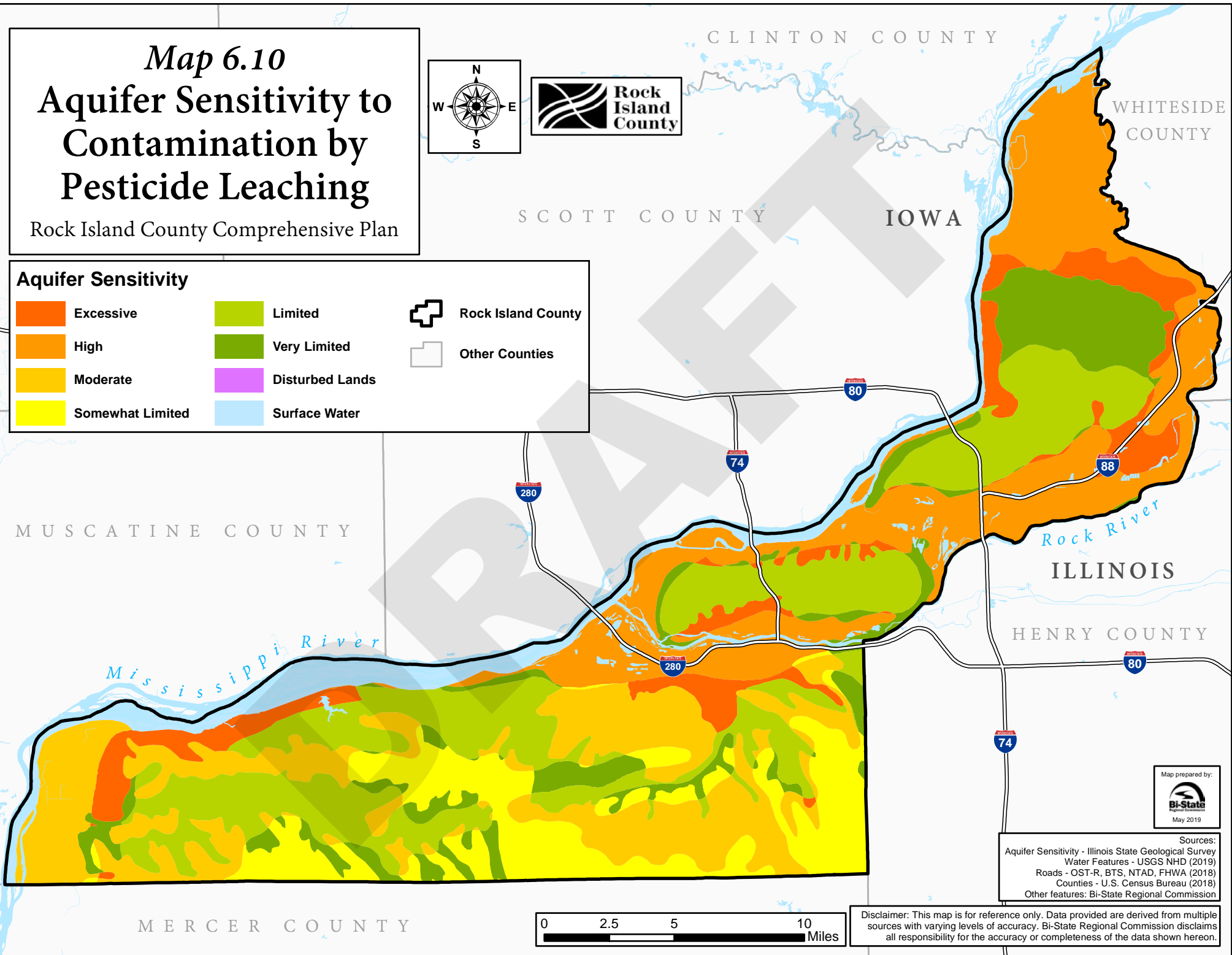
Aquifer Sensitivity



Rock Island County



Other Counties



Map prepared by:

May 2019

Sources:
Aquifer Sensitivity - Illinois State Geological Survey
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

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Wildlife and Habitat Resources

County officials and citizens can have a positive impact on wildlife populations using habitat and ecosystem management practices and protections. Often wildlife habitat is interrelated, and if removed or disturbed can have an impact on multiple species. Rock Island County with its location between the Mississippi and Rock Rivers, its valleys and forests, and its other unique features offer opportunities for natural recreation, conservation, and outdoor sportsman adventures. These activities can be enhanced when land development decisions are being made to strategically develop or preserve particular areas of Rock Island County that support these objectives.

Wildlife

Rock Island County has many different habitats for plants and wildlife. The county has wetlands, upland and floodplain woodlands, and areas of sand and black soil prairies. Over 750 species of flora and fauna have been found in the county. Some of the mammals seen in the county include river otters, red foxes, coyotes, bobcats, white tail deer, opossum, raccoons, muskrats, rabbits, and many other small mammals. It has reptiles, amphibians, and many species of birds including songbirds, water birds, turkey vultures, many hawks, owls, wild turkeys, pheasants, and quail. Nesting and roosting Bald Eagles can be seen along the Rock and Mississippi Rivers. White Pelicans have returned to the region.

Occasionally, black bears, cougars (mountain lions), or grey wolves may wander into the region from the north or west. There are no known established breeding pairs of these animals currently in

the county. The county does have habitat of interest to these species. However, it is unknown if there is enough habitat to support breeding pairs. Confirmed cougars were found in Mercer and Whiteside Counties, and had similar DNA of cougars in South Dakota. Black bears are found in Wisconsin and Missouri and have wandered into eastern Iowa and northwest Illinois. It is possible one may wander into the county. There have been 11 grey wolves confirmed in northern Illinois since 2002. Both young males and females have been found. In 2015, the Illinois Wildlife Code was amended by adding black bears, cougars, and gray wolves to the list of protected species. Gray wolves are listed as a State Threatened Species and as Federally Endangered by the U.S. Fish and Wildlife Service throughout Illinois. Black bears and cougars may not be hunted, killed, or harassed unless there is an imminent threat to person or property. Gray wolves may not be hunted, killed, or harassed for any reason.

Hunting and trapping are two forms of wildlife management that takes place in the county. Regulated hunting and trapping supply many benefits to society, especially to keep a balance between wildlife and people. Trapping is an important management tool to protect the health and viability of many established or newly reestablished populations of rare or endangered plant and animal species. Foothold traps are particularly important management tools to protect rare and endangered species from undesirable levels of predation by species like fox and coyote.

Rock Island County has a deer management program run with the Illinois DNR, which allocates deer hunting permits that follow

the State of Illinois hunting laws. There are also waterfowl hunting pools near the Mississippi River Dam #17 and #18, as well as squirrel, pheasant, turkey, and quail hunting opportunities. The total deer harvest in 2018 for Rock Island County, including by firearm and archery, was 1,659 deer (Illinois Department of Natural Resources).

In 2019, 179 turkeys were harvested. In Illinois, the following animals are harvested for their fur: badger, beaver, bobcat, coyote, grey fox, mink, muskrat, opossum, raccoon, red fox, river otter, striped skunk, and weasel. Ring-necked pheasant were once hunted at a rate of one million a year in Illinois up to the 1970s. Changes to farming practices have reduced the nesting habitat available for these birds, and the last state harvest reports only 68,112 were taken state-wide. Quail have a similar nesting habit as the pheasant. Their harvest numbers have been even more drastically reduced from almost three million harvested in the 1950s to 23,395 harvested state-wide in the 2018-19 season. Cottontail rabbit numbers are also down across the state since 1975. The rabbit populations have been steady the

last few years and even show a slight increase in numbers. Farms with a mix of small fields with shrubby fencerows, old pasture, forest edges, and areas of young or recently harvested timber are the best rabbit habitats. Rock Island County has good forest edge rabbit habitat.

Feral swine are invasive, exotic animals that threaten native plant and animal communities as well as cultivated crops and livestock. In Illinois, wild swine are defined as feral swine, Eurasian wild boar (*Sus scrofa*, including subspecies), and hybrids between feral swine and Eurasian wild boar. Populations or individuals of domesticated swine that are not clearly identified by ear tags or other identification, are unrestrained and free-roaming and have adapted to living in the wild are considered feral swine. In Illinois, feral swine are regulated by the Illinois Department of Natural Resources.

Rock Island County like the rest of Illinois has several threatened and endangered species of plants and animals. This list includes turtles, snakes, fish, birds, and plants. Table 6.3 is a list of the threatened and endangered species for the county.

Table 6.3 – Illinois Threatened and Endangered Species

Scientific Name	Common Name	State Protection	# of occurrences	Last Observed
<i>Corallorhiza maculata</i>	Spotted Coral-root Orchid	LE	1	2002-08-29
<i>Cumberlandia monodonta</i>	Spectaclecase Mussel	LE	5	2016-10-25
<i>Cyclonaias tuberculata</i>	Purple Wartyback Mussel	LT	2	2016-09
<i>Dendroica cerulea</i>	Cerulean Warbler	LT	1	2004-06-19
<i>Ellipsaria lineolata</i>	Butterfly Mussel	LT	11	2017-06-15
<i>Elliptio dilatata</i>	Spike Mussel	LT	1	2016-09
<i>Emydoidea blandingii</i>	Blanding's Turtle	LE	2	2016-07-18
<i>Erimystax x-punctatus</i>	Gravel Chub	LT	3	1999-08-30
<i>Fundulus diaphanus</i>	Banded Killifish	LT	2	2017-11-14
<i>Fusconaia ebena</i>	Ebonysnail	LE	1	1983-05
<i>Hemidactylium scutatum</i>	Four-toed Salamander	LT	2	2015-04-29
<i>Hybopsis amnis</i>	Pallid Shiner	LE	3	1986-10-07
<i>Lampsilis higginsii</i>	Higgins Eye	LE	9	2016-11-03
<i>Ligumia recta</i>	Black Sandshell	LT	15	2017-06-15
<i>Lycopodium clavatum</i>	Running Pine	LE	1	1988
<i>Moxostoma carinatum</i>	River Redhorse	LT	1	2017-04-18
<i>Necturus maculosus</i>	Mudpuppy	LT	1	1927-09-08
<i>Notropis anogenus</i>	Pugnose Shiner	LE	1	1946
<i>Crystallaria asprella</i>	Crystal Darter	LT	3	2016-08-11
<i>Nyctanassa violacea</i>	Yellow-crowned Night-Heron	LE	1	1999-06
<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron	LE	1	1993-10-18
<i>Plethobasus cyphus</i>	Sheepnose	LE	3	2016-10-25
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird	LE	1	1995-05-11
State Status: LE - listed as endangered LT - listed as threatened				

Source: Illinois Natural Heritage Database, July 23, 2018

Illinois Nature Preserves

The Illinois Nature Preserves Commission (INPC) has three dedicated Nature Preserves in Rock Island County. Nature Preserves are permanently protected by state law and can be on private and public lands that have rare plants, animals, or other unique natural features. Nature preserves are dedicated after a thorough and detailed study of an area, protecting them into the future. Table 6.4 lists the dedicated Nature Preserves in Rock Island County.

Table 6.4 – Illinois Dedicated Nature Preserves in Rock Island County

Name	Location	Ownership	Public/Not Public	Dedicated	Type	Size Acres
Black Hawk Forest	Within Black Hawk State Historic Site, Rock Island	Illinois Historic Preservation Agency	Public	1984	High quality upland forest	106.6
Elton E. Fawkes Bald Eagle Refuge	1.5 miles north of Hampton, IL south of Highway 84	Illinois Department of Natural Resources	Public - closed Oct. 1 to April 1	1989	Wooded bluff that is significant winter roost area for Bald Eagles.	173.6
Josua Lindahl Hill Prairies Nature Preserve	Located within the 67-acre Collinson Ecological Preserve, Milan, IL	Augustana College, Rock Island, IL	Private		Loess hill prairie growing on a geologically significant limestone cliff formation	20
Total Acres						300.2

Source: Illinois Nature Preserves Commission (INPC)

Table 6.5 – Other Ecological Preserves in Rock Island County

Name	Location	Ownership	Public/Private	Type	Size Acres
Green Valley Nature Preserve	Moline north of Rock River	City of Moline	Public	Forested Rock River floodplain	358
Beling Ecological Preserve	Moline north of Rock River	Augustana College, Rock Island, IL	Private	Floodplain forest that is seasonally flooded.	97
Collinson Ecological Preserve	Milan	Augustana College, Rock Island, IL	Private	Upland hardwood forest that includes two high quality native loess hill prairie openings	67
Martin Conservation Area	West of Andalusia, IL	Rock Island County Forest Preserve District	Public	<ul style="list-style-type: none"> • 170 acres of native woodland • 2 acres of direct seeded hardwood trees • 5 acres of plants mixed shrubs • 22 acres of tall-grass prairie restoration • 41 acres of cool season grass legume habitat • 63.9 acres enrolled in the USDA Conservation Reserve Program (CRP) and managed for wildlife • 4,360 feet of gravel bottom stream 	240
Milan Bottoms	West of Milan along the Mississippi River	Natural Land Institute	Private	Floodplain Forest-swampy forest, marshes, and sloughs	92
Total Acres					854

Illinois Natural Area Inventory Sites (INAI)

The Illinois Nature Areas Inventory was completed in 2019. The inventory names the state's most rare nature areas. It serves as a guide for the INPC when determining the eligibility of lands for protection.

Currently, there are 1,628 high-quality, undisturbed natural communities in the State of Illinois. Half of these areas are unprotected, and sites either are in danger of being, or have already been, totally or partially destroyed. Table 6.6 lists the natural areas inventory sites in Rock Island County.

Table 6.6 – Rock Island County – Illinois Natural Area Inventory Sites as of October 2019.

Illinois Natural Area Inventory Category Descriptions for the table below:

Category I - High quality natural community and natural community restorations

Category II - Specific suitable habitat for state-listed species or state-listed species relocations

Category III - State dedicated Nature Preserve, Land and Water Reserve, or Natural Heritage Landmark

Category IV - Outstanding geological features

Cat. V = Not used at this time

Cat. VI = Unusual concentrations of flora or fauna and high-quality streams

Illinois Natural Area Inventory Name	INAI Number	Categories	Acreage
Black Hawk Forest	0140	I, III	101.23
Fawks - Illiniwek Forest	0942	I, II, III	705.47
Gorham Hill Prairie	0219	I	9.98
Indian Bluff Hill Prairie	0139	I, II	2.25
Loud Thunder Forest Preserve	1294	II	3.05
McNeal Marsh	0220	I	47.50
Milan South Geological Area	0490	I, III, IV	22.12
Mississippi River - Andalusia Slough	1456	II	8,105.46
Mississippi River - Cordova	1296	II, VI	2,165.17
Mississippi River - Moline	1295	II	2,323.69
Mississippi River - Muscatine	1297	II	5,188.06
Nussbaum Prairie	0218	I	44.31
Pearsall Sand Prairie	0141	I	12.32
Port Byron Bed 1865	1865	VI	6.47
Port Byron Geological Area	0831	IV	12.18
Rock River - Carr Island	1292	II	506.72
Rock Island 034	1846	I	13.17
Total number of Sites in Rock Island County			17
Total acreage of Sites in Rock Island County			19,269

Source: Illinois Department of Natural Resources

Agricultural Resources

Rock Island County has a total of 271,488 acres within its boundaries. Of that number, 143,573 are considered prime farmland. Another 42,895 acres are considered of statewide importance. The growing season averages 155 days with annual rainfall averaging 35 inches and a mean annual temperature of 55°F. Two of the three largest employers in the county are agriculture related: IBP meat packing plant, Joslin, and Deere & Co., Moline. Thus, the soil is one of Rock Island County's primary assets. Next to water, the soil is the most abundant and valuable resource in Rock Island County.

According to the 2017 American Community Survey (ACS) 5-Year Estimates, Rock Island County had a population of 146,205 people. The 2017 ACS shows an incorporated population of 15,672 or about 11 percent of the population in the county. The total number of county households in 2017 was 60,064.

As of 2017, Rock Island County had 649 farm operations. This number is down from the 666 farms operations in 2012. The county had 159,583 acres in farm operations in 2017, an increase of 6.97% over the 149,183 acres in operation in 2012.

The average farm size was 246 acres, although the median farm size was only 79 acres, showing the number of larger sized farm outliers. The number of farms with cropland in 2012 was 575. This decreased to 571 in 2017. Total acres in cropland was 119,622 in 2012 and 132,355 in 2017 for an increase of 10.64%.

In 2017, the county had 7,173 acres enrolled in the Cropland Reserve Program (CRP). Table 6.7 shows the variety of conservation practices and number of acres in each practice for the county. Very little irrigation is used in the county as most years have 23 inches of rain during the April through September growing season. However, even with most years having enough rainfall, the county has not escaped some years of considerable drought. Acres in irrigation have increased since 1980 due to unreliability of moisture. Drought quickly affects the crops grown in the sandier alluvial bottomlands of the northernmost part of the county. Total 2012 irrigated land in the county was 4,038 acres on 36 farm operations. This increased 18.87% to 4,800 acres on 35 farm operations in 2017. Rock Island County has over 41,000 acres of land in floodplains; therefore, prolonged flooding of the Rock and Mississippi Rivers has an impact on agriculture production on these floodplains.

Table 6.7 – Rock Island County Conservation Practices Installed on CRP (Acres)
Cumulative, as of January 2017

Program		Total Acres
Grass Plantings	Intro (CP1)	1,127
	Native (CP2)	579
Tree Plantings	Hardwoods (CP3A)	126
	Wildlife Habitat (CP4D) 2/	484
	Field Windbreaks (CP5)	14
	Grass Waterways (CP8)	431
	Shallow Water for Wildlife (CP9)	150
	Existing Grass (CP10)	554
	Existing Trees (CP11)	74
	Wildlife Food Plots (CP12)	10
	Contour Grass Strips (CP15)	14
	Shelter-Belts (CP16)	5
	Living Snow Fences (CP17)	3
	Filter-Strips (CP21)	1,394
	Riparian Buffers 3/(CP22)	195
	(CP23) 4/	59
	Floodplain (CP23) 5/	476
	Non-Floodplain (CP23A) 5/	76
Farmable Wetland Program 6/	Wetland (Cp27)	5
	Buffer (CP28)	19
	Bottomland Hardwood Trees (CP31)	8
	Upland Bird Habitat Buffers (CP33)	405
	Pollinator Habitat 8/(CP42)	968
Total Acres		7,173

Map 6.11 shows the land cover of Rock Island County. Most of the land outside of the urbanized part of the county is in cultivated crops. Pastureland and deciduous forest are found on the lands with steeper slopes along the streams and rivers of the county. The Mississippi and Rock Rivers have extensive areas along their shores that have woody and herbaceous wetlands. These areas are flooded periodically most years. The county does not have extensive evergreen forests or lake areas. Many of the small lakes in the county are constructed farm ponds. Some land has been developed outside of municipal boundaries. There are several unincorporated towns/places in the county

such as Buffalo Prairie, Illinois City, Taylor Ridge, Edgington, Coyne Center, Campbell's Island, Barstow, and Joslin. There are also many rural residential subdivisions, with the highest concentration along the rivers. In the public input process for the comprehensive plan update, there was interest expressed in more small lake residential developments within Rock Island County. To help preserve the rural character, conservation subdivisions with clustered housing with buffer areas would be recommended.

Prime Farmland

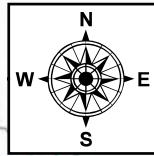
Defined by the U.S. Department of Agriculture (USDA), prime farmland is land

that is best suited to food, feed, forage, fiber, and oilseed crops. It may be cultivated land, pasture, woodland, or other land, but it is not urban and built-up land or water areas. It either is used for food or fiber crops or is available for those crops. The soil qualities, growing season, and moisture supply are those needed for a

well-managed soil to produce a sustained high yield of crops in an economic manner. Prime farmland produces the highest yields with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment. Map 6.12 shows the prime farmland in the county.

Map 6.11 Land Cover

Rock Island County Comprehensive Plan



Land Cover

	Barren Land		Evergreen Forest
	Cultivated Crops		Hay/Pasture
	Deciduous Forest		Herbaceous
	Developed, Low Intensity		Mixed Forest
	Developed, Medium Intensity		Open Water
	Developed, High Intensity		Shrub/Scrub
	Developed, Open Space		Woody Wetlands
	Emergent Herbaceous Wetlands		



Rock Island County



Water Features



Other Counties



Interstates

MUSCATINE COUNTY

SCOTT COUNTY

CLINTON COUNTY

WHITESIDE COUNTY

IOWA

Rock River

ILLINOIS

Mississippi River

HENRY COUNTY

MERCER COUNTY

0 2.5 5 10
Miles

Map prepared by:

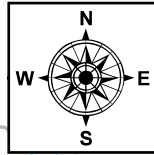


Sources:
Land Cover - USGS NLCD (2016)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

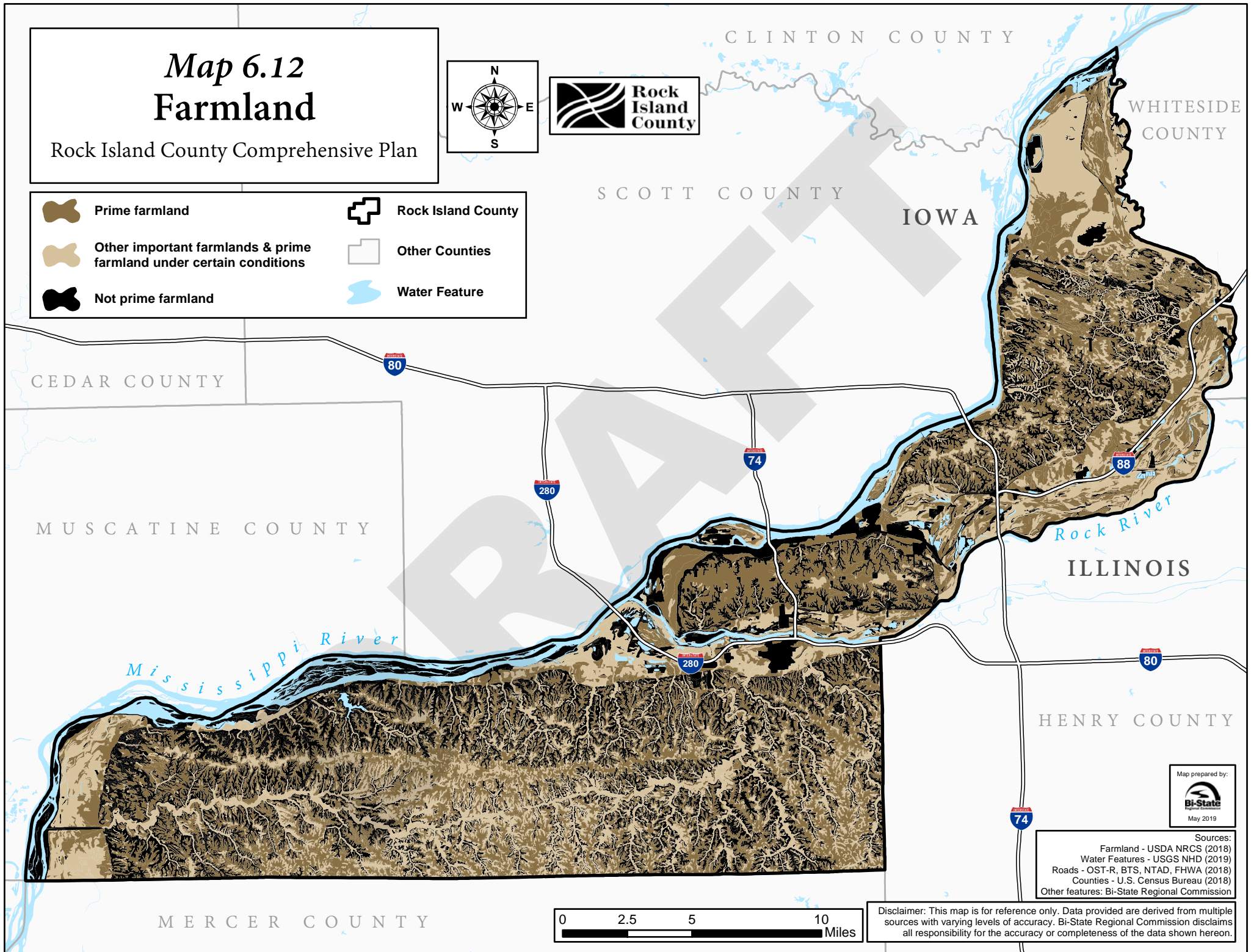
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Map 6.12 Farmland

Rock Island County Comprehensive Plan



- | | | | |
|---|---|---|--------------------|
|  | Prime farmland |  | Rock Island County |
|  | Other important farmlands & prime farmland under certain conditions |  | Other Counties |
|  | Not prime farmland |  | Water Feature |



Map prepared by:

May 2019

Sources:
Farmland - USDA NRCS (2018)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

0 2.5 5 10
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Changes Affecting Agriculture in the County

Since the first comprehensive plan developed for Rock Island County, there have been changes in farming. Total land in farms has decreased over time while values have increased. The age of farm operators has increased, and there are fewer younger farmers. Fewer farmers are managing larger land areas. Farming is shifting from operators' primary occupation to other occupations. These agricultural trends and other noted in this section will have an influence on future land use decision-making in Rock Island County.

Farms and Land in Farm Operations

For current census purposes, a “farm” is defined as a place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year. This farm definition has changed nine times throughout history, and the current definition has been in effect since 1978.

“Land in Farms” is defined as agricultural land used for crops, pasture or grazing, woodlands, and wasteland not under cultivation, and land in Conservation Reserve and Wetlands Reserve Programs. This land includes land owned and operated as well as land rented from others.

In 2012, land operated on farms in the county was 149,186 acres or over 54% of the total county acreage. Total acres of land on farm operations increased to 159,583 acres in 2017 or about 58% of total county acreage. This is an increase of 10,397 acres of land in farm operation uses from 2012-2017.

Total cropland acres in the county was 119,622 acres in 2012 with 108,517 acres or 91% of the cropland acres harvested. In 2017, total cropland acres in the county was 132,355 acres with 122,587 acres or 83% of cropland acres harvested. Acres of agricultural land in woodland was 14,496 acres, and in 2012 this decreased by 298 acres to 14,198 acres in 2017. Total acres of agricultural land in pastureland was 13,143 acres in 2012; this decreased by 1,588 acres to 11,555 acres in 2017.

Total acres enrolled in Federal Government Conservation and Wetlands programs in 2012 was 6,350 acres; this increased by 202 acres in 2017.

Total acres of agricultural land with crop insurance was 87,2283 acres in 2012; this increased by 19,111 acres to 106,394 acres in 2017.

Table 6.8 supplies more detail on these changes in land in farms in Rock Island County from 2012 to 2017.

Table 6.8 – 2012 & 2017 Rock Island County - Farms, Land in Farms, and Land Use

Commodity	Data Item	2012 Value	2017 Value
Total Land	Total land area measured Rock Island County (acres)	273,687	273,574
Farm Operations	Total number of farm operations in the county	666	649
	Total acres operated on farm operations in the county	149,186	159,583
	Acres operated per farm operation.	224	246
Ag Land in Crop Land	Total cropland acres in the county.	119,622	132,355
	Total cropland acres - harvested	108,517	122,583
	Total cropland acres - pastured only	959	489
	Total cropland acres - excluding harvested & pastured acres	6	9,283
	Total cropland acres - excluding harvested & pastured acres that were idle acres	9,686	8,560
	Total cropland acres - excluding harvested & pastured acres where all crops failed	342	631
	Total cropland acres - excluding harvested & pastured acres that were cultivated summer fallow	118	92
Ag Land in Woodland	Total acres of agricultural land in woodland	14,496	14,198
	Total acres of agricultural land in pastured woodland	2,895	2,500
	Total acres of agricultural land in woodland - excluding pastured woodland	11,601	11,698
Ag Land in Pastureland	Total acres agricultural land in pastureland	13,143	11,555
	Total acres of pastureland - excluding pastured cropland & woodland	9,289	8,566
	Total acres of agricultural land - excluding cropland, pastureland, and woodland	5,779	4,464
Government Programs	Total acres in government programs - Federal, Conservation, and Wetlands programs	6,350	6,552
Crop Insurance	Total acres of agricultural land with Crop Insurance	87,283	106,394

Source: USDA, National Agricultural Statistics Service 2012 and 2017 Census of Agriculture

Farmland Values

The farmland market of Region 2 consists of the northwest 11 counties in Illinois. The region experienced a moderate increase in prices across all land classes. Region 2 is diversified from rolling hills and deep prairie soils to sandy river bottom ground scattered throughout the region. This diversification results in a wide range in crops, rents, and land values.

The median price per acre of all land classes was \$8,501 in 2017, which is a 6.3 percent increase over \$8,000 per acre in 2016. The increase was not seen in all land classes with Class A farms showing a 5.2 percent decline from the previous year. The remaining land classes showed modest increases, with the outlier being Class D farms that showed a significant increase from the previous year. Caution should be used when considering Class D farms throughout Region 2 because of the limited number of sales. Class B and C farms were consistent with 6.8 percent and 7.2 percent increases in median price per acre. In general, the market in Region 2 has stabilized. The prior three years had shown

consistent declines in all land classes. This has been counterintuitive to thoughts in the marketplace when considering how commodity prices have declined over the last few years. However, when looking at 2016 and 2017 markets, the stabilization of the land market has been consistent with some of the main drivers in the marketplace. (Source: USDA Agricultural Land Values Bulletin)

The Illinois Society of Farm Managers and Appraisers tracks farmland sales and cash rent in the State of Illinois. Rock Island County falls in Region 2 - Northwest Illinois. The society uses the Productivity Index from the University of Illinois (Bulletin 811) to rank farmland based on its productivity.

- Excellent Productivity – 147 to 133
- Good Productivity – 132 to 117
- Average Productivity – 116 to 100
- Fair Productivity – Less than 100

Farmland values are then assigned using these criteria. Table 6.9 shows the latest selling prices for farmland in Region 2 - Northwest Illinois.

Table 6.9 – Illinois Region 2 Farmland Values per Acre

	Excellent	Good	Average	Fair
2019	\$10,000 - \$11,500	\$7,000 - \$9,000	\$5,000 - \$7,000	\$4,500 - \$6,000
2018	\$10,000 - \$12,000	\$7,000 - \$9,500	\$6,000 - \$7,500	\$4,500 - \$6,000
2017	\$10,500 - \$12,500	\$7,000 - \$9,000	\$5,500 - \$7,500	\$4,000 - \$5,500
2016	\$11,000 - \$13,500	\$8,000 - \$10,500	\$6,000 - \$9,000	\$4,000 - \$6,000
2015	\$11,500 - \$14,000	\$8,500 - \$11,500	\$6,000 - \$9,000	\$4,000 - \$6,000

Source Illinois Society of Farm Managers and Appraisers

Land Cover

Rock Island County is an urban county, but has a long history of farming and extensive land area in farms. Most of the agricultural land in the county is in cropland, mostly used for crops that can be harvested. A percentage of the cropland is used for pastureland, although the number of acres in this category has declined. The total acres of pasture lands that are not used as cropland and woodlands has also declined, as these more marginal areas are increasingly used for cropland that will be harvested or for urban development. Land shown as other land on farms consists of agricultural land used as farmsteads, buildings, animal facilities, ponds, roads, and wasteland, etc.

Commodities Produced

Growing Season

The National Weather Service defined growing season for the region has been based on the climate data collected at Moline, Illinois. The 120-year record shows that the growing season averages 170 days. The season extends from late April to mid-October. The irrigation season ends sooner than the growing season because the supplemental water for the traditional corn and soybean crops is not needed late in the growing season. An exception is the irrigation season for specialty growers, who may use the entire growing season to produce two vegetable crops during one season. According to the National Weather Service the annual precipitation at Moline, Illinois averages between 30 and 40 inches with much of it falling in the period from April through September. Seasonal snowfall averages about 30 inches, but in the past 30 years has ranged from as little as 12 inches to as much as 70 inches.

Primary crops grown are corn, soybeans, and forage crops such as alfalfa and hay. Minor amounts of wheat, oats, berries, vegetables, nursery stock, and orchard crops are also harvested. Seven farm operations in the northern part of the county grew potatoes in 2017. The soil in that area is sandier and supports root crops and melons well. The soils and climate are also suitable for grain sorghum, sunflowers, sugar beets, sweet corn, tomatoes, popcorn, pumpkins, canning peas and beans, and navy beans. Very few acres of these crops are harvested each year, but the total acres are increasing, as people want more vegetables and fruits that are grown locally. See Map 6.13 for the location of various crops.

Food Crops

Rock Island County used to be a large producer of local food for the region. Up until the mid-1960s and sporadically thereafter, large fields of potatoes, popcorn, tomatoes, snap beans, melons, watermelon, onions, strawberries, raspberries, apples, peaches, pears, and cherries were grown in the county. Some of these food crop fruits and vegetables are making a comeback in acres produced. As of 2017, 522 acres of vegetables were harvested in the county. Sweet corn, tomatoes, apples, grapes, and pumpkins top the list for the most acres in production. In 2017, there were 146 acres of orchards in 19 farm operations in the county. This farm acreage includes both bearing and non-bearing stock.

In recent years, there has been a national resurgence of interest in locally grown foods. Primary vegetables grown in the county in 2012 were 40 acres of pumpkins, 31 acres of sweet corn, and 5 acres of

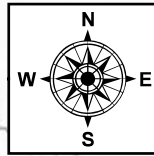
watermelon. Asparagus, beans (pole & snap), beets, broccoli, cabbage (head), melons, carrots, cauliflower, cucumbers, eggplant, head lettuce, okra, onions, bell and other peppers, potatoes, spinach, squash, tomatoes, and turnips were other vegetables grown in minor quantity for fresh market sales.

Rock Island County had 146 acres in orchards in 2017. Apples, tart cherries, peaches, pears, and nuts were the primary orchard crops.

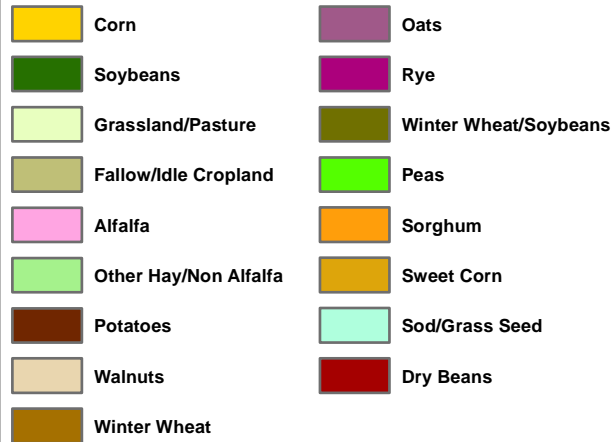
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Map 6.13 Crop Production

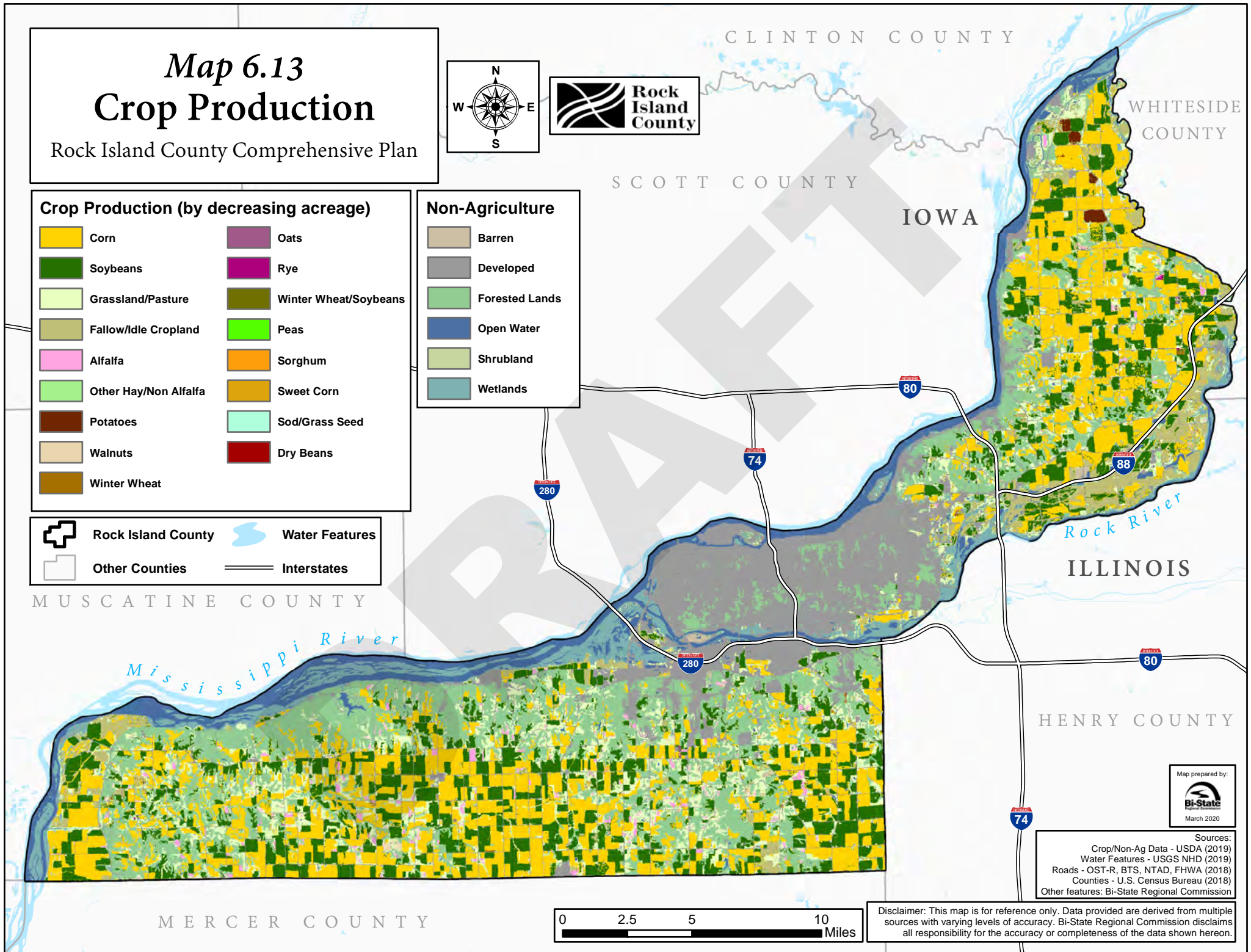
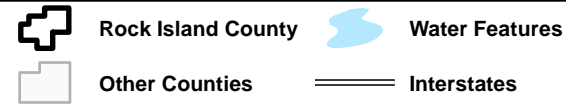
Rock Island County Comprehensive Plan



Crop Production (by decreasing acreage)



Non-Agriculture



Map prepared by:
 Bi-State
March 2020

Sources:
Crop/Non-Ag Data - USDA (2019)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

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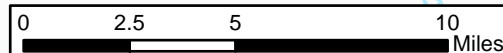


Table 6.10 shows the number of farms in each North American Industry Classification System (NAICS) for 2017.

Table 6.10 – Rock Island County Farms by Industry Classification 2017

2017 NAICS Classification	Number of Farms
1111- Oilseed & Grain Farming	308
1112 – Vegetable and Melon Farming	11
1113 – Fruit and Nut Tree Farming	18
1114 – Greenhouse, Nursery, & Floriculture Production	14
1119 – Other Crop Farming	156
11193, 11194, & 11199 – Sugar Cane, Hay, Sugar Beets, Peanuts, other Farming	156
112111 – Beef Cattle Ranching & Farming	56
112112 – Cattle Feed Lots	1
11212 – Dairy Cattle & Milk Production	6
1122 – Hog & Pig Farming	12
1123 - Poultry	8
1124 – Sheep & Goats	12
1125 – Fish, Shellfish, Aquaculture & 1129- Apticulture, Horses, Furbearing Animals & Rabbits, Other Animal Production.	47

Source: North American Industry Classification (NAICS)

Toolbox for Agricultural Preservation

Agriculture is an important land use in Rock Island County. Preserving agricultural resources will be important to sustaining this industry and supplying food, feed, and fuel resources for the economy. There are various tools the county that its residents can use to preserve farmland. These include Illinois Agricultural Areas, the county's Land Evaluation and Site Assessment, and other farmland management practices.

Illinois Agricultural Areas

The Illinois Agricultural Areas Conservation and Protection Act authorizes the formation of Agricultural Areas in the State of Illinois. Rock Island County does not have any farmland with the agricultural area designation. See the State of Illinois Statutes for regulations on agricultural areas.

Land Evaluation and Site Assessment (LESA)

Due to the pressure of urban expansion into farm areas, and the fact that prime farmland is the most desirable economically to develop, the Rock Island County Board addressed this situation using a model from the U.S. Department of Agriculture under the Natural Resources Conservation Service. In 1985, the Rock Island County Board, in conjunction with the Rock Island County Soil and Water Conservation District, formed a committee to assess prime farmland conversion and, as a result, established the Land Evaluation and Site Assessment (LESA) program.

The LESA program was prepared as a tool to be used when faced with land use decisions that would remove agricultural land from production. The LESA evaluation looked not only at the production value of the farmland in question, but also its relationship to the urban areas, potential

for future development, suitability for development including septic systems, and the relationship of the property to commercial, industrial, and recreational areas. The system was developed as a tool to inform land preservation and land development decision-making.

The LESA document makes the following statements about two different classifications of farmland in Rock Island County:

- **Prime farmland** is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses (the land could be cropland, pastureland, rangeland, forestland, or other land but not built-up land or water). It has the soil quality, growing season and moisture supply needed to economically produce sustained yields of crops when treated and managed, including water management according to acceptable farming methods. Prime farmlands are not excessively erodible nor saturated with water for prolonged periods of time, and they either do not flood often or are protected from flooding.
- **Farmland of statewide importance** include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable.

These two classifications are examined when the LESA evaluation is performed. Factors included in the evaluation are soil type, erosion, productivity, proximity to farmed land and/or urban development, access to infrastructure, and moisture factors. This information is weighted and given a score to be used when land use decisions are made. In the past, the LESA score has been looked at by the Zoning Board of Appeals in a subjective manner. If the LESA number was high but only one or two acres was being removed from production, it was viewed as a minor impact, and, therefore, was likely to be approved. While this may have been beneficial to the property owners, the result has been scattered residential development encroaching on prime farmland.

To provide more guidance for decision-making, farmland in Rock Island County is now classified into three categories, taking into consideration its productivity, along with soil type, erosion characteristics, and existing use (i.e., forested, or tilled).

- **Category One (LESA Groups 1-4)** includes soils that are all prime farmlands, in Capability Classes I or II, and have average productivity indices of 116 to 150. It is usually flat tillable farmland suitable for row crops.
- **Category Two (LESA Groups 5-7)** includes soils that are prime farmland or are important statewide. The group of statewide importance has a high productivity index. The average indices for all three range from 83 to 115. This category includes soils of Capability Classes II through IV.

- **Category Three (LESA Groups 8-10)** includes only one group of soils important statewide. The other two are “non-prime.” Their average indices range from zero to 74. Only one type is Capability Class III. All the rest of the soil types are IV through VII.

Much of the land designated as Category One and Two are prime farmland, suitable for row crops. Large parcels (40 acres or greater) classified as Category One or Category Two should remain as such. Given that the quantity of steep sloped and forested ground in the county is unsuitable for row crops, but suitable for development, farmland preservation should be attainable.

The preservation of prime farmland will require a cooperative effort between developers, decision makers and the agricultural community. This must begin with the realization of at least three contributing factors:

1. Some prime farmland may be sacrificed to development. This sacrifice should occur when its proximity to existing development and/or infrastructure consider it proper.
2. Large parcels of prime farmland should be preserved as such even when the financial opportunities may be greater to remove them from production for development.
3. While flat, tillable farmland is the least cost prohibitive to develop, it must be preserved. Parcels near the urban areas should be developed first and then move to parcels that are forested and sloping.

Two things will continue to remain the same: 1) prime farmland is a valuable asset and 2) there is pressure to develop farmland. If anything, the pressure will increase, not so much with the development of large subdivisions, but with scattered residential developments on 1-5-acre parcels. As discussed previously, scattered residential developments strain the resources of the county. The provision of public or private services such as fire, waste collection and recycling, ambulance service, road maintenance, and classrooms for more students strains the budgets of existing service providers. The increase in tax revenues generated from housing does not begin to cover the cost of these services. Preservation of prime farmland and planned development will enhance the desirability of living and working in the county.

Farmland Management

Farm operators who own their land or who expect to lease it year after year are motivated by profit to ensure that its quality and productivity do not deteriorate over time. However, farming continues to be a source of sedimentation and nutrient loading in rivers and streams. Farmers have a variety of options when it comes to conservation practices. As an incentive to reduce both the onsite and offsite environmental impacts of farming, the federal government supplies technical and financial support to farmers for farm conservation efforts. USDA’s conservation programs share with farmers the cost of adopting the voluntary conservation practices. The farmer must decide if these practices are of benefit to his operation.

For specific crops, the USDA lists three groups of conservation-compatible management practices.

The first group is considered “standard practices.” These practices do not require highly specialized management skills:

- Conservation tillage
- Crop rotation
- Insect/herbicide-resistant plant cultivation

The second group is considered “decision aids.” They provide the farmer with information needed to pursue farming practices that use moderate chemical input.

- Soil testing
- Pest scouting
- Soil mapping

The third group is considered “management-intensive practices.” These require extra effort on the farmer’s part to manage application of nutrients and chemicals.

- Input placement and timing

Source: USDA Economic Research Service Report, Number 14, February 2006.

Farmland Use Practices

The 2017 Census of Agriculture for the first-time asked farmers about variety of farmland use practices. This included how the land may be drained, if it had conservation easements, types of tillage practiced, and the usage of cover crops. Drainage of the soil to enable early planting or to prevent flooding of fields is conducted with the installation of drain tile in fields and by artificial ditches. Twenty-eight percent or 45,439 acres of the total acres in farms in the county has drain tile. One hundred eleven farms are drained by drainage ditches. Total acres drained by these ditches was 13,000 in 2017. Only seven farms in the county have conservation easements. The easements average 175 acres per farm for a total acreage in easements in the county of 1,222 acres. Conservation tillage is the most common conservation practice used on farms in the county. However, only 37% of the farms use this practice. In 2017, 103 farms (16% of total farms) practiced conventional tillage of cropland on 22,207 total acres.

Table 6.11 shows the various practices in place in Rock Island County in 2017.

Table 6.11 – 2017 Rock Island County - Farm Land Use Practices

Farmland Use Practices	2017
Total Farms in the County	649
Total acres operated on farms in the county	159,583
Total Cropland acres in County	132,355
Land Drained by Tile	
Number of farm operations with land drained by tile	231
Total farm acres drained with drain tile.	45,439
Drain-tiled area measured in acres per farm operation	197
Land Drained by Artificial Ditches	
Number of farm operations drained by artificial ditches	111
Total farm acres drained with artificial ditches.	13,000
Farm acres drained measured in acres per operation	117
Land in Conservation Easements	
Number of farm operations with a conservation easement	7
Total farm acres with easements.	1,222
Farm acres in conservation easements - measured in acres per operation	175
Conservation Tillage, Including No-Till Practices	
Number of farm operations using conservation tillage including no-till on cropland.	242
Total cropland acres with conservation tillage including no-till.	58,881
Cropland acres in conservation tillage including no-till - measured in acres per operation	243
Conservation Tillage, Excluding No-Till Practices	
Number of farm operations using conservation tillage excluding no-till practices.	171
Total cropland acres with conservation tillage excluding no-till practices.	36,303
Cropland acres in conservation tillage excluding no-till - measured in acres per operation	212
Conventional Tillage on Cropland	
Number of farm operations using conventional tillage on cropland.	103
Total cropland acres with conventional tillage	22,207
Cropland acres in conventional tillage - measured in acres per operation	216
Cover Crop Planted, (Excluding Crop)	
Number of farm operations using cover crops on cropland (excluding crop).	57
Total cropland acres with cover crop planted (excluding crop)	5,900
Cropland acres with cover crop planted (excluding crop) - measured in acres per operation	104

Source: USDA, National Agricultural Statistics Service 2017 Census of Agriculture

Illinois Nutrient Loss Reduction

Nutrient loss from the soil is a high priority in Illinois. In 2015, the Illinois Nutrient Loss Reduction Strategy (NLRs) was released. Several strategy partners in the state's Policy Working Group and several other working groups—guided by the Illinois Environmental Protection Agency (EPA), Illinois Department of Agriculture, and University of Illinois—have continued to provide considerable support and focus to advance nutrient loss reduction.

The overall goal of the strategy is to improve water quality, not only in Illinois, but downstream, to reduce the hypoxic zone in the Gulf of Mexico. The strategy sets a long-term goal of reducing loads from Illinois for total phosphorus and total nitrogen by 45%, with interim reduction goals of 15% nitrate-nitrogen and 25% total phosphorus by 2025. As found in the strategy, three sectors (agriculture, point source, and urban stormwater, respectively) are sources of nutrient loss in

Illinois. For each of these sectors, measures of implementation help supply a full scope of efforts and accomplishments in the state to achieve strategy goals.

The Illinois NLRs survey conducted by the U.S. Department of Agriculture National Agricultural Statistics Service (NASS) showed that most farmers have at least some knowledge about best management practices listed in the strategy. Eighty percent said that they were knowledgeable about nutrient management or constructed wetlands, and 85% knew about cover crops. Farm management goals in Rock Island County should include increased use of conservation practices such as the use of cover crops, use of technology to manage nutrients, and expanding acres in no till crops. The Rock River watershed has the highest increases in nitrate loading in Illinois. Using farming best practices and adaptive management on farmland that drains to this waterway is critical to the future water quality in this river.

Voluntary Conservation Programs

The USDA Natural Resource Conservation Service (NRCS) and the USDA Farm Service Agency (FSA) manage several voluntary conservation programs for private land with good stewardship practices as a goal. Federal conservation funding is supplied directly to farmers and ranchers who either: (1) retire environmentally sensitive farmland from production or (2) improve conservation practices on working farmland. The USDA supplies the following programs:

The **Conservation Reserve Program (CRP)** is the largest voluntary private-lands conservation program in the United States. CRP can improve water quality, reduce soil erosion, and increase habitat for endangered and threatened species by retiring environmentally-sensitive land from agricultural production. CRP land is classified as cropland due to the difficulty of assessing the level of forest cover on CRP lands. The Conservation Reserve Program generally provides 10-15-year contracts to remove land from agricultural production. Most of the land enrolled in the CRP was in crop production prior to CRP enrollment and is now planted to grass or trees. A large majority of CRP contracts enrolled whole fields or whole farms. Increasingly, however, CRP contracts fund high-priority, partial-field practices such as filter strips and grass waterways, rather than whole-field or whole-farm enrollments. Up to 2 million acres of grassland can also be enrolled in CRP, if the landowner agrees to keep the land in grazing use rather than tilling it for crop production or converting it to any other use.

The **Clean Lakes, Estuaries and Rivers (CLEAR)** Initiative of CRP prioritizes water quality practices on the land that, if enrolled, will help reduce sediment loadings, nutrient loadings, and harmful algal blooms. The Conservation Reserve Program (CRP) provides farmers and landowners with different signup types, practices and initiatives like this to achieve many farming and conservation goals.

CLEAR Practices:

- CP-8A – Grass Waterways
- CP-15A – Contour Grass Strips
- CP-15B – Contour Grass Strips on Terraces
- CP-21 – Filter Strips
- CP21B – Denitrifying Bioreactor on Filter Strip
- CP21S – Saturated Filter Strips
- CP22 – Riparian Buffer
- CP22B – Denitrifying Bioreactor on Riparian Buffers
- CP22S – Saturated Riparian Buffer
- CP23 – Wetland Restoration
- CP23A – Wetland Restoration, Non flood plain
- CP29 – Marginal Pastureland Wildlife Habitat Buffer
- CP30 – Marginal Pastureland Wetland Buffer
- CP31 – Bottomland Timber Establishment on Wetlands
- CP37 – Duck Nesting Habitat
- CP43 – Prairie Strip

Resources Profile

According to the USDA – FSA Conservation and Environment Division’s 2017 Report, as of October 1, 2016, Rock Island County had 6,669 acres in CRP. Of those acres, 1,515 were listed as State Priority Acres, 65 acres were in Permanent Wildlife Habitat, and seven acres were in Pollinator Habitat. The county had 1,441 CRP acres in introduced grasses, 158 CRP acres in native grasses, and 73 CRP acres in hardwood trees.

The **Conservation Reserve Enhancement Program (CREP)**, an offshoot of CRP, targets high-priority conservation issues identified by government and non-government organizations. Farmland that falls under these conservation issues is removed from production in exchange for annual rental payments.

The **Agricultural Conservation Easement Program (ACEP)** supplies long-term or permanent easements for preservation of wetlands and the protection of agricultural land (cropland, grazing land, etc.) from commercial or residential development. ACEP works through partnerships with American Indian tribes, state and local governments, and non-governmental organizations.

The **Conservation Stewardship Program (CSP)** supports ongoing and new conservation efforts for producers who meet stewardship farm-wide requirements on working agricultural and forest lands. Farmers and ranchers must show a high level of stewardship to be eligible for the program and must agree to further improve environment performance over the life of the CSP contract (up to 5 years). Participants receive financial aid for adopting new conservation practices and for stewardship, based on previously adopted practices and the ongoing maintenance of those practices. The entire farm must be enrolled, and conservation requirements must be met throughout the farm.

The **Emergency Conservation Program (ECP)** supplies funding and technical help for farmers and ranchers to restore farmland damaged by natural disasters and for emergency water conservation measures in severe droughts.

The **Emergency Forest Restoration Program (EFRP)**, which is like the ECP, supplies funding to restore privately-owned forests damaged by natural disasters.

The **Environmental Quality Incentives Program (EQIP)** supplies financial aid to farmers who adopt or install conservation practices on land in agricultural production. Common practices include nutrient management, conservation tillage, cover crops, field-edge filter strips, and fences to exclude livestock from streams.

The **Farmable Wetlands Program (FWP)** is designed to restore wetlands and wetland buffer zones that are farmed. FWP gives farmers and ranchers annual rental payments in return for restoring wetlands and establishing plant cover.

The **Grassland Reserve Program (GRP)** works to prevent grazing and pastureland from being converted into cropland or used for urban development. In return for voluntarily limiting the future development of their land, farmers receive a rental payment.

The **Source Water Protection Program (SWPP)** is designed to protect surface and ground water used as drinking water by rural residents. The program targets states based on their water quality and population

The **Agricultural Conservation Easement Program (ACEP)** provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits. The NRCS helps governments and non-governmental organizations protect working agricultural lands and limit non-agricultural uses of the land. Under the Wetlands Reserve Easements part, NRCS helps to restore, protect, and enhance enrolled wetlands.

The **Regional Conservation Partnership Program (RCPP)** helps partners to solve problems on a regional or watershed scale. RCPP can fund a wide range of activities (similar to those funded by other USDA programs) including land retirement, easements, partial-field practices (e.g., filter strips and grass waterways), and conservation practices on working land (e.g., cover crops and nutrient management).

Through **Conservation Technical Assistance (CTA)**, USDA provides ongoing technical assistance to agricultural producers who seek to improve the environmental performance of their farms.

The **Healthy Forests Reserve Program (HFRP)** helps landowners restore, enhance and protect forestland resources on private lands through easements and financial assistance. Through HFRP, landowners promote the recovery of endangered or threatened species, improve plant and animal biodiversity, and enhance carbon sequestration.

Illinois Department of Natural Resources website lists many incentive programs for farmers. <http://www.dnr.state.il.us/orep/pfc/incentives.htm>. More programs can be found at the Illinois Department of Agriculture, Illinois Environmental Protection Agency, Natural Resources Conservation Service, Farm Service Agency, and the Illinois Department of Revenue.

Energy Resources

Just like other resources identified in this chapter such as gravel deposits and prime agricultural land, the geographic features that make some areas of Rock Island County suitable for energy production represent another type of resource for which a range of economic uses and conservation practices can be considered.

Existing energy generation

Energy production already factors into the mix of economic activity for the county. The Quad Cities Generating Station, a two-unit nuclear power plant outside of Cordova owned by the Exelon Corporation, provides electricity for the metropolitan area and the western part of Exelon's Illinois service territory. The location for this plant was chosen in part to make use of the abundant water resources represented by the Mississippi River. Data maintained by the Energy Information Administration shows the station has a net generation capacity of 14,796 kilowatt hours (kWh).¹ Property tax paid on the facility to Rock Island County currently averages \$12.5 million per year.²

In 2016, citing declining revenue and aging infrastructure, Exelon announced plans to decommission the Quad Cities Generating Station by 2018. However, as part of the Future Energy Jobs Act (FEJA) passed by the Illinois legislature in December 2016, the state agreed to subsidize the nuclear power plant at a rate of \$0.01/kWh in order to keep the plant operational for another 10

years.³ In addition to extending the life of the plant, this time provides the county with an opportunity to consider other energy projects that might help offset the future loss of tax revenue.

Whether the Quad Cities Generating Station will close in 2026 as planned or the decommissioning will again be postponed to a later date, the long-term trend in energy generation is away from older coal-fired and nuclear facilities and toward renewable energy sources like wind and solar power. In fact, the majority of the provisions in the FEJA legislation were aimed at spurring development of solar capacity in Illinois in preparation for the eventual closure of older facilities like the Exelon nuclear plant.

Solar energy

On the state level, FEJA is one of a number of policies recently adopted in Illinois that support harnessing solar resources. This includes advancing both the deployment of small-scale, residential solar panels as well as the development of large-scale solar farms. Such legislation includes:

- The 2011 Homeowners' Solar Rights Act, which bars homeowners' associations and similar organizations from prohibiting residents from installing solar panels on their homes or properties⁴
- The 2008 Renewable Energy Portfolio Standard, which calls for 25% of electricity in Illinois to be

¹ <https://www.eia.gov/nuclear/state/Illinois/>

² <https://www.wqad.com/article/news/local/drone/8-in-the-air/rural-illinois-power-plant-has-one-of-the-highest-tax-bills-in-america/526-6a7b7967-c6e3-421b-80e2-e426a96bb75f> POSSIBLE TO GET A BETTER SOURCE, i.e. tax assessor?

³ Illinois SB 2814, <https://legiscan.com/IL/text/SB2814/2015>

⁴ 765 ILCS 165, <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=3278&ChapterID=62>

generated using renewable energy sources by 2025, a target that was reaffirmed by FEJA in 2016⁵

- Standardized assessment formulas established in 2018 for the valuation of large-scale solar installations that set a property tax rate of \$5,000-\$7,000/megawatt per year⁶ and that allow for a special, reduced property tax assessment rates for small-scale solar equipment installed on residential property⁷

Rock Island County has already begun to experience an increase in residential solar installations. In 2018, 4 permits were issued to homeowners to install solar panels on either their rooftops or as ground-mounted installations adjacent to homes or outbuildings. In 2019, the number of permits increased to 26. Many of these permits were issued to farm residences, paralleling a larger trend throughout the Midwest in which solar energy generation is embraced as a means of stabilizing farm income.

Installation of small-scale solar equipment for residential and building structures is currently treated as an as-of-right development, allowed in all zoning districts and requiring only an electrical permit similar to other electrical installations. There are no restrictions as to coverage, placement, or height for roof-mounted

equipment so long as the overall structure conforms with building permit requirements, and ground-mounted installations are treated as accessory structures, meaning they simply cannot be taller than the primary structure on the property. Some additional restrictions may apply for structures built within the floodplain so as to conform with floodplain regulations.

Large-scale or utility-scale solar installations have different considerations and requirements. Generally, for a location to be viable as a solar farm, it must be placed in an area that is unshaded for at least 6 hours a day.⁸ For each megawatt of energy production, a minimum of 5 acres of land is needed. In addition, best practices suggest the installation should be built on ground with 5 percent slop or less and located outside of floodplains, wetland, and open water.⁹ As with other energy installations, proximity to quality roads, electrical substations, and transmission infrastructure are also important considerations.

Based on these considerations, Map 6.14 identifies areas of the county that might be most suitable for future large-scale solar installations. Tier 1 sites are those that meet the basic slope requirements, are located outside of wetlands and floodplains, and are at least 5-acres in size. Tier 2 sites are those that are less than 5 acres in size

⁵ Illinois SB 2814, <https://legiscan.com/IL/text/SB2814/2015>

⁶ Illinois SB 486,

<https://illinoisolar.org/resources/Documents/Property%20Tax%20SB%20486%20Fact%20Sheet%206.21.18.pdf>

⁷ 35 ILCS 200,

<http://www.ilga.gov/legislation/ilcs/ilcs4.asp?DocName=003502000HArt.+10&ActID=596&ChapterID=8&SeqStart=17975000&SeqEnd=28800000>

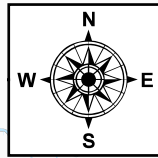
⁸ Great Plains Institute, *Grow Solar: Local Government Solar Toolkit Illinois*. <https://www.growsolar.org/wp-content/uploads/2015/04/IllinoisSolarToolkit-1.pdf>

⁹ Illinois Sustainable Technology Center, *FEJA Seminar Series – Solar Updates for Illinois*. <https://www.youtube.com/watch?v=Vo4paedTOQ4>

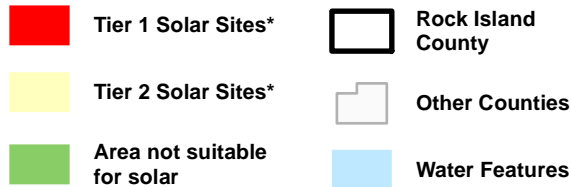
but otherwise meet the siting requirements. For Tier 2 locations, multiple adjacent parcels could be linked together to meet the size requirements for a solar farm.

Map 6.14 Solar Suitability

Rock Island County Comprehensive Plan



Solar Potential

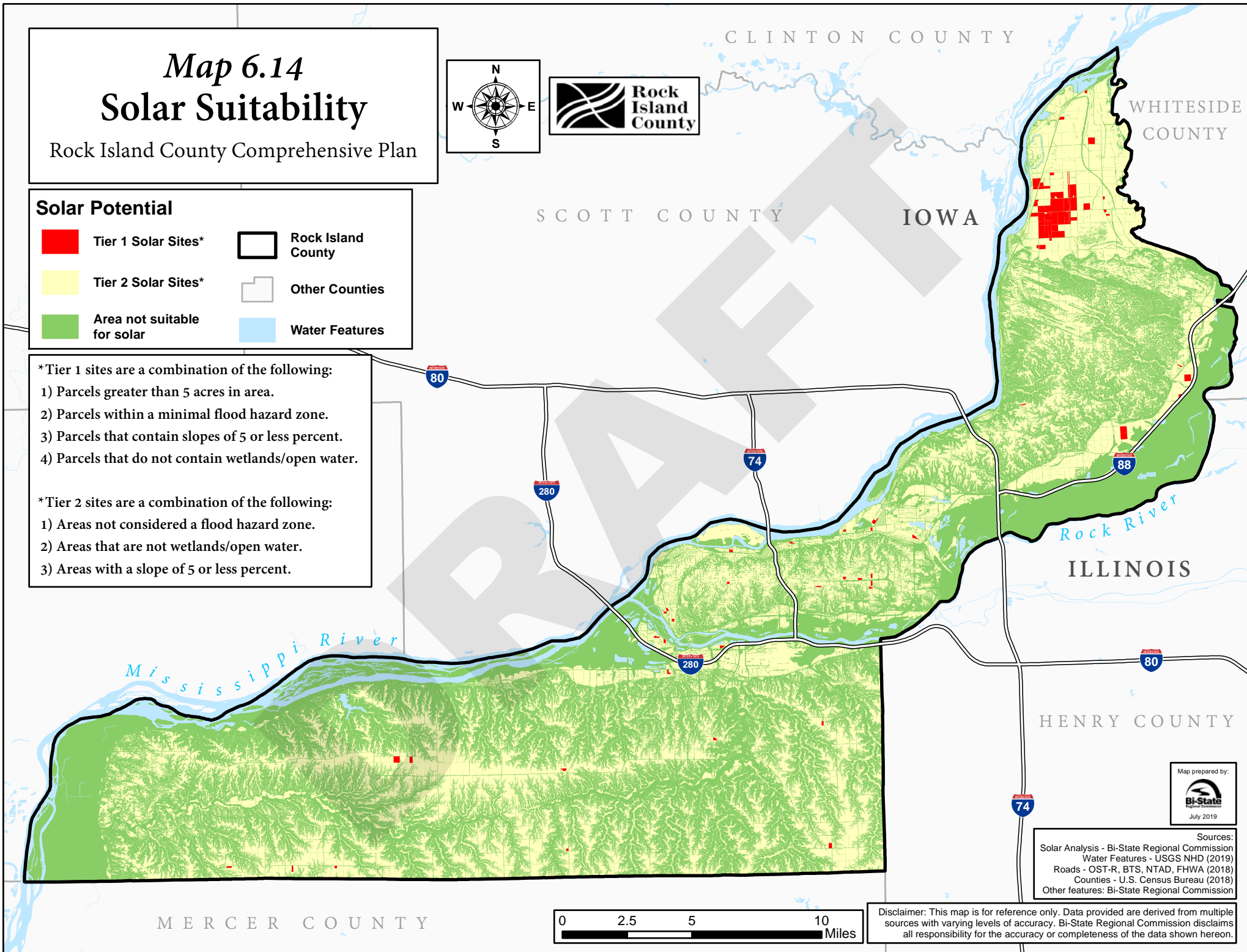


*Tier 1 sites are a combination of the following:

- 1) Parcels greater than 5 acres in area.
- 2) Parcels within a minimal flood hazard zone.
- 3) Parcels that contain slopes of 5 or less percent.
- 4) Parcels that do not contain wetlands/open water.

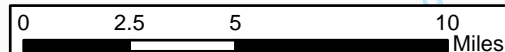
*Tier 2 sites are a combination of the following:

- 1) Areas not considered a flood hazard zone.
- 2) Areas that are not wetlands/open water.
- 3) Areas with a slope of 5 or less percent.



Sources:
Solar Analysis - Bi-State Regional Commission
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.



MERCER COUNTY

Notably, this geographical analysis finds that the largest areas suitable for utility-scale solar development are near the Quad Cities Generating Station. This has the added benefit of suitable transmission infrastructure located in this area to support existing nuclear production. Together, this suggests transitioning the area of the nuclear power station to solar generation may be a suitable solar development goal for Rock Island County to pursue.

As with the development of any natural resources, conservation considerations should also be weighed. In areas of prime farm land, agricultural uses are prioritized in Rock Island County over other forms of development. However, solar development and agricultural are not always mutually exclusive uses. In recent years, solar installations have been identified as a means of stabilizing farm income when placed on a portion of available land.¹⁰ Moreover, a recent study conducted by Argonne National Laboratory in Illinois found that where pollinator habitat was included as ground cover at solar installations, higher yields resulted in adjacent cropland, including for soybeans and alfalfa.¹¹

Planting various prairie grasses and forbs to serve as pollinator habitat also provides additional benefits for managing

stormwater runoff and regenerating topsoil. It provides aesthetic benefits for nearby homeowners as well. In recognition of this, the State of Illinois has established standards for pollinator habitat on solar sites through the passage of SB 3214 in 2018.¹² Additional agricultural land protections are afforded by Illinois through SB 2591, which requires large-scale solar developers to file plans to remove solar arrays and return land to a farmable condition once a site is retired.¹³

Other considerations often cited by landowners near potential solar sites include concerns about glare, noise, and dangerous voltages created by solar panels. Often, these concerns can be mitigated by sharing information about the technology. For example, solar panels “capture” the energy that creates glare to produce energy, and are less reflective than glass windows or water surfaces as a result. The equipment also produces very little noise, about 45 decibels at a distance of 10 meters, equivalent to the noise made by a refrigerator. Similarly, solar equipment produces far lower voltages than transmission lines and have no electromagnetic field (EMF) impacts. As a result, U.S. regulatory agencies have deemed solar equipment compatible with nearby

¹⁰ USDA, “Solar Energy Use in U.S. Agriculture Overview and Policy Issues.”

https://www.usda.gov/oce/reports/energy/Web_SolarEnergy_combined.pdf

¹¹ Walston, Leroy J., et al. “Examining the Potential for Agricultural Benefits from Pollinator Habitat at Solar Facilities in the United States,” <https://pubs.acs.org/doi/10.1021/acs.est.8b00020>.

¹² IL SB 3214,

<http://www.ilga.gov/legislation/fulltext.asp?DocName=10000SB3214sam001&GA=100&LegID=110909&SessionId=91&SpecSess=0&DocTypeId=SB&DocNum=3214&GAID=14&Session>

¹³ IL SB 2591,

<http://www.ilga.gov/legislation/fulltext.asp?DocName=&SessionId=91&GA=100&DocTypeId=SB&DocNum=2591&GAID=14&LegID=109580&SpecSess=&Session>

residential, office building, and aviation structures.¹⁴

Currently, few barriers exist for small-scale solar development in Rock Island County beyond the upfront costs to homeowners and businesses, and although large-scale solar developments have been slower to manifest, there are likewise few barriers on the county level to such installations as well. By establishing a goal to increase solar energy production at both scales, Rock Island County can realize a number of benefits including:

- Maintain local air quality standards through the continued production of clean energy
- Spur the development of skilled employment in solar equipment installation and maintenance
- Support lower electricity bills for Rock Island County residents
- Grow property values and property tax revenues where solar equipment is installed
- Increase energy resilience by diversifying energy production

Wind energy

The primary focus of this section has been on solar production and the possibility for increased development in Rock Island County. Wind energy represents another renewable energy technology that has experienced growth in recent years

throughout the Midwest. However, the unique topography and geology of Rock Island County is currently a limiting factor in the development of utility-scale wind installations in this area.

Wooded ravines, a major landform in the county, are not suitable for sites for large wind turbine placement and are also likely to house bat populations that would be sensitive to impacts from wind installations on adjacent land areas.¹⁵ Likewise, both limestone and shale bedrock are prone to minor shifts and settlements that can lead to turbines tilting beyond mechanical tolerance levels,¹⁶ making many of the flatter areas of the county also poor candidate locations for large wind installations.

Small-scale wind equipment, meanwhile, is limited by the technology itself, which has not yet achieved the economies of scale comparable to solar panels for individual homeowners. It is reasonable to assume at this time that wind energy will continue to see limited development in Rock Island County for the foreseeable future, though future technological advances should be periodically reviewed for unforeseen opportunities. When such opportunities arise, current best practices for siting, infrastructure, and decommissioning standards should likewise be reviewed.

¹⁴ National Renewable Energy Lab, "Top Five Large Scale Solar Myths,"

https://www.nrel.gov/tech_deployment/state_local_governments/blog/top-five-large-scale-solar-myths

¹⁵ National Research Council, Committee on Environmental Impacts of Wind Energy Projects, *Environmental Impacts of Wind-Energy Projects*. <http://www.nap.edu/catalog/11935.html>

¹⁶ American Wind Energy Association, *Recommended Practice for Compliance of Large Land-based Wind Turbine Support Structures*. https://www.asce.org/uploadedFiles/Technical_Areas/Wind_Engineering/Content_Pieces/ASCE-AWEA-RP2011-Public-Release.pdf

Possible action strategies resulting from this section:

1. Explore the possibility of redeveloping the Quad Cities Generating Station as a solar farm following the closure of the nuclear facility
2. Partner with Farm Bureau, the University of Illinois Extension, and USDA to help provide information to area farmers as to the benefits of solar installations as an income stream
3. Encourage the development of both small-scale and large-scale solar energy production in Rock Island County
4. Develop installation standards for large scale solar development that include setbacks, fencing, stormwater management, and decommissioning standards and, where appropriate, encourage the use of pollinator habitat as ground cover
5. Create an energy overlay zone for the portion of northwest Rock Island County most suitable for utility-scale solar development

Chapter 7 Transportation

Existing System

Transportation facilities in Rock Island County are diverse in nature, making the county accessible by land, air, and river. Alternative modes of transportation are coming to represent an increasingly important component of the nation's and Rock Island County's transportation systems. Rock Island County boasts high-quality access to railroads, interstates, federal and state highways, river navigation, and recreational trails of state-wide and national significance.

Highways/Roads

Highway routes provide easy access to Rock Island County from all directions. The county is served by three U.S. Highway routes, Routes 150, 67, and 6. Interstates 80 and 280 encircle the urban Quad Cities and provide local access at five interchanges. Interstate 74 bisects the Illinois Quad Cities in Moline before crossing the Mississippi River into Bettendorf, Iowa. Interstate 88 provides an alternate, partially-tolled route east to Chicago.

Five highways designated as part of the Illinois State Highway System traverse Rock Island County. They are Routes 5, 84, 92, 94, and 192. The county roads supplement the existing state and federal routes by connecting with major highways and communities in the area for shopping and shipping of farm products to markets. At

the time of the previous comprehensive plan in 1998, the total number of vehicles registered in Rock Island County, not including farm machinery, was approximately 143,821. In 2019, there were 138,177 vehicles registered in the county as the county's population also decreased by approximately 3,000 residents over that period.

The interstate highway routes through Rock Island County have the highest Average Annual Daily Traffic, or AADT, as seen in Map 7.1. AADT measures the total annual traffic at a given point of roadway and divides it by 365 days to depict an average daily traffic count. The short portion of Interstate 80 in Rock Island County carried approximately 26,600 vehicles per day according to the Illinois Department of Transportation (2018), nearly identical to the 26,500 carried by Interstate 280 near Milan. Interstate 74 saw the highest AADT in the county; it carried nearly 70,000 vehicles at the Mississippi River. The AADT of trucks along Class I and II truck routes can be seen in Map 7.2. Heavy trucks put more wear and tear on roadways, resulting in higher maintenance costs.

While all state and federal roads are comprised of a bituminous surface, there are many miles of rural gravel roads in Rock Island County, see Map 7.3. Gravel roads generally carry very low volumes of traffic and support surrounding agricultural uses or provide access to a small number of residences. Gravel road maintenance

involves annual upkeep to re-grade, add rock, and in some locations apply dust control measures. While the county is not responsible for any gravel roads, townships in the county must maintain them to ensure proper function.

An increase in the number of highway crashes in recent years has led to increased efforts to promote safety on the state's highways in coordination with federal guidelines for state departments of transportation. Over the ten-year period between 2009 and 2018, the number of crashes steadily rose from 3,088 to 3,536 (see Figure 7.1). Meanwhile, the annual number of fatalities has increased, while the number of Type A Injuries has remained

steady (Figure 7.2). Type A Injuries are incapacitating injuries that "prevent the person from walking, driving, or normally continuing the activities he/she was capable of performing before the injury occurred," according to the Illinois Traffic Crash Report Instruction Manual (2013). Map 7.4 shows the locations and types of crashes in unincorporated parts of the county. Between 2009 and 2018, 79 roadway fatalities occurred in Rock Island County. The State of Illinois has developed performance measures to monitor fatal and serious injury crashes. Reducing crashes in Rock Island County will help contribute to the zero fatalities goal of the state and improve overall safety for travelers in Rock Island County.

Figure 7.1 – Crashes in Rock Island County

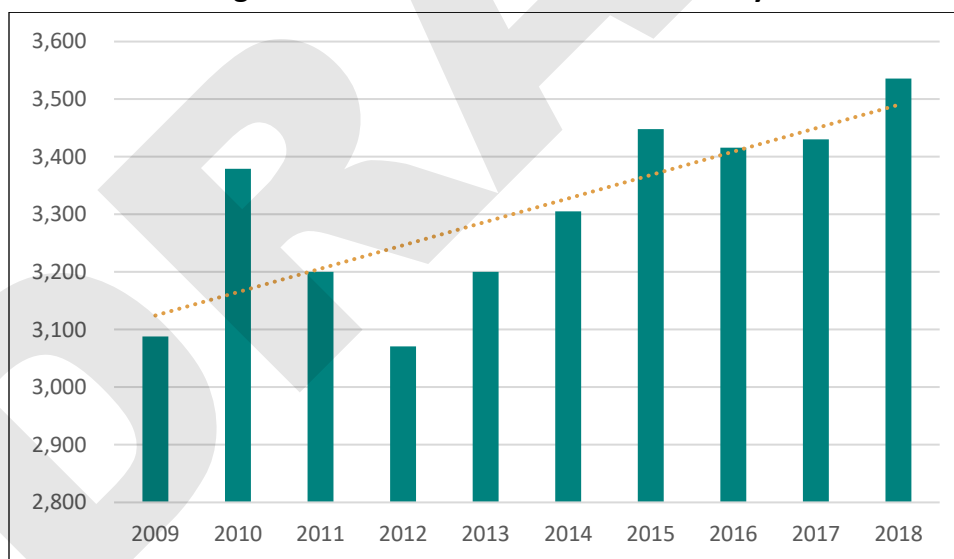
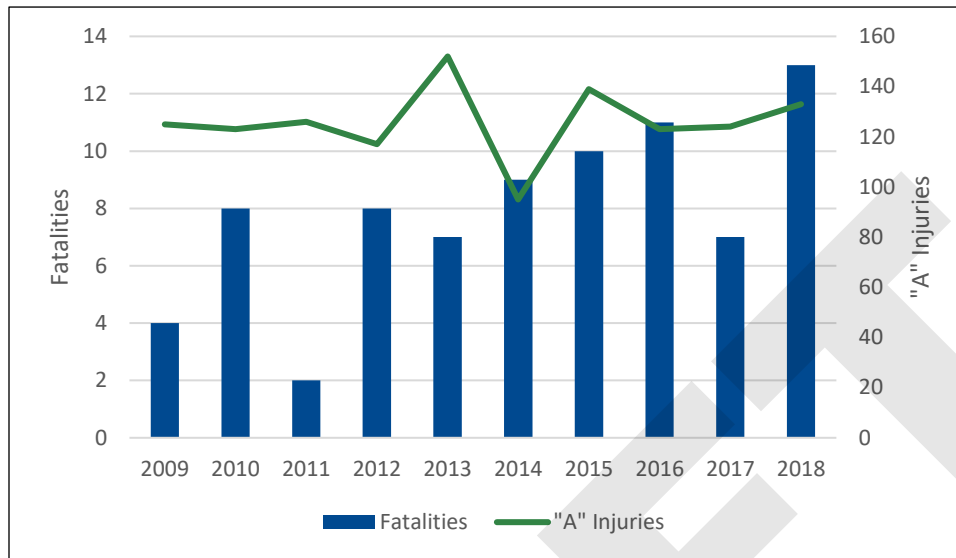


Figure 7.2 – Injuries and Fatalities in Rock Island County



Transit

Most communities in the urban area of Rock Island County are served by the Rock Island County Metropolitan Mass Transit District (MetroLINK) that provides public transit services in the form of fixed-route bus service within its geographic district and seasonal water taxi service on the Mississippi River. Service is available seven days per week. Riders are able to travel to destinations outside of Rock Island County at transfer points in Rock Island and Moline. MetroLINK also serves the City of Colona in Henry County. Over 3 million trips are taken annually on MetroLINK, representing over 10 million passenger miles. See Map 7.5 for locations of MetroLINK routes.

RIM Rural Transit is a public transportation system operated by Project NOW to serve rural Rock Island and Mercer Counties. RIM began providing service in March 2010. Operations are managed through Project NOW's Rock Island County Senior Center and are an expansion of the agency's

previously existing senior transportation system. Demand for service to medical facilities in extended service areas has increased in recent years. RIM ridership in FY2019 was 10,065, with 6,938 from Rock Island County.

Rail

Freight rail traffic represents an important segment of the transportation system in Rock Island County. Currently, BNSF Railway and Iowa Interstate Railroad (IAIS) operate lines in and through Rock Island County, providing the ability to ship regionally and throughout the country and internationally through the nation's major ports. There are a total of 84 miles of railway and 96 at-grade railroad crossings in the county.

Passenger rail is a growing segment of the American transportation system. Nationwide, Amtrak has seen a 71 percent increase in ridership between FY2000 and FY2019, an increase of 9.5 million

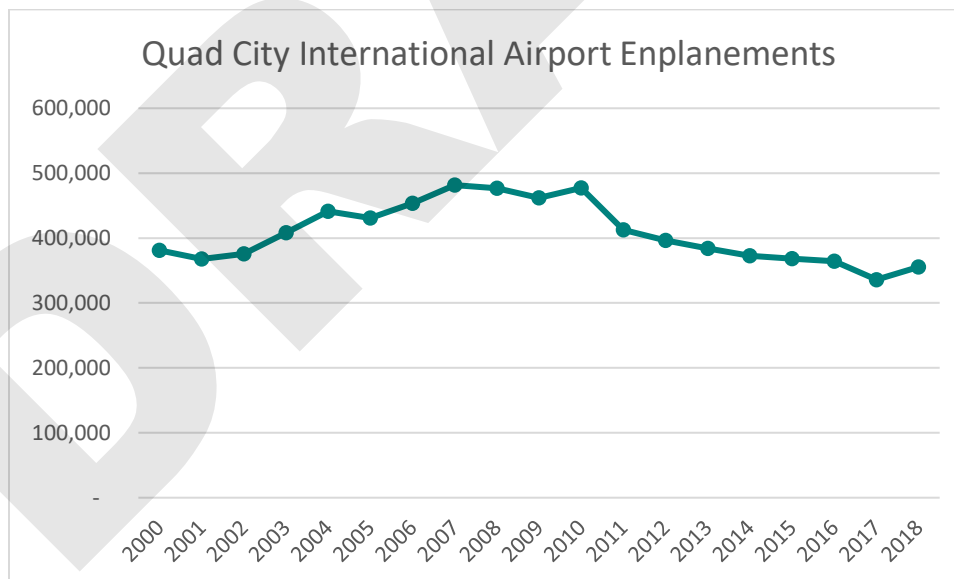
passengers annually. In the State of Illinois alone, according to the Department of Transportation, total Amtrak ridership increased 60 percent between FY2007 and FY2019, an increase of over 800,000 passengers annually. Rock Island County will be able to capitalize on this trend as well. Moline will be regaining passenger rail service to Chicago in the coming years as plans to complete a connection in Wyand, Illinois will connect the BNSF to the Iowa Interstate Railroad. An existing rail station is completed in Moline and awaiting passenger service to be established. At this time, the closest passenger rail stations are located in Kewanee, Galesburg, and Princeton, Illinois. From these stations, long distance service is available to the west coast and the Southwest via Amtrak's California Zephyr and Southwest Chief

services as well as to Chicago. See Map 7.6 for the locations of Rock Island County's future Amtrak station and the railroads that run through the county.

Air

The Quad City International Airport located in Moline offers four passenger carriers, including Allegiant Air, American Eagle, Delta Airlines, and United Airlines. It handled approximately 355,241 enplanements in 2018, an increase of 5.75% over 2017 (see Figure 7.3). The four runways measure approximately 10,000 feet, 7,300 feet, and 5,000 feet in length. The airport provides cargo services at all times of day. Within 60 miles of the airport is Foreign Trade Zone (FTZ) #133.

Figure 7.3 – Quad City International Airport Enplanements



Bicycle/Pedestrian Facilities

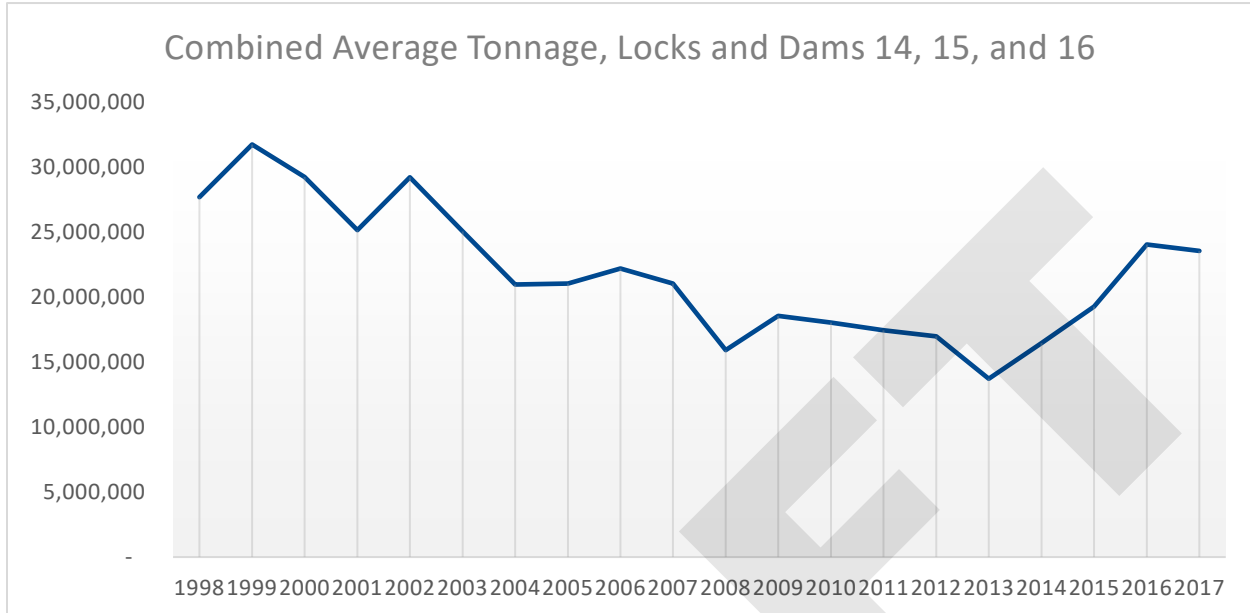
Rock Island County currently has approximately 183 miles of recreational trails, with the majority of that being found in the urban area (see Map 7.5). The longest contiguous linear trail in Rock Island County is the Great River Trail (GRT), which runs from the City of Rock Island approximately 60 miles to Savanna, Illinois. The GRT also shares a designation in locations with the Mississippi River Trail, the American Discovery Trail, and Grand Illinois Trail. The first two of which are national trails, while the latter is a trail of statewide importance. Two major Mississippi River crossings are located in Rock Island, with another being added as part of the I-74 bridge construction project. Bicycle and pedestrian access across the Rock River is available on U.S. 67 and the Veterans Memorial Bridge at Carr's Crossing. Trail counts in Illiniwek Forest Preserve register over 1,000 counts per week during the summer high season, indicating steady demand for such infrastructure as well as its significance as county infrastructure. Hiking and mountain biking trails within Forest Preserve parks provide many miles for residents and visitors to explore nature. Most county trails are included on the website

QCTrails.org, which was developed through a partnership between Bi-State Regional Commission and the Quad City Health Initiative to highlight hiking, walking, bicycling, and water trails in the region.

River Navigation

The Mississippi River has been a conduit and lifeline for shipping goods and facilitating the movement of people for thousands of years. Modern river navigation began in the 1930s with the construction of the Nine-Foot Channel Project. There are three locks and dams located in Rock Island County: Lock and Dam 14 near Hampton, Lock and Dam 15 in Rock Island, and Lock and Dam 16 near Muscatine, Iowa. Water freight links Rock Island County with markets along the rest of the Mississippi River, the Gulf of Mexico, and the Great Lakes. The shipping rates of barge transportation are approximately 7.5 times more economical than shipping by trucks measured by weight, according to the U.S. Army Corps of Engineers. Thus, river navigation is an important component of the freight network for bulk commodities such as grain, crude materials, and chemicals. Figure 7.4 indicates an increase in shipping through the locks and dams located in Rock Island County between 2013 and 2017.

Figure 7.4 – Combined Average Tonnage, Locks and Dams 14, 15, and 16



Source: U.S. Army Corps of Engineers, 2018

Proposed System

Envisioned for Rock Island County is a multimodal transportation system that accommodates growth of industry in particular areas, while first and foremost maintaining the current system's level of service. The residents of Rock Island County require a complete transportation system for the movement of people and goods within and out of the county. The continued industrialization of the agricultural industry will play an important role in the future of the highways and roads throughout the county, as farm implements continue to grow in size and weight, increasing stress on rural roads. This trend is most impactful at the rural northern and southwestern ends of Rock Island County.

The current system serves intercity travel adequately in all directions. The system is anticipated to grow and improve in the near future with the reestablishment of

passenger rail to Moline, opening travel opportunities for current residents and future visitors. The passenger rail line is envisioned to extend west to Iowa City, Des Moines, and Omaha over the long term. The urban portion of Rock Island County falls under the Quad Cities Area planning boundary and is included in the Quad Cities Long Range Transportation Plan. The following goals mirror those for the urban area and apply to Rock Island County:

- Support economic vitality
 - Use transportation project programming to support desired development patterns – fill gaps, connect employment centers, and invest in planned corridors
 - Consider regional travel patterns and commuting in the development of the transportation network to encourage proximity of

- residential areas to jobs in and around the county as a process to support affordable housing and healthy lifestyles
 - Improve multimodal freight terminals to enable competitiveness and address freight reliability and capacity needs for productivity and efficiency
- Increase safety
 - Encourage comprehensive transportation safety solutions through engineering, enforcement, education, and emergency response to reduce traffic fatalities and severe injury crashes, as well as crash frequencies overall
 - Support programs that ensure safe operation of the transportation system for motorized and non-motorized users, including adequate safety data for problem identification and analysis
- Increase security
 - Support transportation system redundancy to provide alternatives, mobility, and connectivity during emergency situations
 - Support programs that ensure secure operation of the transportation system for motorized and non-motorized users, including adequate transportation
- data useful for emergency response and/or evacuations
 - Encourage cooperative communications and monitoring systems to observe and react to changing conditions and transportation system hazards, natural or man-made
- Increase access and mobility options
 - Maintain, improve, and expand river crossing capacity
 - Support implementation of passenger rail service to and from the Quad Cities
 - Design the transportation system to provide convenient access to essential services and alternative transportation options for the movement of goods and people, giving consideration to types of users, surrounding context, and service levels (e.g. Complete Streets)
 - Encourage land use patterns and transportation services that support transportation alternatives (bus, bike, and pedestrian options), and provide choices for mobility and access
 - Promote and enhance facility and service design for people with disabilities, the elderly, and low-income individuals
 - Improve connections to existing modal facilities –

- airports, barge, rail, and motor freight terminals – and remove or reduce impediments to the movement of goods and services
- Protect and enhance the built and natural environments
 - Consider urban design context of the community for culture, history, aesthetics, and the natural environment in development of transportation facilities
 - Develop a balanced multimodal system that enhances the environment and minimizes effects on the quality of the air, land, and water as well as groups protected under Title VI of the 1964 Civil Rights Act for improved quality of life
 - Promote energy conservation and air emission reduction measures to improve air quality and reduce dependence on a single energy source
 - Promote early environmental consultation and coordination with resource agencies on planning transportation facilities to identify and develop potential mitigation strategies as part of project development
- Enhance connectivity and integration between modes
 - Promote interconnections between passenger modes
- and encourage integrated facilities where intracity and intercity transportation facilities link to other modes, such as transit centers, bicycle facilities, sidewalks, or park-and-ride locations
- Consider connectivity of the various transportation modes in the development of freight transportation facilities
- Promote efficient system management and operation through the use of technology and innovative, context-sensitive solutions
- Encourage use of travel demand management techniques, work zone management, incident response, and Intelligent Transportation Systems (ITS) for better transportation system performance
- Work to coordinate transportation systems through management and operations strategies to reduce congestion and enhance mobility, including support of data collection, analysis, and access to traveler information
- Promote area-wide uniformity in traffic regulations, signs, and enforcement
- Promote efficient system management and operations
- Support resilience of the built environment

- Emphasize system preservation
 - Support projects that preserve and improve the condition of the existing transportation system in order to maintain a state of good repair
 - Preserve planned and proposed transportation corridors whenever feasible

Highways/Roads

The vast majority of the highway and road system in Rock Island County has already been built out. There is a need to maintain the existing facilities to an adequate level of service. Feedback from highway and road officials indicates that the level of need to reconstruct and maintain roads outweighs the amount of funding available at the county and state level. Therefore, the prioritization of projects is critical to achieving the best transportation system possible. Criteria to address and prioritize future road improvements may include the following:

- **Accessibility:** Driveway access to public roads should be carefully designed and considered for proximity to intersections and other driveways, for traffic volume, and for safety and conflicts with pedestrians or bicycles. These specifications should be reflected in subdivision ordinances or design specifications.
- **Safety:** Number of crashes, crash severity and crash rates may be used to evaluate need for improvements. Separating heavy-duty truck traffic from primarily

residential traffic may be accomplished using a truck route to further safety concerns.

- **Level of Service:** Traffic volume and volume to capacity on a roadway may be used to evaluate the need for street improvements. Traffic signals or other engineering solutions such as roundabouts may be warranted under certain traffic flow conditions.
- **Surface Condition:** The condition of the pavement is another criterion that can be used to evaluate and prioritize street improvements. Roadway surfaces in poor condition can lead to increased costs for deferred maintenance and decreased safety as a result of vehicular maneuvering for example.

The condition of roads in the county varies from good to poor on state and county-owned roads (Map 7.7). There is an evident need for expanded roadway repair funding. Long-term effects of more fuel efficient vehicles and the collection of fuel taxes will have to be examined and accounted for in future funding cycles. The wise and efficient use of limited funds is paramount to deliver the best system possible. In 2019, the Illinois State Legislature approved increasing the state's gas tax from 19 cents to 38 cents per gallon. The increase will help fund maintenance on the state's aging infrastructure.

Bi-State Regional Commission commissioned a study in 2010 to identify a corridor for a future east-west arterial road in the southern portion of Rock Island County. The East-West Circulation Arterial Corridor Study reviewed four alternatives, proposing an alignment along 120th Avenue

and 127th Avenue from Turkey Hollow Road to County Highway 12 (East 200th Street) in Henry County. The proposed corridor should continue to be included in long range planning documents as an option for providing continuous travel to accommodate future residential, commercial, and light industrial developments, while providing access to major north-south corridors, namely Turkey Hollow Road, U.S. Route 67, U.S. Route 150, and County Highway 12 in Henry County.

Transit

The current transit system in rural Rock Island County is to be maintained at a sufficient level to meet the needs of residents, especially the groups who make up the bulk of RIM's riders, namely older adults. As noted in the Bi-State Regional Commission's Transit Development Plan (TDP), non-emergency medical trips are growing in importance and demand for public transit agencies. As the demographics of Rock Island County continue to transition to an older population, medical trips on public transportation will also continue to grow in importance for its residents. RIM Transit provides the urban and rural interface for rural residents. However, there is limited funding to offer more hours of service and weekend service. This is a gap in mobility for rural residents without access to a vehicle, have a lower income, and/or disabilities.

Bicycle/Pedestrian Facilities

With the reestablishment of passenger rail service coming to Moline, the opportunity exists to market the area to passengers who want utilize the extensive trail network in

and extending from the Quad Cities. The network is easily accessible from the Q Multimodal Station in downtown Moline, providing a viable starting point for both short and long-distance trail users. Currently, Amtrak services from Chicago to all downstate Illinois destinations allow four bicycles per train with advanced reservation required. The extra fee for the service is \$10. Ride Illinois, a statewide nonprofit organization working towards better bicycling conditions, released a Bike on Amtrak Guide in 2013 (updated in 2015) that outlines the logistics of taking one's bike on Amtrak, in addition to outlining some suggested rides and destinations.

The intersection of two cross-country trails, the American Discovery Trail and the Mississippi River Trail, occurs in Rock Island County and provides more marketable opportunities to promote bicycle transportation and tourism. Additionally, the Grand Illinois Trail, a 500-mile loop through northern Illinois, links the Hennepin Canal Trail in Colona to the Great River Trail in East Moline. A gap in this trail of statewide importance will be closed in coming years, connecting the communities of East Moline, Silvis, and Carbon Cliff. More information on bicycle and pedestrian facilities can be found in Chapter 8.

The Rock River Trail runs parallel to the river for 320 miles from Fond du Lac County, Wisconsin to its confluence with the Mississippi at Rock Island. The multi-use corridor is often used for recreational, scenic, and historic interest purposes. Opportunities will exist to connect to the Hennepin Canal Trail heading east through Henry County, expanding the possibilities for bicycle and active recreation and long-

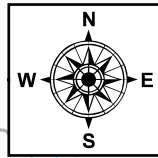
distance bicycle touring through Rock Island County.

River Navigation

Each of the three locks and dams in the Rock Island County were constructed in the 1930s. Their advanced age requires significant maintenance. Inland river navigation is an integral part of the regional and national freight network. Significant investment by the federal and state governments along the river will be needed to ensure regular operation for years to come. Additionally, public-private partnerships may encourage more innovative solutions to the nation's inland maritime navigation system.

Map 7.1 Road Network

Rock Island County Comprehensive Plan



Federal Functional Class

- Interstate
- Freeway and Expressway
- Other Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local

1234 2018 AADT



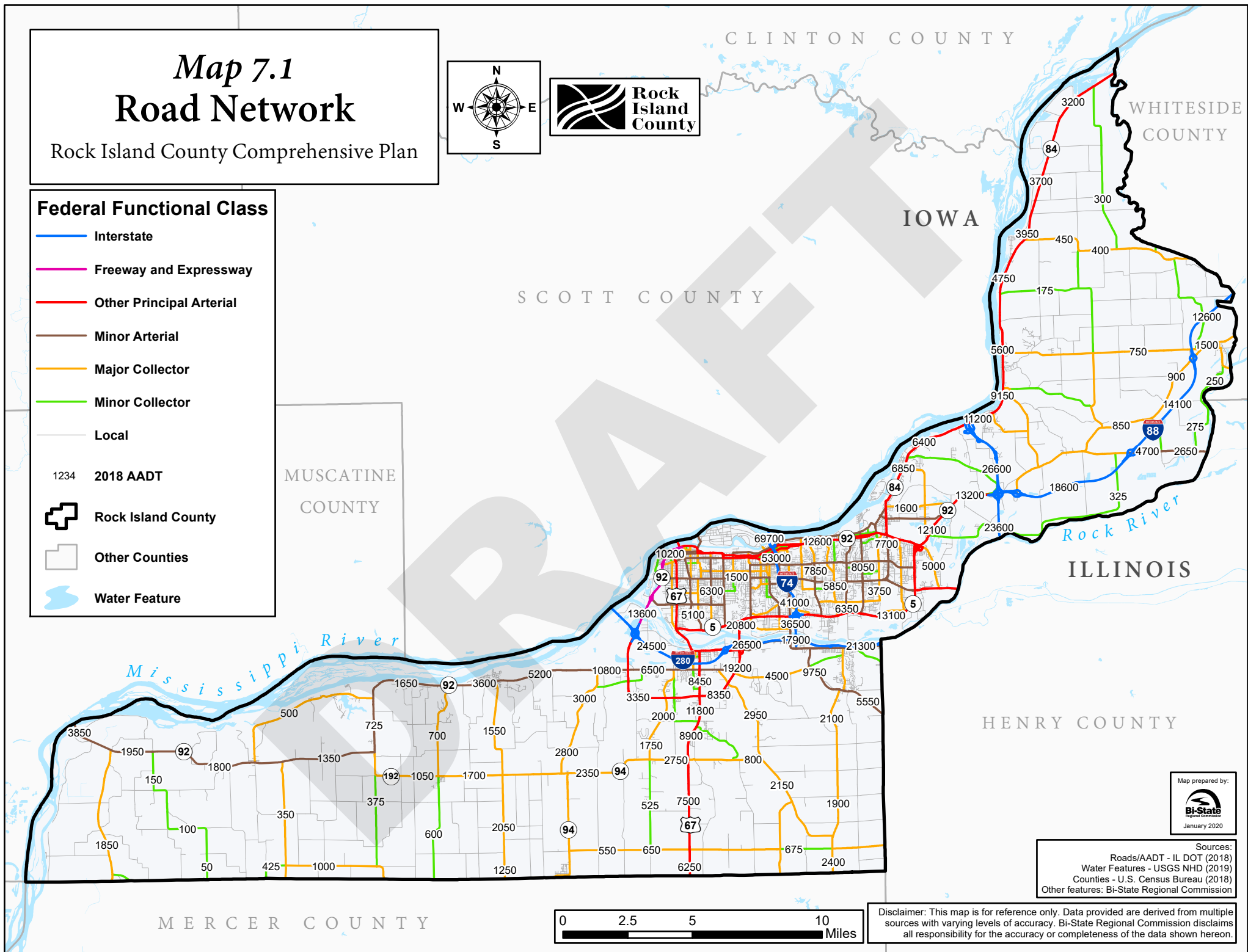
Rock Island County



Other Counties



Water Feature



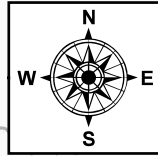
Sources:
Roads/AADT - IL DOT (2018)
Water Features - USGS NHD (2019)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

0 2.5 5 10
Miles

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

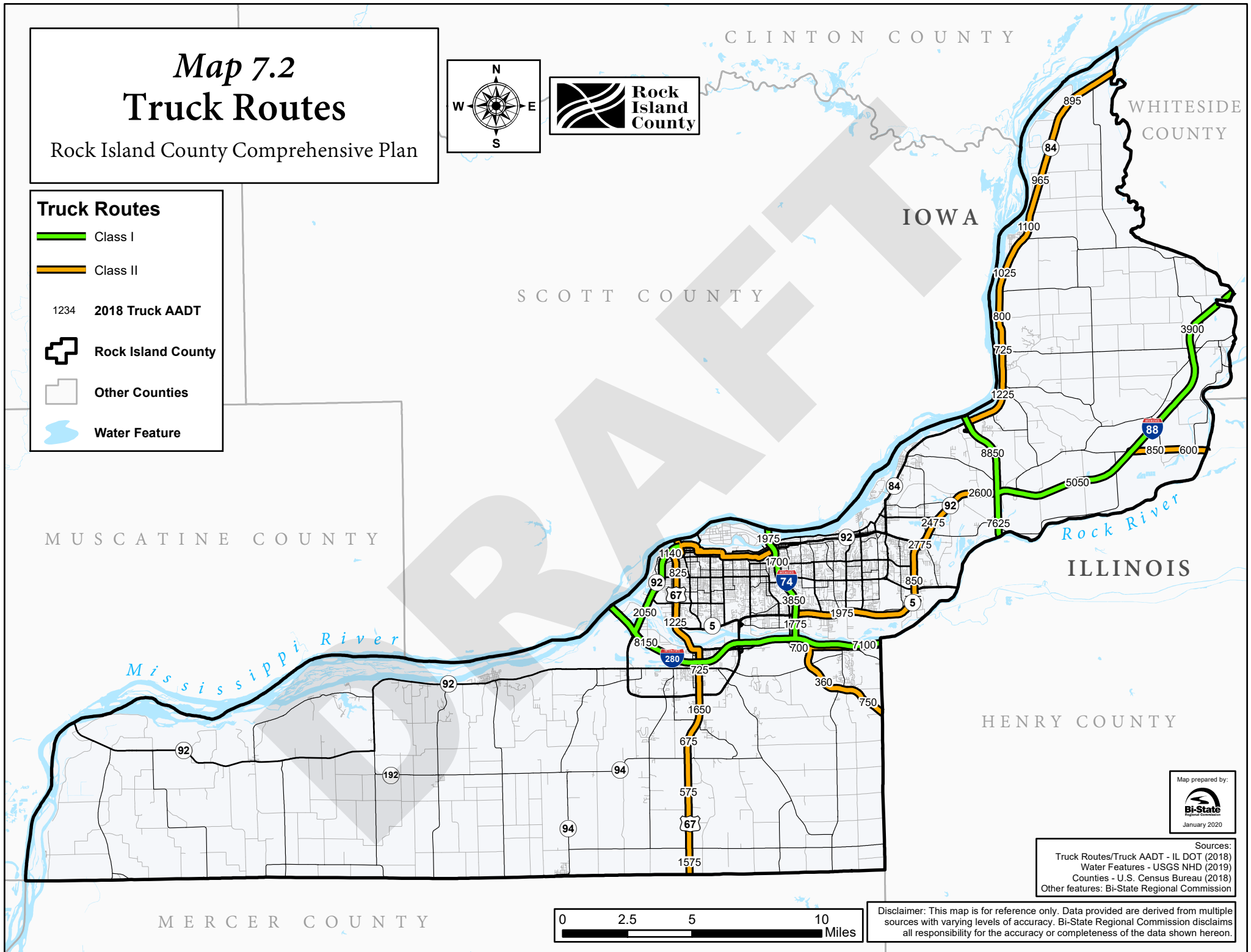
Map 7.2 Truck Routes

Rock Island County Comprehensive Plan



Truck Routes

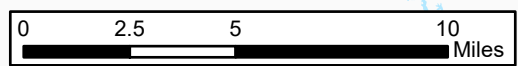
- Class I
- Class II
- 1234 2018 Truck AADT
- Rock Island County
- Other Counties
- Water Feature



Map prepared by:

January 2020

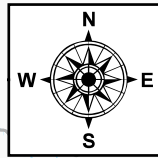
Sources:
Truck Routes/Truck AADT - IL DOT (2018)
Water Features - USGS NHD (2019)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission



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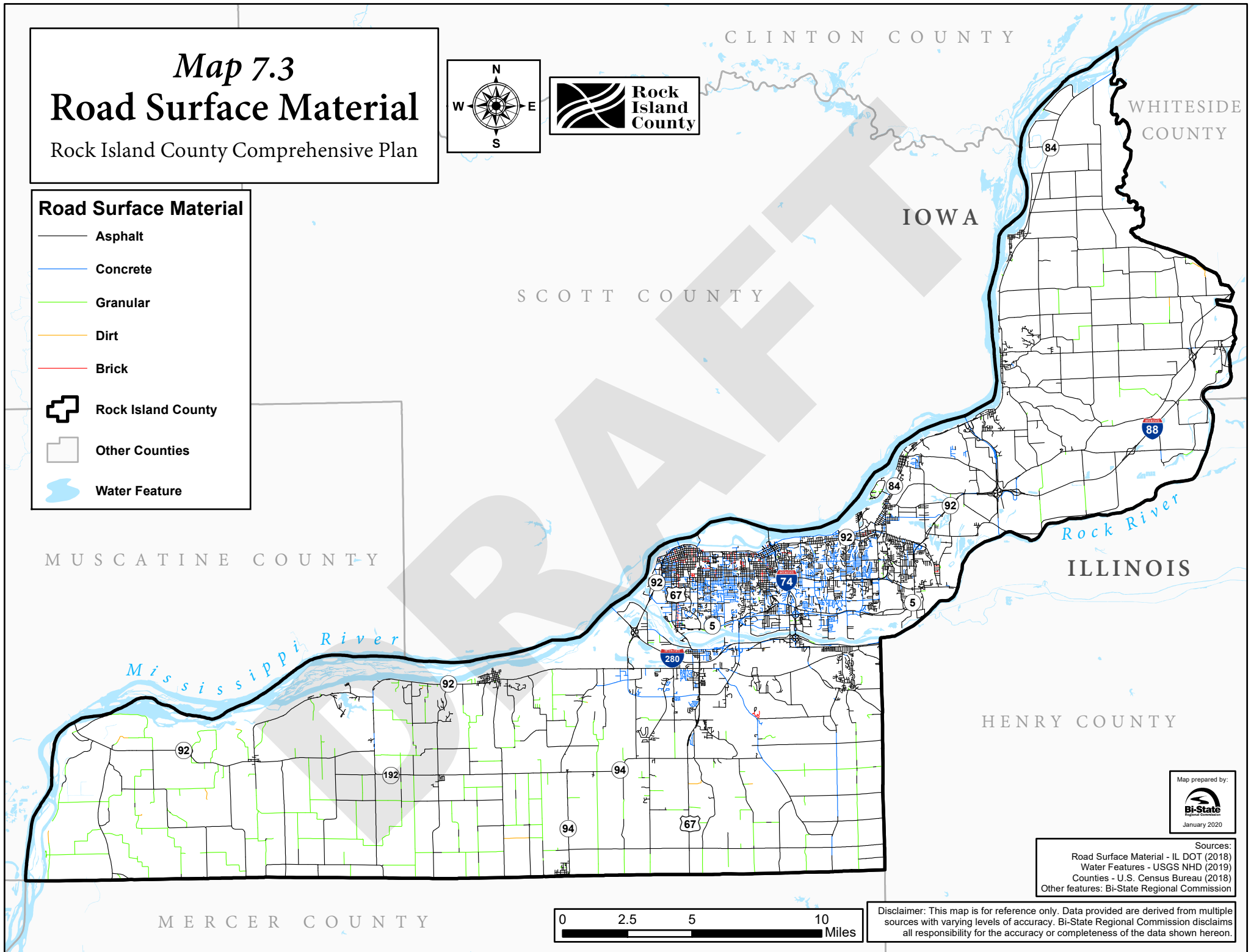
Map 7.3 Road Surface Material

Rock Island County Comprehensive Plan



Road Surface Material

- Asphalt
- Concrete
- Granular
- Dirt
- Brick
- Rock Island County
- Other Counties
- Water Feature



Map prepared by:

January 2020

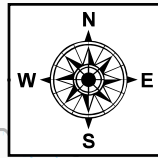
Sources:
Road Surface Material - IL DOT (2018)
Water Features - USGS NHD (2019)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

0 2.5 5 10
Miles

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Map 7.4 Crashes

Rock Island County Comprehensive Plan



Crash Density (2013-2017)

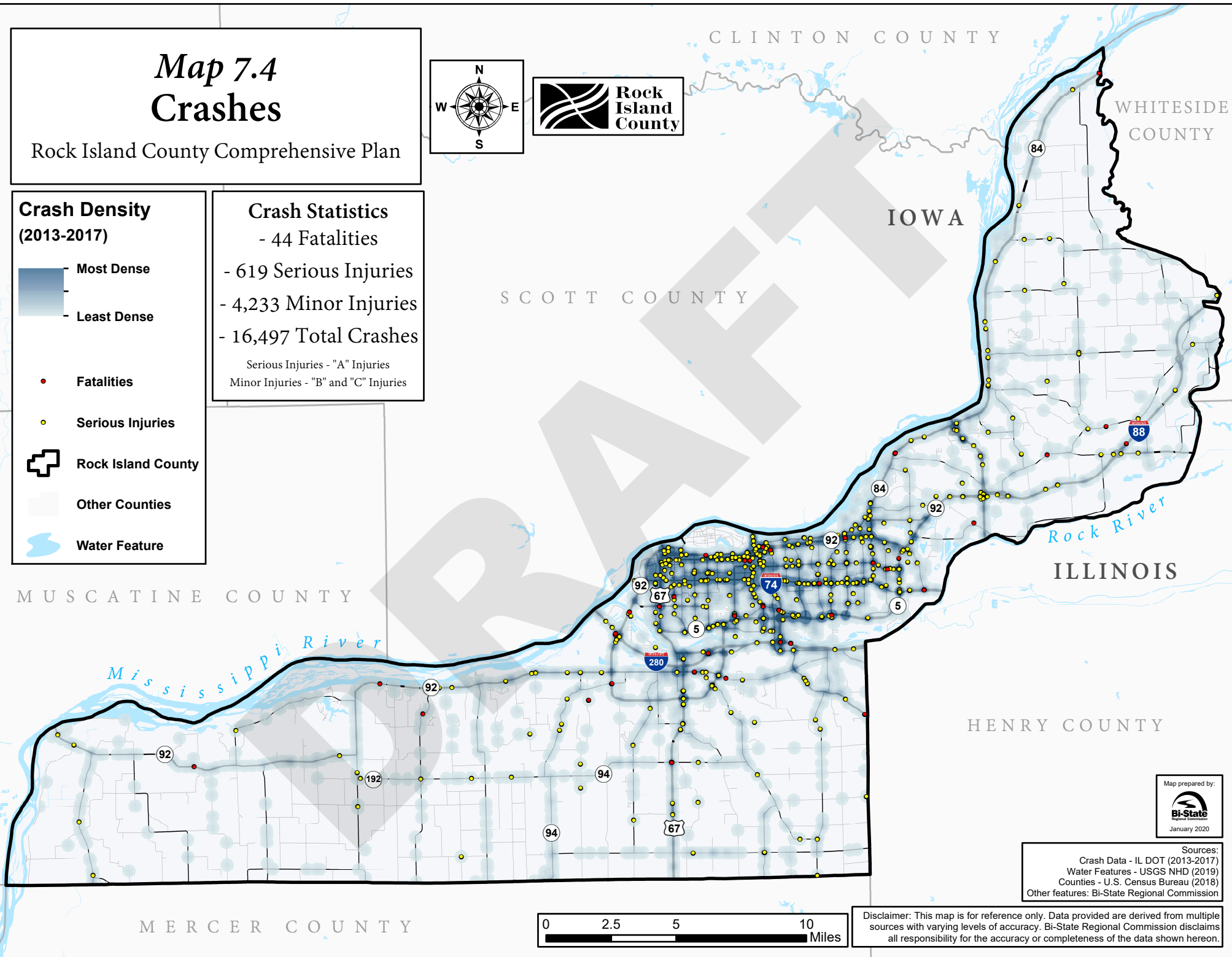


- **Fatalities**
- **Serious Injuries**
- Rock Island County**
- Other Counties**
- Water Feature**

Crash Statistics

- 44 Fatalities
- 619 Serious Injuries
- 4,233 Minor Injuries
- 16,497 Total Crashes

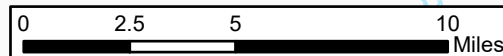
Serious Injuries - "A" Injuries
Minor Injuries - "B" and "C" Injuries



Map prepared by:

January 2020

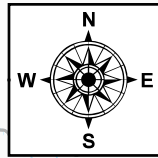
Sources:
Crash Data - IL DOT (2013-2017)
Water Features - USGS NHD (2019)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission



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Map 7.5 Intermodal Facilities

Rock Island County Comprehensive Plan



CLINTON COUNTY

WHITESIDE COUNTY

IOWA

SCOTT COUNTY

MUSCATINE COUNTY

ILLINOIS

HENRY COUNTY

MERCER COUNTY

- Lock and Dam
- Commercial Dock
- Transit Routes
- Trails
- Rock Island County
- Other Counties
- Water Feature

Mississippi River

Rock River

0 2.5 5 10
Miles

Map prepared by:

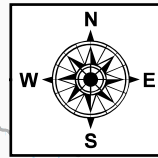
January 2020

Sources:
Locks, Dams, and Docks - USACE (2018)
Water Features - USGS NHD (2019)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Map 7.6 Rail Network

Rock Island County Comprehensive Plan



**Proposed Passenger
Rail Station**



Railroad



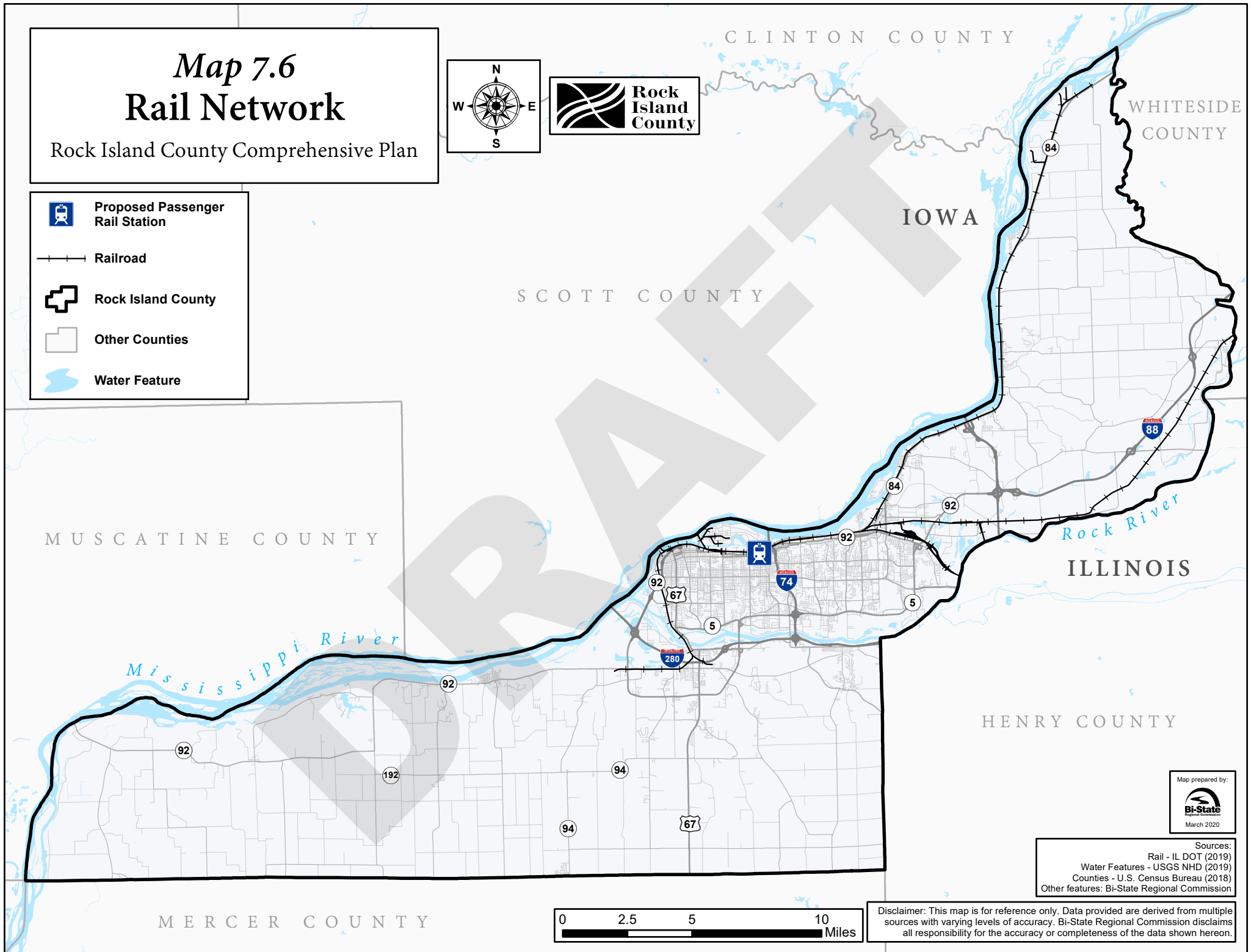
Rock Island County



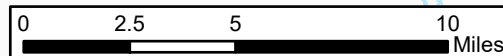
Other Counties



Water Feature



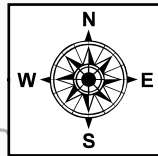
Sources:
 Rail - IL DOT (2019)
 Water Features - USGS NHD (2019)
 Counties - U.S. Census Bureau (2018)
 Other features: Bi-State Regional Commission



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Map 7.7 Pavement Conditions

Rock Island County Comprehensive Plan



Pavement Conditions Condition Rating System (CRS)

- 1.0 - 4.5 (Poor/Very Poor)
- 4.6 - 6.0 (Fair)
- 6.1 - 9.0 (Excellent/Good)



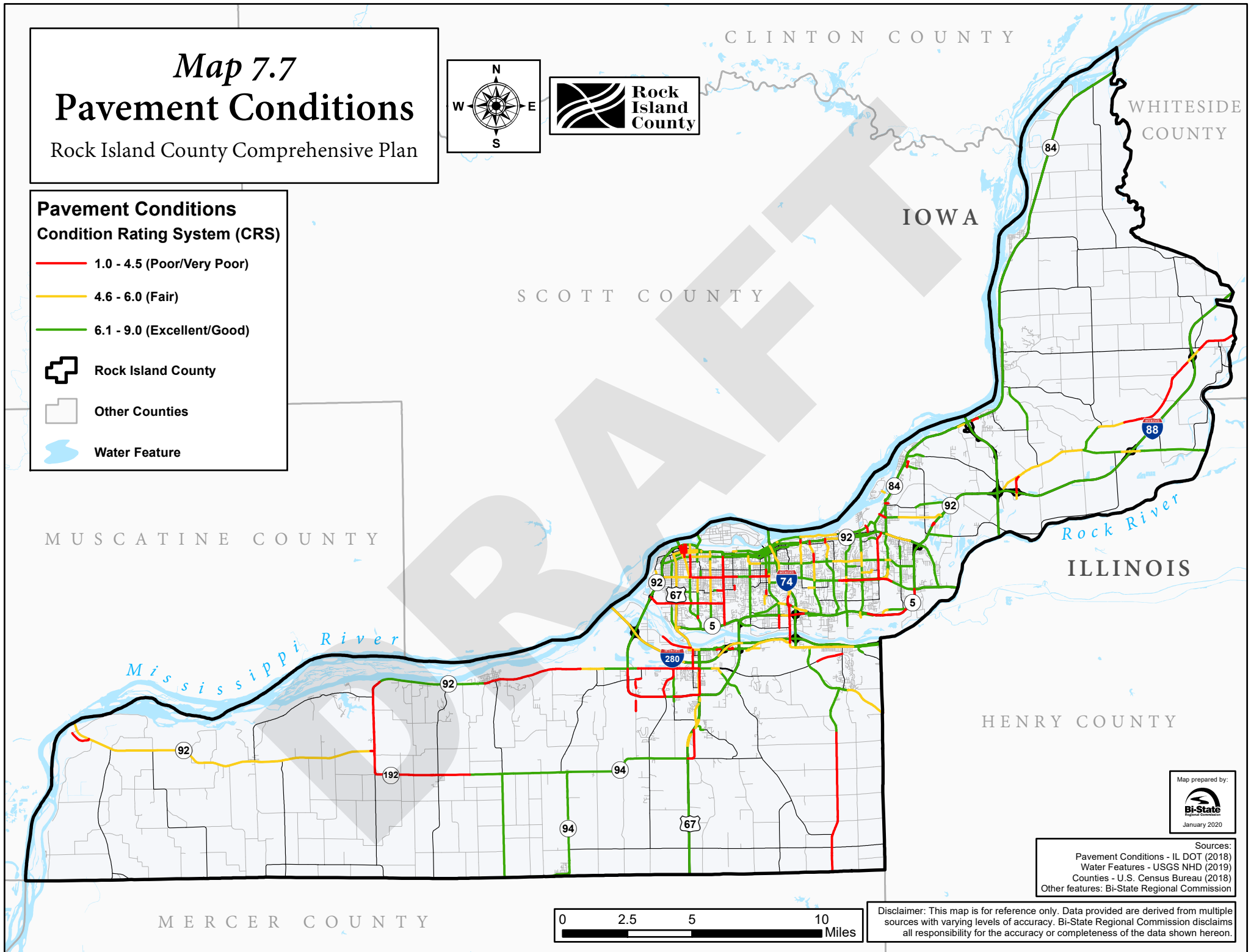
Rock Island County



Other Counties



Water Feature



Map prepared by:

January 2020

Sources:
Pavement Conditions - IL DOT (2018)
Water Features - USGS NHD (2019)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

0 2.5 5 10
Miles

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Chapter 8 Recreation

Rock Island County is home to numerous high-quality recreational amenities. Both natural and man-made recreation areas draw visitors from around the region. The benefits of recreation extend to the users, the natural environment, businesses that serve visitors, and the county itself in a number of ways. Recreation will continue to play an important role in the county's development, drawing new visitors and residents to the area who wish to take advantage of the county's amenities.

The Rock Island County Forest Preserve District maintains 2,529 acres of preserve areas in the county. The district's mission is to "maintain and acquire lands and facilities in Rock Island County with the intent to restore, conserve, and protect the waters, forests, and prairies for the purpose of conservation, education, and recreation for its residents with fiscal responsibility." The RICFPD is governed by the Forest Preserve Commission, whose commissioners are elected from the Rock Island County Board.

Rock Island County and the RICFPD have undergone numerous planning processes in recent years to better prepare for the future. This includes both wide reaching, long-range plans and detailed, small-scale site plans. Recreational resources receive ongoing attention from county leaders in the process. Two recent plans have highlighted the importance of county recreation amenities, and inventoried existing facilities. The plans offered varying degrees of specific goals and objectives for

parks and park amenities. The two plans are the *Rock Island County Forest Preserve District Park Plan* (2018) and the *Rock Island County Greenways Plan Update* (2018). More detailed information on the parks, forest preserves, recreation, and conservation within the county can be found in these plans.

In support of these two plans, a comprehensive Public Perception Research Report was conducted by MindFire Communications in 2017 "to better understand the awareness, perceptions, behaviors and needs of Rock Island County residents related to the [RICFPD's] parks and preserves." The top priorities of Rock Island County residents were conservation, recreation, and education. And generally, residents held positive perceptions of the value of the RICFPD's properties. The report indicated that 65% of survey respondents thought the amount of RICFPD property should be increased. Of those who felt that more property was needed or warranted, 38% wanted more trails for hiking, running, biking, etc. Among RICFPD properties, respondents indicated the most familiarity with Niabi Zoo, followed by Loud Thunder Forest Preserve, Illiniwek Forest Preserve, Indian Bluff Golf Course & Forest Preserve, Dorrance Park, and the Martin Conservation Area.

Recreation in Rock Island County extends to hunting and fishing among the county's natural areas described in Chapter 6. Between 2009 and 2019 according to the

Illinois Department of Natural Resources, the number of hunting licenses¹⁷ in Rock Island County decreased from 3,251 to 2,911 (see Figure 8.1). This trend matches data found in the 2016 *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* by the U.S. Fish and Wildlife Service. The survey found a 16% decrease

in the number of hunters, from 13.7 million to 11.5 million, between 2011 and 2016. Fishing, on the other hand, saw an 8% increase in participation rates between 2011 and 2016, increasing to 36 million anglers nationwide. Locally, fishing licenses have increased from 5,426 in 2009 to 6,914 in 2019.

Figure 8.1 – Hunting Licenses in Rock Island County

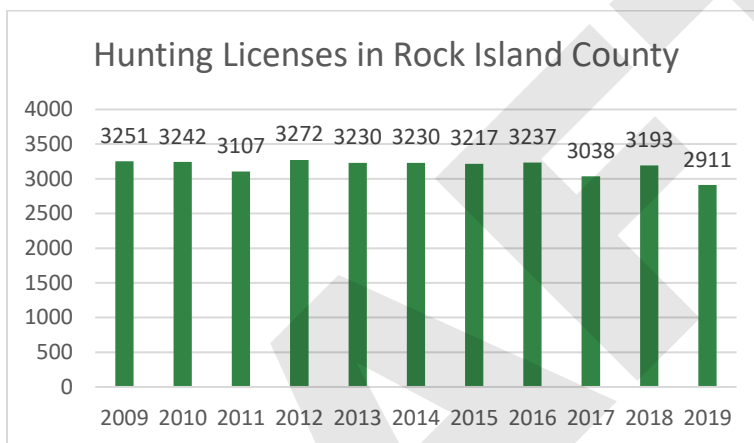
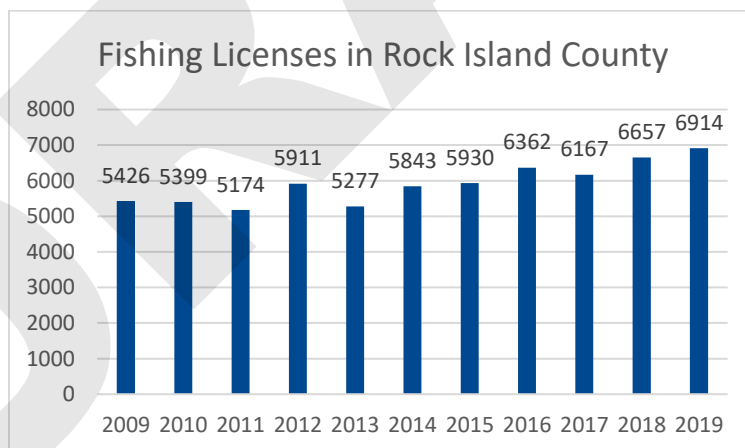


Figure 8.2 – Fishing Licenses in Rock Island County



¹⁷ Data include the following licenses: Residential Hunting; Residential Veteran Hunting; Hunting Apprentice; Youth Hunting License; Senior Hunting; Super Senior Hunting; Sportsman Combo Hunting &

Fishing; Veteran Sportsman Combo Hunting & Fishing; Senior Sportsman Combo Hunting & Fishing; Super Senior Sportsman Combo Hunting & Fishing; Lifetime Hunting; Lifetime Sportsman.

The local effects of the evolving participation rates among hunters and anglers reaches to multiple areas of focus in this plan. The natural resources in the county, for instance, may provide an opportunity to promote fishing on and along area rivers such as the Rock and Mississippi. The economic effects of anglers purchasing equipment, for example, helps local retailers. The 2016 *National Survey* found that spending on fishing equipment increased 27% between 2011 and 2016. In addition, ancillary services, such as lodging and food establishments, can also benefit from out-of-town visitors, boosting the local economy. According to the 2016 and 2017 Consumer Expenditure Surveys by the Bureau of Labor Statistics, Rock Island County residents annually spend approximately \$7.5 million on recreational vehicles and fees, and another \$9.7 million on sports, recreation, and exercise equipment, which includes hunting and fishing equipment.

Social Benefits

As a nation, Americans are growing increasingly aware of the benefits that can be gained through outdoor recreation, exercise, and leisure activities. Public interest in recreational facilities, outdoor leisure activities, recreational tourism, and a variety of physical fitness opportunities is evident in Rock Island County and can be sustained with adequate and diverse facilities suited for such activities.

“Strong evidence shows that when people have access to parks, they exercise more. Regular physical activity has been shown to increase health and reduce the risk of a wide

range of diseases, including heart disease, hypertension, colon cancer, and diabetes. Physical activity also relieves symptoms of depression and anxiety, improves mood, and enhances psychological well-being. Beyond the benefits of exercise, a growing body of research shows that contact with the natural world improves physical and psychological health.” (Trust for Public Land, “The Benefits of Parks,” 2006)

According to the Centers for Disease Control and Prevention, in 2017-2018, approximately 42.4% of American adults were obese. In Rock Island County, according to the Robert Wood Johnson Foundation’s County Health Rankings, 29% of adults were obese in 2015. Public Health officials are alarmed because being overweight is tied to many serious diseases and conditions such as those listed above. If trends continue, one-third of children born in 2000 are expected to become diabetic. All of these issues are closely tied to one’s quality of life. It is important that the residents of Rock Island County have access to the necessary facilities to support the endeavors of individuals who are striving for continuous good health and well-being.

According to the National Recreation and Park Association:

- People with access to recreational facilities are two times more likely to get the recommended level of physical activity than those without access.

- People living in areas without sufficient public outdoor recreation facilities are more likely to be overweight.
- People with the best access to a variety of built and natural facilities are 43% more likely to exercise 30 minutes most days of the week than those with poor access.
- Older people who bicycle, jog, or walk in parks are significantly healthier than those who don't, and report feeling "renewed" after using the park, with greater frequency of use linked to better health. These active users also report fewer physician visits.
- The closer people live to a bikeway, the more likely they are to use it.
- Older adults living near safe walking and bicycle paths, parks, recreation centers, and gyms are more likely to get enough activity.

Economic Benefits

Economic benefit can be derived through outdoor recreational facilities in a variety of ways. According to the 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation¹⁸, over \$2.5 billion were spent on hunting and fishing-related activities in 2011 in the State of Illinois. This survey provides insight into the importance of forest-based recreation and tourism to the Illinois economy and therefore in Rock Island County's economy as well, more specifically in parks such as Loud Thunder Forest Preserve, Illiniwek Forest Preserve, Black Hawk State Historic Site, and more.

¹⁸ U.S. Department of the Interior, U.S. Fish and Wildlife Service, and U.S. Department of Commerce,

The National Survey was updated in 2016, but did not include state-level data. In 2011, 1.3 million individuals at least 16 years old participated in wildlife-watching activities in Illinois, which include observing, feeding, and photographing wildlife. It is clear that Rock Island County's recreational facilities must continue to be maintained, upgraded, and expanded when needed to meet the demands of residents and visitors and to continue to capture its share of the dollars spent on recreation and tourism that will be filtered through the local community.

The county also gains economic benefits from recreational facilities by their ability to attract and retain employees and members of the retired community. The availability of park and recreation facilities is an important quality-of-life factor for corporations choosing where to locate facilities and for well-educated individuals choosing a place to live. "The Benefits of Parks" by the Trust for Public Land states that numerous studies have shown that parks and open space increase the value of neighboring residential property. Growing evidence points to a similar benefits on commercial property value.

County Recreation Facilities

The Rock Island County Forest Preserve District (RICFPD) operates, manages, and maintains six facilities in addition to the Mississippi River Trail/Grand Illinois Trail in the northern portions of the county. The six facilities are Dorrance Park, Illiniwek Forest Preserve, Indian Bluff Golf Course, Loud Thunder Forest Preserve, Marin

U.S. Census Bureau. 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

Conservation Area, and Niabi Zoo. Most of the parks were acquired by the district in the mid-1940s, with Niabi Zoo being acquired in 1963 and the Martin Conservation Area in 1994. The properties owned and maintained by the RICFPD are

shown in Table 8.1. Detailed descriptions, developmental histories, goals and objectives for each property are provided in the *Rock Island County Forest Preserve District Park Plan* (2018).

Table 8.1 – Rock Island County Forest Preserve District Properties

Name	Year Acquired	Size	Activities
Dorrance Park	1945	80 acres	Baseball/Softball, wildlife viewing, hiking, picnics
Illiniwek Forest Preserve	1944	174 acres	Camping, boat launch, hiking, mountain biking, sledding
Indian Bluff Golf Course	1945	200 acres	Golf, picnic rentals
Loud Thunder Forest Preserve	1944	1,482 acres	Fishing, boat launch & rentals, hiking, equestrian trails, camping
Marin Conservation Area	1994	234 acres	Archaeological protection, ecological preserve
Niabi Zoo	1963	238 acres	Zoological exhibitions
Mississippi River Trail/ Grand Illinois Trail/ Great River Trail	1999-2005	Approx. 7.5 miles	Walking, hiking, bicycling

There are numerous regionally significant parks and recreation opportunities in the county operated or maintained by other entities than the RICFPD. Snowstar Winter Sports Park is privately owned and operated near Andalusia. The park offers opportunities for skiing, snowboarding, snow tubing, and zip lining. The 28-acre park utilizes natural ravine systems to offer the relief change required of downhill sports and activities.

The Hennepin Canal is a historic waterway listed on the National Register of Historic Places. The canal's western terminus is near where the Rock River flows into the Mississippi River, and the canal is used by many residents and visitors. Activities such as wildlife viewing, canoeing, kayaking, and

fishing are all common sights near the canal. Likewise, the Hennepin Canal Trail runs adjacent to the canal, often on the old towpath, for much of its length in Rock Island County, offering significant stretches of unencumbered active recreation opportunities in addition to more passive endeavors.

The development of the Great River Trail, also known as the Mississippi River Trail and the Grand Illinois Trail in locations, represents a significant accomplishment of regionalism in planning and cooperation. The county and cities up and down the Illinois side of the Mississippi River between Savanna and Rock Island partnered to develop the 60-mile trail. Each individual community is responsible for its section of

maintenance. Likewise, the Rock Island County Forest Preserve maintains approximately 7.5 miles of trail in unincorporated Rock Island County. Continued maintenance and reconstruction of the trail will require significant levels of investment in coming years to maintain an adequate level of usability for users of the trail. State and federal resources may be able to offset a portion of the costs.

Greenways

A greenway is a corridor of open space connecting natural areas, cultural and historic sites, parks, neighborhoods and communities. They can be either active greenways, providing for human use akin to linear parks, or passive greenways that preserve and protect natural resources and the environment. The benefits of these natural corridors range from active recreation to wildlife habitat, wetland preservation and erosion control.

Among the regional greenways proposed for Rock Island County in the Rock Island County Greenway Plan Update (2018), the Rock River corridor has been dedicated as a Scenic and Historic Route and a National Water Trail. Plans include further designating a bike route from the headwaters in Fond du Lac County, Wisconsin to the mouth of the Rock River near Rock Island. Other regional greenways proposed include the Copperas Creek Watershed, which was awarded grant

funding for water quality improvements by the U.S. Environmental Protection Agency (EPA) in 2016, Mill Creek in Milan, and Lake George in Loud Thunder Forest Preserve, which was found to be an “impaired stream” by the U.S. EPA.

Overall, the plan proposes 33 passive and active greenway corridors. Approximately 204.5 miles were identified to offer the diverse benefits noted above with about 91 miles being designated as potential active greenways and 113 miles of passive open space. The benefits of improving the quality of regional greenways extend to ecology and recreation especially. Conservation and rehabilitation of the county’s streams and watersheds have shown wide-ranging benefits to residents and the natural environment within and downstream of the county.

The Copperas Creek Watershed project led by the Rock Island County Soil and Water Conservation District resulted in an annual reduction of 1,102 pounds of phosphorus runoff, 2,204 pounds of nitrogen runoff, and 1,102 tons of sediment runoff across 17 projects along the creek corridor. Improved habitat and water quality as a result of the project along the creek will increase higher quality environments for the flora and fauna of the area, along with people who wish to interact with them through wildlife viewing, fishing, kayaking, or other recreational means.

Chapter 9 County Facilities and Services

This chapter contains information on Rock Island County's water supply systems, sanitary sewer and wastewater treatment systems, gas and electric utilities, communications, public safety and emergency services, health and human services, and planning and development.

Water Supply Systems

Most cities and villages in Rock Island County have municipal water supplies. The sources for these systems are either the Mississippi River or groundwater wells. The Villages of Hampton, Hillsdale, and Oak Grove do not have municipal water supplies, though Hampton receives its water from the City of East Moline. Private wells serve the residents in the rest of rural Rock Island County. See Chapter 2 and Maps 2.3 and 2.4 for information on shallow aquifers that may be sensitive to contamination in Rock Island County.

Table 9.1 – Waterworks Characteristics

Municipality	Source	Self-Supplied Water Use (2012)	Treatment Capacity (GPD)	Average Demand (GDP)	Peak Demand (GDP)	Storage Capacity (Gal)
Andalusia	Groundwater	31,585,212	—	—	—	—
Carbon Cliff	Groundwater	41,386,000	—	—	—	—
Coal Valley	Groundwater	110,516,460	1,116,400	290,000	693,000	700,000
Cordova	Groundwater	N/A	—	—	—	—
East Moline	Mississippi River	1,537,936,000	10,000,000	4,800,000	7,100,000	4,000,000
Edgington Water District	Groundwater	N/A	—	—	—	—
Hampton	—	N/A	—	—	—	—
Hillsdale	—	N/A	—	—	—	—
Milan	Groundwater	137,287,932	2,500,000	500,000	800,000	390,000
Moline	Mississippi River	1,986,475,000	12,000,000	4,500,000	6,500,000	9,050,000
Oak Grove	—	—	—	—	—	—
Port Byron	Groundwater	28,509,200	80,000	80,000	160,000	150,000
Rapids City	Groundwater	—	—	—	—	—
Reynolds	Groundwater	25,358,300	—	—	—	—
Rock Island	Mississippi River	1,907,145,000	12,000,000	5,275,000	9,100,000	10,850,000
Silvis	Groundwater	244,982,000	1,300,000	580,000	900,000	1,100,000

Source: *Illinois State Water Survey, 2012; Individual municipalities, 2020.*

Sanitary Sewer Systems and Waste Water Treatment

Within Rock Island County, the Villages of Andalusia, Coal Valley, Cordova, Hillsdale, Oak Grove, and Reynolds plus unincorporated areas of the county use septic systems for sewage disposal. The rest of the municipalities in the county have sanitary sewage treatment facilities. Table 9.2 details the waste water characteristics for municipalities over 1,000 in population.

Table 9.2 – Waste Water Treatment Characteristics

Municipality	Design Capacity (GPD)	Average Load (GPD)	Peak Load (GPD)	Type of Treatment
East Moline*	11,100,000	5,000,000	27,800,000	Secondary
Milan	3,500,000	1,000,000	2,000,000	Secondary
Moline				
North	22,000,000	3,900,000	5,500,000	Secondary
South	17,000,000	4,300,000	9,000,000	Secondary
Port Byron	300,000	80,000	180,000	Primary
Rock Island				
Mill Street	106,000,000	11,100,000	256,000,000	Secondary
Southwest	1,500,000	480,000	1,300,000	Tertiary

*Serves Silvis, Carbon Cliff, Hampton, Rapids City
Source: Individual municipalities, 2018.

According to the Illinois Department of Public Health, a properly designed, sized, installed, and maintained on-site wastewater treatment system should safely remove and treat wastewater from a home. Untreated or improperly treated wastewater is a disease risk to people through direct contact with sewage or animals (flies, dogs, cats, etc.) that have been in direct contact with sewage. Also, untreated or improperly treated wastewater is a threat to human health and the environment when it pollutes surface water or groundwater.

Poorly functioning on-site wastewater treatment systems also can affect the surrounding environment. On-site systems can release nitrogen from human waste into groundwater and surface water. They also can release phosphorous, found in

some household detergents and water conditioners, as well as human waste, into surface water. These nutrients promote algae and weed growth in lakes and streams. These plants eventually die and settle to the bottom where they decompose. This decomposition process depletes oxygen that fish and other aquatic animals need to survive, which may result in the death of fish and other aquatic organisms. Cleaning products, pharmaceuticals and other chemicals dumped down the household drain also enter the wastewater treatment system. Some of these materials can be dangerous to humans, pets, and wildlife. If allowed to enter a system, many of these chemicals will pass through without degrading and may contaminate groundwater, surface water, and/or soil.

The rural areas of Rock Island County rely on private, on-site septic systems for sewage disposal. The Rock Island County Health Department regulates the design, construction, and installation of all private on-site treatment systems; samples private, on-site treatment systems; and provides assistance with complaints relating to sewage treatment and disposal systems.

Waste Management

Sanitary Landfills

There are two active landfills located in Rock Island County. The Quad Cities Landfill is located in Milan and accepts household municipal waste and demolition debris. Hazardous waste is not accepted. The Upper Rock Island County Landfill is located in East Moline. It accepts municipal solid waste, demolition and construction debris, and asbestos. Non-hazardous special waste, such as industrial process waste and contaminated soils are accepted on a pre-approval basis. Illinois non-hazardous waste landfills are not allowed to accept hazardous waste, whole tires, white goods, or materials containing free liquids.

Waste Collection

There are a number of waste hauling operations in Rock Island County. The cities of Moline and East Moline, as well as the Village of Milan, offer hauling services. In addition, the following private companies are located in Rock Island County or offer hauling services within the county:

- Millennium Waste
- Republic Services of Bettendorf
- Landrum Disposal
- Neville's Trucking Disposal
- Joe Louis Conard

- Redstar Roll-Off
- J & J Roll Off Services
- Rush Roll Off
- Dumpster Rental Quad Cities
- Quad City Dumpster Rental
- Wholesale Dumpster Rental
- 1-800-Got-Junk
- County Waste Systems, Inc.

Recycling

The Rock Island County Waste Management Agency administers four drop-off recycling sites:

- East Moline - 1200 13th Avenue at Engineering & Maintenance Services Facility
- Milan - 451 West 4th Street
- Moline - 3635 4th Avenue at Public Works Department
- Rock Island - 701 2nd Street

The municipalities host the sites, and a cooperative agreement allows all county residents to use the facilities. Republic Services is contracted to collect and process the recyclable materials.

Utilities

Electricity and Natural Gas

Rock Island County is largely served by one utility company: MidAmerican Energy. Ameren Illinois serves a small section of the county near Buffalo Prairie. Propane is used in rural areas of Rock Island County not served by natural gas. The propane is used for heating and drying of farm products. Propane is stored in above or below ground tanks.

Renewables

Increased efficiency and profitability over the past decade have seen renewable energy sources expand throughout the United States. Generation from wind energy, in particular in Illinois, has become an important leg in the electric grid mix, increasing from 2.8 million megawatt hours in 2009 to 13.8 million in 2019, or 7.6% of the state's power generation (U.S. Energy Information Administration, 2020). See Map 9.1 for wind turbine suitability in Rock Island County. Currently there is one non-residential turbine in the county, located at Sherrard High School. Anticipating the growth of wind energy, Rock Island County has developed an ordinance for regulating

the development of wind energy systems. It outlines where small and large scale wind operations can be located and sets requirements for setbacks, spacing, height, clearance, access and other parameters. Solar energy also represents a growing sector, albeit at a smaller scale. Map 2.5 indicates sites in Rock Island County where solar energy is more suitable for development. Notably, portions of the northern reaches of the county north of Interstate 88 are among the sites where both wind and solar energy may be well suited. Development may take advantage of existing power generation infrastructure serving the Exelon Quad Cities Generating Station nuclear plant.

Map 9.1 Wind Turbine Suitability

Rock Island County Comprehensive Plan

Wind Suitability

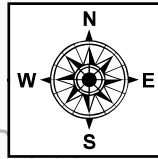


Rock Island County



Other Counties

Wind turbine suitability is based off of a variety of factors and assigned a weight based on its importance for wind turbine suitability. The criteria used were wind speed, slope, land cover, population density by census tract, and distance to major roads. Data created by Bi-State Regional Commission (April 2020).



CLINTON COUNTY

WHITESIDE COUNTY

SCOTT COUNTY

IOWA

MUSCATINE COUNTY

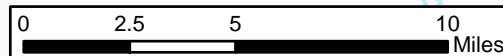
ILLINOIS

HENRY COUNTY

MERCER COUNTY



Sources:
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission



Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

Pipelines

Pipelines provide a relatively low-cost method of transporting bulk commodities that are often classified as hazardous materials. These facilities commonly bisect urban areas across a variety of land uses, from agricultural to residential. The relationship between land use and transportation is particularly critical for pipelines. Distribution of energy fuels by pipeline is widespread across the United States. As urban areas grow and develop, the need for fuels and access to pipelines also increases. Land use around pipelines then becomes important for public safety and the environment. Large diameter, high-pressure transmission pipelines, although benefiting an urban area economically, can pose significant public safety and environmental consequences without knowledge of their location and the risks associated with them.

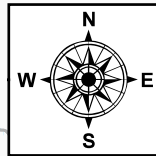
The U.S. Department of Transportation (DOT), Office of Pipeline Safety, regulates pipeline safety. The Pipeline Safety Improvement Act of 2002 required the DOT and Federal Energy Regulatory Commission (FERC) to conduct a study of population

encroachment on rights-of-way. Ultimately, a report was published called the *2004 Transportation Research Board Transportation Pipelines and Land Use: a Risk-Informed Approach Special Report 281*. The report concludes that judicious land use decisions can reduce the risks associated with transmission pipelines through land use policies affecting siting, width, and other characteristics of new pipeline corridors and new development areas encroaching on existing corridors.

Alliance Pipeline LP, ANR Pipeline Co., Enterprise Products Operating LLC, Jo-Carroll Energy, Magellan Pipeline Company, LP, MidAmerican Energy Company, Natural Gas Pipeline Co Of America (KMI), Northern Border Pipeline Company, Northern Illinois Gas Co, Oneok NGL Pipeline, LLC, Pembina Cochin LLC are all located in or run through Rock Island County. Consideration should be given to reviewing land use policies related to buffering transmission pipelines on a risk-based approach where intensity of the land use is considered to prevent damage of the pipeline and for public safety. See Map 9.2 for general locations of major pipelines in Rock Island County.

Map 9.2 Pipelines

Rock Island County Comprehensive Plan



Pipelines

— Gas

— Liquid



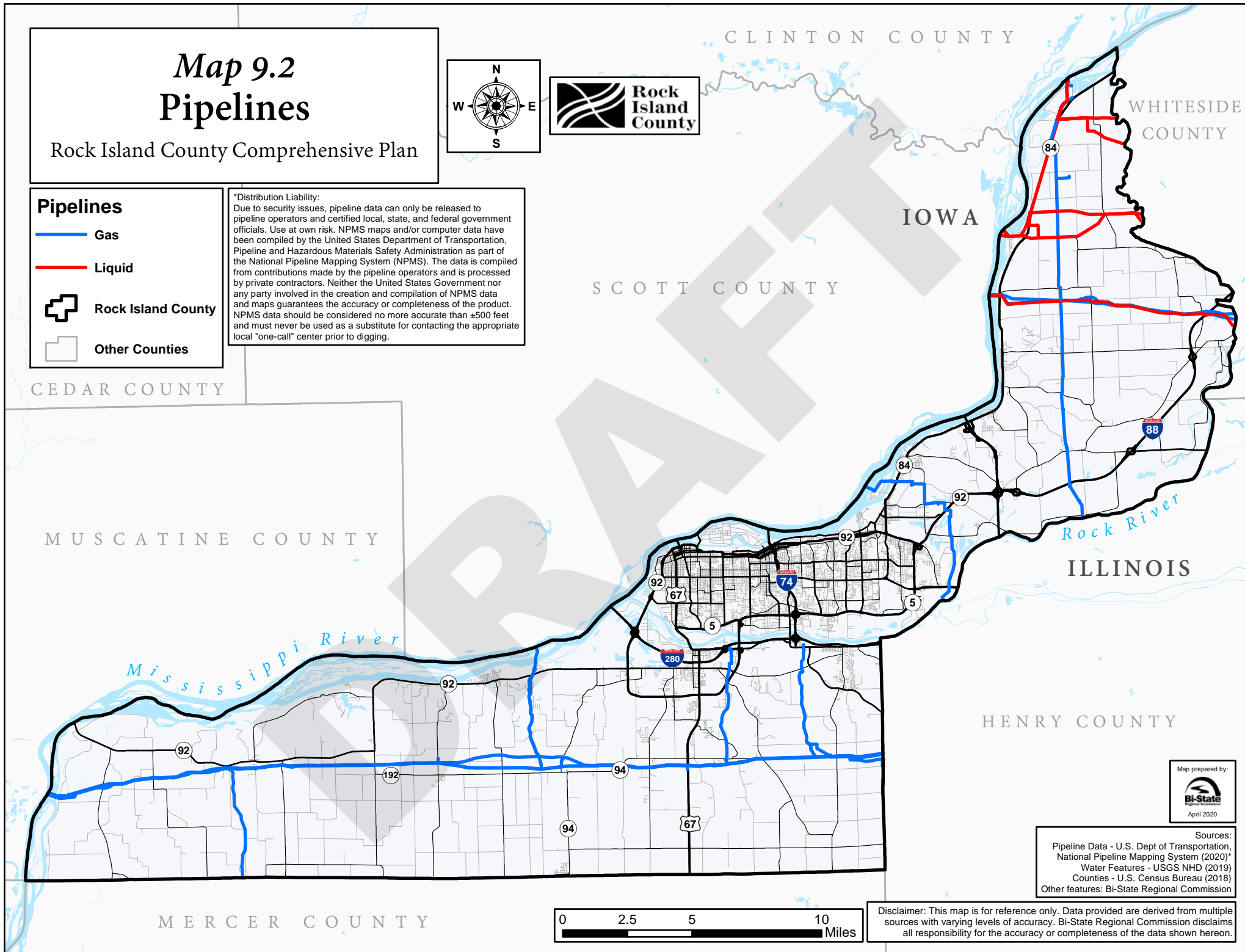
Rock Island County



Other Counties

*Distribution Liability:

Due to security issues, pipeline data can only be released to pipeline operators and certified local, state, and federal government officials. Use at own risk. NPMS maps and/or computer data have been compiled by the United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration as part of the National Pipeline Mapping System (NPMS). The data is compiled from contributions made by the pipeline operators and is processed by private contractors. Neither the United States Government nor any party involved in the creation and compilation of NPMS data and maps guarantees the accuracy or completeness of the product. NPMS data should be considered no more accurate than ±500 feet and must never be used as a substitute for contacting the appropriate local "one-call" center prior to digging.



Map prepared by:

April 2020

Sources:
Pipeline Data - U.S. Dept of Transportation,
National Pipeline Mapping System (2020)*
Water Features - USGS NHD (2019)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

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Miles

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Communications

Local telephone service providers include AT&T, Mediacom, EarthLink, Geneseo Communications, Network Business Systems, Reynolds Telephone Company, Everywhere Wireless, SpeedConnect, Viasat, and HughesNet.

Newspapers (Quad Cities Area): The Quad City Times (Davenport), The Dispatch/Rock Island Argus (Moline), Star Courier (Kewanee), The North Scott Press (Eldridge, IA), Aledo Times-Record (Aledo, IL), The River Cities Reader (Davenport, IA)

Radio Stations: 27 FM stations, 6 AM station

Television Stations: ABC, CBS, NBC, FOX, plus educational & digital cable

Cellular Service: AT&T Wireless, T-Mobile, U.S. Cellular, Verizon Wireless





Internet Service: The State of Illinois included a major investment in rural broadband expansion in the 2019 Rebuild Illinois infrastructure program. The Connect Illinois program seeks to connect all public K-12 schools and libraries in the state to a high-speed fiber network. The investment aspires to leverage development across the state in many economic sectors, such as education, precision agriculture, and telehealth. Map 9.3 shows generalized internet speed as depicted by download speeds per second within Rock Island County. For more detailed information on provider coverage and internet speed, visit Broadband Illinois's website. As of 2020, Rock Island County has the highest access rate to 1 gigabit per second download speeds in the state at 96.3%.

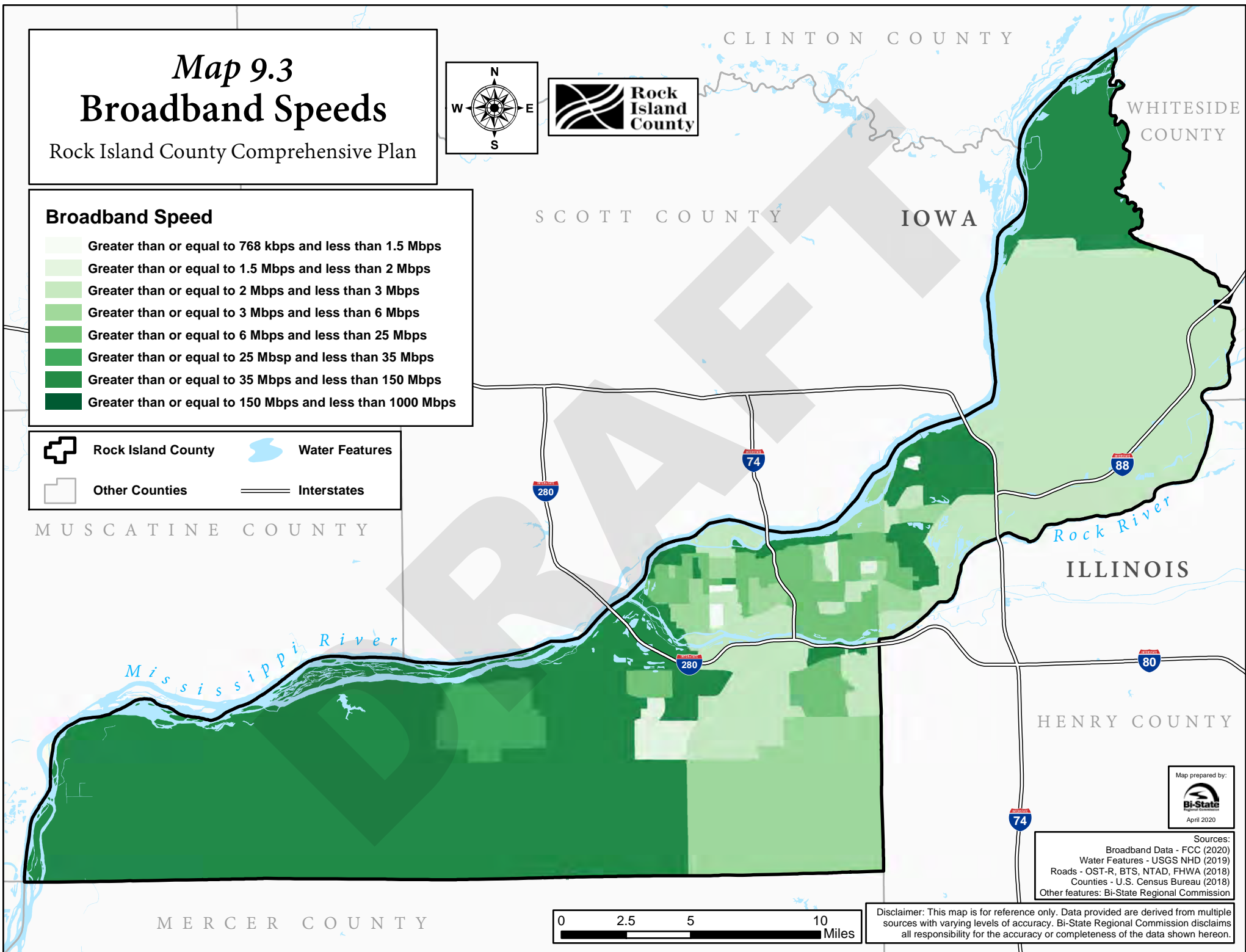
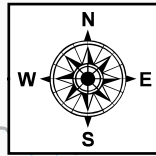
Map 9.3 Broadband Speeds

Rock Island County Comprehensive Plan

Broadband Speed

- Greater than or equal to 768 kbps and less than 1.5 Mbps
- Greater than or equal to 1.5 Mbps and less than 2 Mbps
- Greater than or equal to 2 Mbps and less than 3 Mbps
- Greater than or equal to 3 Mbps and less than 6 Mbps
- Greater than or equal to 6 Mbps and less than 25 Mbps
- Greater than or equal to 25 Mbps and less than 35 Mbps
- Greater than or equal to 35 Mbps and less than 150 Mbps
- Greater than or equal to 150 Mbps and less than 1000 Mbps

-  Rock Island County
-  Water Features
-  Other Counties
-  Interstates



Map prepared by:

April 2020

Sources:
Broadband Data - FCC (2020)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

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Miles

Rock Island County Services

Animal Control

Rock Island County Animal Care and Control investigates complaints of neglected and/or abused animals, animal bites, and persistent animal problems, as well as containing loose and/or stray dogs and cats. Rock Island County animal control is responsible for upholding and enforcing, as required by State Statute, the Illinois Animal Control Act, Humane Care for Animals Act, Animal Welfare Act, and local ordinances. The Rock Island County Animal Care and Control Shelter is located off U.S. 150 near the Quad City International Airport. The facility is licensed by the State of Illinois and is operated by the county and QC PAWS (Pets Are Worth Saving), a nonprofit organization for the care and support of animals at the shelter.

Assessments

The Assessments Office plays an important role in the county. The office keeps and maintains information on each parcel to assist in the assessment process. This information includes owner name and address, property sales data, exemptions from property taxes, and parcel maps. They also keep information on the physical characteristics of the property including building square footage, age, condition, number of plumbing fixtures, photos, and sketches. There are over 66,000 parcels in Rock Island County with a total assessed value of over \$2,644,964,342 (Net Assessed Valuation 2018).

Circuit Court

The Office of the Circuit Court is responsible for maintaining a record of all traffic, civil,

and criminal cases filed and heard in Rock Island County. The office interacts with the public and attorneys while performing several functions including the collection and disbursement of fines, fees and child support. The office is also responsible for recording filed documents and maintaining a record of all court proceedings. The Circuit Clerk is required to attend sessions of the Court, keep and preserve all records and files of the Court, issue process as required by law, and is the Keeper of the Seal of the Court. The office includes four divisions: Accounting, Child Support, Civil, and Criminal. The Circuit Court Office also summons prospective jurors for petit jury, grand jury, and coroner jury.

Court Services

Court Services guides and educates clients through the development of life and social skills that empower people to live a law-abiding life. Court Services administers the following adult probation programs:

- Domestic Batterer's Program
- Drug Court
- DUI Supervision
- Mental Health Court
- Pre-Sentence Investigation
- Pre-Trial Release
- Probation Intake
- Probation Supervision
- Public/Community Service

Coroner

The coroner investigates all sudden, natural, and violent deaths in the county that appear to be accidental, homicidal, or suicidal to determine the cause and manner of death. The coroner coordinates the investigation and determines the

circumstances, manner, and cause of all violent, sudden, or unusual deaths. The coroner notifies the next-of-kin and prepares reports and press releases while ensuring media does not release names and addresses until next-of-kin are notified. Additionally, the coroner completes death certificates and cremation certificates as well as requests organ donations from next-of-kin and sees that those wishes are carried out. The coroner also orders and conducts inquests as necessary as well as procuring bodily fluid samples for toxicology tests.

County Board and Administration Office

The County Board consists of 25 elected officials representing as many districts covering the county. Members are elected to serve staggered four-year terms. The County Board acts as a taxing authority, employer, property manager, and provider of services. The board authority includes budget, administration, management of funds, care and custody of property, health and safety, land use, social services, emergency services, transportation, and elections.

The County Administration Office houses the County Administrator whose responsibility is to assist the County Board, its Executive Committee and the Chairman in administering matters related to the operations of the county government. The County Administrator advises the County Board committees in the performance of responsibilities related to budgeting, finances, purchasing, personnel, information services, property management, and general information and assistance.

Each regular meeting of the Rock Island County Board and its various committees (both standing and special) includes a public comment period in which any citizen of Rock Island County may make a statement regarding an item on that day's agenda for the committee's action. A total of 10 speakers are allowed at each session for a period not to exceed 30 minutes in length. The County Board meets in the Rock Island County Office Building located at 1504 Third Avenue, Rock Island. The building, built in 1898 with a 1904 addition, was acquired from Modern Woodmen of America in 1970 and houses numerous county departments and offices, including the county clerk, zoning and building, and the public defender, as well as space for leased tenants.

County Clerk

The County Clerk administers elections in Rock Island County; calculates tax extensions; calculates tax rates applied to property; collects delinquent taxes; files annual financial reports; files all county taxing districts' budgets and levies; issues liquor licenses, marriage and civil union licenses, and notary public commissions; maintains assumed names of businesses, birth records, death records, permanent voter registrations for Rock Island County, and Statement of Economic Interest Filings.

Emergency Management Agency

The Rock Island County Emergency Management Agency (EMA) is responsible for developing and maintaining a countywide emergency preparedness plan to coordinate resources in Rock Island County for foreseeable emergencies or disasters. These disasters include severe

storms, tornadoes, hazardous materials incidents, or other natural or man-made emergencies. The Rock Island County EMA provides coordination between county agencies and acts as a liaison between local governments, state, and federal agencies during disasters and emergencies.

Geographic Information System (GIS)

The Rock Island County GIS Department, located in the Rock Island County Office Building, provides improved methods for collecting, managing, and using location-based information to analyze trends, design spatial models, and develop projections to support decision making processes and enhance public access to data in an equitable manner.

Rock Island County GIS promotes fact-based decision making for both day-to-day operation needs and long range planning to benefit citizens in Rock Island County. The GIS Department enables elected officials, department heads, county employees, public and private agencies, and citizens of Rock Island County to graphically view and analyze information and apply GIS technology to Rock Island County issues.

Health Department

The Rock Island County Health Department is responsible for the day-to-day safety and health of the public. The following is a list of programs offered by the Rock Island County Health Department:

- Family planning
- Illinois Breast and Cervical Cancer Program (IBCCO)
- Immunizations
- Refugee screening program
- Food safety inspections

- Illinois Tobacco Free Communities
- Hearing and vision screening
- Lead poison prevention
- School health LINK
- W.I.C. Nutrition registration
- STD education and prevention
- Private sewage disposal regulation
- Private water supply well regulation

Rock Island County Correctional Center

The Rock Island County Correctional Center is operated by the county Sheriff's Office and has an annual jail population of over 10,000 inmates. The Correctional Center houses inmates locally and for federal agencies and neighboring communities. The Rock Island County Correctional Center was completed in 1986 and the Correctional Center Annex and Criminal Justice Center were completed in 2001. Both of these buildings were state-of-the-art facilities. The buildings include intercom systems, closed circuit television monitors, court scheduling monitors, lighting controls, courtroom electronics, etc. The security systems in both buildings are integrated under one central system. The Correctional Center provides a Central Booking System for all arrestees in Rock Island County. The Correctional Center staff utilize an inkless, digitized fingerprint system and a computerized mug shot system.

The Rock Island County Sheriff's Office has also partnered with the Rock Island County Metropolitan Mass Transit System, MetroLINK, to provide full-time police protection. The Sheriff's Office provides many more services to the citizens of Rock Island County, including the Water Rescue Unit, Canine Officers and Bomb Squad. The Sheriff has assigned officers to work on the

Metropolitan Drug Task Force, Rock Island County Gang Task Force and all local and state tactical teams.

Highway Department

The County Highway Department prepares road and bridge plans and is responsible for the supervision and inspection of all construction and maintenance projects on the County Highways. The Highway Department also provides information on road plans and right-of-way and upon request; the Department provides advice and assistance to the 14 Township Road Commissioners concerning the 401 miles of highways and 46 bridges under township jurisdiction.

The County Highway Department is also responsible for the maintenance and repair of all County Highways including the following services:

- snow removal and ice control
- mowing, weed spraying and cleaning of county right-of-ways
- improvements and maintenance of drainage structures
- inspection, repair, and painting of bridges
- pavement repairs
- sign installation and repair
- paint striping
- establishment and posting of speed limits

Hope Creek Care Center

Hope Creek Care Center is a 245-bed nursing and rehabilitation center opened in 2009 and located on Kennedy Drive between Avenue of the Cities and John Deere Road in East Moline. Rock Island County operated the facility until 2020,

when it was sold to a private operator. Hope Creek offers the following services and features:

- 245 beds – All Medicare and Medicaid certified as well as Veteran’s contracts.
- Full inpatient rehabilitation (physical, occupational, speech)
- Admissions 24 hours per day, 7 days per week
- Regulated and licensed by the Illinois Department of Public Health
- Respite stays
- Hospice services
- Restorative therapy programs
- Secured memory care unit
- Activities for socialization

Information Systems

The Information Services Department designs, implements, and manages information technology resources in support of the efficient operation of county government. General services include application programming, computer operations, consulting services to county offices, data entry and clerical, system administration, and telephones and switchboard operation.

Law Enforcement

The Rock Island County Sheriff’s office is responsible for upholding national and county laws. The Sheriff’s Office has an authorized strength of 66 sworn Deputy Sheriffs, 60 Correctional Officers, 30 full time civilian personnel, and 30 part-time employees. The Department handles over 40,000 calls for service and warrants annually and has an advanced computer

dispatch system, integrated in-car computers, and an enhanced 911 service.

The Rock Island Justice Center Annex was completed in 2018. The building includes civil (non-jury) courtrooms, a new state's attorney's office, circuit clerk's office, secure attorney's room, judges' chambers, and break rooms. The future of the vacant, old courthouse, built in 1895, is uncertain at this time. Numerous offices moved from the County Office Building located at 1504 Third Avenue to the new annex.

The Rock Island County Sheriff's Office includes a communications center in operation 24 hours a day, seven days a week. It is responsible for answering 911 calls and non-emergency calls. In 2016, three PSAPs (Public Safety Answering Points) consolidated into one facility in Milan. There are currently four PSAPs in Rock Island County:

- Rock Island Federal Arsenal PSAP
- Rock Island County Sheriff's Office PSAP
- Rock Island Police Department PSAP
- Consolidated PSAP.

The Sheriff's Office is a participant of Mutual Aid Box Alarm System (MABAS) and is the primary dispatch center for Division 43. MABAS is used when there is a sizable event involving Fire and/or EMA and mutual aid is needed. The Sheriff's Office is also a member of the Illinois Law Enforcement Alarm System (ILEAS). One of the primary missions of ILEAS is to coordinate statewide mutual aid for law enforcement in Illinois. As with MABAS, ILEAS is utilized when there is a sizable event requiring law enforcement personnel and additional assistance is needed.

Public Defender

The main responsibility of the public defender is to represent those persons who have been accused of a crime that carries with it the potential for jail or prison time and who cannot afford to retain a private attorney. Only a judge can appoint the public defender to a case. The public defender can also be appointed to juvenile matters involving abuse or neglect and delinquent minors.

Public Transportation

Public transportation in Rock Island County is offered through the Rock Island County Metropolitan Mass Transit District (MetroLINK) and RIM Rural Transit. The Rock Island County Metropolitan Mass Transit District, commonly referred to as MetroLINK, is a multi-city public transit system that was created in 1970 to serve the Illinois Quad Cities. Fixed-route service is provided to the communities of Carbon Cliff, Colona, East Moline, Hampton, Milan, Moline, Rock Island, and Silvis. In addition to fixed-route transit service, MetroLINK serves as an agent for Greyhound Bus Lines and Burlington Trailways, provides paratransit and special transportation services, and operates a passenger ferry, known as the Channel Cat Water Taxi.

RIM Rural Transit is a public transportation system operated by Project NOW to serve rural Rock Island and Mercer Counties. RIM began providing service in March 2010. Operations are managed through Project NOW's Rock Island County Senior Center and are an expansion of the agency's previous senior transportation program.

Recorder

The Recorder's Office is the official land records office for Rock Island County. Records date back to the 1800s. The Office of the Recorder is an integral part of property ownership by permanently recording all original documents pertaining to property ownership and real property transactions within Rock Island County. Instruments filed with the Recorder's Office include deeds, mortgages, releases and assignments, property liens, as well as assorted federal, state, and local liens. Other documents included are veteran's discharge papers, corporation papers, and instruments pertaining to the Uniform Commercial Code. The Recorder's Office is also responsible for the recording and storage of subdivision plats, land surveys, and monument records.

Treasurer

The Treasurer's Office is responsible for receiving, recording and depositing tax receipts for over 90 County Funds which include banking, investments, monthly reconciliation and reporting. Duties of the Treasurer's Office include:

- Printing and mailing of tax bills based on data provided by other county and state agencies on assessments, exemptions and tax rates.
- Collection of real estate taxes from the owners of more than 66,000 real estate parcels.
- Distribution of tax funds to approximately 180 governmental agencies that have the jurisdiction to collect taxes. These agencies include townships, villages, cities,

school districts, libraries, public health and safety agencies, election authorities, park and forest preserve systems, economic development agencies and bonds to pay for public works projects.

- Preparation of delinquency tax lists and mailing of notices to the taxpayer(s) on record.
- Obtaining tax-sale judgment orders in court.
- Conducting annual sale of tax liens to seek payment of delinquent taxes.
- Collection and secure maintenance of revenues and other public funds of the County in addition to funds authorized by law to be paid to the Rock Island County Treasurer.
- Administration of refunds resulting from duplicate payments of the same taxes, overpayments of taxes due, or reductions in assessments after original billing (as authorized by various tax assessment agencies or the courts).
- Filing of regular reports with the Rock Island County Board, summarizing the financial status of the Treasurer's Office.

Zoning and Building Department

The Zoning and Building Department is responsible for ordinances related to zoning, building, property maintenance, planning, stormwater, and floodplain issues. The Zoning Department assists residents with zoning requests, questions, applications for variances, rezoning and special use permits, as well as investigating complaints regarding zoning violations and overseeing regulations. The Building

Department is responsible for enforcement of the county's building codes, including reviewing plans for new and altered construction projects, issuing building and occupancy permits, and on-site inspections. Department employees also answer questions from residents, business contacts, potential residents, and corporate clients interested in locating in the county regarding building requirements, zoning requirements and all applicable rules and regulations. The department only has authority over properties located in unincorporated Rock Island County. All cities and villages have their own departments to handle these issues.

Other Services

Bi-State Revolving Loan Fund

The Bi-State Revolving Loan Fund (RLF) was established for entrepreneurs and business people to obtain supplemental financing for projects spurring economic development. The RLF is available to all communities within Scott and Rock Island Counties in an effort to stimulate the economy by sustaining and encouraging growth of existing businesses and to attract new business. The RLF uses capital provided by the Economic Development Administration to provide low-interest loans to help qualified businesses locate, expand, or remain in Scott County or Rock Island County. These loans are supplemental, providing a portion of the total needed for a given project.

Fire Protection

Rock Island County is divided into 17 fire protection districts. The districts include: Andalusia, Blackhawk, Bowelsburg, Buffalo Prairie, Campbell Island, Carbon Cliff/Barstow, Coal Valley, Cordova, Coyne

Center, East Moline Rural, Four-Way, Hillsdale, Orion, Rapids City, Reynolds, Sherrard, and South Moline Fire Protection Districts. East Moline, Moline, Rock Island, and Silvis are served by municipal fire departments. The districts all coordinate efforts under a mutual aid agreement. Map 9.4 shows the location of fire districts in Rock Island County.

Library Systems

Rock Island County does not operate a regional library system; however, there are 12 public library districts located within the county, including four municipal libraries, one township library, and seven library districts:

- Andalusia Township Library
- Cordova District Library
- East Moline Public Library
- Hampton Public Library
- Milan-Blackhawk Area Public Library District
- Moline Public Library
- Moore Memorial Library District
- River Valley District Library
- Rock Island Public Library
- Rock River Library District
- Sherrard Public Library
- Silvis Public Library

All of the libraries within Rock Island County are part of the Reaching Across Illinois Library System (RAILS). RAILS is a library system established by Illinois Law and funded through the state library and Secretary of State. It acts as a delivery system for over 600 libraries in northern Illinois. When a citizen orders a book from any participating library in Illinois, RAILS is used to cover the costs of shipping the book to the library closest to the citizen. The

libraries in Rock Island County also participate in Prairiecat and RSACat, which are library consortiums that share a catalogue. This enables a relatively small library to offer a wider variety of books and other materials.

Regional Office of Education

The Rock Island County Regional Office of Education supports and enhances educational growth through advocacy and leadership. Its office is located in Moline and is run by the Regional Superintendent. It is an intermediate agency between the Illinois State Board of Education and local school districts. The superintendent

performs regulatory functions as directed by the Illinois School Code.

School Districts

There are 12 school districts that entirely or partly serve students in Rock Island County with a total enrollment of 24,537 students. Map 9.5 shows the school districts within Rock Island County. See Table 9.1 below for enrollment and grades served for each school district. The East Moline, Silvis, Carbon Cliff-Barstow, and Hampton elementary school districts feed into United Township High School District. All other districts in the county serve pre-kindergarten through 12th grade.

Table 9.1 – Details for Rock Island County School Districts

Public School Districts in Rock Island County	Total students (2019)	Grades
Carbon Cliff-Barstow SD 36	279	PK-8
East Moline SD 37	2,731	PK-8
Erie CUSD 1	650	PK-12
Hampton SD 29	219	K-8
Moline-Coal Valley CUSD 40	7,255	PK-12
Orion CUSD 223	1,046	PK-12
Riverdale CUSD 100	1,167	PK-12
Rock Island SD 41	6,337	PK-12
Rockridge CUSD 300	1,091	PK-12
Sherrard CUSD 200	1,405	PK-12
Silvis SD 24	647	PK-8
United Township HSD 30	1,710	9-12

State's Attorney

The mission of the State's Attorney's Office is to serve and protect the public by seeking criminal justice and providing efficient legal services to the county government as a whole. The office employs 11 assistant state's attorneys in four divisions: Criminal Felony Division, Criminal Misdemeanor Division, Juvenile Division, and the Civil Division. The State's Attorney's Office has two central goals set to accomplish our mission: to prosecute criminal cases with fairness and equality; and second, to work with other county departments to act with fiscal responsibility on behalf of the residents of Rock Island County. As chief legal advisor for county government, the State's Attorney provides legal services to the county board, elected county officials and other county departments.

Veteran's Assistance

The Veteran's Assistance office is located in the Rock Island County Office Building. The office offers financial assistance to veterans

for rent, food, utilities, and certain medical needs not covered by another governmental, County, State, or welfare program. They can also provide free transportation to VA Hospital in Iowa City or Quad City Veterans Outpatient Clinic in Bettendorf and offer free hospital equipment for temporary loan, including hospital beds, wheel chairs, portable commodes, walkers, etc.

Visit Quad Cities

Visit Quad Cities is the official Destination Management and Marketing Organization (DMMO) for the region. Previously known as the Quad Cities Convention and Tourism Bureau, Visit Quad Cities markets and promotes the region through sales and marketing efforts to bring new and returning visitors to the Quad Cities Region for meetings, conventions, sporting events, group tour buses, business travel, and vacations. It is a non-profit organization funded through the city and state hotel/motel taxes, grants, and sponsor and partner investments.

Map 9.4 Fire Protection Districts

Rock Island County Comprehensive Plan

Fire Protection Districts

Andalusia FPD	East Moline Rural FPD
Blackhawk FPD	Four-Way FPD
Bowelsburg FPD	Hillsdale FPD
Buffalo Prairie FPD	Orion FPD
Campbell's Island FPD	Rapids City FPD
Carbon Cliff/Barstow FPD	Reynolds FPD
Coal Valley FPD	Sherrard FPD
Cordova FPD	South Moline FPD
Coyne Center FPD/EMS	



Rock Island County



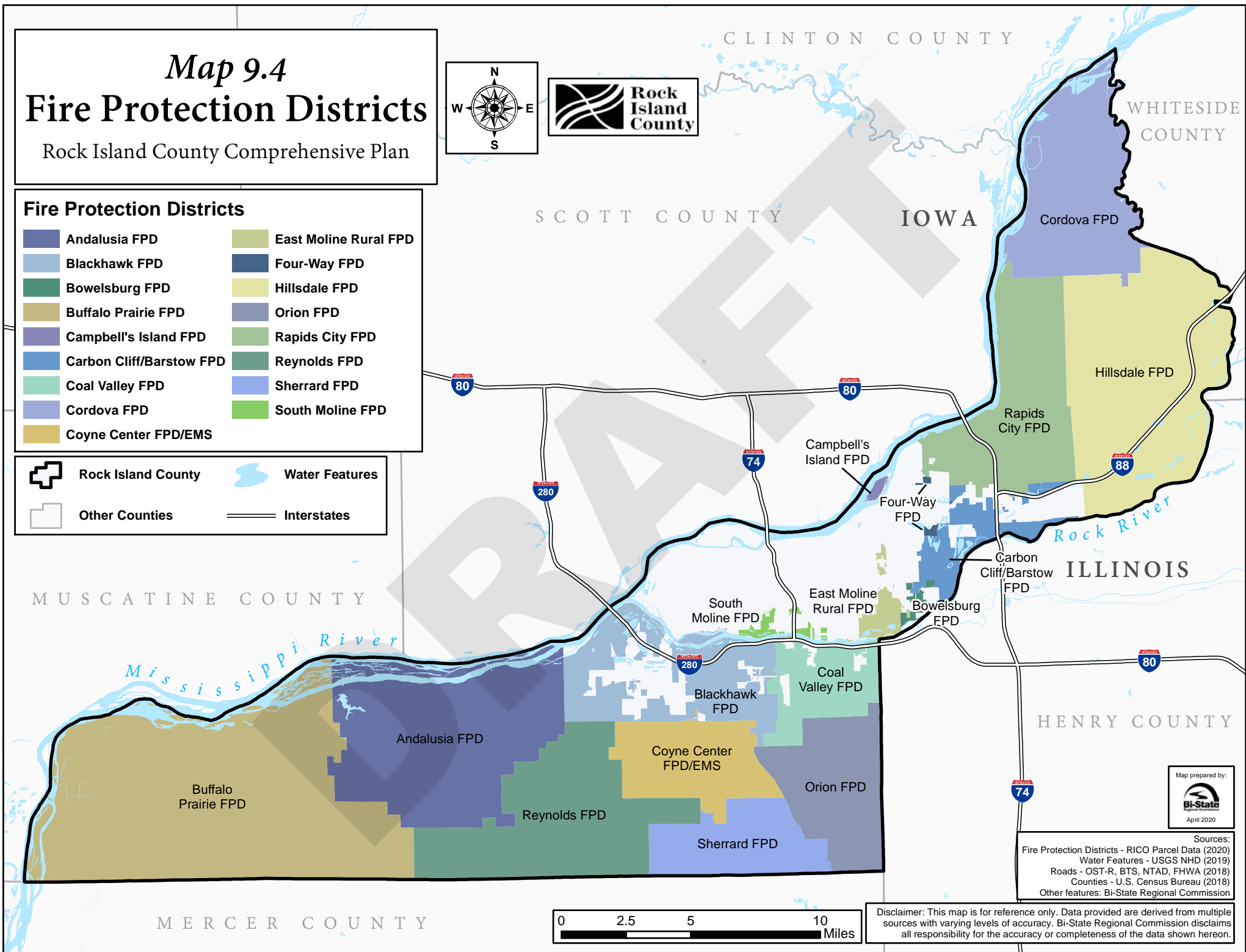
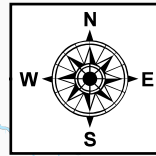
Water Features



Other Counties



Interstates



Map prepared by:



Sources:






Fire Protection Districts - RICO Parcel Data (2020)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

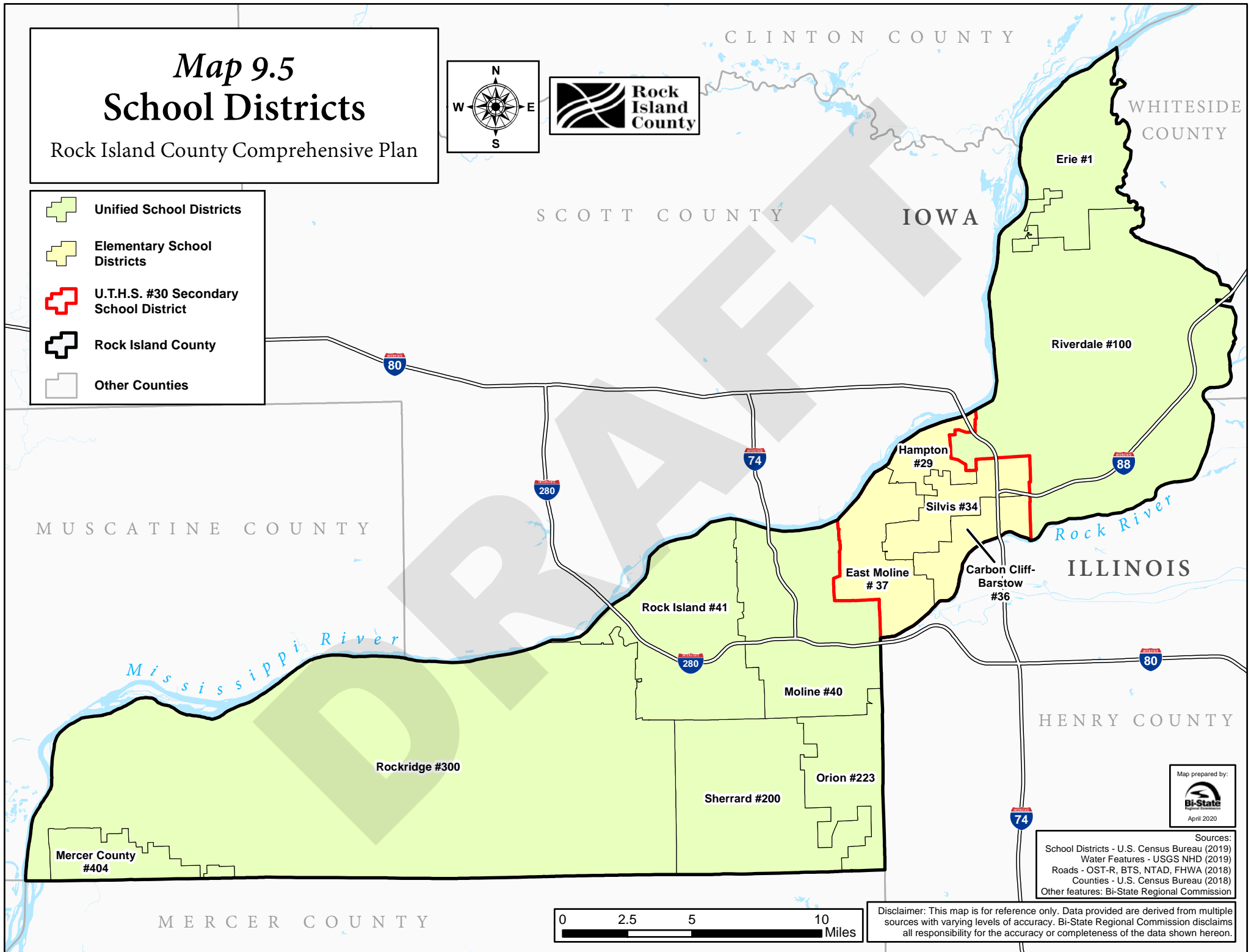
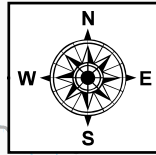
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

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Map 9.5 School Districts

Rock Island County Comprehensive Plan

-  Unified School Districts
-  Elementary School Districts
-  U.T.H.S. #30 Secondary School District
-  Rock Island County
-  Other Counties



Map prepared by:

April 2020

Sources:
School Districts - U.S. Census Bureau (2019)
Water Features - USGS NHD (2019)
Roads - OST-R, BTS, NTAD, FHWA (2018)
Counties - U.S. Census Bureau (2018)
Other features: Bi-State Regional Commission

Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

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Chapter 10 Governance

Rock Island County has 25 county board districts. An elected official from each district makes up the County Board. The County Board operates on the committee system. Items concerning county government are discussed in depth by standing and special committees which then refer the items to the County Board with recommendations for passage or denial. The County Board Chairman appoints the Committees. The standing committees of the Board include: Committee-of-the-Whole; Finance and Personnel; Governance, Health, and Administration; and the Public Works and Facilities Committee. Special Committees include: Budget; Rock Island County Board Minority Caucus, and Zoning Board of Appeals. Other county committees included the Litigation Committee and the 708 Mental Health Board. The County Board meets at 5:30 p.m. on the third Tuesday of each month. The county employs a County Administrator.

Finance

The Auditor is responsible in preparing Rock Island County Annual Financial Report (CAFR) at the end of each fiscal year and assumes full responsibility for the completeness and reliability contained in these reports. The county's annual budgeted revenue as of May 20, 2020 was \$82,420,398.00 and expenses were budgeted at \$85,2983,699.75. Rock Island County has reduced and laid off employees in many departments, reduced services, eliminated many capitol improvements,

reduced maintenance, and other expenditures to aid its financial situation. Of the total taxes collected in Rock Island County, 13.38% is retained for county services, amounting to over \$35 million. Schools and other agencies receive the remaining amount of property tax collected. As part of cost saving measures, Rock Island County has also sold Hope Creek Care Center, the county nursing home. Money generated from the sale will not cover the outstanding debt owed by the facility. Between debt on the nursing home, liability fund and the current economic downturn due to the pandemic, the county will need to seek additional revenue sources to pay down its debt over time.

The *Rock Island County Comprehensive Plan* contains identified plans and proposals for what is believed to be necessary to improve the function of the county and to make it a better place to live. Most of the plans and proposals will take local, state, and federal funding for transportation and various other county facilities, both public and private. Whenever possible and appropriate, county officials will work with other public and private entities to share costs and services. In addition to taxes, other funding sources may help defray or pay for facilities and services, such as grants, user fees, impact fees, special assessments, memorials, trusts, etc. Following is a sample listing federal and state agencies that may provide funding sources such as grants and loans for county projects.

Sample Listing of Agencies Providing Grants and Loans

Federal

- Federal Emergency Management Agency
- U.S. Department of Housing and Urban Development
- U.S. Department of Commerce
- Economic Development Administration
- U.S. Environmental Protection Agencies
- Federal Highway Administration
- National Parks Service
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture
- U.S. Department of Justice

As future projects are defined, they may or may not be eligible for grant funding through these agencies, based on grant rules and specifications. Planning is a critical component of competitive projects in the current climate of numerous needs and limited resources. County prioritization and planning for ready-to-go projects will provide a competitive advantage when pursuing grants and foundation monies.

Intergovernmental Relations

Intergovernmental relations and image influence a county government's ability to serve its citizens efficiently and effectively. Citizen support for programs, services, and projects allows county government to meet needs and achieve its goals and objectives. Thoughtful policies, good decision-making, and quality customer service can accomplish this support. Clear and consistent communications can also influence how county government is perceived by its citizens.

State

- Department of Transportation
- Department of Commerce and Economic Opportunity
- IL Environmental Protection Agency
- IL Department of Natural Resources
- Department of Agriculture
- Department of Public Health
- Department of Human Services
- IL Department of Veterans' Affairs
- IL Criminal Justice Information Authority

Intergovernmental Relations

As noted in the Finance section, it will be important to establish good relationships with funding organizations, both public and private to encourage partnerships for improvements within the county, and for future development.

Rock Island County actively participates in a number of intergovernmental activities for emergency services, economic development, and tourism, among others. It is a member of the following organizations:

- Illinois Emergency Management Agency
- Illini Hospital District
- MetroLink
- Project Now Board
- Quad City Civic Center Authority
- Quad City Regional Economic Development Authority
- RIM Rural Transit
- Rock Island County Emergency Telephone System Board
- Rock Island County Farm Bureau

- Rock Island County Forest Preserve District
- Rock Island County Historical Society
- Rock Island County Emergency Management Agency
- Rock Island County Local Emergency Planning Committee (LEPC)
- Rock Island County Waste Management Agency
- Soil and Water District
- University of IL Extension,
- Work Force Development Board
- Rural Fire Protection Districts serving the county

Rock Island County is also a member of Bi-State Regional Commission, which aids with planning, technical support, grant writing, etc.

As the county continues to develop, county leaders are encouraged to continue interagency and intergovernmental cooperation to enhance services and offset costs. Coordination among local groups and organizations and local, state, and federal agencies and governments will be key to becoming a vital and sustainable county.

The county will periodically review the potential for intergovernmental agreements to provide more efficient, cost-effective public services. It is suggested that Rock Island County maintain communication with local, state, and federal governments and organizations through conversations, meetings, associations, memberships, and other forums that promote cooperation and further community goals.

Another intergovernmental opportunity for the county is to work closely with the local community college system to further

educational and economic goals within the county and region.

Image

Vision

The vision for Rock Island County is to be acclaimed for its historic riverfront communities along the Mississippi River, its natural scenic beauty, a vital agricultural and natural resource base, and a strong foundation in industry and commerce as part of the Quad Cities Metropolitan Area. To create image, the county will use its mission statement for land use to guide growth and development based on the Comprehensive Plan goals and objectives. Within Rock Island County, there is support for farmland preservation and an emphasis for land development to be located within municipalities.

To be an attractive place for people to live and work, the county will need to tell its story about its history, rich resources and become recognized for its assets. It will include what makes the county unique as stated by residents – the connection to the Mississippi River, the variety of industry and commerce, recreation assets like trails, multi-modal transportation assets, the topography and landscape as well as natural resources.

Civic Involvement

To foster the vision, the county can encourage public participation in county government. There are a variety of opportunities for civic involvement in Rock Island County, both public and private, such as the County Board, County Board of Review, Zoning Board of Appeals, Mental Health Board, various Fire Protection Districts, Public Aid Committee, Workforce Development Board, other groups, as well

as other clubs/associations. Youth involvement is another aspect to encourage long-term residency in the county. Partnering with the school districts and/or community colleges to develop a youth leadership, to “grow” the young leaders, may provide a vehicle to encourage greater participation in county government. By encouraging youth involvement, the county leaders are drawing in the involvement of their families and cultivating future leaders of the county. This type of anchoring encourages stronger ties to the county, which is important for long-term residency.

Marketing

Rock Island County utilizes various media to communicate its policies, programs, and services. It supports a website that provides detailed information on each department in the county as well as resources available for the public in each department. Meeting agendas and minutes are posted on the county website for all public meetings. The Rock Island County Health Department uses its website and online meetings to convey timely health information to the public. They also have a robust presence for citizens on Facebook. Other county departments have a page of information and interaction with county citizens on Facebook. A link to video tours of the county can be found on the website. Ongoing review of county communications for consistency in messages will further the county image and its education on public services. The county image can be managed through marketing, governmental and intergovernmental relations, and civic involvement. A relationship with local high school government classes could better educate future county taxpayers on the workings of their county government.

Controls

Another way the image of Rock Island County, its governance, and its physical appearance can be managed is through a periodic review of the county ordinances. Reviewing development and nuisance controls and ensuring effective enforcement will aid the county in achieving a continued quality image. County development codes or book of ordinances can also be used to help protect and enhance the environment by protecting its natural areas, drainage ways, and farmland. Rock Island County has posted its 2008 Code of Ordinances online to provide additional access. Ordinances are online by department, and additional ordinances are available upon request. A modern online Code of Ordinances format and recodify its Code of Ordinances on an annual basis to ensure the Code of Ordinances remains current and enforceable is recommended. Even though the Code was last adopted in 2008, many ordinances are dated. Fees and fines listed in ordinances need to be reviewed and updated to meet current financial expectations. According to Illinois statute (55 ILCS 5/5-29008) *“The County code shall be updated and republished annually or more frequently as the county board may direct. The county board may direct the State’s Attorney, or any person or persons deemed by the county board to be qualified, to update the county code. The county clerk shall cooperate fully with the person or persons designated by the county to update the county code.”* Consideration should be given to reviewing this code for updates to address changes in laws and practices.

Appendix

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Detailed Census Bureau Profiles

The appendix provide snapshots of Rock Island County for demographic, social, economic, and social data for a more in-depth view of these characteristics. All data is from the 2017 American Community Survey 5-year estimates (2013-17 ACS 5-year estimates).

Selected Social Characteristics

Selected Social Characteristics		
Subject	Number	Percent
HOUSEHOLDS BY TYPE		
Total households	60,064	60,064
Family households (families)	37,684	62.70%
With own children of the householder under 18 years	15,375	25.60%
Married-couple family	26,854	44.70%
With own children of the householder under 18 years	9,016	15.00%
Male householder, no wife present, family	2,994	5.00%
With own children of the householder under 18 years	1,620	2.70%
Female householder, no husband present, family	7,836	13.00%
With own children of the householder under 18 years	4,739	7.90%
Nonfamily households	22,380	37.30%
Householder living alone	19,650	32.70%
65 years and over	8,404	14.00%
Households with one or more people under 18 years	17,110	28.50%
Households with one or more people 65 years and over	18,769	31.20%
Average household size	2.35	(X)
Average family size	2.97	(X)
RELATIONSHIP		
Population in households	141,414	141,414
Householder	60,064	42.50%
Spouse	26,736	18.90%
Child	40,311	28.50%
Other relatives	7,281	5.10%
Nonrelatives	7,022	5.00%
Unmarried partner	3,826	2.70%
MARITAL STATUS		
Males 15 years and over	58,072	58,072
Never married	19,576	33.70%
Now married, except separated	28,873	49.70%
Separated	830	1.40%
Widowed	1,992	3.40%
Divorced	6,801	11.70%
Females 15 years and over	60,686	60,686

Selected Social Characteristics		
Never married	16,290	26.80%
Now married, except separated	27,898	46.00%
Separated	1,033	1.70%
Widowed	6,961	11.50%
Divorced	8,504	14.00%
FERTILITY		
Number of women 15 to 50 years old who had a birth in the past 12 months	1,825	1,825
Unmarried women (widowed, divorced, and never married)	679	37.20%
Per 1,000 unmarried women	38	(X)
Per 1,000 women 15 to 50 years old	58	(X)
Per 1,000 women 15 to 19 years old	3	(X)
Per 1,000 women 20 to 34 years old	103	(X)
Per 1,000 women 35 to 50 years old	30	(X)
GRANDPARENTS		
Number of grandparents living with own grandchildren under 18 years	2,232	2,232
Grandparents responsible for grandchildren	899	40.30%
Years responsible for grandchildren		
Less than 1 year	234	10.50%
1 or 2 years	94	4.20%
3 or 4 years	196	8.80%
5 or more years	375	16.80%
Number of grandparents responsible for own grandchildren under 18 years	899	899
Who are female	546	60.70%
Who are married	640	71.20%
SCHOOL ENROLLMENT		
Population 3 years and over enrolled in school	34,905	34,905
Nursery school, preschool	2,117	6.10%
Kindergarten	1,724	4.90%
Elementary school (grades 1-8)	14,354	41.10%
High school (grades 9-12)	7,527	21.60%
College or graduate school	9,183	26.30%
EDUCATIONAL ATTAINMENT		
Population 25 years and over	100,347	100,347
Less than 9th grade	3,749	3.70%
9th to 12th grade, no diploma	7,510	7.50%
High school graduate (includes equivalency)	30,886	30.80%
Some college, no degree	25,601	25.50%
Associate's degree	9,803	9.80%
Bachelor's degree	14,918	14.90%
Graduate or professional degree	7,880	7.90%
Percent high school graduate or higher	(X)	88.80%

Appendix

Selected Social Characteristics		
Percent bachelor's degree or higher	(X)	22.70%
VETERAN STATUS		
Civilian population 18 years and over	113,323	113,323
Civilian veterans	10,078	8.90%
DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION		
Total Civilian Noninstitutionalized Population	143,569	143,569
With a disability	19,543	13.60%
Under 18 years	32,798	32,798
With a disability	1,395	4.30%
18 to 64 years	85,457	85,457
With a disability	9,059	10.60%
65 years and over	25,314	25,314
With a disability	9,089	35.90%
RESIDENCE 1 YEAR AGO		
Population 1 year and over	144,413	144,413
Same house	123,337	85.40%
Different house in the U.S.	20,577	14.20%
Same county	13,547	9.40%
Different county	7,030	4.90%
Same state	3,247	2.20%
Different state	3,783	2.60%
Abroad	499	0.30%
PLACE OF BIRTH		
Total population	146,205	146,205
Native	134,708	92.10%
Born in United States	133,463	91.30%
State of residence	94,804	64.80%
Different state	38,659	26.40%
Born in Puerto Rico, U.S. Island areas, or born abroad to American parent(s)	1,245	0.90%
Foreign born	11,497	7.90%
U.S. CITIZENSHIP STATUS		
Foreign-born population	11,497	11,497
Naturalized U.S. citizen	4,223	36.70%
Not a U.S. citizen	7,274	63.30%
YEAR OF ENTRY		
Population born outside the United States	12,742	12,742
Native	1,245	1,245

Selected Social Characteristics		
Entered 2010 or later	197	15.80%
Entered before 2010	1,048	84.20%
Foreign born	11,497	11,497
Entered 2010 or later	2,359	20.50%
Entered before 2010	9,138	79.50%
WORLD REGION OF BIRTH OF FOREIGN BORN		
Foreign-born population, excluding population born at sea	11,497	11,497
Europe	1,026	8.90%
Asia	2,934	25.50%
Africa	2,500	21.70%
Oceania	14	0.10%
Latin America	4,901	42.60%
Northern America	122	1.10%
LANGUAGE SPOKEN AT HOME		
Population 5 years and over	136,834	136,834
English only	119,007	87.00%
Language other than English	17,827	13.00%
Speak English less than "very well"	7,064	5.20%
Spanish	10,939	8.00%
Speak English less than "very well"	3,560	2.60%
Other Indo-European languages	3,460	2.50%
Speak English less than "very well"	1,625	1.20%
Asian and Pacific Islander languages	2,063	1.50%
Speak English less than "very well"	1,185	0.90%
Other languages	1,365	1.00%
Speak English less than "very well"	694	0.50%
ANCESTRY		
Total population	146,205	146,205
American	6,490	4.40%
Arab	520	0.40%
Czech	855	0.60%
Danish	636	0.40%
Dutch	2,714	1.90%
English	11,324	7.70%
French (except Basque)	3,288	2.20%
French Canadian	371	0.30%
German	34,878	23.90%
Greek	703	0.50%
Hungarian	194	0.10%
Irish	19,224	13.10%
Italian	4,327	3.00%
Lithuanian	228	0.20%
Norwegian	2,082	1.40%

Appendix

Selected Social Characteristics		
Polish	3,347	2.30%
Portuguese	74	0.10%
Russian	378	0.30%
Scotch-Irish	1,343	0.90%
Scottish	2,131	1.50%
Slovak	172	0.10%
Subsaharan African	2,985	2.00%
Swedish	8,694	5.90%
Swiss	378	0.30%
Ukrainian	100	0.10%
Welsh	686	0.50%
West Indian (excluding Hispanic origin groups)	212	0.10%
COMPUTERS AND INTERNET USE		
Total households	60,064	60,064
With a computer	50,681	84.40%
Source: U.S. Census Bureau, American Community Survey, 5-Year Estimates 2013-2017.		
Note: Data is based on a sample count and is subject to sampling variability.		
An '(X)' means that an estimate is not applicable or available.		
The total counts of each subcategory are provided in absolute numbers and not percentage in the percent column.		

Selected Economic Characteristics

Selected Economic Characteristics		
Subject	Number	Percent
EMPLOYMENT STATUS		
Population 16 years and over	117,081	117,081
In labor force	73,789	63.00%
Civilian labor force	73,720	63.00%
Employed	68,461	58.50%
Unemployed	5,259	4.50%
Armed Forces	69	0.10%
Not in labor force	43,292	37.00%
Civilian labor force	73,720	73,720
Unemployment Rate	(X)	7.10%
Females 16 years and over	59,980	59,980
In labor force	35,660	59.50%
Civilian labor force	35,660	59.50%
Employed	33,194	55.30%
Own children of the householder under 6 years	10,628	10,628
All parents in family in labor force	7,418	69.80%
Own children of the householder 6 to 17 years	20,606	20,606
All parents in family in labor force	16,539	80.30%
COMMUTING TO WORK		
Workers 16 years and over	67,410	67,410
Car, truck, or van -- drove alone	56,013	83.10%
Car, truck, or van -- carpooled	5,461	8.10%
Public transportation (excluding taxicab)	1,076	1.60%
Walked	1,669	2.50%
Other means	1,393	2.10%
Worked at home	1,798	2.70%
Mean travel time to work (minutes)	19.1	(X)
OCCUPATION		
Civilian employed population 16 years and over	68,461	68,461
Management, business, science, and arts occupations	20,197	29.50%
Service occupations	13,323	19.50%
Sales and office occupations	15,754	23.00%
Natural resources, construction, and maintenance occupations	5,823	8.50%
Production, transportation, and material moving occupations	13,364	19.50%
INDUSTRY		
Civilian employed population 16 years and over	68,461	68,461

Appendix

Selected Economic Characteristics		
Agriculture, forestry, fishing and hunting, and mining	521	0.80%
Construction	4,181	6.10%
Manufacturing	12,771	18.70%
Wholesale trade	1,646	2.40%
Retail trade	8,283	12.10%
Transportation and warehousing, and utilities	4,364	6.40%
Information	1,133	1.70%
Finance and insurance, and real estate and rental and leasing	2,898	4.20%
Professional, scientific, and management, and administrative and waste management services	5,650	8.30%
Educational services, and health care and social assistance	15,288	22.30%
Arts, entertainment, and recreation, and accommodation and food services	6,138	9.00%
Other services, except public administration	2,910	4.30%
Public administration	2,678	3.90%
CLASS OF WORKER		
Civilian employed population 16 years and over	68,461	68,461
Private wage and salary workers	57,672	84.20%
Government workers	7,996	11.70%
Self-employed in own not incorporated business workers	2,703	3.90%
Unpaid family workers	90	0.10%
INCOME AND BENEFITS (IN 2017 INFLATION-ADJUSTED DOLLARS)		
Total households	60,064	60,064
Less than \$10,000	4,571	7.60%
\$10,000 to \$14,999	2,989	5.00%
\$15,000 to \$24,999	6,129	10.20%
\$25,000 to \$34,999	6,319	10.50%
\$35,000 to \$49,999	8,964	14.90%
\$50,000 to \$74,999	11,813	19.70%
\$75,000 to \$99,999	7,746	12.90%
\$100,000 to \$149,999	7,689	12.80%
\$150,000 to \$199,999	2,202	3.70%
\$200,000 or more	1,642	2.70%
Median household income (dollars)	51,426	(X)
Mean household income (dollars)	66,215	(X)
With earnings		
Mean earnings (dollars)	44,385	73.90%
With Social Security	66,285	(X)
Mean Social Security income (dollars)	19,550	32.50%
With retirement income	18,325	(X)
Mean retirement income (dollars)	15,014	25.00%
With Supplemental Security Income	26,362	(X)
Mean Supplemental Security Income (dollars)	2,739	4.60%
	9,756	(X)

Selected Economic Characteristics		
With cash public assistance income	1,436	2.40%
Mean cash public assistance income (dollars)	2,544	(X)
With Food Stamp/SNAP benefits in the past 12 months	8,249	13.70%
Families	37,684	37,684
Less than \$10,000	2,028	5.40%
\$10,000 to \$14,999	995	2.60%
\$15,000 to \$24,999	2,168	5.80%
\$25,000 to \$34,999	2,971	7.90%
\$35,000 to \$49,999	5,233	13.90%
\$50,000 to \$74,999	8,348	22.20%
\$75,000 to \$99,999	6,244	16.60%
\$100,000 to \$149,999	6,341	16.80%
\$150,000 to \$199,999	1,865	4.90%
\$200,000 or more	1,491	4.00%
Median family income (dollars)	64,696	(X)
Mean family income (dollars)	79,889	(X)
Per capita income (dollars)	27,822	(X)
Nonfamily households	22,380	22,380
Median nonfamily income (dollars)	30,966	(X)
Mean nonfamily income (dollars)	40,333	(X)
Median earnings for workers (dollars)	29,749	(X)
Median earnings for male full-time, year-round workers (dollars)	47,613	(X)
Median earnings for female full-time, year-round workers (dollars)	36,817	(X)
HEALTH INSURANCE COVERAGE		
Civilian noninstitutionalized population	143,569	143,569
With health insurance coverage	133,348	92.90%
With private health insurance	99,725	69.50%
With public coverage	56,188	39.10%
No health insurance coverage	10,221	7.10%
Civilian noninstitutionalized population under 19 years	34,583	34,583
No health insurance coverage	1,140	3.30%
Civilian noninstitutionalized population 19 to 64 years	83,672	83,672
In labor force:	67,197	67,197
Employed:	62,570	62,570
With health insurance coverage	56,480	90.30%
With private health insurance	50,668	81.00%
With public coverage	7,683	12.30%
No health insurance coverage	6,090	9.70%
Unemployed:	4,627	4,627
With health insurance coverage	3,336	72.10%

Appendix

Selected Economic Characteristics		
With private health insurance	1,560	33.70%
With public coverage	1,950	42.10%
No health insurance coverage	1,291	27.90%
Not in labor force:	16,475	16,475
With health insurance coverage	14,889	90.40%
With private health insurance	8,873	53.90%
With public coverage	6,957	42.20%
No health insurance coverage	1,586	9.60%
PERCENTAGE OF FAMILIES AND PEOPLE WHOSE INCOME IN THE PAST 12 MONTHS IS BELOW THE POVERTY LEVEL		
All families	(X)	11.00%
With related children of the householder under 18 years	(X)	19.30%
With related children of the householder under 5 years only	(X)	22.90%
Married couple families	(X)	4.70%
With related children of the householder under 18 years	(X)	7.30%
With related children of the householder under 5 years only	(X)	6.30%
Families with female householder, no husband present	(X)	33.20%
With related children of the householder under 18 years	(X)	42.60%
With related children of the householder under 5 years only	(X)	48.70%
All people	(X)	14.60%
Under 18 years	(X)	23.00%
Related children of the householder under 18 years	(X)	22.60%
Related children of the householder under 5 years	(X)	27.00%
Related children of the householder 5 to 17 years	(X)	20.70%
18 years and over	(X)	12.10%
18 to 64 years	(X)	12.90%
65 years and over	(X)	9.70%
People in families	(X)	12.40%
Unrelated individuals 15 years and over	(X)	23.20%
Source: U.S. Census Bureau, American Community Survey, 5-Year Estimates 2013-2017.		
Note: Data is based on a sample count and is subject to sampling variability.		
An '(X)' means that an estimate is not applicable or available.		
The total counts of each subcategory are provided in absolute numbers and not percentage in the percent column.		

Selected Housing Characteristics

Selected Housing Characteristics		
Subject	Number	Percent
HOUSING OCCUPANCY		
Total housing units	66,063	66,063
Occupied housing units	60,064	90.90%
Vacant housing units	5,999	9.10%
Homeowner vacancy rate	2.2	(X)
Rental vacancy rate	10.1	(X)
UNITS IN STRUCTURE		
Total housing units	66,063	66,063
1-unit, detached	46,398	70.20%
1-unit, attached	2,707	4.10%
2 units	2,436	3.70%
3 or 4 units	2,281	3.50%
5 to 9 units	3,173	4.80%
10 to 19 units	2,404	3.60%
20 or more units	4,631	7.00%
Mobile home	2,026	3.10%
Boat, RV, van, etc.	7	0.00%
YEAR STRUCTURE BUILT		
Total housing units	66,063	66,063
Built 2014 or later	240	0.40%
Built 2010 to 2013	966	1.50%
Built 2000 to 2009	3,374	5.10%
Built 1990 to 1999	4,092	6.20%
Built 1980 to 1989	3,982	6.00%
Built 1970 to 1979	9,859	14.90%
Built 1960 to 1969	10,610	16.10%
Built 1950 to 1959	10,004	15.10%
Built 1940 to 1949	6,041	9.10%
Built 1939 or earlier	16,895	25.60%
ROOMS		
Total housing units	66,063	66,063
1 room	1,395	2.10%
2 rooms	1,256	1.90%
3 rooms	4,906	7.40%
4 rooms	10,506	15.90%
5 rooms	14,247	21.60%
6 rooms	12,805	19.40%
7 rooms	7,798	11.80%

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Selected Housing Characteristics		
8 rooms	5,520	8.40%
9 rooms or more	7,630	11.50%
Median rooms	5.6	(X)
BEDROOMS		
Total housing units	66,063	66,063
No bedroom	1,481	2.20%
1 bedroom	7,287	11.00%
2 bedrooms	21,549	32.60%
3 bedrooms	25,771	39.00%
4 bedrooms	7,819	11.80%
5 or more bedrooms	2,156	3.30%
HOUSING TENURE		
Occupied housing units	60,064	60,064
Owner-occupied	41,434	69.00%
Renter-occupied	18,630	31.00%
Average household size of owner-occupied unit	2.44	(X)
Average household size of renter-occupied unit	2.17	(X)
YEAR HOUSEHOLDER MOVED INTO UNIT		
Occupied housing units	60,064	60,064
Moved in 2015 or later	5,826	9.70%
Moved in 2010 to 2014	16,959	28.20%
Moved in 2000 to 2009	16,355	27.20%
Moved in 1990 to 1999	9,179	15.30%
Moved in 1980 to 1989	4,816	8.00%
Moved in 1979 and earlier	6,929	11.50%
VEHICLES AVAILABLE		
Occupied housing units	60,064	60,064
No vehicles available	4,835	8.00%
1 vehicle available	21,780	36.30%
2 vehicles available	23,269	38.70%
3 or more vehicles available	10,180	16.90%
HOUSE HEATING FUEL		
Occupied housing units	60,064	60,064
Utility gas	49,664	82.70%
Bottled, tank, or LP gas	1,672	2.80%
Electricity	7,945	13.20%
Fuel oil, kerosene, etc.	76	0.10%
Coal or coke	8	0.00%
Wood	126	0.20%

Selected Housing Characteristics		
Solar energy	7	0.00%
Other fuel	215	0.40%
No fuel used	351	0.60%
SELECTED CHARACTERISTICS		
Occupied housing units	60,064	60,064
Lacking complete plumbing facilities	177	0.30%
Lacking complete kitchen facilities	645	1.10%
No telephone service available	1,720	2.90%
OCCUPANTS PER ROOM		
Occupied housing units	60,064	60,064
1.00 or less	58,818	97.90%
1.01 to 1.50	905	1.50%
1.51 or more	341	0.60%
VALUE		
Owner-occupied units	41,434	41,434
Less than \$50,000	3,895	9.40%
\$50,000 to \$99,999	12,727	30.70%
\$100,000 to \$149,999	11,198	27.00%
\$150,000 to \$199,999	6,702	16.20%
\$200,000 to \$299,999	4,546	11.00%
\$300,000 to \$499,999	1,673	4.00%
\$500,000 to \$999,999	566	1.40%
\$1,000,000 or more	127	0.30%
Median (dollars)	115,600	(X)
MORTGAGE STATUS		
Owner-occupied units	41,434	41,434
Housing units with a mortgage	24,082	58.10%
Housing units without a mortgage	17,352	41.90%
SELECTED MONTHLY OWNER COSTS (SMOC)		
Housing units with a mortgage	24,082	24,082
Less than \$500	388	1.60%
\$500 to \$999	8,671	36.00%
\$1,000 to \$1,499	9,255	38.40%
\$1,500 to \$1,999	3,498	14.50%
\$2,000 to \$2,499	1,292	5.40%
\$2,500 to \$2,999	444	1.80%
\$3,000 or more	534	2.20%
Median (dollars)	1,132	(X)
Housing units without a mortgage	17,352	17,352

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Selected Housing Characteristics		
Less than \$250	1,776	10.20%
\$250 to \$399	4,151	23.90%
\$400 to \$599	6,435	37.10%
\$600 to \$799	3,010	17.30%
\$800 to \$999	1,154	6.70%
\$1,000 or more	826	4.80%
Median (dollars)	481	(X)
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI)		
Housing units with a mortgage (excluding units where SMOCAPI cannot be computed)	23,990	23,990
Less than 20.0 percent	12,593	52.50%
20.0 to 24.9 percent	3,681	15.30%
25.0 to 29.9 percent	2,485	10.40%
30.0 to 34.9 percent	1,666	6.90%
35.0 percent or more	3,565	14.90%
Not computed	92	(X)
Housing unit without a mortgage (excluding units where SMOCAPI cannot be computed)	17,206	17,206
Less than 10.0 percent	7,145	41.50%
10.0 to 14.9 percent	4,077	23.70%
15.0 to 19.9 percent	2,108	12.30%
20.0 to 24.9 percent	1,160	6.70%
25.0 to 29.9 percent	601	3.50%
30.0 to 34.9 percent	439	2.60%
35.0 percent or more	1,676	9.70%
Not computed	146	(X)
GROSS RENT		
Occupied units paying rent	17,838	17,838
Less than \$500	4,172	23.40%
\$500 to \$999	10,516	59.00%
\$1,000 to \$1,499	2,526	14.20%
\$1,500 to \$1,999	384	2.20%
\$2,000 to \$2,499	69	0.40%
\$2,500 to \$2,999	51	0.30%
\$3,000 or more	120	0.70%
Median (dollars)	692	(X)
No rent paid	792	(X)

Selected Housing Characteristics		
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI)		
Occupied units paying rent (excluding units where GRAPI cannot be computed)	17,440	17,440
Less than 15.0 percent	3,077	17.60%
15.0 to 19.9 percent	2,348	13.50%
20.0 to 24.9 percent	2,338	13.40%
25.0 to 29.9 percent	1,800	10.30%
30.0 to 34.9 percent	1,576	9.00%
35.0 percent or more	6,301	36.10%
Not computed	1,190	(X)
Source: U.S. Census Bureau, American Community Survey, 5-Year Estimates 2013-2017.		
Note: Data is based on a sample count and is subject to sampling variability.		
An '(X)' means that an estimate is not applicable or available.		
The total counts of each subcategory are provided in absolute numbers and not percentage in the percent column.		

Selected Demographic and Housing Estimates

Demographic and Housing Estimates		
Subject	Estimate	Percent
SEX AND AGE		
Total population	146,205	146,205
Male	72,053	49.30%
Female	74,152	50.70%
Sex ratio (males per 100 females)	97.2	(X)
Under 5 years	9,371	6.40%
5 to 9 years	9,156	6.30%
10 to 14 years	8,920	6.10%
15 to 19 years	9,207	6.30%
20 to 24 years	9,204	6.30%
25 to 34 years	18,345	12.50%
35 to 44 years	17,155	11.70%
45 to 54 years	18,353	12.60%
55 to 59 years	10,500	7.20%
60 to 64 years	9,820	6.70%
65 to 74 years	14,383	9.80%
75 to 84 years	8,038	5.50%
85 years and over	3,753	2.60%
Median age (years)	40	(X)
Under 18 years	32,813	22.40%
16 years and over	117,081	80.10%
18 years and over	113,392	77.60%
21 years and over	107,442	73.50%
62 years and over	31,797	21.70%
65 years and over	26,174	17.90%
18 years and over	113,392	113,392
Male	55,288	48.80%
Female	58,104	51.20%
Sex ratio (males per 100 females)	95.2	(X)
65 years and over	26,174	26,174
Male	11,500	43.90%
Female	14,674	56.10%
Sex ratio (males per 100 females)	78.4	(X)
RACE		
Total population	146,205	146,205
One race	141,016	96.50%
Two or more races	5,189	3.50%

Demographic and Housing Estimates		
One race	141,016	96.50%
White	119,259	81.60%
Black or African American	14,573	10.00%
American Indian and Alaska Native	483	0.30%
Cherokee tribal grouping	22	0.00%
Chippewa tribal grouping	31	0.00%
Navajo tribal grouping	10	0.00%
Sioux tribal grouping	48	0.00%
Asian	3,517	2.40%
Asian Indian	820	0.60%
Chinese	348	0.20%
Filipino	419	0.30%
Japanese	28	0.00%
Korean	368	0.30%
Vietnamese	221	0.20%
Other Asian	1,313	0.90%
Native Hawaiian and Other Pacific Islander	53	0.00%
Native Hawaiian	2	0.00%
Guamanian or Chamorro	18	0.00%
Samoan	4	0.00%
Other Pacific Islander	29	0.00%
Some other race	3,131	2.10%
Two or more races	5,189	3.50%
White and Black or African American	2,249	1.50%
White and American Indian and Alaska Native	590	0.40%
White and Asian	432	0.30%
Black or African American and American Indian and Alaska Native	64	0.00%
Race alone or in combination with one or more other races		
Total population	146,205	146,205
White	124,010	84.80%
Black or African American	17,478	12.00%
American Indian and Alaska Native	1,429	1.00%
Asian	4,357	3.00%
Native Hawaiian and Other Pacific Islander	233	0.20%
Some other race	4,416	3.00%
HISPANIC OR LATINO AND RACE		
Total population	146,205	146,205
Hispanic or Latino (of any race)	18,361	12.60%
Mexican	15,965	10.90%
Puerto Rican	1,112	0.80%
Cuban	140	0.10%
Other Hispanic or Latino	1,144	0.80%
Not Hispanic or Latino	127,844	87.40%
White alone	106,163	72.60%
Black or African American alone	14,074	9.60%

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Demographic and Housing Estimates		
American Indian and Alaska Native alone	310	0.20%
Asian alone	3,506	2.40%
Native Hawaiian and Other Pacific Islander alone	53	0.00%
Some other race alone	177	0.10%
Two or more races	3,561	2.40%
Two races including Some other race	12	0.00%
Two races excluding Some other race, and Three or more races	3,549	2.40%
Total housing units	66,063	(X)
CITIZEN, VOTING AGE POPULATION		
Citizen, 18 and over population	107,083	107,083
Male	52,060	48.60%
Female	55,023	51.40%
Source: U.S. Census Bureau, American Community Survey, 5-Year Estimates 2013-2017.		
Note: Data is based on a sample count and is subject to sampling variability.		
An '(X)' means that an estimate is not applicable or available.		
The total counts of each subcategory are provided in absolute numbers and not percentage in the percent column.		

Chapter 6 Additional Resources

Lower Pennsylvanian Clay Resources of Rock Island, Mercer and Henry Counties, Illinois by Walter E. Parham, 1961, Illinois State Geological Survey Circular 322

Soil Survey of Rock Island County, Illinois created by the United States Department of Agriculture and the Natural Resources Conservation Service in cooperation with the Illinois Agricultural Experiment Station. A printed or electronic copy of the current soil survey document was not available at the time of this writing.

Current inter active soil maps for Rock Island County can be found at the U.S. Department of Agriculture Web Soil Survey (WSS) website. <http://websoilsurvey.nrcs.usda.gov/app/>

Glacial Drift in Illinois: Thickness and Character, Kemal Piskin and Robert Bergstrom, Illinois State Geological Survey Circular 490, 1975

Lower Rock River Assessment: Volume 1 Geology, 1998, Illinois Department of Natural Resources DNR Clearinghouse

Copperas Creek Watershed Based Plan, Rock Island Soil and Water Conservation District, 2013

Further details on soil descriptions, locations, suitability, limitations, and management for specified uses can be found in the ***Soil Survey of Rock Island County, Illinois*** issued September 1996 by the United States Department of Agriculture, Natural Resource Conservation Service. This information is also online at the Natural Resource Conservation Service (NRCS) Soil Data Mart.

Groundwater Conditions of the Principal Aquifers of Lee, Whiteside, Bureau, and Henry Counties, Illinois by Stephen L. Burch, Groundwater Section, Illinois State Water Survey, A Division of the Illinois Department of Natural Resources, 2004, Data/Case Study 2004-01.

Groundwater Geology in Western Illinois, North Part by Robert E. Bergstrom, Division of the Illinois State Geological Survey, Circular 222, 1956.

Paha Ridge Landform Features of Iowa, Iowa Geological Survey, 2006.

Stratigraphy and origin of the paha topography of northwestern Illinois, Ronald C. Flemal, Edgar Odom, Ronald G. Vail; Department of Geology, Northern Illinois University, De Kalb, Illinois

The Mississippi Valley Between Savanna and Davenport: Issue 13, Joel Ernest Carman, January 1, 1910, University of Illinois, Illinois State Geological Survey

Limestone Resources of Illinois, 1925, by Krey, Frank; Lamar, J. E., joint author. Published by the Illinois Geological Survey.

2010 Keystone Coal Industry Manual, Mining Informational Services of the McGraw-Hill Mining Publications

2009 Proximity Report - The Proximity of Underground Mines to Urban and Developed Lands in Illinois. Secretary of State, Illinois 2009.

Strippable Coal Reserves of Illinois Part 5B - Mercer, Rock Island, Warren, and parts of Henderson and Henry Counties, T.K. Searight and W. H. Smith, Illinois State Geological Survey Circular 439, 1969

Rock Island County Hazard Mitigation Plan, Bi-State Regional Commission, 2016