



KEITH
Creek
CORRIDOR STUDY

STATE OF KEITH
CREEK SUMMARY
03/31/2022

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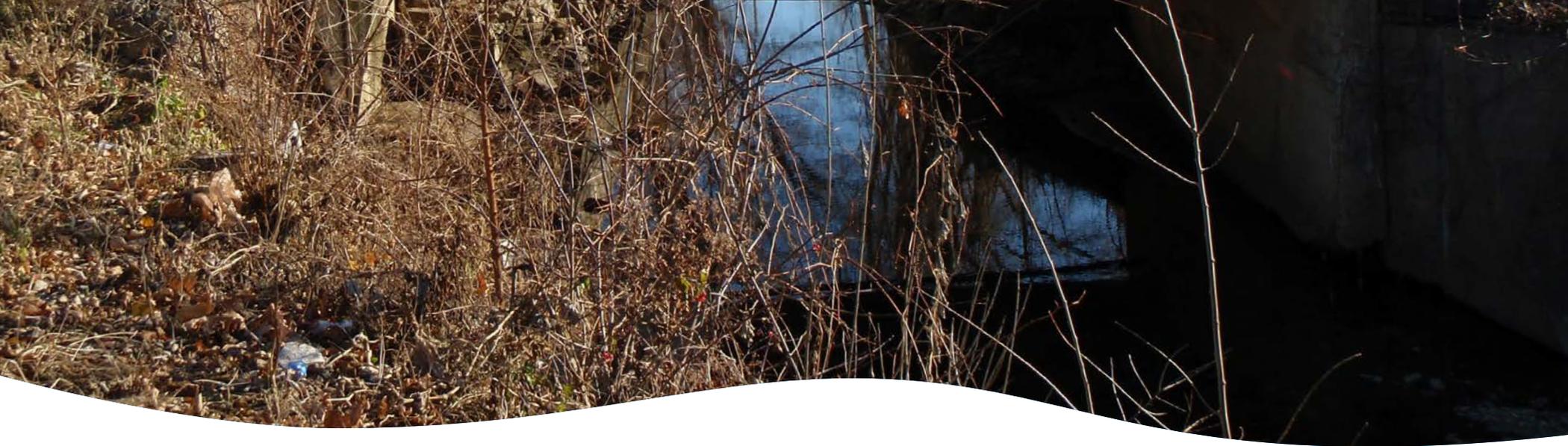
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Section 1

INTRODUCTION



PROJECT OVERVIEW & PURPOSE

Region 1 Planning Council (RPC) is a special-purpose, regional government agency that provides a wide variety of services responsive to member and community needs, including transportation planning, land use planning, and research and analytics. RPC requested proposals from qualified teams for completing a corridor study with special emphasis on the north branch of Keith Creek. Keith Creek begins in western Boone County and travels southwest through the City of Rockford, Illinois, before converging with the Rock River just south of Morgan Street in southeast Rockford. The creek travels through natural areas, parks, urban neighborhoods, and channelized routes for approximately 20 miles. It also travels through undeveloped land, neighborhoods, under several arterial roads, and includes some utilities. The Keith Creek watershed consists of approximately 14.2 square miles of drainage area and provides an excellent opportunity to invest in a historically disadvantaged area of the City of Rockford.

Issues, needs, and opportunities as they relate to the Keith Creek corridor Existing Conditions Report include a data profile featuring demographics, community assets, land use, environmental, and transportation background.

Development scenarios, a phased development timeline, and funding options will be provided with the Final Report. We reviewed key land use, environmental, development, and transportation documents as part of the Existing Conditions Report.

Rockford is a medium-sized community in the northern portion of Illinois. It is accessible via Interstate 90 and other regional roadways. It is located about 16 miles south of Wisconsin and has a population of about 152,000. Rockford was incorporated as a City in 1852. Keith Creek feeds into the Rock River which is Rockford's most recognizable natural feature.



PROJECT GOALS

- Planning and redeveloping projects along a major natural resource.
- Identifying an improved greenway that offers equitable access to alternative transportation.
- Improving protection of and access to natural resources.
- Supporting infrastructure improvements (e.g. drainage, sidewalks, natural culverts, etc.).
- Increasing the resiliency of the corridor through planning and redevelopment projects.
- Supporting economic redevelopment through planning and redevelopment opportunities that exist.
- Coordinating efforts between municipalities and organizations to control and mitigate flooding throughout the watershed.

COMMUNITY ENGAGEMENT SUMMARY

In order to ensure the success of the Keith Creek Corridor Study planning process, it is essential to engage a broad and diverse cross-section of the community. Before the planning process began, The Lakota Group created a Community Engagement Plan that identified potential stakeholders, including key community organizations, governmental entities, businesses, neighborhood groups, transportation organizations, medical institutions, educational institutions and more. The Engagement Plan also outlined a number of community engagement events and milestones. The information gathered through community engagement thus far has helped to inform the State of Keith Creek Summary Report. Future engagement will help the planning team to craft the final Keith Creek Corridor Plan. For the Keith Creek Corridor Plan, community engagement has begun and will continue throughout the planning process until the final plan is delivered.

INITIAL ENGAGEMENT

PROJECT KICK-OFF MEETING WITH RPC

The project team and RPC met on August 17, 2021 to discuss the following:

- Planning Mission and Project Goals
- Mobility Strengths/Weaknesses
- Work Plan
- Data and Resources
- Previous Area Studies and Plans
- Previous and Current Major Projects
- Identification of Key Stakeholders

PROJECT BRAND AND WEBSITE

The Lakota Group created a project-specific brand and website in order to encourage project recognition and provide an online resource for project updates, such as draft and final plans, graphics, reports, online surveys, polls, and more.

STAKEHOLDER INTERVIEWS

The project team conducted stakeholder interviews from October to November of 2021. Stakeholders were divided into the following groups and interviewed:

- Elected Officials and City Leaders
- Natural Resource Conservationists
- Community Planning and Transportation Representatives
- Businesses
- Community Organizations and Educational Institutions
- Neighborhood Organizations

Stakeholders were able to share their thoughts about their perceptions of Keith Creek, their goals and visions for the Creek and surrounding neighborhoods, their hopes for development and programming along the Creek and within surrounding neighborhoods, access to the creek and transportation throughout the Study Area, flooding, and existing conditions. Stakeholder feedback was gathered and recorded in order to inform Phase 2 development scenarios and the final plan.

WORKING GROUP SESSION

A working group session was held in March of 2022 in order to review the Draft Keith Creek Summary Report and present initial findings.



Community Engagement Example

COMMUNITY ENGAGEMENT SUMMARY

FUTURE ENGAGEMENT

COMMUNITY WORKSHOPS

In collaboration with RPC and the project Working Group, the planning team will host and facilitate three Community Open Houses or workshops over the course of the project. These events will provide a “Stations-Style” format where the planning team members can discuss topics with stakeholders related to the corridor physical conditions, land uses, transportation, green space access, development opportunities, and other issues and opportunities. Exhibits will be prepared from the State of Keith Creek Summary Report that will be used at these stations to guide discussions and engage participants as well as development scenarios and imagery as the process progresses.

STAKEHOLDER MEETINGS

The planning team will continue to conduct a series of stakeholder interviews and focus group discussions with key City and area leaders, working group members, business and property owners, special interest groups, and other interested stakeholders. This will help stakeholders stay involved in the project as it progresses.

WORKING GROUP SESSIONS

The working group will be continuously engaged throughout the planning process. This will help to guide the project and to get input on preferred direction and priorities. These sessions will assist the planning team as concepts are refined.

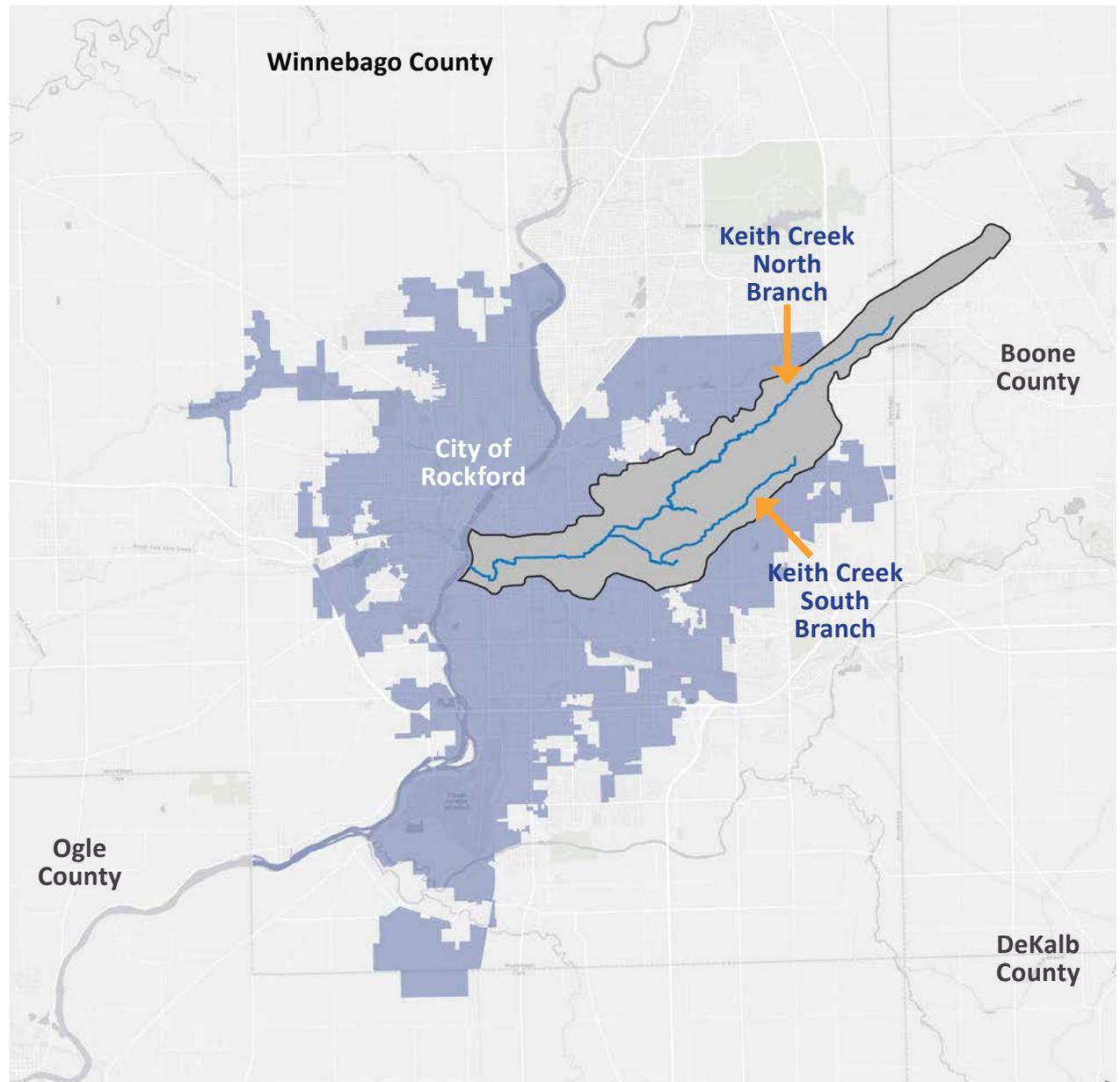


Community Engagement Example

REGIONAL CONTEXT

Keith Creek is comprised of a two-branch creek system which runs primarily south and west through the City of Rockford before converging with the Rock River. The Study Area includes both the north and south branches of Keith Creek. The north branch originates in western Boone County, where the land use is a mix of agricultural and low-density residential. This portion of the creek is also located on the eastern border of the City of Loves Park. The south branch originates in eastern Winnebago County near Bell School Road, where the land use is similar to that of the north branch. The confluence of the two branches is just west of the intersection of Fairview Avenue and East State Street. From there, Keith Creek continues through pre-1950s era development and is channelized in a number of sections until it flows into the Rock River.

Figure 1: Regional Context Map



EASTERN SECTIONS

Generally, the most eastern sections of the north and south branch meander through a suburban-style land use transect consisting of light commercial, low-density residential, and extant naturalized areas. Greenfield development has proliferated in this section of the Study Area in recent years. The addition of the Perryville Promenade commercial center and the commercial development occurring in the Riverside/ Interstate 90 corridor suggest that this area will continue to develop with similar commercial as well as residential uses in the future.



Keith Creek near Spring Brook Road and Lyford Road

WESTERN SECTIONS

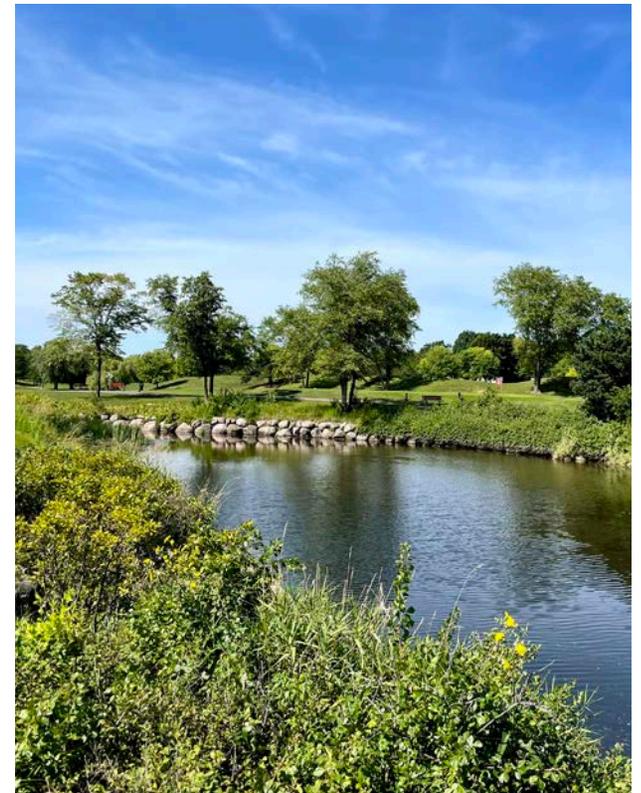
The western section of the creek meanders through some of the oldest residential neighborhoods as well as near some of the early industrial properties in the city. This section of the creek cuts through a grid-type street system comprised of homes and industrial properties. Culverts and bridges are very prevalent in this area.



Old industrial buildings near 7th Street and Railroad Avenue

GREEN SPACE

Throughout its extent the creek passes through or near 11 parks, all of which are owned and managed by the Rockford Park District (RPD). In addition, it passes through two golf courses, one private and one public, as well as alongside three private educational institutions' green space: Rockford University, Spectrum Progressive Schools, and Rockford Christian School.



Aldeen Golf Course

STUDY SUB-AREAS

The Keith Creek study area spans over twenty miles, is comprised of numerous neighborhoods and communities, and is home to over 30,000 residents. For this reason, the Existing Conditions Report divides the Study Area into four distinct Sub-Areas. The sections of this report examine the Study Area as a whole and then touch upon each of the Sub-Areas in order to better understand the particular characteristics of each.

SUB-AREA 1

Sub-Area 1 is bounded by the Rock River to the west and 20th Street/Rockford Avenue to the east. This Sub-Area is decidedly the most urban of the four, with the streets being established on a grid, and land uses typifying a compact, pre-World-War II development pattern. Concurrently, the creek is less naturalized within this Sub-Area. Upon exiting the underground section in Charles and 20th Street corridor, the creek moves into a channelized area between 9th and 18th Streets. This section has a sanitary sewer directly underneath the creek installed in 1932 and was then channelized by way of a Work Progress Administration project beginning in 1935. Two 100-year floods in 2006 and 2007 led to the acquisition and demolition of over 100 residential properties, which has resulted in green space in the interim. West of 9th Street, the creek flows through both commercial and residential properties, continues into 10th Avenue Park, and is then piped through the Joe Behr property before daylighting into Seminary Street and exiting at the Rock River. It should be noted that the damage and long-term effects from flooding has been felt most acutely in Sub-Area 1.

Previous flood control projects including the WPA-funded channelization efforts in the 1930s along with the construction of the Alpine Dam in 1940 can be viewed as a response to control the flooding of what was then known as southeast Rockford.

SUB-AREA 2

Sub-Area 2 is generally bounded by 20th Street/Rockford Avenue to the west and Alpine Road to the east. When compared to Sub-Areas 3 and 4, both branches of the creek run through particularly more urban conditions and less naturalized conditions, especially concerning riparian buffers and natural creek bends.

Upon exiting Aldeen Park and Alpine Dam, the north branch of Keith Creek flows between Morsay Drive to the south and the Alpine Ridge neighborhood to the north until it runs underneath Fairview Boulevard and East State Street/US-20. The south branch of the creek flows through Alpine Hills park and underneath surface parking designated for a now-demolished shopping area until it meets up with the north branch of the creek north of Glendale Avenue.

After flowing through Dahlquist Park and Twin Sisters Park, the creek flows around the Schnucks grocery store parking lot, underneath Hunter Avenue, and then underground through Charles Street and 20th Street before reaching a channelized section in Sub-Area 1.

With the exception of the Rockford Plaza and the Miracle Mile shopping district, Sub-Area 2 is comprised primarily of low- to medium-density residential properties, most of which were constructed during the 1940s to 1960s.

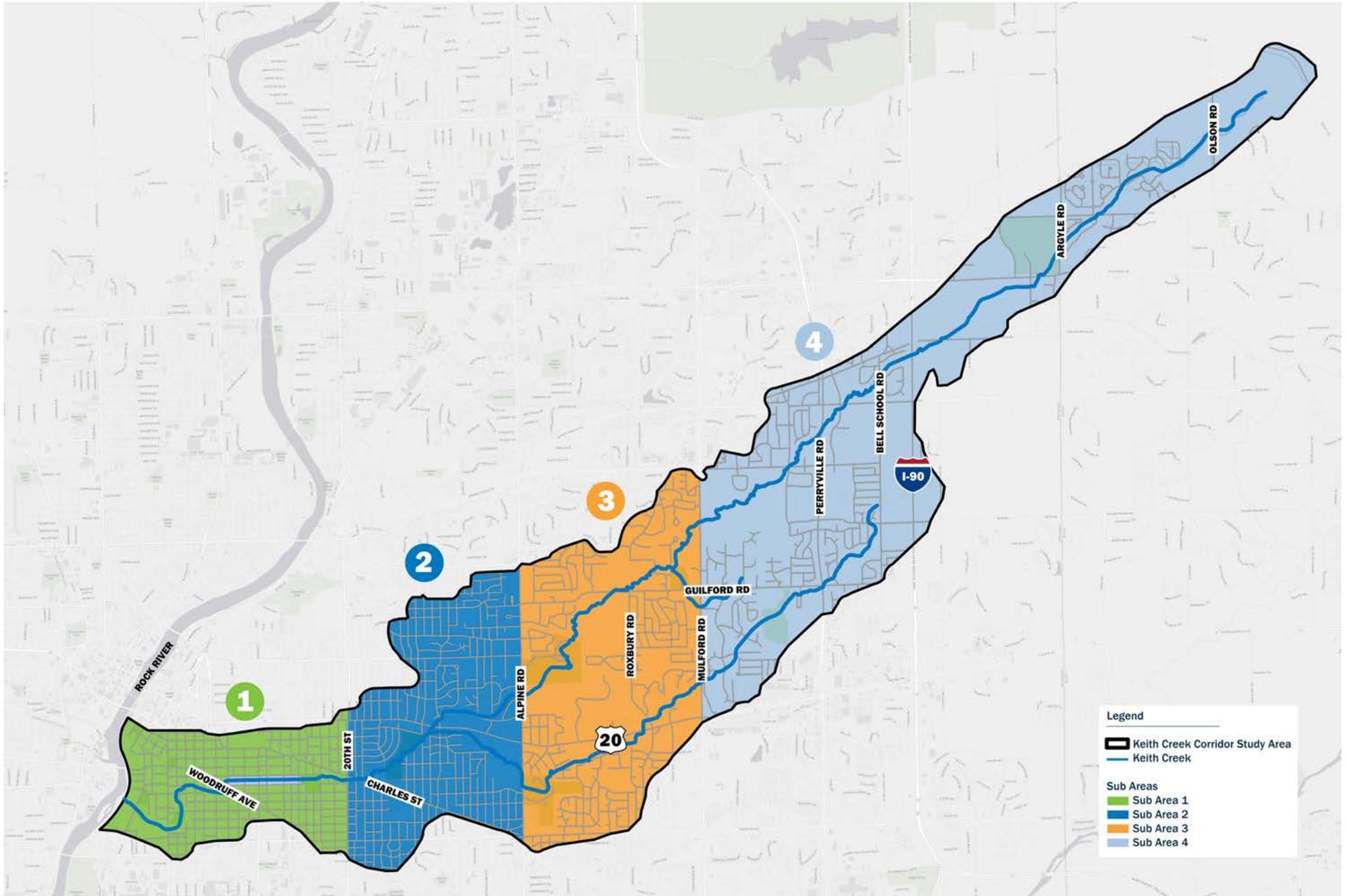
SUB-AREA 3

Sub-Area 3 includes both branches of Keith Creek and is generally bounded by Alpine Road to the west and Mulford Road to the east. The north branch of the creek flows southwest through large recreational destinations including Mauh-Nah-Tee-See Golf Club and Aldeen Park, the latter of which includes the Alpine Dam. The majority of the south branch flows southwest through a large commercial district that includes retail, restaurant, and medical institutions among other uses.

SUB-AREA 4

Sub-Area 4 includes the points of origin for both the north and south branches of Keith Creek. This Sub-Area is bounded by Mulford Road to the west and approximate to Beloit Road to the east. This Sub-Area is particularly unique among other Sub-Areas in that it is multi-jurisdictional; the City of Rockford, the Village of Loves Park, and Boone County all have boundaries within Sub-Area 4. Sub-Area 4 is comprised of low-density, suburban land uses, most of which has been constructed in the last few decades. With the exception of recreational destinations such as Aldeen Golf Club, Midway Village, and Sportscore Two, a large portion of the creek abuts private residential properties. Commercial development has proliferated in this Sub-Area, and there are active capital improvements underway at the time of this report.

Figure 2: Sub-Area Map



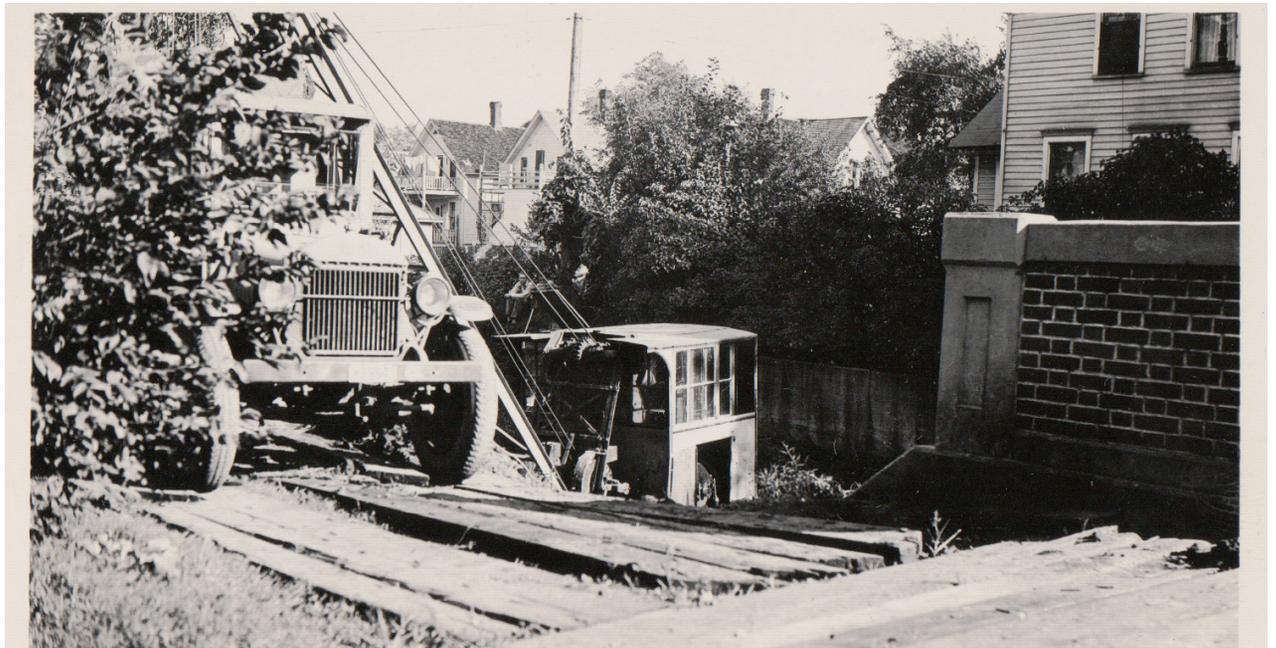
KEITH CREEK HISTORY

OVERVIEW

Before the settlement of the area in the early 1800s, the landcover in the Keith Creek watershed was a combination of forest and prairie. As the City of Rockford developed, homes and industry started populating the westernmost part of the watershed where the creek meets the Rock River. From there, development moved eastward. For most of Rockford's history, the eastern reaches of Keith Creek were used as agricultural land and farms abutted the creek.



Archival Image of Keith Creek ca. 1949, looking northwest from East State St/US Bus 20 and Alpine Road. Photo courtesy of Robert Anderson.



Archival Image ca. 1940 showing the installation of sanitary sewer main placed directly under Keith Creek. Approximate location is likely between 9th Street and 18th Street. Photo courtesy of Midway Village Museum collection.

RECURRING FLOODING

Although flooding is a natural and common occurrence with Keith Creek, the development of land within the floodplain has resulted in floods that cause more severe property damage and greater public health risks.

The below timeline shows that there have been at least 13 flood events in the last 140 years, with the earliest record going back to 1883. Most of these events were headline articles in the local newspaper and were given substantial coverage. It is likely that the number of total flood events is much higher than detailed below, as smaller flood events may not have been discovered at the time of this report or potentially not documented at all. The timeline also includes dates for significant flood control and mitigation projects, which were typically executed a few years after a major flooding event. Sources include the Rockford Morning Star, Rockford Gazette, Rockford Daily Register-Gazette, Rockford Republic, Rockford Register Star.

- 1883 A Rockford Gazette news article from 1883 reports on the flooding of Keith Creek and the threat the flood waters posed to lumber piles at the Forest City Furniture Factory.
- 1890 A flood event occurred in June of this year.
- 1892 A flood event occurred in June of this year.
- 1922 A flood occurred in February of this year and this was the earliest record of a flood-related fatality.
- 1926 Floods occurred in March, June, and August of this year. A news article from 1926 indicates that the newly built housing was experiencing flooding damage during heavy rain events. A news article from this year is the earliest record of plans to consider a dam for Keith Creek.

- 1928 A flood occurred in January of this year.
- 1935 In October of this year the Works Progress Administration (WPA) projects related to Keith Creek begin, including channelization and rip-rap, between Kishwaukee and 18th Streets.
- 1936 The City of Rockford receives a second round of WPA funding. In total, WPA-funded Keith Creek improvements included 15,000 feet of channelization, 10,000 linear feet of rip-rap on the bank, and 7,500 feet of stones on the creek floor.
- 1937 Residential Security Maps, also commonly referred to as redlining maps, indicate the area around Churchill Park, the area now known as Keith Creek neighborhood was identified as “Grade D”. Clarifying remarks from the notes indicate that “Keith Creek at times overflows its banks and floods adjacent areas, however, there are improvements in process to correct this.” This shows how continued flooding began to influence investment in the area, as well as development patterns.
- 1938 According to the Rockford Register Republic, a large flood drives hundreds out of their homes and prompts an emergency action to provide aid to flood refugees.
- 1939 The WPA provides additional funding to complete the riprapping and channel pavement of Keith Creek.
- 1940 In May of this year construction begins on the Keith Creek impounding dam, now known as the Alpine Dam at Aldeen Park. According to a July 7, 1940 Rockford Morning Star article, the purpose of the dam was to “protect the southeast end residential area from ‘flash’ floods.” The dam was a WPA project.

- 1952 A flood event occurred in July of this year.
- 1973 A flood event occurred in April of this year.
- 2006 A 100-year flood event occurs in September, resulting in the damage of at least 700 residences. 70-80 businesses sustained damage and 70-90 residents were displaced from their homes.
- 2007 Keith Creek sustains another 100-year flood event in August of this year.
- 2009 In October the first demolition related to the buy-out of homes in the floodplain that were damaged after the 2006-2007 floods. Acquisition and demolition of over 115 homes continued through 2011.
- 2012 Army Corps of Engineers completes Feasibility Study for flood protection along Keith Creek.
- 2018 A 100-year flood occurs, with over 5 inches of rain falling in a four hour period.



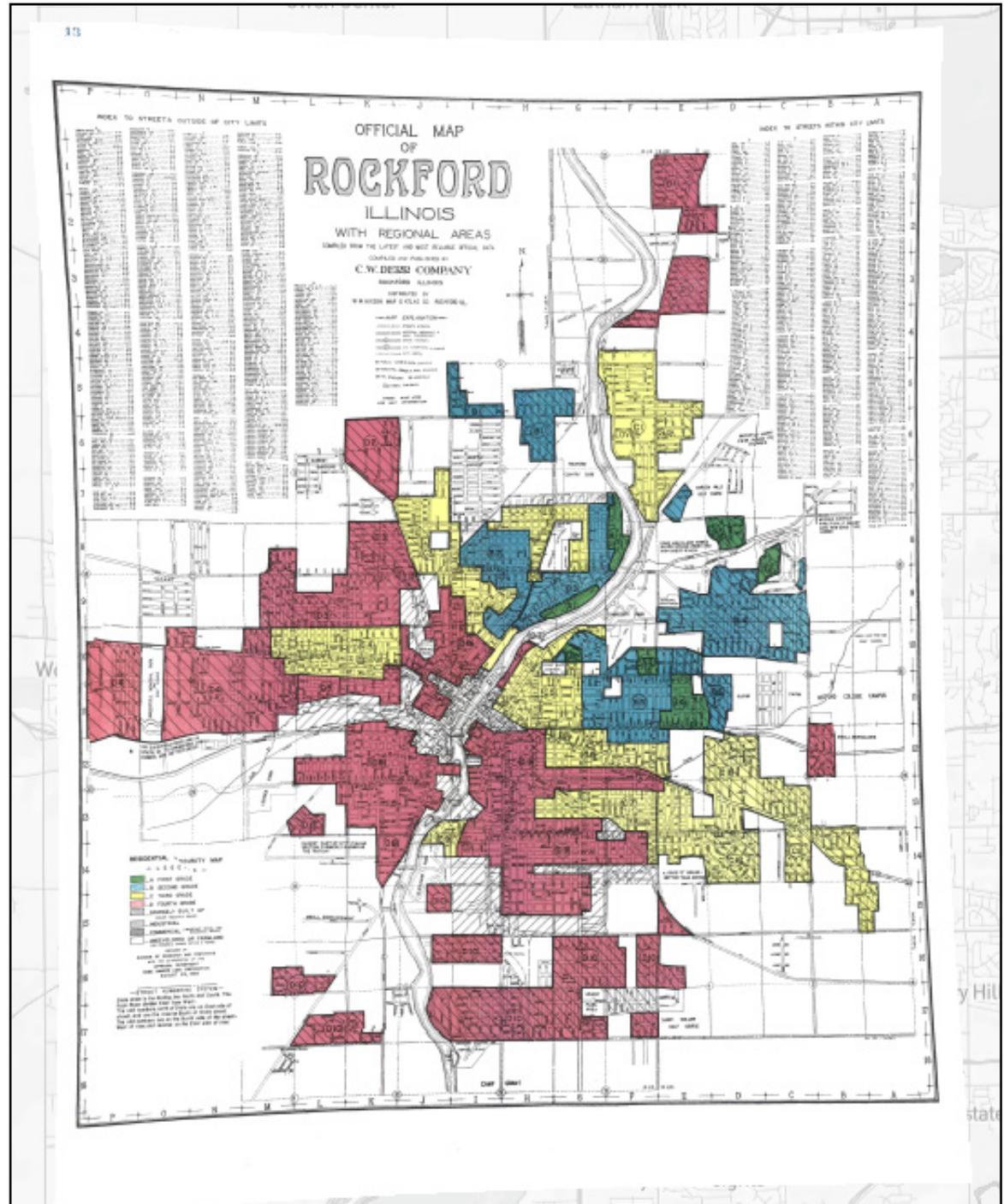
Charles Street Flooding

RESIDENTIAL SECURITY MAPS & REDLINING

Residential Security Maps, also commonly referred to as redlining maps, were created in 1930's by the federal agency, the Home Owners' Loan Corporation. The map for Rockford indicates the area around Churchill Park, the area now known as Keith Creek neighborhood, was identified as Grade D, which is the lowest grade assigned. On the map, the boundaries for Grade D are identified in red, hence the term "redlining". This information is relevant because it identifies a point in time when federal agencies deemed the area as unfit for investment. The challenges and barriers that this set up denied investment for a significant period of time, the legacy of which continues on, as indicated by the current demographic data.

The Area Description that accompanies the map contains data points related to home ownership rates, home price ranges, rent ranges, and rental demand amongst others. When comparing these data points to current data, there are notable similarities. Many issues continue to this day: the flooding issues identified then, the lower home ownership rates, and the higher rates of poverty. The Description notes that for "Home Purchase" and "Home Building" that there is "None" in terms of Availability of Mortgage Funds. This cut off funding for home investment purposes. Foreign born families were indicated at 10% with an increasing population in the 1937 data. Current data shows that this area, especially Census tracts 12 and 18 have high percentages of Non-English speaking residents, one of the highest concentrations in the City.

Clarifying remarks from the notes indicate that "Keith Creek at times overflows its banks and floods adjacent areas, however, there are improvements in process to correct this." This alludes to how the continued flooding influenced disinvestment in the area as well as development patterns.



Rockford Residential Security Map

AREA DESCRIPTION - SECURITY MAP OF Rockford, Ill.

1. AREA CHARACTERISTICS:

- a. Description of Terrain. Level
- b. Favorable Influences. Schools - Utilities and close in transportation
- c. Detrimental Influences. Northwest part of area close to business
- d. Percentage of land improved 95 %; e. Trend of desirability next 10-15 yrs. Down

2. INHABITANTS:

- a. Occupation Mixed; b. Estimated annual family income \$ 500-1200
- c. Foreign-born families 10 %; Swedish & Italian predominating; d. Negro = %; = %
- e. Infiltration of Above; f. Relief families Mary
- g. Population is increasing Yes; decreasing -; static -

3. BUILDINGS:

- | | | | | | | |
|-------------------------|------------------------------------|-------|---|---------|------------|---------|
| | PREDOMINATING | 100 % | OTHER TYPE | _____ % | OTHER TYPE | _____ % |
| a. Type | <u>Singles - 2 story</u> | | <u>north of 12th avenue and bungalows on south</u> | | | |
| b. Construction | <u>Frame</u> | | | | | |
| c. Average Age | <u>55</u> Years | | | | | |
| d. Repair | <u>Poor</u> | | | | | |
| e. Occupancy | <u>95</u> % | | | | | |
| f. Home ownership | <u>60</u> % | | | | | |
| g. Constructed past yr. | <u>None</u> | | | | | |
| h. 1929 Price range | \$ <u>2500-5000</u> <u>100</u> % | | No. of Broadway <u>2500-5000</u> - So. of Broadway <u>1800-3500</u> | | | |
| i. 1932 Price range | \$ <u>2000-4500</u> <u>80-90</u> % | | | | | |
| j. 1938 Price range | \$ <u>1500-3000</u> <u>83-85</u> % | | | | | |
| k. Sales demand | \$ <u>-</u> | | | | | |
| l. Activity | <u>Poor</u> | | | | | |
| m. 1929 Rent range | \$ <u>25-35</u> <u>100</u> % | | | | | |
| n. 1932 Rent range | \$ <u>15-27.50</u> <u>60-78</u> % | | | | | |
| o. Rent range | \$ <u>20-35</u> <u>80-100</u> % | | | | | |
| p. Rental demand | \$ <u>27.50</u> | | | | | |
| q. Activity | <u>Good</u> | | | | | |

4. AVAILABILITY OF MORTGAGE FUNDS: a. Home purchase None; b. Home building None

5. CLARIFYING REMARKS:

Property north of Broadway better class and commands higher rental - property south is mostly 1 story bungalow type and cheaper rentals and property value Keith Creek at times overflows its banks and floods adjacent areas, however, there are improvements in process to correct this. Upkeep poor - very spotted. An old area with poor income group.

6. NAME AND LOCATION _____ SECURITY GRADE D AREA NO. 9

"Keith Creek at times overflows its banks and floods adjacent areas, however, there are improvements in process to correct this. Upkeep poor - very spotted. An old area with poor income group." - Rockford, Illinois Security Map Area Description

EXISTING PLANS & PLANNING EFFORTS

In the past 20 years, there have been numerous planning efforts that have focused on or included the Keith Creek area. These vary from landscape and public space planning efforts to water quality studies.

PATRIOT'S GATEWAY PLANNING

In 2005, Studio GWA (previously known as Gary W. Anderson & Associates) conducted some visionary planning on behalf of Patriot's Gateway, planning for a kid's training golf course near their property. That blossomed into a visionary linear links course along the creek, and then expanded the thinking into a linear park along the creek. Following this visioning effort, the Midtown Business Association hosted a number of resident meetings as a means to keep momentum going.

GREENWAYS PLAN

The 2005 Greenways Plan from Region 1 Planning Council (formerly Rockford Metropolitan Agency for Planning or 'RMAP') mentions Keith Creek. RPC's 2015 Greenways Plan also shows a Keith Creek Greenway identified in its overall planning document.

BEE BRANCH CASE STUDY

In 2017, Brad Roos of the Midtown District helped organize a visit to the Bee Branch Creek project in Dubuque, IA as a case study example. The Bee Branch offered a tangible example of creeks being daylight, which not only helped with flood mitigation, but also provided community assets along the creek and improved housing conditions.

WATER QUALITY STUDY

In 2019, Zion Development obtained an AmeriCorps VISTA member to assist with efforts toward the creek. This included neighborhood outreach to maintain momentum as well as reviewing funding opportunities for future work. Notably, one funding opportunity that became available was the Section 319 Grant from the Illinois Environmental Protection Agency (IEPA), which could be used to hire a consultant to complete a Nine Elements water quality study. Zion Development was awarded the grant in 2020, with a 40% match from the City of Rockford. Resource Environmental Solutions (RES) was hired as the consultant to conduct the study. As of the date of this report the water quality study is approximately 50% complete.

CAPITAL IMPROVEMENT PLANNING PROJECTS

The City of Rockford has invested in a number of improvements in recent years related to Keith Creek including:

- Rehabilitation of Alpine Dam at Aldeen Park
- Removal of 8th Street Bridge
- Stabilization of eroding streambank from 5th St. to Railroad Ave.
- Bank stabilization at Fairview Ave. and at 7th St.
- Bridge removal at 5th, 10th, 12th, and 13th Streets.
- Culvert repair at Charles St. and 22nd St.
- Seminary St. bridge reconstruction

Additionally, the 2022-2026 Capital Improvement Plan outlines improvements to the 8th Avenue bridge over Keith Creek (\$800,000) and Phase 2 improvements to Alpine Dam (\$1 million). The Rockford Park District has also made efforts to address creek bank stabilization at Alpine Park and are planning for additional stabilization at Alpine Hills Park.



Bee Branch Creek, Iowa



Alpine Dam

DIVERSITY, EQUITY, AND INCLUSION (DEI) ANALYSIS

In addition to a broader demographic analysis of the Study Area, the City of Rockford, and Winnebago County, this report includes a Diversity, Equity, and Inclusion (DEI) analysis. The DEI analysis takes a close look at certain demographic factors in specific census tracts located within the Keith Creek Study Area. These tracts include 6, 10-18 and 21. Each of these tracts is located in Community Development Block Grant (CDBG) eligible areas and areas with low-income concentrations. CDBG eligible areas are determined by the U.S. Department of Housing and Urban Development (HUD). HUD identified areas that are in need of neighborhood revitalization, economic development, and improved community facilities and services. The census tracts that are analyzed in this report each have lands abutting or in close proximity to Keith Creek and its southern branch. This analysis uses the most recently available census tract-level data from the American Community Survey 2015-2019 5-year Estimates. The data accounts for the entire census tract, rather than only the portion of the census tract that is within the Study Area. Therefore, some figures may differ slightly from the overall demographic analysis. Census tracts that are located outside of the City of Rockford are not included in the analysis.

DEI factors have been selected because they are either indicative of barriers faced by a population (e.g. Poverty Status, Median Income, and Food Stamp Use) or because they are known to be a barrier to equitable and inclusive treatment and quality of life (e.g. Age, Disability Status, Race, and Citizen Status).

RELEVANT DEI FACTORS THAT HAVE BEEN ANALYZED INCLUDE:

- **Race:** This analysis tracks the percentage of non-white residents.
- **Income:** This analysis tracks median income.
- **Age:** This analysis tracks percentage of population that is age 60 or older.
- **Educational Attainment:** This analysis tracks percentage of residents who have completed high school only.
- **Citizen Status:** This analysis tracks percentage of non-citizen residents.
- **Language Spoken at Home:** This analysis tracks percentage of residents that speak a language other than English at home.
- **Disability Status:** This analysis tracks percentage of residents with a disability.
- **Means of Transportation to Work:** This analysis tracks percentage of residents that drive alone to work.
- **Poverty Status:** This analysis tracks percentage of residents below poverty level.
- **Food Stamp Use:** This analysis tracks percentage of households receiving food stamps

THIS DEI ANALYSIS FOCUSES ON THE FOLLOWING CORE FUNDAMENTAL PRINCIPLES:

Diversity:

Differences and characteristics in individuals and groups of people

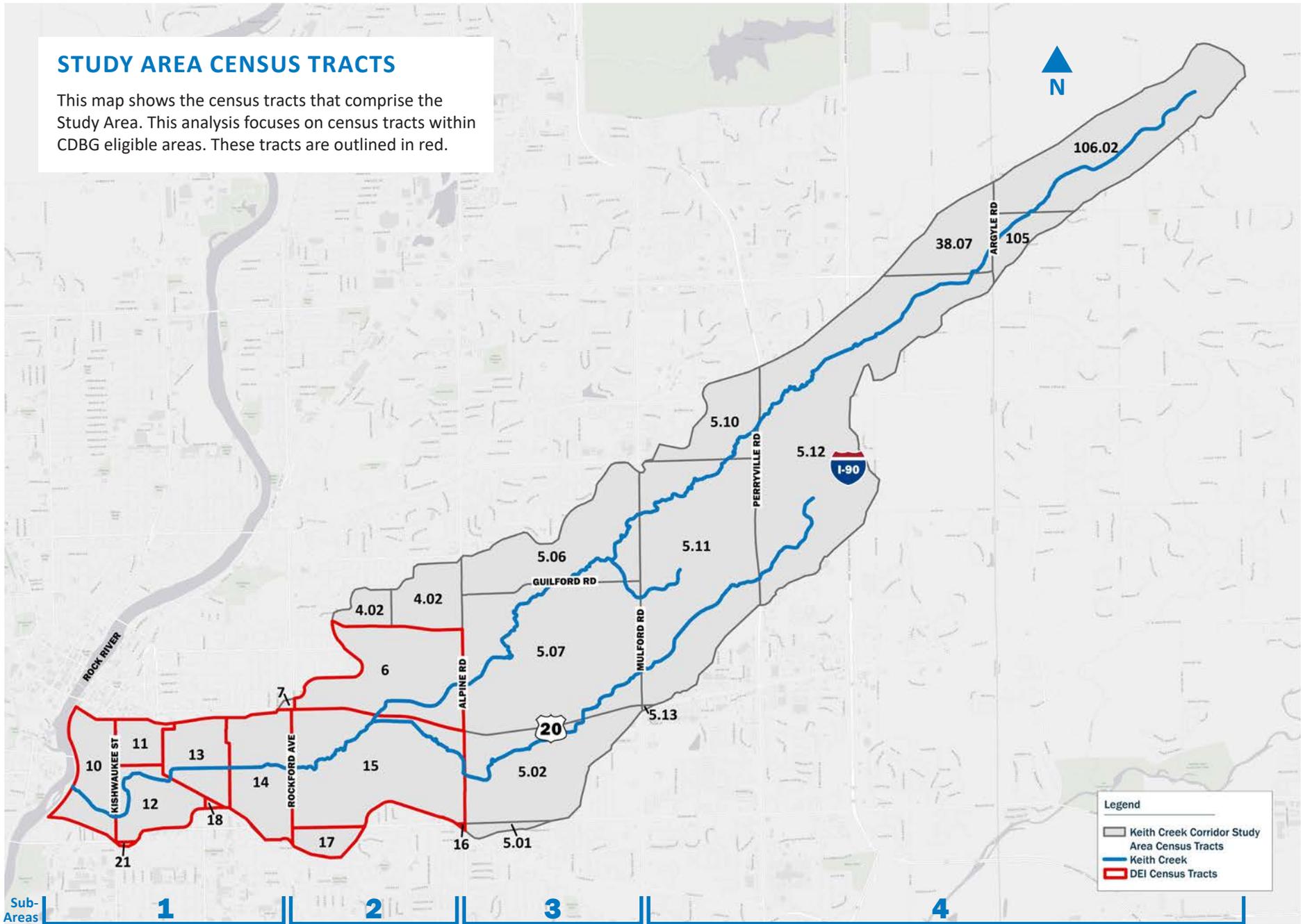
Equity:

Fair treatment, access, removal of barriers, and opportunity for all

Inclusion:

Creating a welcoming and inviting environment where all individuals and groups can participate

Figure 3: Study Area Census Tracts Map



RACE: NON-WHITE RESIDENTS

Historically, race has been the basis for discrimination and the creation of financial, educational, and social barriers that negatively affect quality of life. It is important to explore the concentration of non-white residents in an area, and, conversely, to explore the concentration of white residents in an area in order to target the application of particular resources and identify any barriers that may still be in place. Table 7 represents the percentage of residents in each census tract that identify as non-white. DEI census tracts are outlined in red. In DEI census tracts, 50.6% of residents identify as non-white alone. In non-DEI census tracts, 30.8% of residents identify as being non-white alone. Based on the 2015-2019 5-year community survey, 46.5% of residents identify as non-white alone in Rockford. This indicates that DEI census tracts are more diverse than the remainder of the Study Area and the City of Rockford.

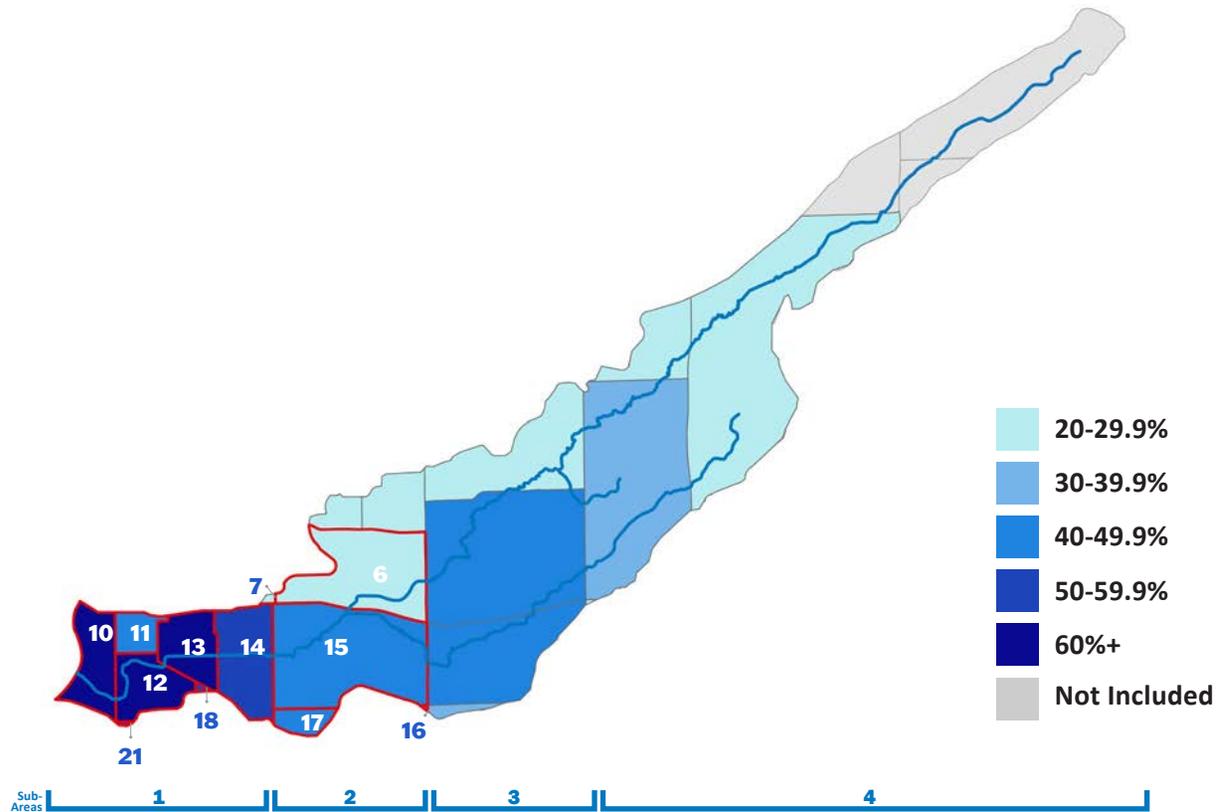


Table 1: Non-White Residents

Geography	6	10	11	12	13	14	15	16	17	18	21	DEI	Non-DEI	Keith Creek	Rockford	Winnebago County
% Non-White	29.7%	70.3%	49.5%	68.4%	61.2%	50.7%	42.7%	49.0%	45.0%	57.4%	64.8%	50.6%	30.8%	38.8%	45.7%	31%

Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

EDUCATIONAL ATTAINMENT: HIGH SCHOOL ONLY

A higher level of educational attainment can lead to better employment, higher salaries, and a better quality of life. Tracking Educational Attainment and understanding which communities have lower levels of educational attainment can help local government and organizations craft policies or programs that are targeted at helping residents find pathways to college and greater opportunities. In DEI census tracts, the percentage of residents ages 25 and up with only a high school education is 33.3%. In non-DEI census tracts located in the Keith Creek Study Area, the percentage of residents that only had a high school diploma is 25.9%. In the City of Rockford, 30.6% of residents have only acquired a high school diploma based on 2019 data.

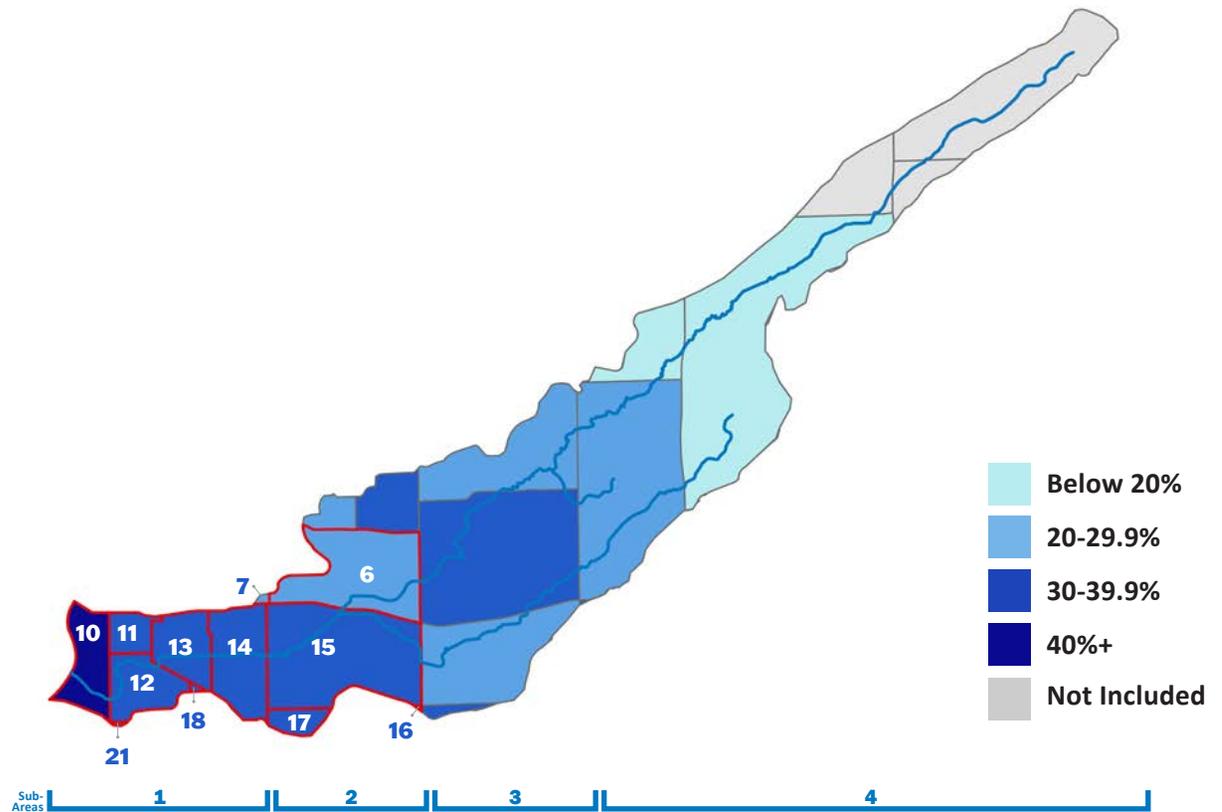


Table 2: Educational Attainment: High School Only

Geography	6	10	11	12	13	14	15	16	17	18	21	DEI	Non-DEI	Keith Creek	Rockford	Winnebago County
% High School Only	23.0%	55.0%	36.0%	31.2%	34.9%	36.2%	32.2%	31.1%	32.9%	34.4%	33.6%	33.3%	25.9%	28.7%	30.8%	31.7%

Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

CITIZEN STATUS: NON-CITIZENS

Citizenship provides a number of benefits, including the right to vote, the ability to work in government jobs, protection from deportation, and the ability to travel freely, among others. Citizenship gives residents a means of influencing the future of their community, as well as a sense of security. Based on the American Community Survey 2015-2019 5-year Estimate, DEI census tracts within the Keith Creek Study Area have a higher concentration of residents that were not US citizens, 7.8%. In non-DEI census tracts, 5.3% of residents are non-citizens. In the City of Rockford, 6.8% of residents are non-citizens.

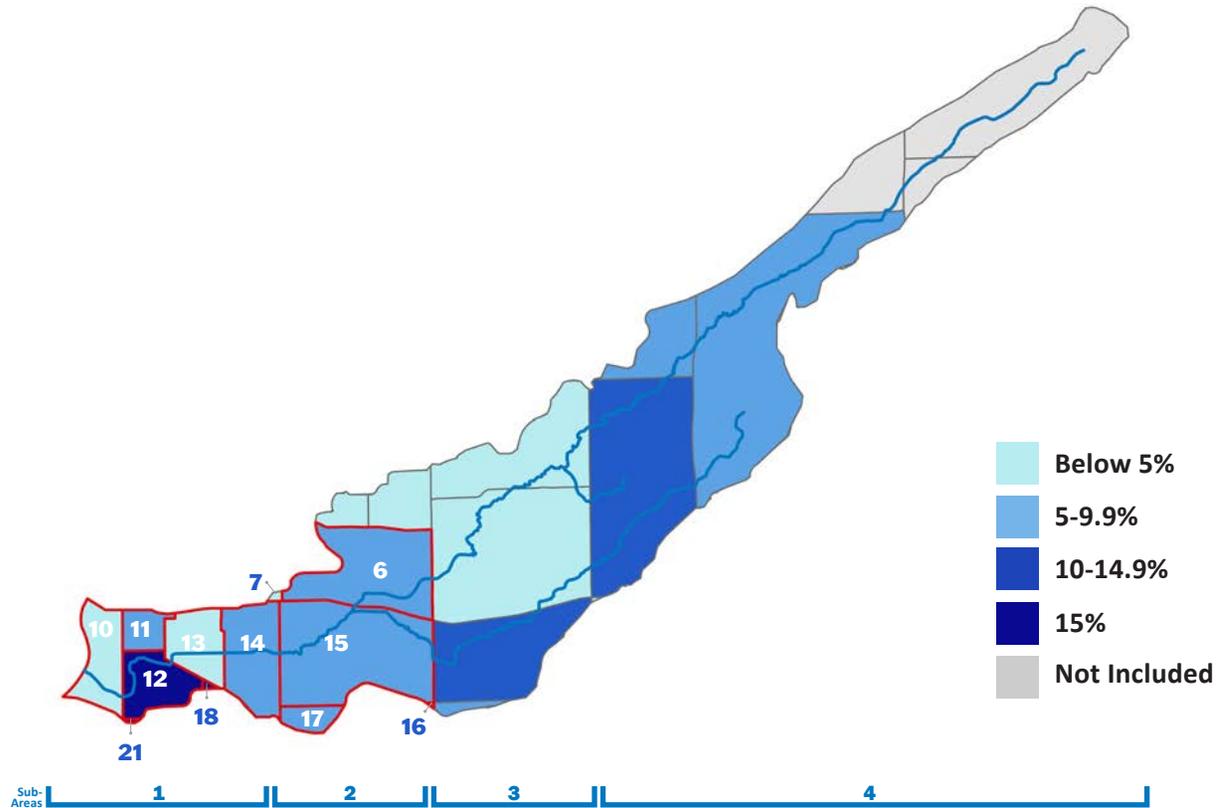


Table 3: Percentage of Non-Citizens

Geography	6	10	11	12	13	14	15	16	17	18	21	DEI	Non-DEI	Keith Creek	Rockford	Winnebago County
% Non-Citizens	6.0%	4.0%	5.0%	15.0%	4.0%	5.0%	5.0%	8.0%	5.0%	18.0%	7.0%	7.8%	5.3%	Not Available	6.8%	4.28%

Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

DISABILITY STATUS: HAVE DISABILITY

Individuals with disabilities tend to face disproportionately more discrimination in education, employment, and other areas of life. The Americans With Disabilities Act (ADA) prohibits discrimination, but many barriers are still faced by those with disabilities, particularly in an urban or suburban environment that was not built to support disabled populations. The census tract with the highest percentage of residents with a disability is Tract 11, which is a DEI census tract. 33% of residents in Tract 11 have a disability, which exceeds any other census tract in the Keith Creek Study Area by over 10%. The percentage of residents with a Disability in DEI census tracts is 16.4%. The percentage of residents with a Disability in non-DEI census tracts is 12%. In Rockford 13.3% of residents have a disability.

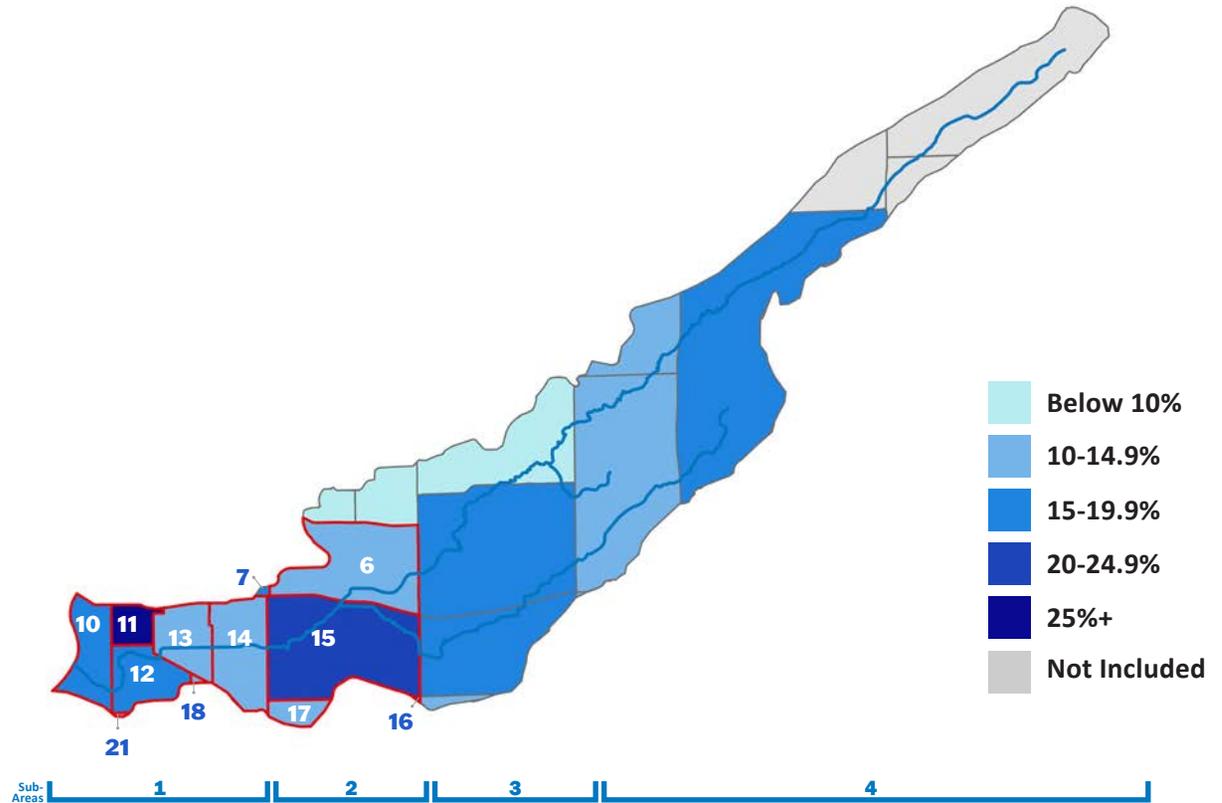


Table 4: Percentage of Residents with a Disability

Geography	6	10	11	12	13	14	15	16	17	18	21	DEI	Non-DEI	Keith Creek	Rockford	Winnebago County
% With Disability	10.0%	19.0%	33.0%	18.0%	12.0%	13.0%	20.0%	21.0%	12.0%	14.0%	17.0%	16.4%	12.0%	26.4%	30.1%	27.9%

Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

FOOD STAMPS

A higher percentage of households that utilize food stamps can point to economic inequalities. However, food assistance programs do help to improve health and overall quality of life. The percentage of households that receive SNAP assistance within DEI census tracts is 32.5%, while the percentage of households that receive SNAP assistance within non-DEI census tracts is 8.7%. In the City of Rockford, 25.3% of households receive SNAP assistance.

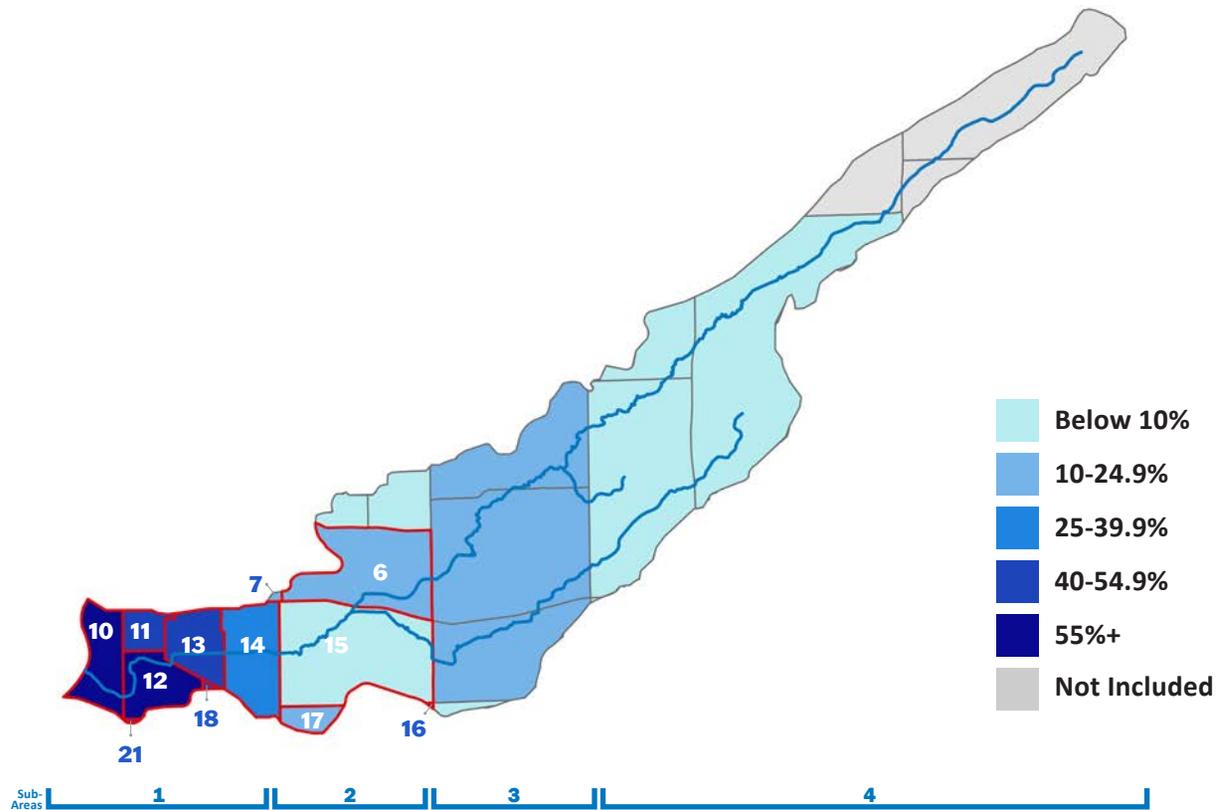


Table 5: Percentage of Residents Using Food Stamps

Geography	6	10	11	12	13	14	15	16	17	18	21	DEI	Non-DEI	Keith Creek	Rockford	Winnebago County
% Receive Food Stamps	10.0%	67.5%	42.2%	55.7%	42.2%	27.4%	4.7%	36.0%	12.7%	46.4%	50.4%	32.5%	8.7%	18.5%	25.2%	18%

Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

INCOME: MEDIAN INCOME

Income is tied to socioeconomic class and economic inequality. Areas with lower median incomes tend to have access to less goods and services, which contributes to a lower quality of life. Table 12 shows the median income of all census tracts within the Keith Creek Study Area. DEI census tracts have a lower median income, with the average median income among census tracts being \$36,526. Non-DEI census tracts in the Keith Creek Study Area have an average median income of \$80,631. The City of Rockford’s average median income is \$44,252.

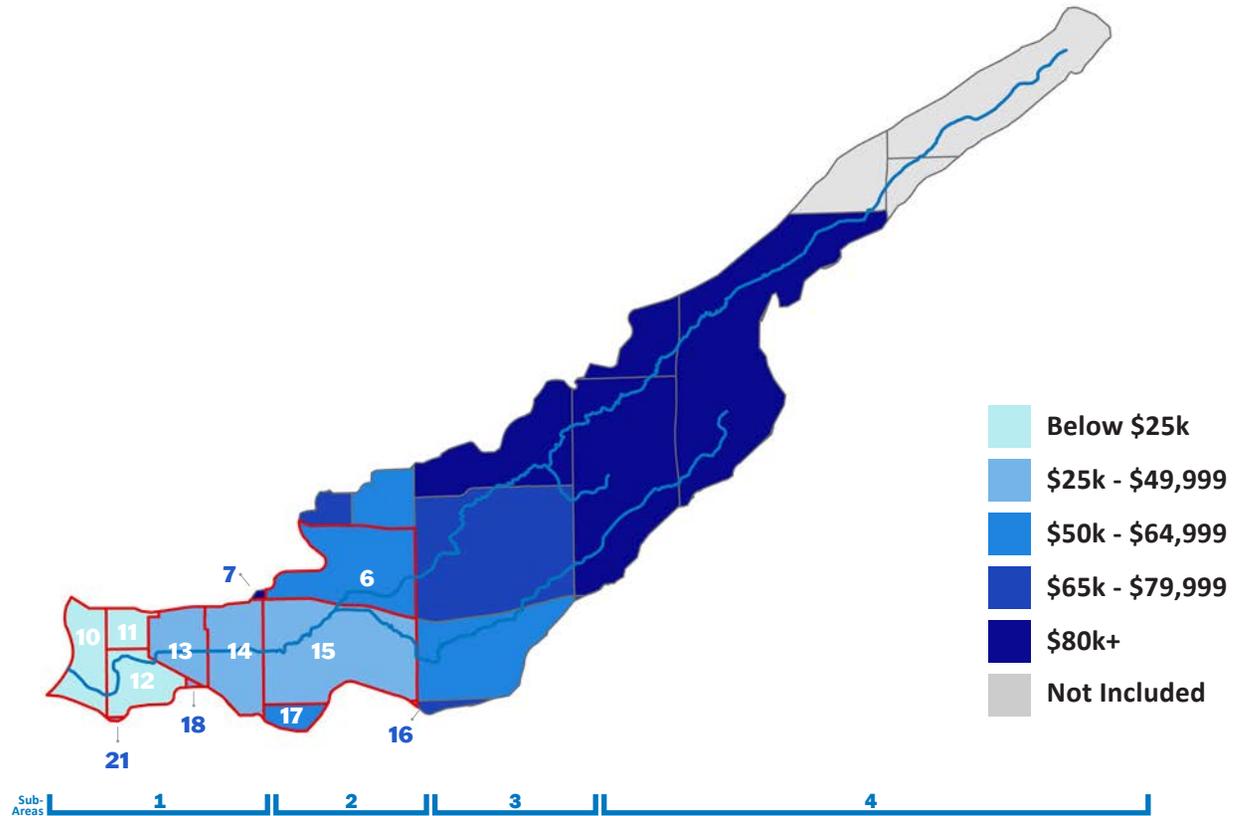


Table 6: Median Income

Geography	6	10	11	12	13	14	15	16	17	18	21	DEI	Non-DEI	Keith Creek	Rockford	Winnebago County
Median Income	\$60,385	\$15,013	\$16,625	\$21,713	\$35,434	\$47,216	\$49,331	\$36,323	\$63,053	\$36,914	\$19,776	\$36,526	\$80,631	\$52,800	\$46,438	\$57,205

Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

LANGUAGE SPOKEN AT HOME: NON-ENGLISH

The language spoken at home can be indicative of a community's overall diversity. Throughout the entire Keith Creek Study Area – in both DEI and non-DEI census tracts – the majority of residents speak English at home. Census tracts 12 and 18, which are both DEI census tracts, have high concentrations of residents who speak a language other than English at home. In tract 12, 41.7% of households speak a language other than English at home. In tract 18, 45% of households speak a language other than English at home. For DEI census tracts, the proportion of non-English speaking households is 24.5% and for non-DEI census tracts it is 19.3%. In the City of Rockford 21% speak a language other than English at home.

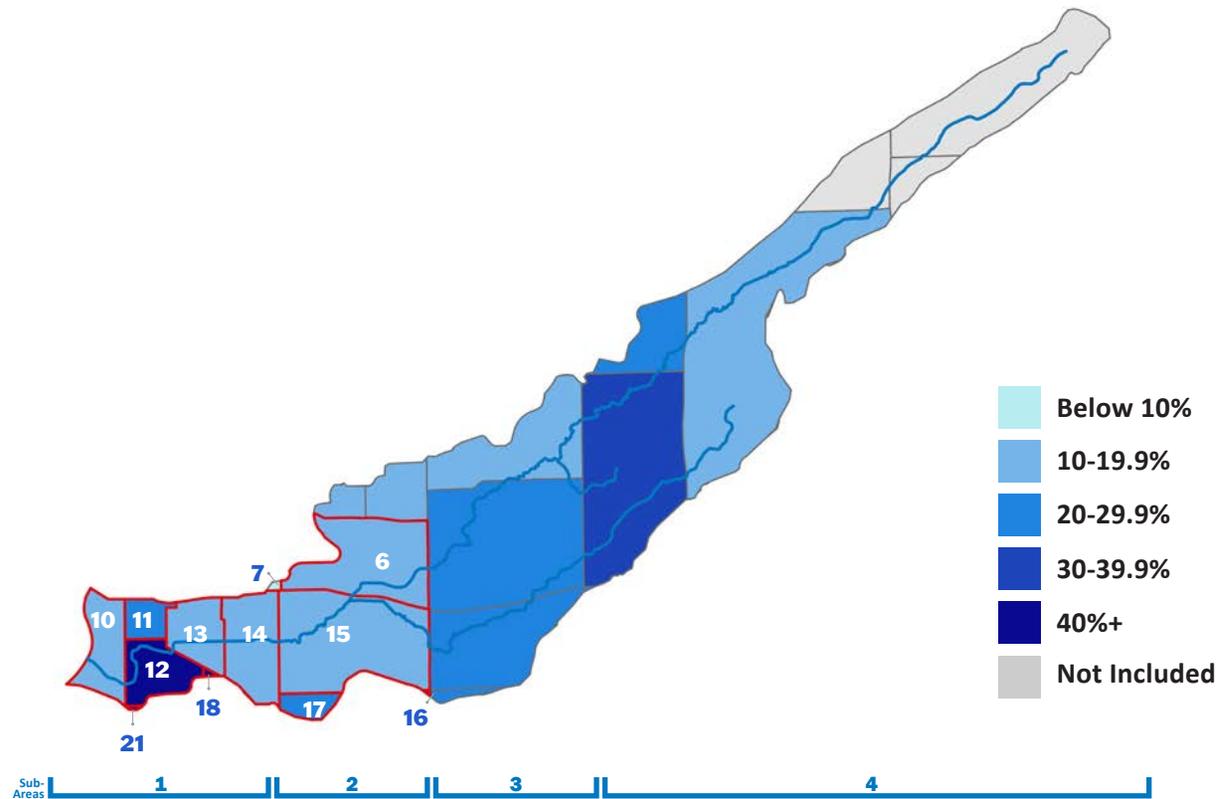


Table 7: Percentage of Non-English Speaking Residents

Geography	6	10	11	12	13	14	15	16	17	18	21	DEI	Non-DEI	Keith Creek	Rockford	Winnebago County
% Non-English Speaking	12.6%	16.7%	21.0%	41.7%	18.0%	11.7%	17.6%	35.0%	20.0%	44.9%	22.4%	24.5%	19.3%	Not Available	21.0%	14.7%

Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

MEANS OF TRANSPORTATION TO WORK: DRIVE ALONE

This analysis tracks the percentage of residents that drive alone to work. A lower percentage can indicate that there is a greater dependence on alternative means of transportation, such as public transit or biking. Transportation equity can be facilitated by strengthening transportation networks in areas that need them most. This allows residents to have equal access to opportunities and resources. Census Tract 12 has the lowest percentage of residents that drive alone to work, 64%. In DEI census tracts, 76.6% of residents drive alone to work and in non-DEI census tracts, 85.6% of residents drive alone to work. In Rockford 78.9% of residents drive alone to work.

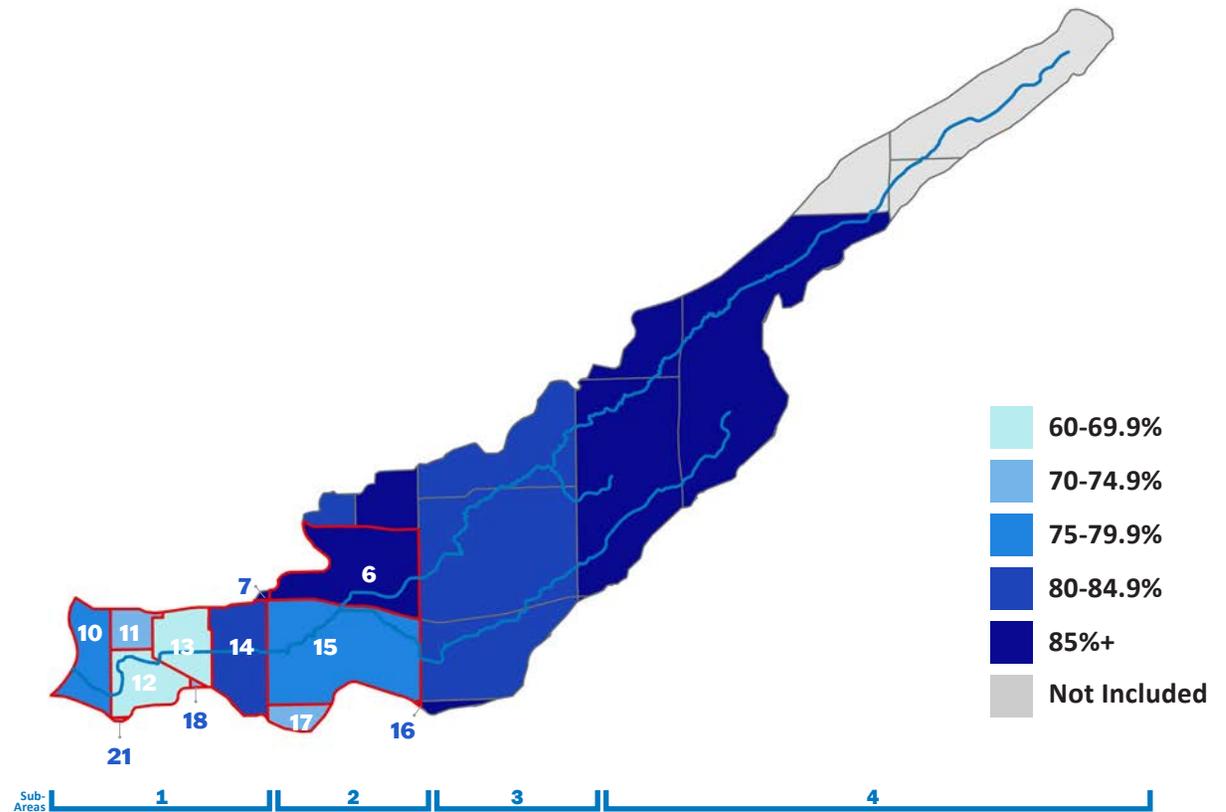


Table 8: Percentage of Residents Who Drive Alone

Geography	6	10	11	12	13	14	15	16	17	18	21	DEI	Non-DEI	Keith Creek	Rockford	Winnebago County
% Drive Alone	85.0%	75.0%	71.0%	64.0%	66.7%	80.0%	79.0%	86.0%	72.5%	71.5%	65.8%	76.6%	85.6%	81.5%	79.3%	83.2%

Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

POVERTY STATUS: BELOW POVERTY LEVEL

Poverty Status can be indicative of a number of barriers faced by a population, including lack of educational opportunity, lack of employment opportunity, and lack of access to resources. In DEI census tracts 25% of residents are below poverty level. In non-DEI census tracts that are within the Keith Creek Study Area, only 12.7% of residents are below poverty level. In the City of Rockford, 22.3% of residents earn below poverty level.

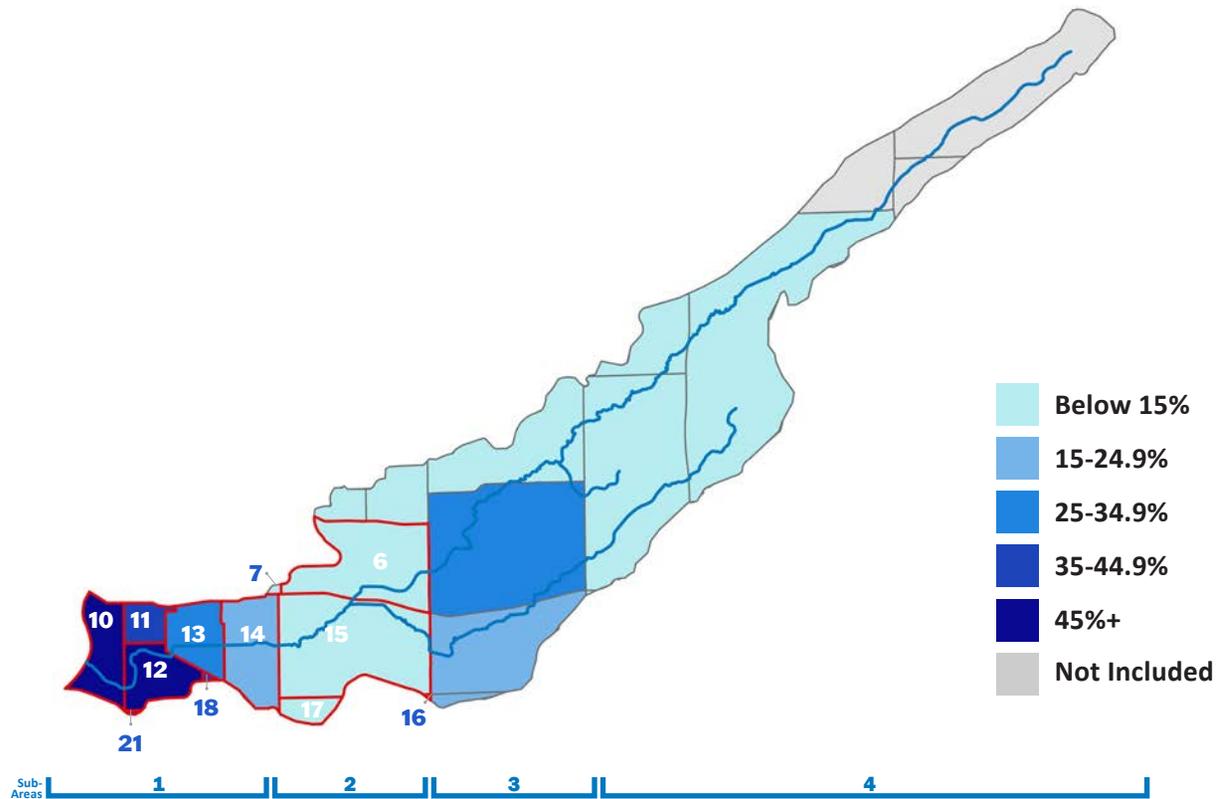


Table 9: Percentage of Residents Below Poverty Level

Geography	6	10	11	12	13	14	15	16	17	18	21	DEI	Non-DEI	Keith Creek	Rockford	Winnebago County
% Below Poverty Level	11.5%	55.4%	43.3%	59.0%	32.2%	20.0%	7.0%	13.5%	9.3%	39.0%	53.0%	25.1%	12.7%	17.2%	20.2%	14.4%

Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

DEMOGRAPHIC SUMMARY

OVERVIEW

The Keith Creek Study Area is primarily located within the City of Rockford, within Winnebago County in Illinois. The northeastern section of the Study Area is located outside of the Rockford city limits. A portion of this area is located in Winnebago County, and the remainder extends into Boone County. The demographic profile and DEI Analysis examines data from the Study Area, the City of Rockford, and Winnebago County. Data for the demographic profile has been collected from the US Census Bureau American Community Survey 5-year Estimates from 2015-2019, and ESRI 2021 estimates.

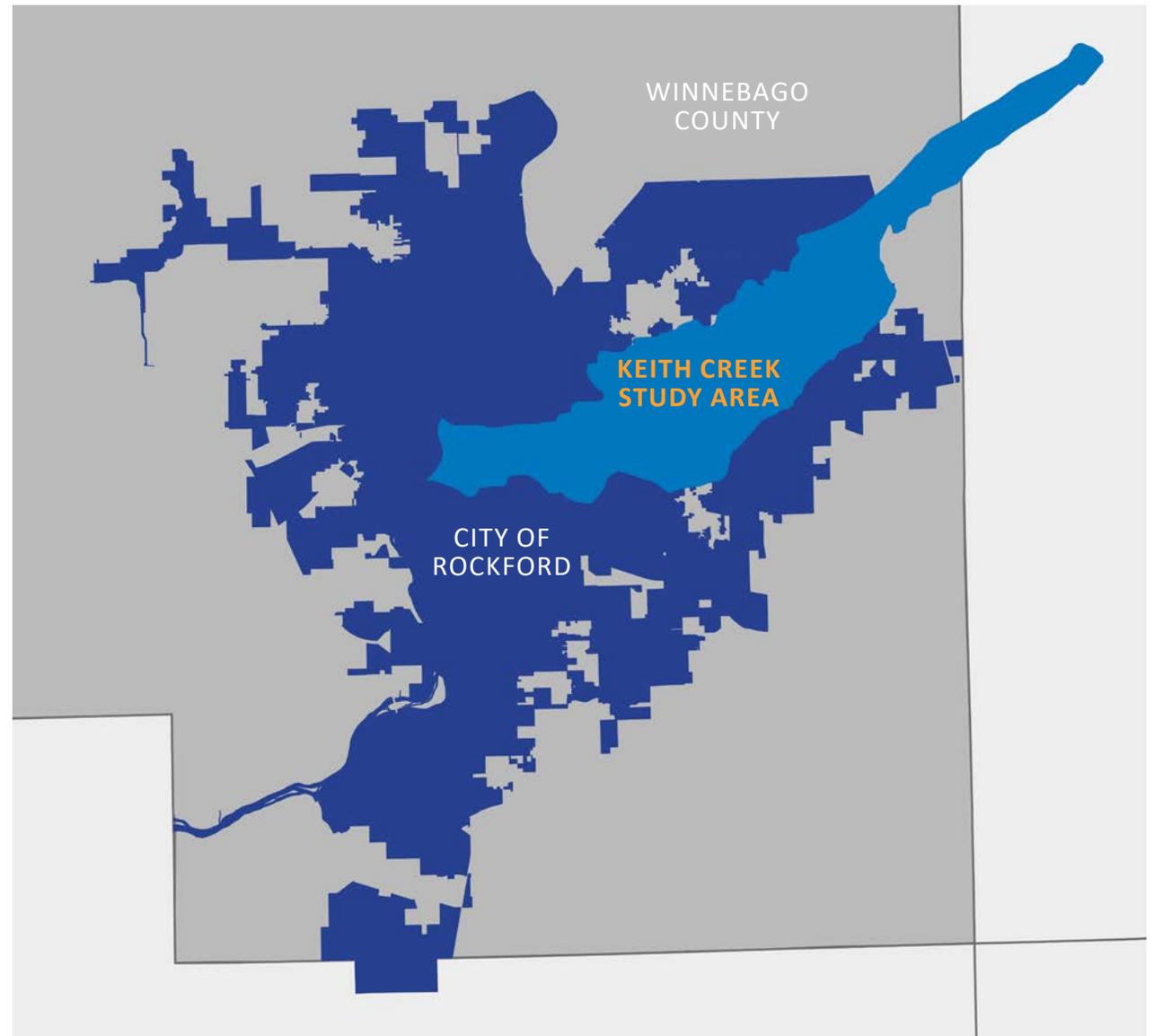
DEMOGRAPHIC PROFILE

Demographic information can provide insights into a community and help to inform planning assumptions and recommendations.

The demographic profile examines the following topics.

- **Population**
- **Housing**
- **Diversity**
- **Income**
- **Education**
- **Age**

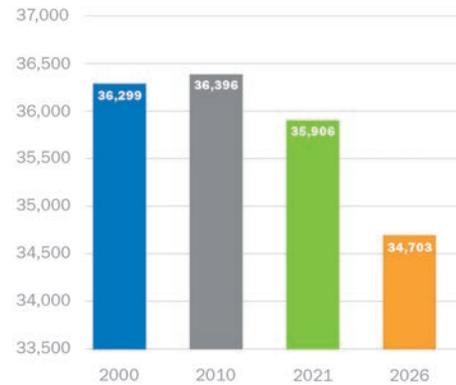
Figure 4: Demographic Study Areas Map



POPULATION

The population within the Keith Creek Study Area is gradually declining. From 2010 to 2021, the population dropped from 36,396 to 35,906, a decrease of 1.35%. According to ESRI population forecasts, the population of Keith Creek will continue to decline and will be home to approximately 34,703 residents by 2026. Keith Creek population trends reflect trends occurring in Rockford, where the population has been steadily declining for the past two decades. Surrounding Winnebago County has experienced a net increase in population since 2000, however the County has lost approximately 5,000 residents since 2010. The populations of both Rockford and Winnebago County are expected to decrease into the future.

Figure 5: Keith Creek Population change 2000 - 2026



Source: US Census Bureau 2000, 2010 Decennial Census; ESRI

Table 10: Population Change 2000 to 2026

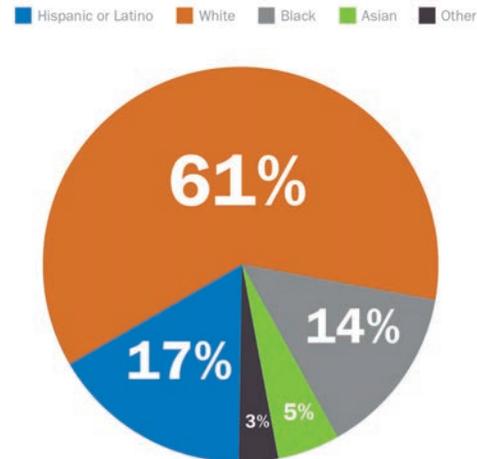
Year	2000	2010	2021	2026	% Change 2010 – 2021	
					Count	%
Keith Creek	36,299	36,396	35,906	34,703	-490	-1.1%
City of Rockford	153,279	153,032	149,366	143,682	-3,666	-2.6%
Winnebago County	278,418	295,266	290,435	283,645	+4,831	+4.3%

Source: US Census Bureau 2000, 2010 Decennial Census; ESRI

RACE AND ETHNICITY

The Keith Creek Study Area is becoming more and more diverse, both racially and ethnically. According to the ESRI Diversity Index, which represents the likelihood that any two people that are chosen randomly from the same area belong to different race or ethnic groups, Keith Creek has an Index of 66.7. This is up approximately nine points from the community's 2010 Diversity Index score of 57.8 and is expected to increase to 70.8 by 2026. In 2019, the non-white population was 39%. The Keith Creek Study Area is slightly less diverse than the City of Rockford, as a whole. Rockford has a diversity index of 72 and 46% of the population is non-white. Both Keith Creek and Rockford are more diverse than Winnebago County, which has a diversity index of 58.5 and a population that is 31% non-white.

Figure 6: Keith Creek Race & Ethnicity, 2021



Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

Table 11: Race & Ethnicity, 2021

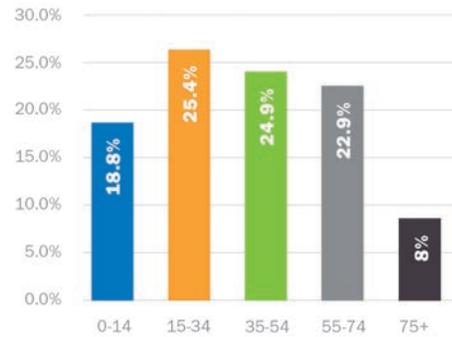
Race/Ethnicity	Hispanic or Latino	White	Black	Asian	Other
Keith Creek	16.7%	61.2%	14.0%	5.1%	3.0%
City of Rockford	18.2%	54.2%	20.7%	3.2%	3.6%
Winnebago County	12.8%	69.0%	12.6%	2.6%	3.0%

Source: US Census Bureau American Community Survey 5-year Estimates 2015-2019

AGE SEGMENTATION

Based on ESRI data, the population of Keith Creek is aging. The median age in 2021 was 39.2, up from 37.4 in 2010. The number of residents over 50 in 2021 was 13,235, which is up 8.9% from 2010. The number of children in Keith Creek is also decreasing. The percentage of children ages 0 to 14 years old was 18.8% in 2021, compared to 20.6% in 2010. The percentage of youth ages 15 to 34 has decreased from 12.8% to 12.6%. Both the City of Rockford and Winnebago County are also experiencing aging populations and a decrease in population ages 0 to 24.

Figure 7: Keith Creek Age Distribution, 2021



Source: US Census Bureau Decennial Census; ESRI

Table 12: Age Distribution, 2021

Age	0-14	15-34	35-54	55-74	75+	Median Age
Keith Creek	18.8%	25.4%	24.9%	22.9%	8.0%	39.2
City of Rockford	19.7%	26.1%	24.2%	21.9%	8.1%	38.2
Winnebago County	18.3%	25.0%	24.9%	24.2%	7.7%	40.3

Source: US Census Bureau Decennial Census; ESRI

HOUSING TENURE

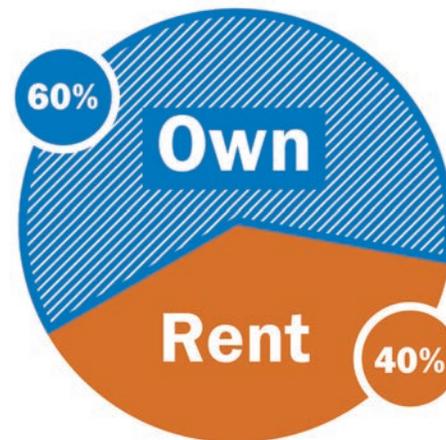
In the Keith Creek Study Area, 60% of occupied housing units are owner occupied, while 40% of housing units are renter occupied. In Rockford, homeownership is slightly lower and in Winnebago County, homeownership is substantially higher.

Table 13: Owner- vs Renter-Occupied, 2021

Year	Owner-Occupied	Renter-Occupied
Keith Creek	60%	40%
City of Rockford	57%	43%
Winnebago County	67%	33%

Source: ESRI 2021 Estimates

Figure 8: Keith Creek Owner- vs Renter-Occupied, 2021



Source: ESRI 2021 Estimates

MEDIAN INCOME

Median household income in the Study Area was \$52,800 in 2021, which is higher than the Rockford median income of \$46,438, but lower than the Winnebago County median income of \$57,205. The Keith Creek median income is expected to increase in the next five years to \$56,181 according to ESRI forecasts.

Table 14: Median Income, 2021

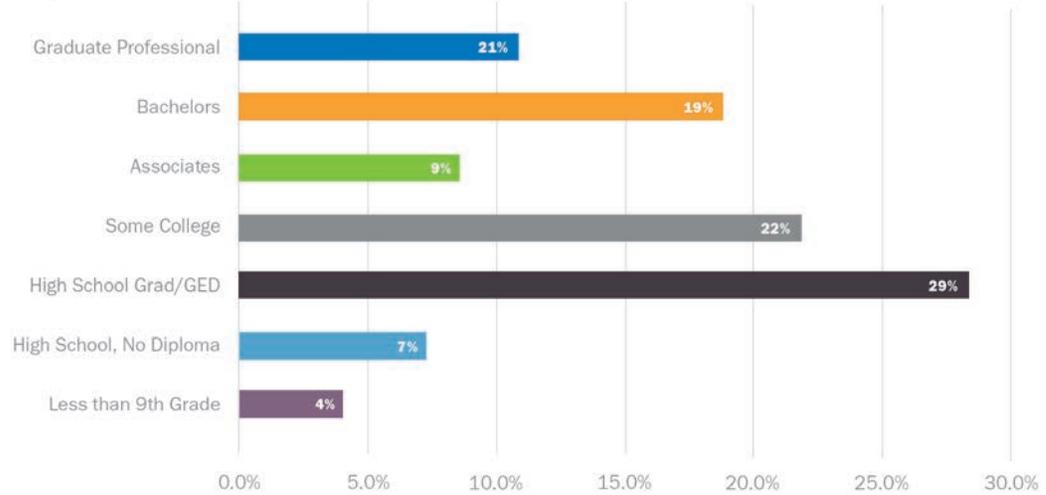
Year	2021	2026
Keith Creek	\$52,800	\$56,181
City of Rockford	\$46,438	\$50,573
Winnebago County	\$57,205	\$62,325

Source: ESRI 2021 Estimates

EDUCATIONAL ATTAINMENT

According to ESRI data, the population of Keith Creek has a higher educational attainment level than surrounding areas. In Keith Creek, 38.4% of the population has an Associates degree or higher. This is higher than both the City of Rockford (31.3%) and Winnebago County (33.6%).

Figure 9: Keith Creek Educational Attainment, 2021



Source: ESRI 2021 Estimates

Table 15: Educational Attainment, 2021

	Less than 9th Grade	Some High School	High School or Equivalent	Some College	Associates Degree	Bachelors Degree	Graduate/ Professional
Keith Creek	4%	7%	29%	22%	9%	19%	11%
City of Rockford	5%	10%	31%	23%	8%	14%	9%
Winnebago County	4%	8%	32%	23%	9%	15%	9%

Source: ESRI 2021 Estimates



Section 2

CORRIDOR ANALYSIS



CORRIDOR ASSETS & ACTIVITY GENERATORS

Assets and Activity Generators are places, buildings, businesses, or organizations that attract people, provide services, and are a locus of human interaction. Assets and activity generators help to make a community more livable, as well as help to improve quality of life standards, such as health, comfort, safety, and happiness. Increasing the concentration of community assets and activity generators can help attract more residents, businesses, and investment.

Assets and Activity Generators can include schools (particularly those that offer before- and after-school programming), community centers, parks, lively neighborhoods or districts, commercial corridors, health campuses, established housing communities, and more. In this section, Assets and Activity Generators are identified by Sub-Area.



Dahlquist Park

CORRIDOR ASSETS & ACTIVITY GENERATORS

SCHOOLS

Schools are important assets and activity drivers because they attract families and students to nearby neighborhoods. They also offer activities, such as sports and after-school programming that engage children and their families. Academic institutions, such as universities, also drive activity by attracting students which, in turn, attracts businesses and other student-oriented services.

There are many schools within the Study Area, several of which partner with outside organizations to provide programming to students. Constance Lane Elementary is located to the west of the Study Area near the Rock River. Constance Lane partners with the Burpee Museum of Natural History to provide after-school programming. It also offers RISE (Restore Inspire Sustain Educate) programming for children struggling with behavioral issues and Calm Classroom mindfulness training.

Gregory Elementary School is located near the center of the Study Area. Gregory offers a YMCA after-school program, as well as a number of extra-curricular activities, such as REBA basketball and soccer, running club, and Lego Robotics League.

Rockford University is located near the center of the Study Area and is considered a top-rated regional university. The university offers numerous opportunities for students to get involved in their campus and the surrounding community, including sports teams, volunteer organizations, and student clubs.

Further educational and park-related programming can be implemented at the following local schools and centers:

Sub-Area 1:

- Constance Lane Elementary School (10th Ave. Park): Currently partners with the Burpee Museum of Natural History to offer after-school programming.
- Lincoln Middle School (at 11th St & Keith Creek or Churchill Park)

Sub-Area 2

- Rockford Christian School (near Morsay Drive)
- East High School (at Twin Sister Park)

Sub-Area 3

- Spectrum Progressive Schools (near Aldeen Park)
- Gregory Elementary School (south branch)
- Rockford University (abutting Aldeen Park)

Future Opportunities

- A new community center or urban ecology center could be a go-to spot for learning the Keith Creek history, discussing the natural/urban interface, and providing other educational programming.



Constance Lane Elementary School



Aldeen Park

CORRIDOR ASSETS & ACTIVITY GENERATORS

PARKS AND GREENSPACE

Parks and greenspaces are the ideal places for families, friends, and neighbors to gather. There are 11 parks within the Study Area that are owned and managed by the Rockford Park District. Many of these parks, such as Aldeen Park and Dahlquist Park, have strong name recognition and are highly utilized. Activities offered at parks include baseball, playgrounds, cross-country, basketball, tennis, and summer programs. Other greenspaces located in the Study Area, such as Mauh-Nah-Tee-See Country Club (which is a Certified Audubon Cooperative Sanctuary) and Aldeen Golf Course also help to drive activity by attracting visitors. Rock Cut State Park is located approximately 2.3 miles from the Study Area, but is considered a corridor asset because it also draws visitors to the area. Parks and Open Spaces located within the Keith Creek Study Area include:

Sub-Area 1:

- Nelson Park (950 Seminary St.)
- Tenth Avenue Park (825 10th Ave.)
- Ingersoll Centennial Park (315 S 1st St.)
- Churchill Park (682-2199 6th Ave)
- Keith Creek Greenway (Keith Creek from 9th to 18th St.)

Sub-Area 2:

- Twin Sister Hills Park (3001 Harney Ct.)
- Dahlquist Park (3251 Oak Grove Ave.)

Sub-Area 3:

- Aldeen Park (623 N Alpine Rd.)
- Aldeen Golf Club (1902 Reid Farm Rd.)
- Alpine Park (950 S Alpine Rd.)
- Guilford Center Park (5824 Guilford Rd.)
- Mauh-Nah-Tee-See Country Club

Sub-Area 4:

- Guilford County Forest Preserve (6595 Guilford Rd.)
- Sportscore Community Park (8800 Sportsscore)

BUSINESS DISTRICTS AND CORRIDORS

The following urban districts and commercial corridors offer a number of restaurants, businesses, and services that draw residents to the area and help to create a lively and vibrant atmosphere throughout the Keith Creek Corridor.

Sub-Area 1:

- The 7th Street and Midtown District, which is located to the west of the Study Area. The majority of businesses are located along 7th Street between 1st Avenue and 6th Avenue. This area is a walkable urban center.
- The Charles Street and 20th Street commercial area provides a number of services, such as a pharmacy, bicycle store, beauty salon and more. The area is more auto-oriented with

plenty of parking, but is also located along a transit route, making it accessible from most of the Keith Creek Study Area.

- The Rockford Downtown Area is concentrated around State Street, which is located just north of the Study Area.

Sub-Area 2:

- The Miracle Mile business district is located along State Street from Fairview Boulevard to Alpine Road.



Downtown Rockford

CORRIDOR ASSETS & ACTIVITY GENERATORS

ORGANIZATIONS

The Keith Creek Study Area has several active neighborhood organizations, such as the Keith Creek Neighborhood Association. The Keith Creek Neighborhood Association hosts events, such as the Keith Creek Summer Bash, and holds regular meetings at Redeemer Lutheran Church.

There are also a number of churches within the Study Area, which offer their own community events and work to engage residents from the surrounding neighborhoods.

Business district associations, such as the Miracle Mile Business District Association also generate activity within the Study Area by hosting a number of events, such as clean-up days and auto shows.

HEALTH

There are three health systems accessible along Keith Creek, including the SwedishAmerican Health System, the Rockford Health System, and the Mercy Health System. The OSF Saint Anthony Medical Center is also located within the Study Area. The corridor also benefits from connective access to numerous pharmacies, which are located along major roads and transit routes.

Sub-Area 1:

- SwedishAmerican Hospital (1401 E State St.)

Sub-Area 2:

- SwedishAmerican Clinic (2550 Charles St.)
- Mercy Health (4223 E State St.)

Sub-Area 3:

- OSF Saint Anthony Medical Center (5666 E State St.)
- Rockford Health Clinic (5970 Churchview Dr.)

Sub-Area 4:

- Mercy Health (6998 Redansa Dr.)
- Swedish American Orthopedic & Sports Therapy (8451 Orth Rd.)
- Javon Bea Hospital (8201 E. Riverside Blvd.)

HOUSING

The Keith Creek Corridor has good quality housing stock throughout the Study Area. There are many long-established residents, which lends to a sense of community, stability, and social connection. The Keith Creek Corridor provides housing opportunities for low-income residents, as well as seniors. Affordable housing developments, such as The Grove at Keith Creek and senior housing developments such as Valley View Senior Living ensure that these populations aren't excluded from the Study Area and the number of assets that it offers.

Sub-Area 2:

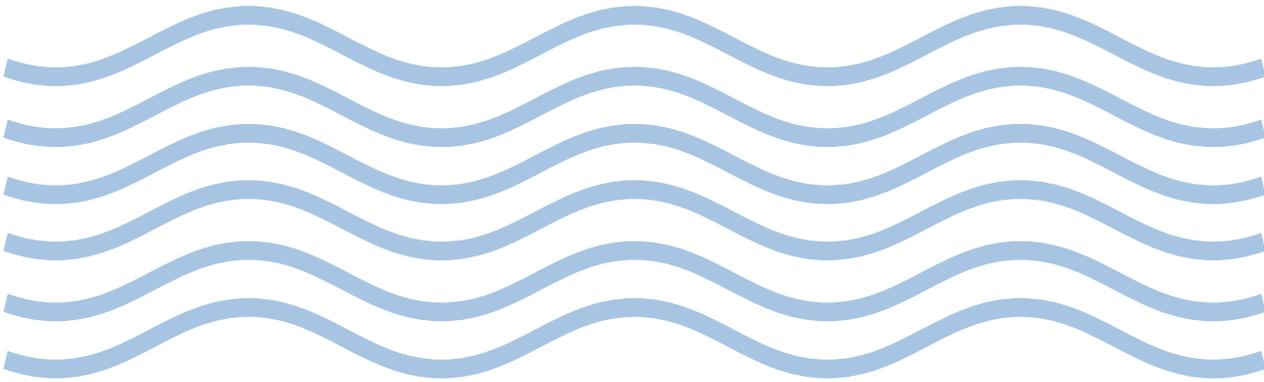
- Valley View Senior Living (3303 E State St.)

Sub-Area 3:

- The Grove at Keith Creek (S Newtowne Dr.)



The Grove at Keith Creek; Opposite: Rockford cyclists, Aldeen Golf Club, Dahlquist Park



LAND USE, ZONING & DEVELOPMENT CONSIDERATIONS

Land use, zoning and development considerations include opportunities to update the future land use map of the Study Area, zoning amendments to districts along the corridor or development, redevelopment, and improvements that are needed. The City of Rockford is currently updating its Comprehensive Plan, so the opportunity exists to reexamine the Study Area and Keith Creek corridor.

LAND USE

The land use mix of the Study Area contains the following: 37% single-family residential, 19.5% commercial/retail, 17.5% transportation, 8% multi-family residential, 8% agriculture, 7% open space, 2% industrial and 1% of other uses. The land use mix transitions from rural to urban as one travels the Study Area from the northeast in Boone County to the southwest in Downtown Rockford near the Rock River. The land use transitions from large, auto-oriented parcels and large uses to smaller parcels, but still largely auto-oriented along Charles and State Streets. Then as one gets closer to the river and downtown to more walkable and the smallest properties including single-family, industrial, service, and retail uses.

Figure 10: Land Use Percentages

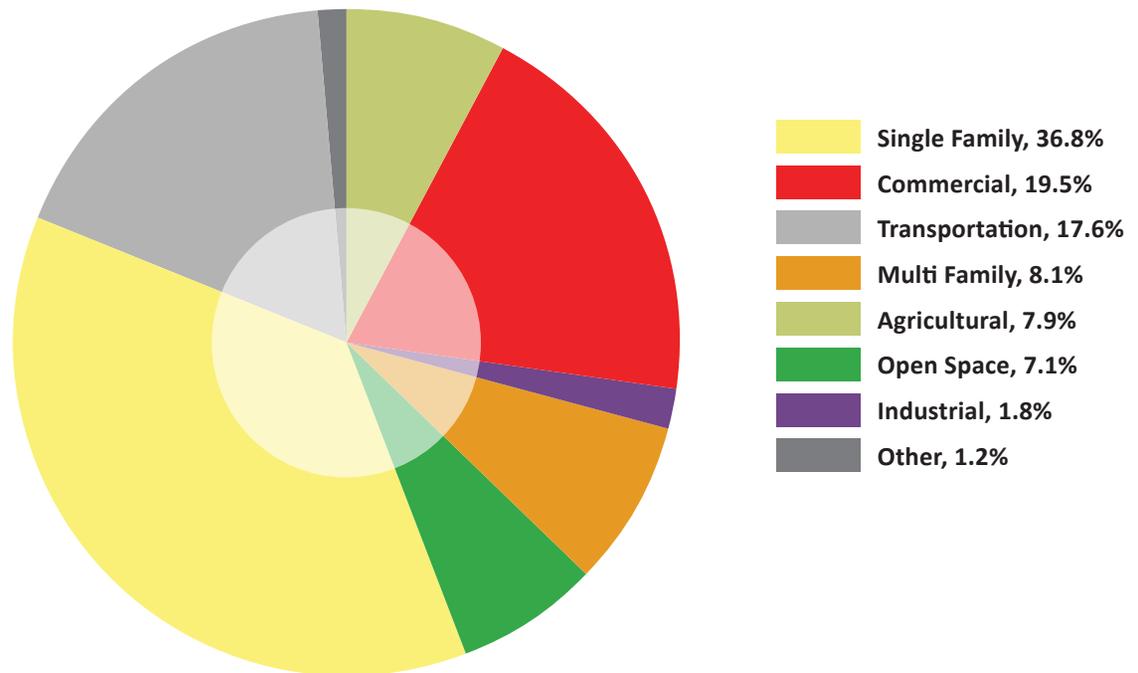
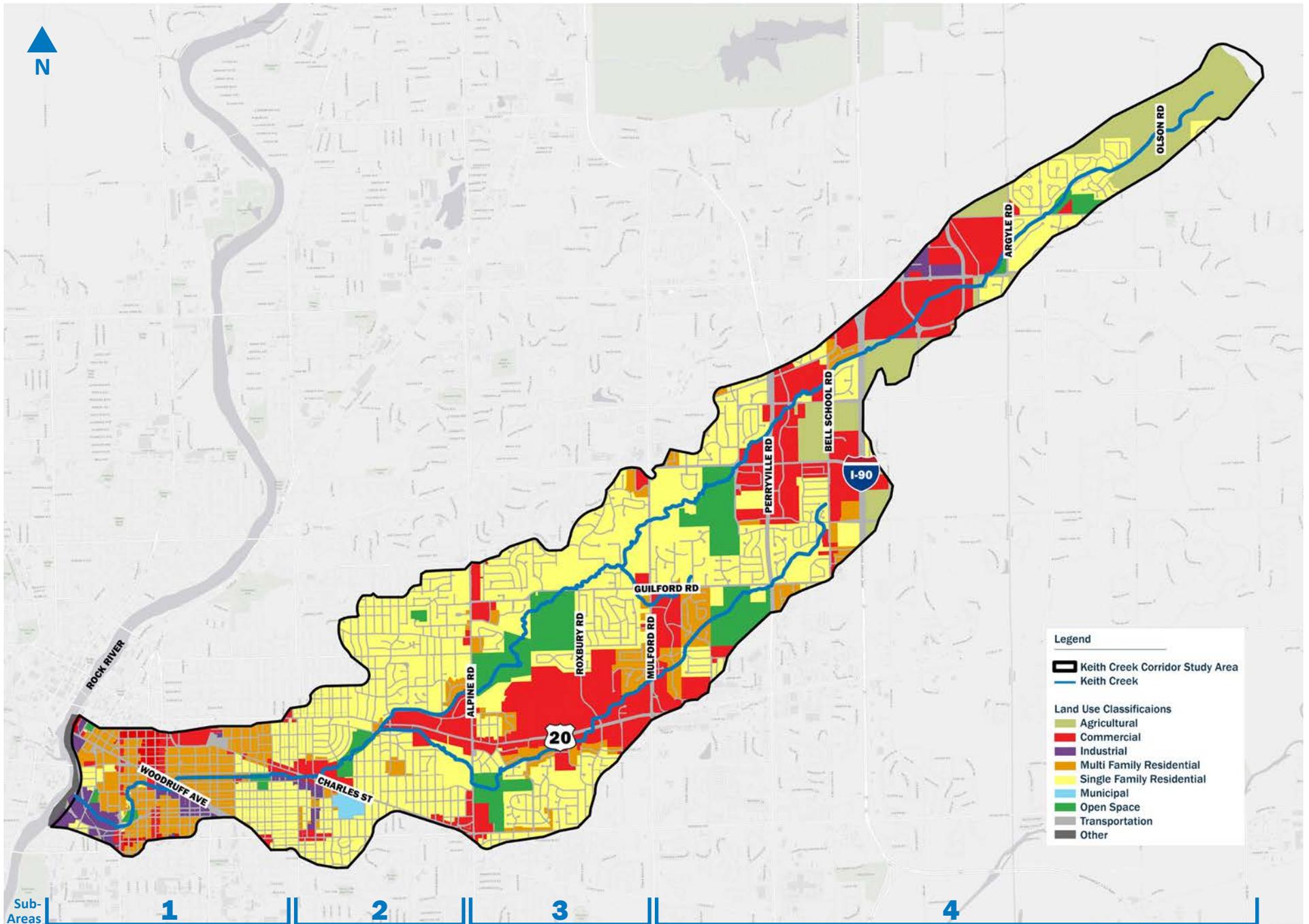


Figure 11: Land Use Map



ZONING

The City of Rockford Zoning Ordinance covers most of the Study Area and was amended in 2008 and 2017. Other county or unincorporated areas exist but those documents are not described in this report because they contain such small locations of the Study Area. The City of Rockford's ordinance provides comprehensive development standards and regulations for all zoning districts in the City, including Residential, Commercial, Mixed-Use, and Industrial.

It includes six residential districts, three commercial districts, an urban mixed-use district and three industrial districts. The purpose of the residential districts is to create, maintain, and promote a variety of housing opportunities for individual households and to maintain the desired physical character of existing neighborhoods and developing areas consistent with the city's official comprehensive plan.

The purpose of the Commercial Districts is intended to accommodate retail, service, and commercial uses and to ensure that business and commercial-zoned areas are compatible with the character of existing neighborhoods.

The purpose of the Mixed-Use district is five-fold, 1) Maintain and promote a compact, pedestrian-oriented, mixed-use district with a diverse mix of residential, office, business, government, cultural, and entertainment uses; 2) Promote a walkable environment by protecting those streets with

“intact” streetwalls; 3) Encourage residential living environments that provide a broad range of housing types such as lofts, townhomes, and condominiums; 4) Promote these districts as viable and vital residential areas by permitting residential uses in a wide variety of densities and locations; and, 5) Promote the continued use and/or redevelopment of historically significant buildings and older buildings that contribute to the character of these districts.

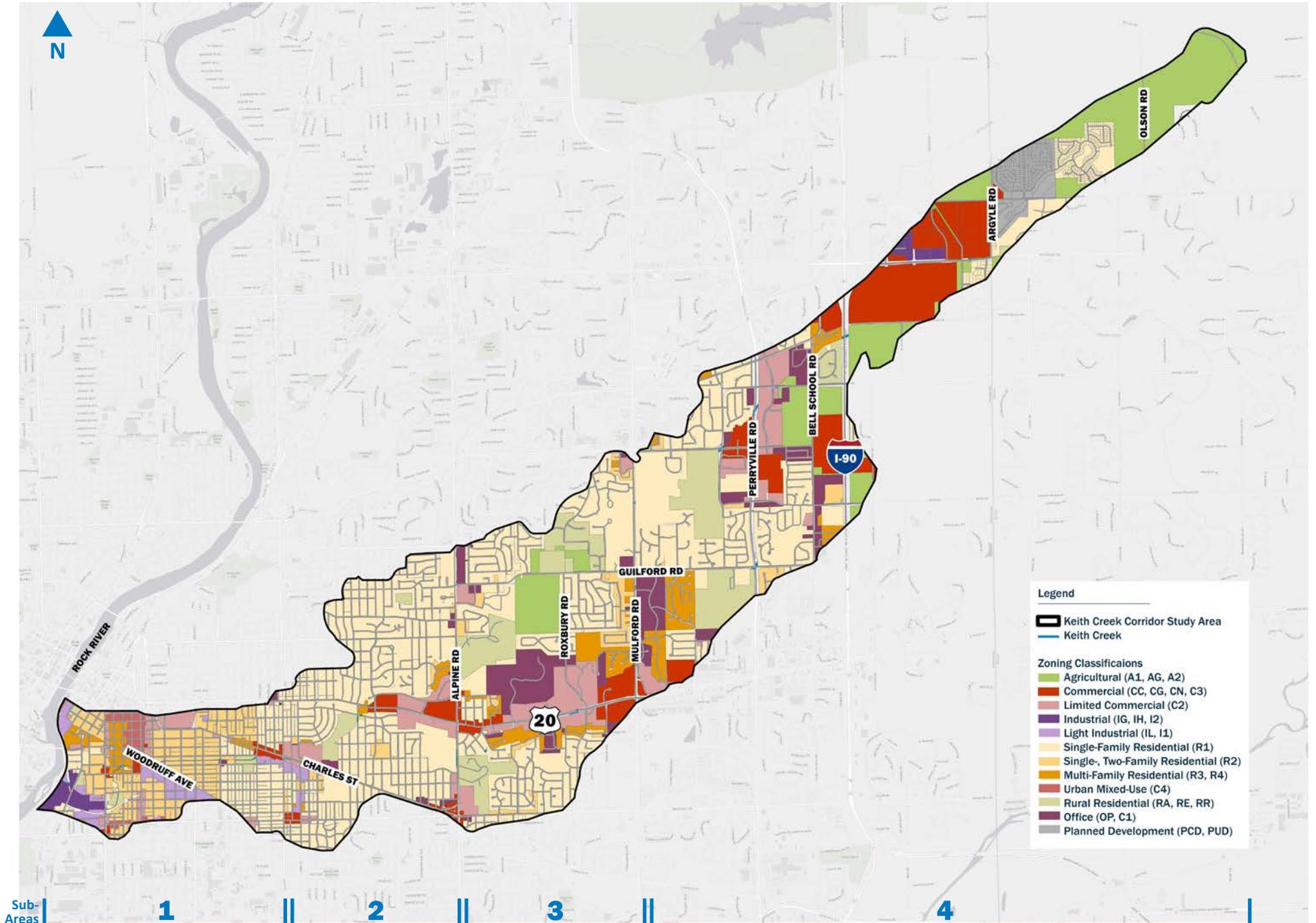
The purpose of the Industrial Districts is to accommodate manufacturing, shipping and warehousing, distribution, wholesale, and other industrial uses within the City. The district regulations are four-fold and intended to 1) Promote the economic viability of manufacturing and industrial uses; 2) Encourage employment growth; 3) Promote the development of high-technology centers; and, 4) Encourage the expansion of shipping, handling, and air cargo facilities in the vicinity of the Chicago-Rockford International Airport.

The ordinance includes development standards related to parking and loading, signs, landscaping, home businesses, mobile homes, fences, dumpster enclosures, lighting, and accessory uses, buildings, and structures. It also includes overlay and special purpose districts which allow other select special or permitted uses and the review or approval procedures related to each.

Zoning has two major functions, which include administration, and enforcement of the Zoning Ordinance. Zoning administration includes the process for Zoning Map Amendments, Special Use Permits and Variances requested by property owners or developers on their behalf, and providing background information and recommendations to the Zoning Board of Appeals on all requests for zoning changes.

Zoning also includes review of all building permits for compliance with the Zoning Ordinance, and enforcement of the Ordinance by responding to complaints and following up on previous zoning cases.

Figure 12: Zoning Map



TRANSECT ANALYSIS

The Study Area for the Keith Creek Corridor is approximately five miles long as it follows Keith Creek from the Rock River in Downtown Rockford out to Boone County in the eastern area of the corridor. This eastern portion of the Study Area is largely rural area and includes the headwaters of Keith Creek

The Study Area itself can be identified by transect zones as it travels from urban to suburban to rural environments. In general, transect zones are used to identify environments and to reinforce existing or create new mixed-use environments. The Transect is a means for considering and organizing the environments in a continuum of intensity that ranges from the most rural condition to the most urban. This concept is largely used as an evaluation technique when considering zoning updates to a Form Based Code, but also assists to identify the character and form, intensity of development, and type of place; and, secondly the mix of uses within the area.

For this purpose and to aid in analysis of the Study Area, it has been divided into transect zones based on the existing conditions. These include the following:

URBAN CENTER ZONE

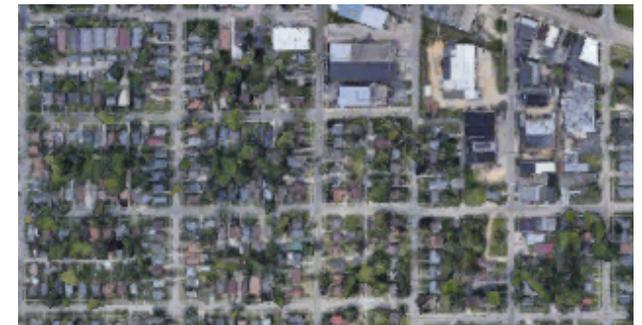
The Urban Center zone generally consists of higher density development and mixed-use buildings that accommodate a range of uses. It has a tight network of streets and small blocks, pedestrian focused and regularly spaced street planting, and buildings set close to the streets. The Urban Center zone is generally located from the Rock River to 9th Street.



Urban Center Zone Aerial

GENERAL URBAN ZONE

The General Urban Zone generally consists of mixed-uses but primarily residential urban environment. It may have a wide range of building types, and uses such as single-family, townhomes or apartments, or stand-alone commercial uses along arterial streets. Setbacks and landscaping are variable and a consistent development pattern of streets and blocks typically exists. Streets with curbs and sidewalks define small to medium-sized blocks. The General Urban zone is generally located from 9th Street to Alpine Road.



General Urban Zone Aerial

SUBURBAN ZONE

The Suburban Zone generally consists of low-density residential areas, including large parks, commercial districts, and institutional uses. Plantings tend to be naturalistic and building setbacks typically larger and relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions. The grid pattern street and block system tend to transition to more suburban systems of irregular shaped lots, subdivisions, and curvilinear streets. The Suburban zone is generally located from Alpine Road to Perryville Road.



RURAL ZONE

The Rural Zone largely consists of sparsely settled lands in open or cultivated state. These include agriculture woodland, grasslands, and parks and open space areas. Some commercial or institutional uses may exist as well as some residential subdivision. Typical buildings are farmhouses, agricultural buildings or cabins. The Rural zone is generally located from Perryville Road to the eastern boundary of the Study Area.



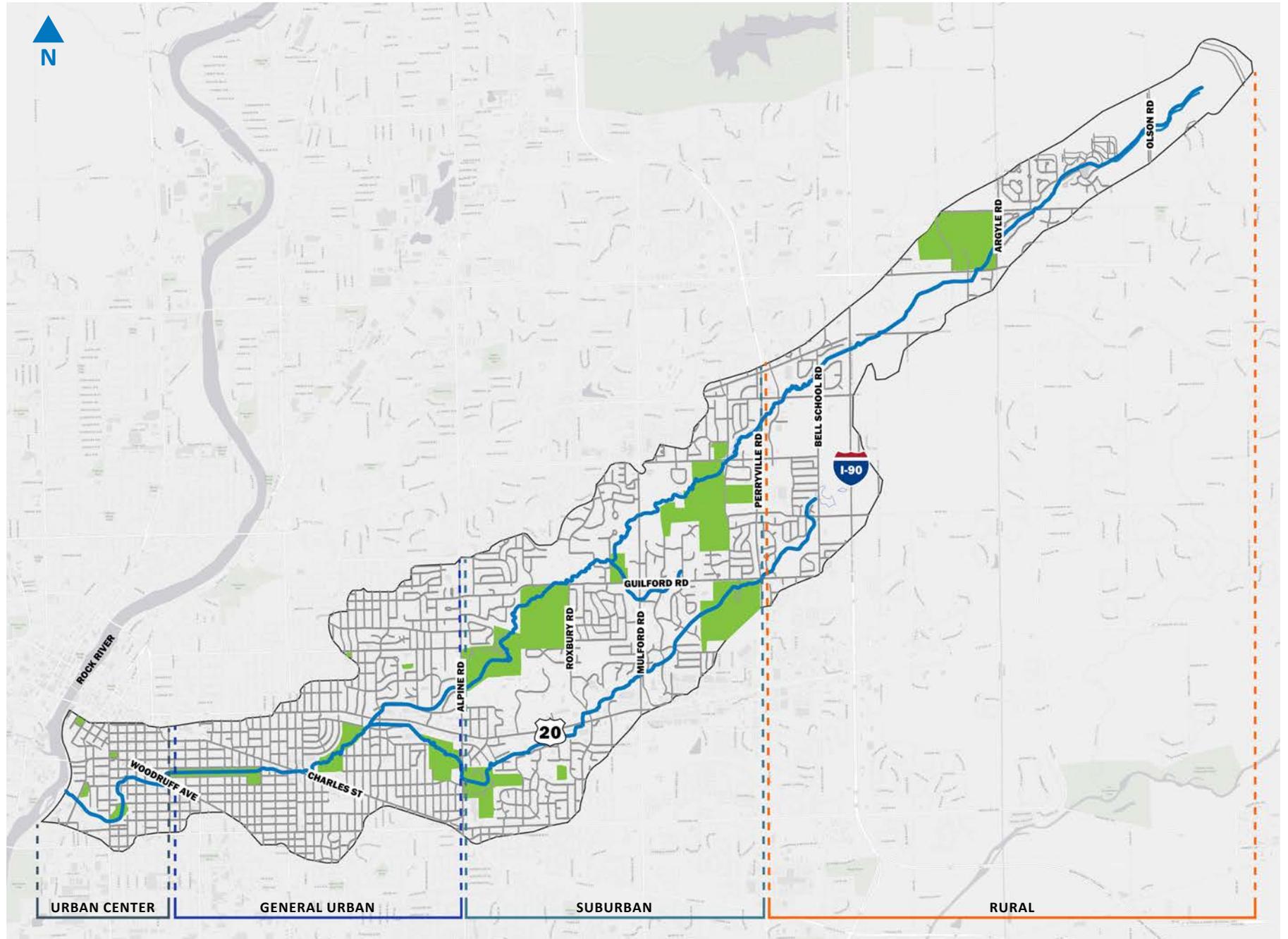
Suburban Zone Aerial



Rural Zone Aerial



Figure 13: Transect Zones



MOBILITY & CONNECTIVITY

“...the City recognizes the need to develop a safe, efficient, accessible and integrated multimodal transportation network that balances the need and desire for access, mobility, economic development and aesthetics while providing for the health and well-being for people of all ages and abilities.”

- Excerpt, Complete Streets Policy, City of Rockford

OVERVIEW

The Keith Creek Study Area is bisected by a number of state- and city-owned roadways of multiple classifications. While the majority of commute trips are conducted by drive-alone motorists (79%, for the City of Rockford as a whole), the needs of transit riders, pedestrians, and bicycle users must also be taken into account. Values such as safety, equity, accessibility, connectivity, and convenience are critical to improving commute and non-commute trip outcomes for the city’s non-motorized travelers.

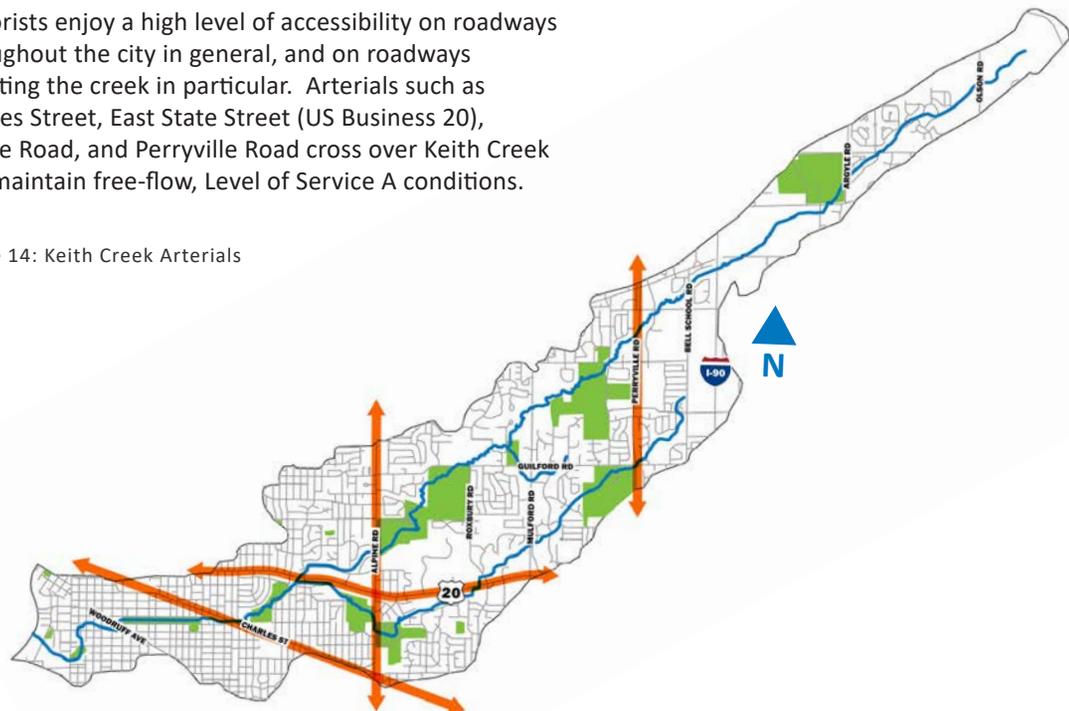
Fortunately, recent plans and policies including the City of Rockford 10-Year Bike Plan, the Rockford Metropolitan Area Bicycle & Pedestrian Plan, the City of Rockford Complete Streets Resolution, and the Region 1 Planning Council Greenways Plan aspire to create a multimodal transportation network that incorporates each of the above values. Understanding the current plans, policies, and values undergirding mobility in Rockford as a whole is an integral part of understanding the existing conditions within the Study Area in particular.

THE LAND USE AND TRANSPORTATION INTERFACE

Previous sections mention the city’s changes in its land use pattern and transportation network over time. The city’s traditional, pre-World War II development pattern occurred in close proximity to the creek; residential, commercial, and industrial properties were established on a gridded street pattern which, by design, can more easily accommodate multiple modes of transportation. As development proliferated eastward, especially after World War II, transportation facilities were designed exclusively around the automobile, with the needs of other roadway users being addressed through retrofit projects.

Motorists enjoy a high level of accessibility on roadways throughout the city in general, and on roadways bisecting the creek in particular. Arterials such as Charles Street, East State Street (US Business 20), Alpine Road, and Perryville Road cross over Keith Creek and maintain free-flow, Level of Service A conditions.

Figure 14: Keith Creek Arterials



ACS 2015-2019 estimates indicate that there are ten tracts within the Study Area with lower-than-average drive-alone rates, suggesting that the number of individuals who neither own nor have access to a vehicle is lower than other tracts within the City of Rockford.

Non-motorized roadway users may face the following challenges within the existing conditions:

LONGER TRIP TIMES, LOW ACCESSIBILITY

Non-motorized users can encounter travel times that far exceed the typical travel times of motorists, especially in the south and west sections of the Study Area. The proliferation of industrial and commercial development on the south and east quadrants of the city compounds non-motorized accessibility, especially when those trips are needed to access employment and critical services. It is not uncommon for transit riders to face long (60-minute) headways and travel times exceeding one hour.

A NETWORK OF 'INCOMPLETE' STREETS

Pedestrians walking on arterials within the Study Area often must navigate right-of-ways which lack serviceable sidewalks and transit amenities. Sidewalks may be difficult to navigate due to utility placement, poor existing conditions in general, or a lack of sidewalks altogether. These conditions become even more challenging for individuals who use a mobility-assist device, such as a wheelchair, to access their destinations. Recent road constructions with a multi-use path (MUP) placement (e.g. South Main, West State) as well as slated CIP road construction projects with MUP placement (e.g. Charles Street from 28th to Parkside Drive) are encouraging but are not located within the Study Area.

INCOMPLETE INTERSECTION AND MID-BLOCK TREATMENTS

Given that a disproportionate amount of crashes occur at intersections, any on- or off-street route consideration such as a greenway or trail must be paired with proper intersection treatments in order for the route to be used consistently and safely. It is not uncommon for intersections to lack pedestrian amenities such as ramps and walk buttons that meet the ADA standard at all four corners of the intersection. Additionally, route crossings that occur mid-block lack features such as 'zebra' crosswalks and RRFB or 'HAWK' beacons. Reid Farm Road, for example, a designated bike route that is located close to Keith Creek and crosses Spring Creek Road, has been the site of one pedestrian collision from 2007-2016 and a bicycle fatality in 2018.

BICYCLE MOBILITY

The 10-Year Bike Plan from the City of Rockford outlines the Bicycle Level of Service (BLOS) currently offered through the existing bicycle infrastructure as well as the Bicycle Level of Service (BLOS) anticipated by the planned improvements over the next 10 years. The 10-Year Bike Plan indicates that "the BLOS measure quantifies the "bike-friendliness" of a roadway, helping to remove a wide range of subjectivity on this issue. The measure indicates adult bicyclist comfort level for specific roadway geometries and traffic conditions. Roadways with a better (lower) score are more attractive – and usually safer – for cyclists. For example a BLOS grade of B (or better) might be considered "comfortable" for casual adult cyclists, C (or better) for experienced cyclists."

Focusing in on the Keith Creek watershed, there is little dedicated bicycle infrastructure currently. While the current facilities do indicate a BLOS average of B, the infrastructure is disconnected. With the plans

identified for the next 10 years, the plan calls for quite a few improvements in and around the watershed that contribute to more comfortable east-west connections, and the future BLOS is anticipated to average at level B.



Reid Farm Road and Spring Creek Road intersection



7th Street sidewalk and road conditions

CRASH DATA AND TRANSPORTATION SAFETY

Above all values, policymakers typically espouse safety is a core value undergirding a transportation system. Towards that end, it is important to analyze crash data to better understand which roadway segments in the Study Area may pose a higher risk, especially for vulnerable, non-motorized users of the network.

Crash data extracts were obtained from the Illinois Department of Transportation (IDOT) for years 2007-2016. During this timeframe, the majority of collisions in the City of Rockford occurred on arterials (both minor arterials and principal arterials). The following arterials within the Study Area are considered to be high-risk roadways, especially for pedestrians and cyclists:

- Charles Street has sustained 39 pedestrian collisions, 4 of which were fatal, and 4 bicycle collisions. The majority of these collisions occurred between 11th and 20th Street; this section runs virtually parallel with Keith Creek to the south.
- East State Street from Fairview Avenue to Alpine road sustained 22 pedestrian collisions and 3 bicycle collisions.

A Keith Creek greenway presents an opportunity to enhance safety for non-motorized roadway users. Future greenway planning efforts should take into account the need to balance safety and access. For example, a greenway along 6th avenue south of Charles provides pedestrians and bicycle users with a safe, comfortable route. However, insofar as these trips are destined to a commercial use, be it for consumer purposes or employment purposes, most businesses are located directly on Charles Street. Greenway users may find that the greenway location is not as convenient as walking or cycling on the Charles street sidewalk, notwithstanding the existing conditions.



East State Street



East State Street stretch without sidewalks

“The review of...documents in combination with stakeholder feedback indicates the need for multimodal transportation improvements along the Keith Creek corridor along with public utility relocations in critical area of the creek.”

TRANSPORTATION & UTILITIES INFRASTRUCTURE

EXISTING UTILITIES AND TRANSPORTATION

In order to assess existing utilities and transportation conditions, the following reports were reviewed:

- The City of Rockford 2022 to 2026 Capital Improvement Program
- Rockford Metropolitan Agency for Planning’s Plan for More Sustainable and Dynamic Rockford Region
- Bicycle & Pedestrian Plan for the Rockford Metropolitan Area
- Rock River Water Reclamation District FY 2021 to 2022 Budget Summary
- Region 1 Planning Council 2021 Greenways Plan
- RPC Coordinated Public Transit Human Services Transportation Plan
- RPC Transportation Improvement Program 2022 to 2025

- Winnebago County Utilities and Transportation Plan.
- Rockford Region Vital Signs: Regional Plan for Sustainable Development 2014

The review of these documents in combination with stakeholder feedback indicates the need for multimodal transportation improvements along the Keith Creek corridor along with public utility relocations in critical area of the creek.

WATER

The City’s Water Division provides drinking water to the majority of the Keith Creek watershed area including some service in the Township of Rockford, while some of the residents in the township are still on private wells. The remaining watershed area east of Interstate Highway 90 is served by the City of Loves Park.

The water main infrastructure mainly follows the existing roadway networks and crosses Keith Creek at bridge locations. There are some concerns with creek scoring at these crossings during high-velocity storm events. The water division monitors water main crossings of

Keith Creek to verify adequate cover is maintained. There are a few short sections of water main that follow Keith Creek from 9th Street to Railroad Avenue, along 7th Avenue, and along Lewis Street. These are relatively short sections of water main that could be assessed and relocated in the future as needed and if channel work is provided in those sections of the creek.

The relative age of the water system tends to increase as it approaches the Rock River with pipes up to 100 years in age. The older pipe material is typically cast iron and with newer material as ductile iron. The City Water Division has focused on the replacement of older water mains in the City over the past five years and will continue to make replacement a priority. Upcoming water main replacement projects in this watershed include, Seminary Street, 15th Avenue, 8th Avenue, 8th Street, and 11th Street.

“The relative age of the water system tends to increase as it approaches the Rock River with pipes up to 100 years in age.”

SANITARY SEWER

The Four River Sanitation Authority (FRSA) provides sanitary sewer service to the Keith Creek watershed areas in the City, parts of the Township of Rockford and the City of Loves Park. Similar to water distribution, portions of the township in the watershed area are not served with municipal sewer but instead include private septic systems.

Urban sanitary sewer systems typically flow by gravity so as expected, a majority of FRSA's sewer interceptor and collection system does follow Keith Creek as it is the natural low point and flows west toward the treatment facility along the Rock River. The interceptor sewers from Charles Street to the far east limits of the watershed are mainly installed within a utility easement on either side of the creek with periodic crossings and connections to local sewer mains and laterals. In this section of Keith Creek, FRSA concerns include creek crossings of local sewers and laterals as these tend to have creek scouring issues and the rehabilitation of older pipe. The sanitary sewer pipe material in this area is typically vitrified clay or reinforced concrete and ranges from 50 to 75 years old. Because the sanitary main flows by gravity, the soil cover over these pipes are limited and large storm events continue to scour the creek bottom removing critical pipe cover. FRSA mentioned one critical area of sewer main cover in the Alpine Dam area and the connection to Rockford University. FRSA televises and inspects its sewer systems on a regular basis and believe a majority of its pipe along Keith Creek is in great condition and has plenty of capacity for future needs.

As the sewer interceptor crosses Charles Street, it follows 7th Avenue until it enters Keith Creek at 14th Street. From here, it continues mainly down the center of the creek channel until 10th Avenue. This section of the sewer is directly impacted by the creek and is the most difficult for FRSA to maintain.

A majority of the access manholes for this section of pipe are located adjacent to bridge pier structures for access. This section of the sanitary sewer and manholes experience a high rate of inflow and infiltration (I&I) of water during storm events.

FRSA does not have any future plans to relocate this section of sanitary sewer under the creek but would be open to future opportunities as a joint channel reconstruction project is planned. At a minimum, FRSA may consider lining this section of sanitary to reduce I&I. FRSA has budgeted approximately \$7,000,000 annually on collection system rehabilitation projects over the next ten years. This budget includes a sanitary sewer relocation under Keith Creek between 8th and 15th Streets.



Sewer Manhole Located Adjacent to Bridge along Keith Creek

Figure 15: Keith Creek Sanitary Sewer Location (in red)



TELECOMMUNICATIONS

High-speed internet and a fiber optic network are coming to the City based on a recent development agreement between the City and SiFi Networks (SiFi). SiFi will develop a City-wide fiber optic network. The City will allow access and use of the right-of-way to SiFi, which will pay for and install the fiber optic network. More than 1,100 miles of fiber optic wire will be laid across the entire City in the next four years. Then, SiFi will work with multiple service providers to offer services to homes and businesses in the City. Those services include gigabit internet, television, phone, and home security. This opportunity should be leveraged by the City along the Keith Creek corridor by considering installing City provided WiFi networks along the creek connecting the parks and gathering areas.

TRANSPORTATION AND BICYCLE AND PEDESTRIAN ACCOMMODATIONS

The Rockford Area Transportation System includes a grid type network of street similar to most urbanized areas. In this network of streets, bridges cross Keith Creek at several locations. In recent years, the City has focused on improving and removing bridges along the Keith Creek corridor. Planned bridge removals include 6th Street, 8th Street, 10th Street, 12th Street, and 13th Street bridges. Planned bridge replacements include the bridges at 5th Street, 8th Avenue, and Seminary Street.

The creek corridor includes structural constraints in several areas that will limit transportation and pedestrian improvement opportunities. From west to east there are the following existing structures:

- Large box culvert crossing (more than 700 feet) along the Behr Iron and Metal property.
- Structural wall channel containing building foundations from 18th to 20th Street.

- A large box culvert crossing (more than 650 feet) at Charles Street.
- A large box culvert crossing (more than 1,000 feet) at the Del Marty Plaza.

These locations experience flooding that impact roadway, bike, pedestrian, and parking during extreme rain events along the creek due to insufficient stormwater conveyance capacity.

The City has passed a complete street resolution stating, "The City of Rockford shall approach every transportation and transportation-related improvement as an opportunity to create safer, more accessible streets for all users. Complete Streets may be achieved through single projects or incrementally through a series of smaller improvements or maintenance activities over time. This includes approaching private development and re-development projects with a Complete Streets focus in mind."

In addition, Region 1 Planning Council's Bicycle and Pedestrian Plan includes the following goals and objectives regarding transportation infrastructure:

Goal 2 - *Develop a well-connected active transportation network that links a variety of multi-modal facilities together and accommodates users of all ages and abilities.*

Objective 2.a. *Focus on achieving connectivity of the existing bikeway and trail system when planning and programming trail and bikeway improvements.*

Objective 2.b. *Increase the number of multimodal connections between residential areas, commercial centers, and employment opportunities to enhance the quality of life for residents and visitors.*

Objective 2.c. *Increase signage and wayfinding on existing pedestrian and bicycle facilities that will direct users to the existing active transportation network.*

Objective 2.d. *Provide bike racks at major recreational and commercial locations in the community to encourage bicycle use and accommodate existing bicycle facilities.*

Currently there are no multiuse paths routed along Keith Creek outside of current park areas. There are several streets in the Keith Creek corridor network with bike and pedestrian facilities such as State Street and Charles Street, but those too contain gaps and lack proper wayfinding.



Railroad trestle near Seminary.



Concrete channel sidewall built into existing foundation at 2233 18th Street.

ENVIRONMENTAL CONSIDERATIONS

INTRODUCTION AND BACKGROUND

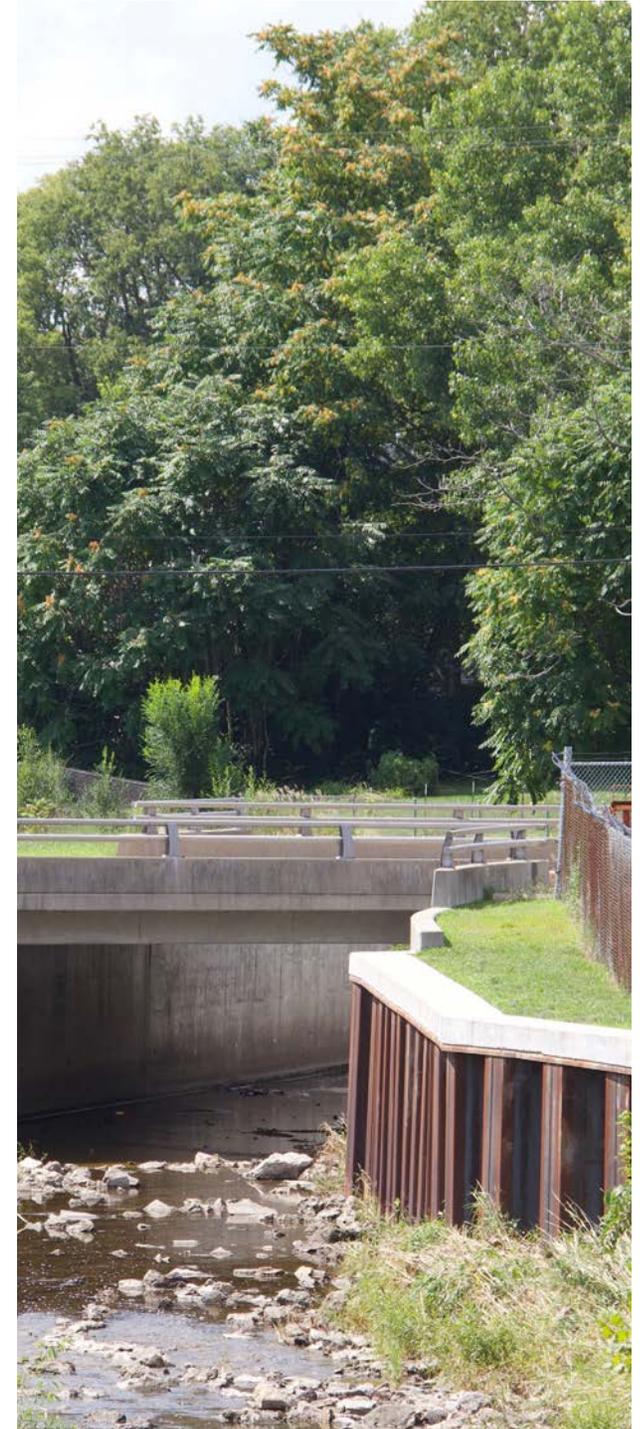
The Keith Creek Corridor Study is being conducted concurrently with the preparation of a watershed-based plan for the Keith Creek watershed by RES, an ecological restoration company. The Keith Creek Corridor Study is focused on the creek corridor itself and does not encompass the entire watershed. However, the two study efforts are working collaboratively for efficiency and comprehensiveness. This assessment of environmental conditions takes advantage of field assessments conducted by RES for the watershed-based plan, in addition to field evaluations gathered by the project team.

The Keith Creek headwaters is in Boone County northeast of the Javon Bea Hospital area in a rural setting near the Village of Caledonia. Keith Creek flows southwest into Winnebago County through the City of Loves Park, through Rockford, and into the Rock River. The Keith Creek watershed is 9,111.8 acres or 14.2 square miles in size. This study includes 20.20 miles of Creek channel, including the South Branch.

Keith Creek generally drains from northeast to southwest before entering the Rock River. Elevations within the watershed range from a high of 958.7 feet above sea level to a low of 689.5 feet for a total relief of 268.6 feet. The highest point is found in the northeastern portion of the watershed near the intersection of Ayrshire Lane and Castle Wynd Drive. Higher elevations also extend through much of the eastern portions of the watershed, generally. The lowest elevation occurs near where Keith Creek outlets to the Rock River with lower elevations extending along the reaches of Keith Creek and adjacent to the Rock River.



“The Keith Creek watershed is 9,111.8 acres or 14.2 square miles in size. This study includes 20.20 miles of Creek channel, including the South Branch.”



KEITH CREEK CHANNEL AND RIPARIAN CORRIDOR CONDITION

The Keith Creek watershed-based study being prepared by RES evaluates each stream reach for stream channelization, streambank erosion, and riparian condition. It should be noted that this evaluation by RES does not appear to extend into Boone County. In this Study, these assessments are synthesized, along with independent evaluations and observations, into a single description and assessment of each reach of Keith Creek's northern branch located within the subareas. The goal is to provide an analysis that can provide insights into the areas that provide the best opportunities for creek channel improvement and riparian corridor enhancement as natural open space within the Keith Creek corridor.

For this analysis of the existing condition from an ecological perspective, the descriptions begin at the Rock River and proceed upstream in the direction opposite to the flow. Sub-Areas are correlated with the stream reach numbering used in the RES watershed-based plan (see Figure 15) for comparison and context.

Figure 16: Sub-Area Reference

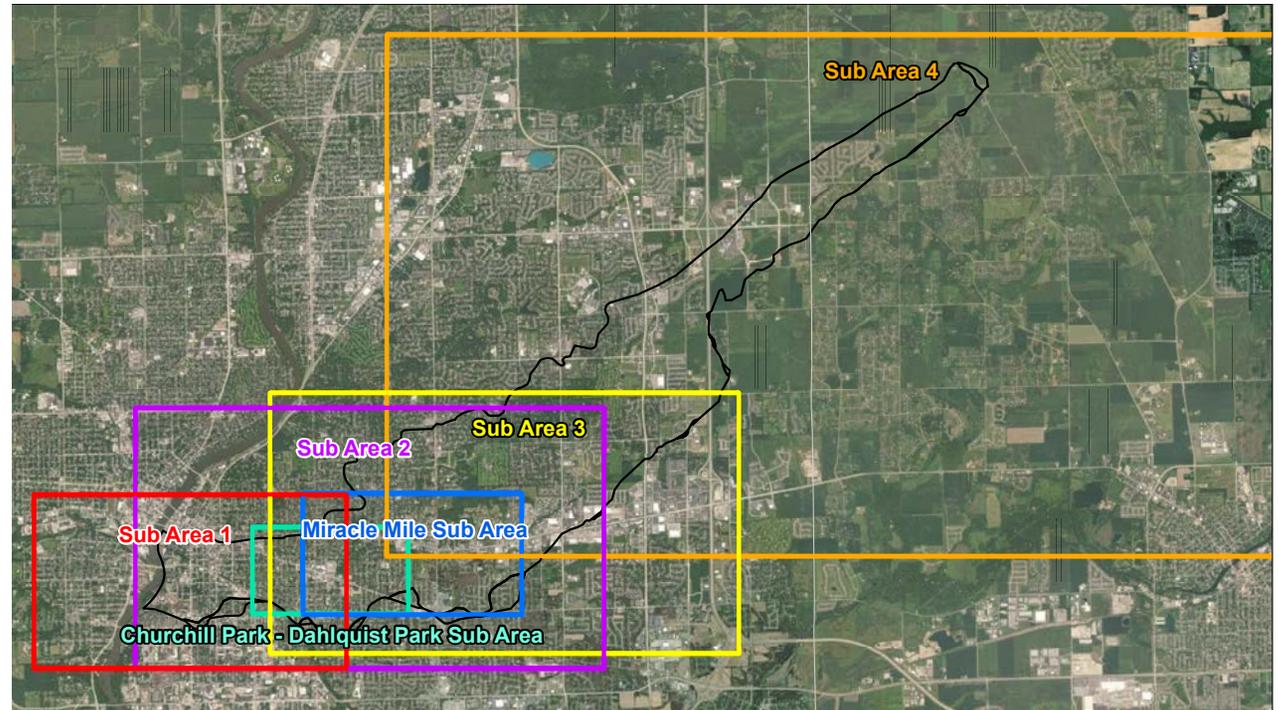
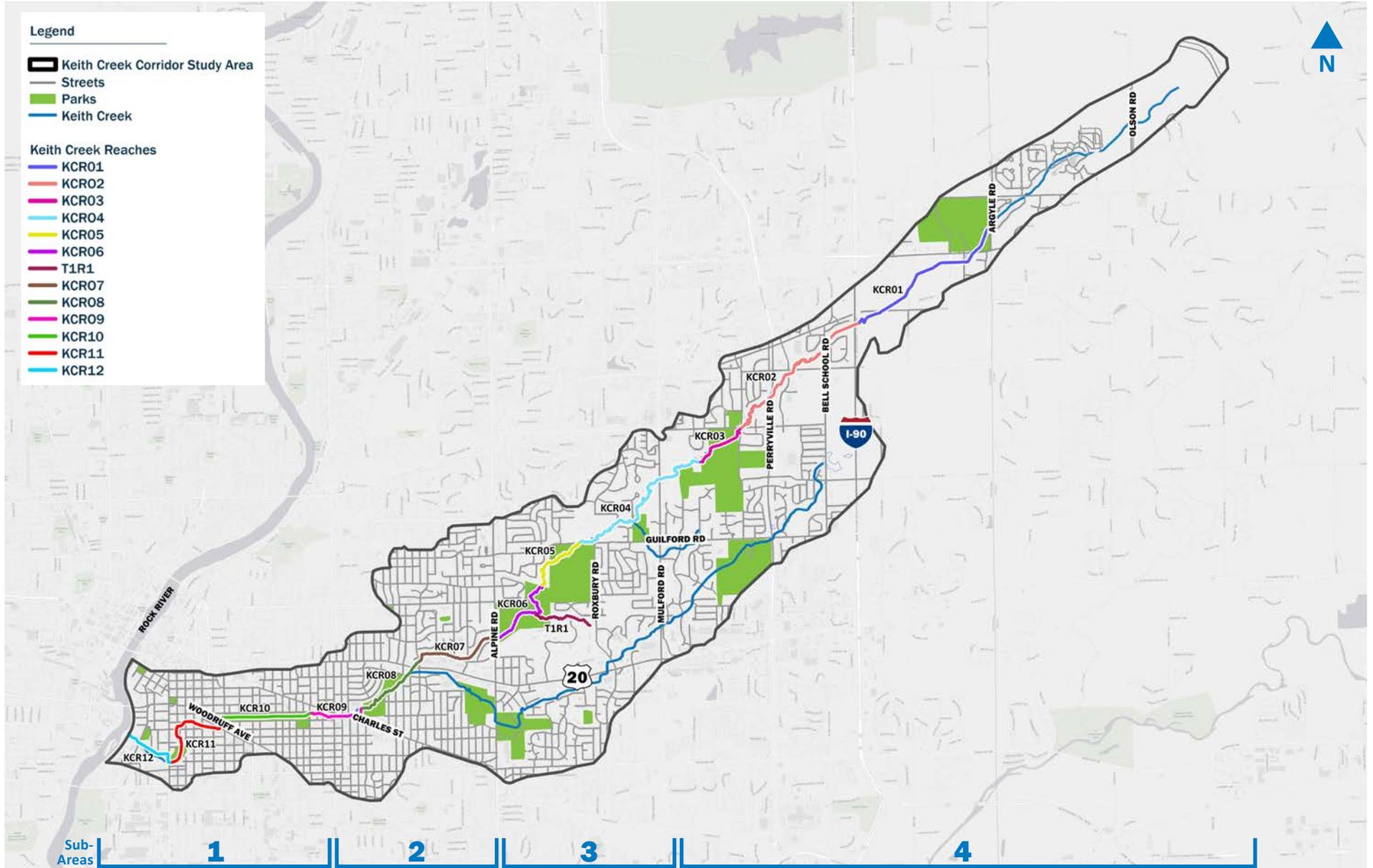


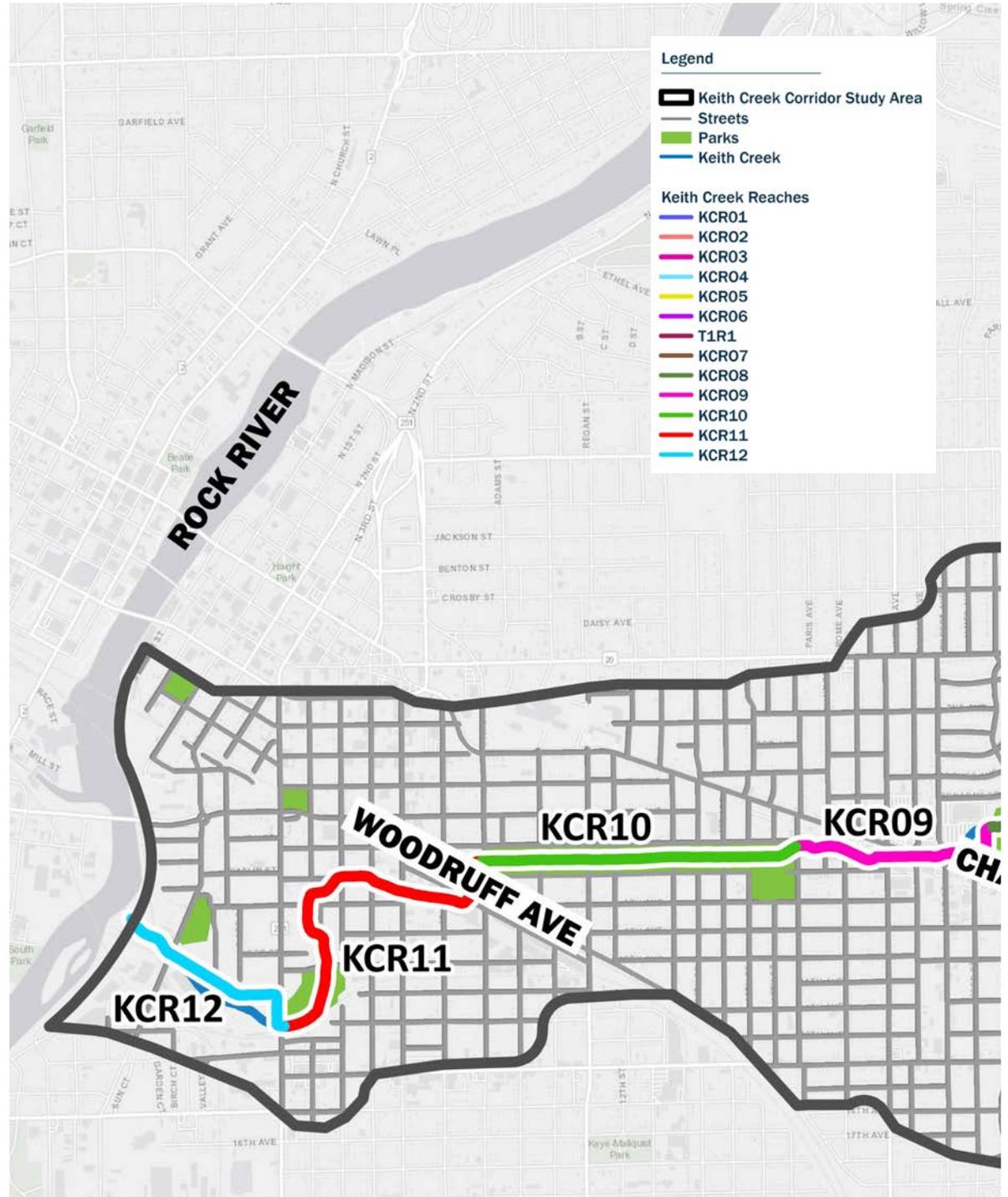
Figure 17: Keith Creek Reaches



SUB-AREA 1

Once the creek daylights downstream of the underground section, it flows behind businesses in a concrete lined channel before going under 18th Street. West of 18th Street it is labeled as KCR10 and it flows in a concrete lined channel through Churchill Park and the “Keith Creek Greenway” where the majority of the homes have been bought out and demolished due to frequent flood damages. This greenway consists of mowed turf grass, a concrete-line channel with near-vertical sides, and a community garden plot. This location is an opportunity for ecological restoration of the creek and public or economic developments that are appropriate within a floodplain.

In reaches KCR11 and KCR12 Keith Creek then flows through residential neighborhoods in a very channelized section with some very deteriorated bridges where residential streets cross over the creek channel. It continues under Kishwaukee Street and into the Behr Iron & Metal works property in a deep ravine. It is then piped through part of the Behr property before daylighting near Seminary Street. Below Seminary Street it flows in a deep channel under a railroad bridge and into the Rock River. In the RES watershed-based planning assessments this reach is rated as high level of channelization, moderate erosion, and poor riparian condition.

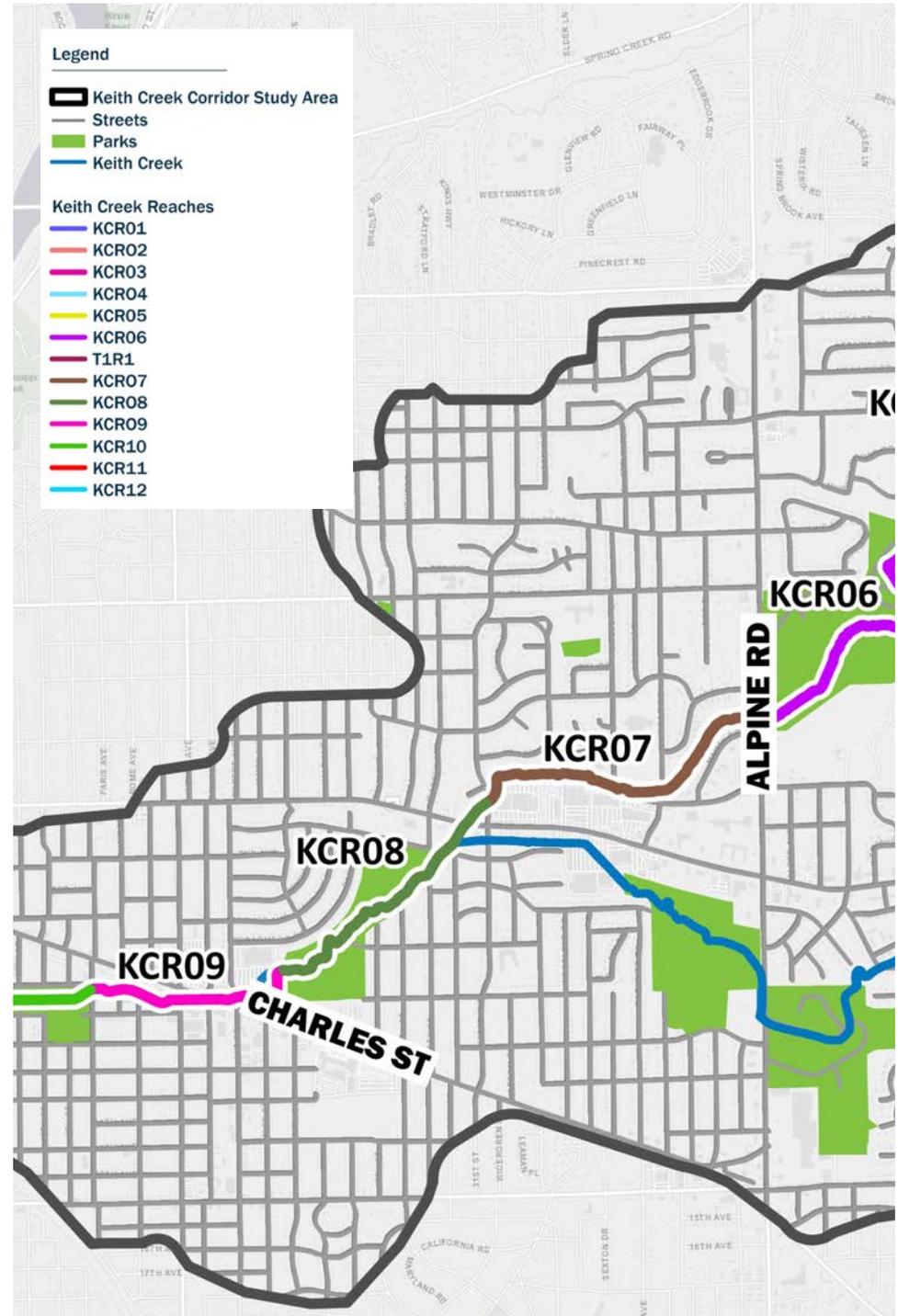


SUB-AREA 2

West of Alpine Road Keith Creek flows in a wooded corridor through a residential neighborhood until it flows along Morsay Drive where the creek channel is at the toe of the road embankment. It is naturally vegetated through this reach, albeit with weedy, invasive species. This reach is labeled as KCR07 in the RES watershed-based plan and is rated as moderate levels of channelization and erosion, and poor riparian condition.

For part of reach KCR08, the creek is in a very steep rock-lined channel where it is spatially confined as it flows under Morsay Drive, Fairview Boulevard, and East State Street. The creek then flows through Dahlquist and Twin Sister Hills Parks where it is in a tree-lined, narrow riparian corridor. KCR08 is rated as moderately channelized, low levels of erosion, and poor riparian condition in the RES watershed-based plan. The section in these parks offers an opportunity area to widen the riparian corridor and improve its condition with native vegetation.

Then the creek takes two unnatural sharp bends to flow around the Schnucks parking lot before it flows under Hunter Avenue and into the underground piped section beneath Charles Street, 20th Street, and several businesses. This reach is labeled as KCR09 in the RES watershed-based plan and rated as highly channelized, poor riparian condition, and low levels of erosion. Though it should be noted that the erosion levels are low due to the channel being largely enclosed in concrete and other hard structures. From an open space, ecological, and water quality perspective this reach is in the worst condition.

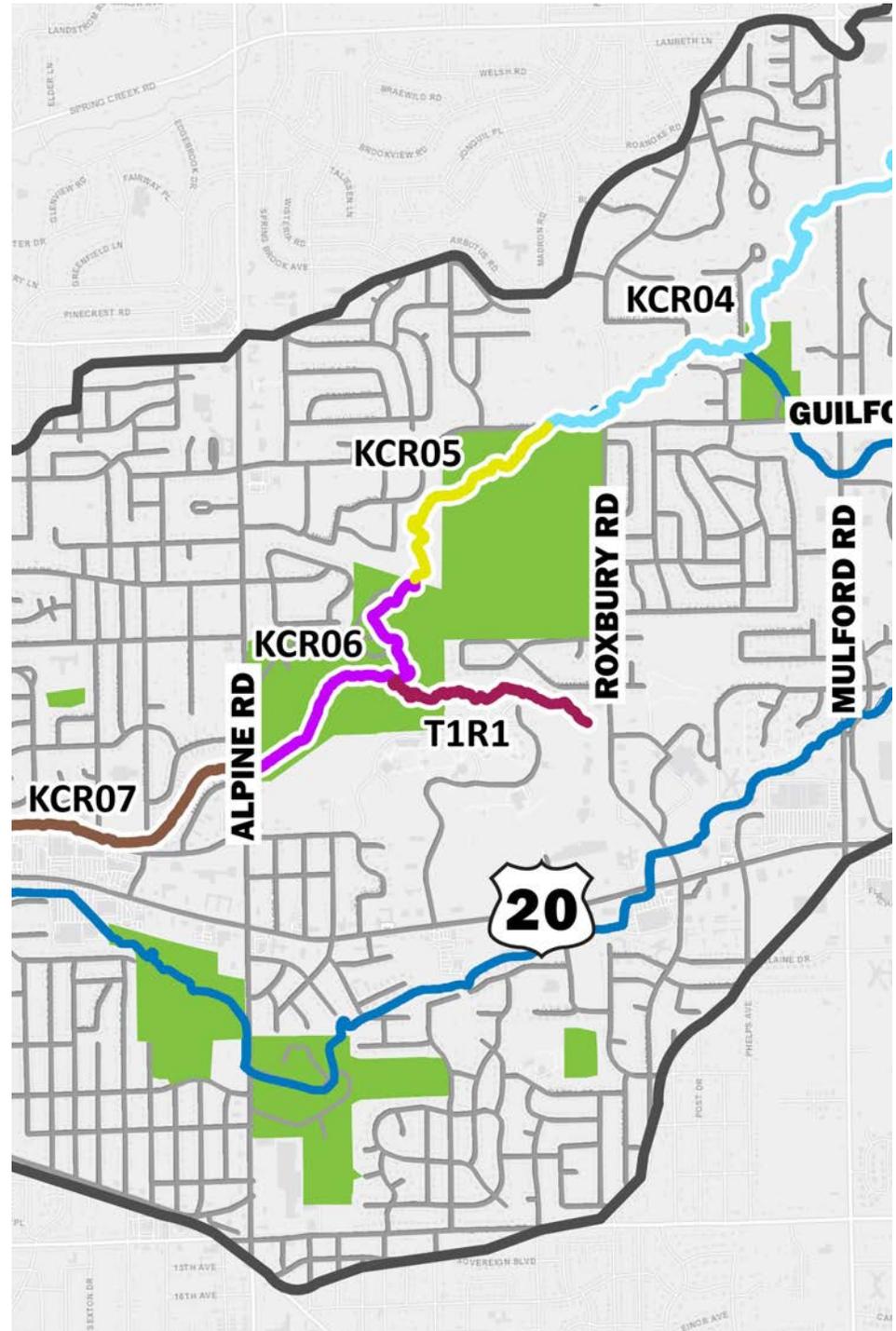
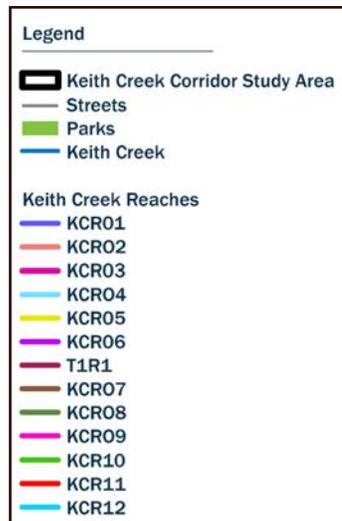


SUB-AREA 3

Subarea 3 includes RES Reaches KCR05, KCR06, and a part of KCR04. In this Sub-Area, Keith Creek flows southwest through Mauh-Nah-Tee-See Golf Club and Aldeen Park. West of the golf club and within Aldeen Park there are some stretches of Keith Creek that are in very good condition with a cobble bottom channel and within a native wooded context that featured oaks and walnuts. Within the golf club, portions of the creek had naturalized vegetation along the riparian corridor, providing good streambank stability and wildlife habitat. In other parts, there was mowed turf to the stream edge. It is a better practice to allow unmowed vegetation along the streambank for reduction of erosion and improved water quality and wildlife habitat.

Aldeen Park also includes a large concrete spillway and dam which has been in place for decades. The “lake” formed by the dam at high flows appears vegetated in its present condition and on most historic aerials.

Sub-Area 3 also includes a small tributary to Keith Creek, labeled T1R1 in the RES watershed-based plan. This tributary extends into the Rockford College campus where it is largely a wooded corridor.

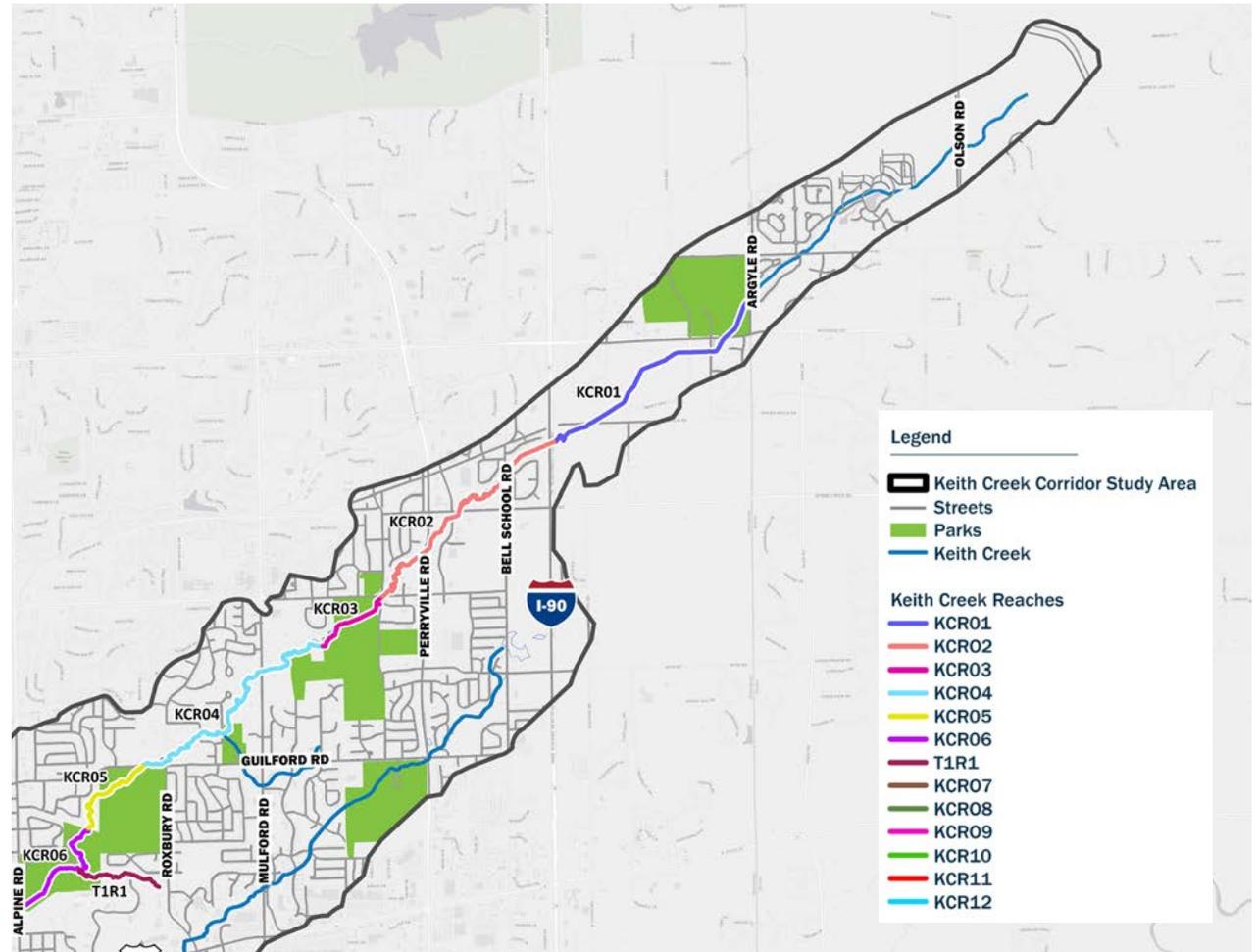


SUB-AREA 4

This headwaters reach includes an area in Boone County not evaluated by RES for the watershed-based plan and also includes the areas RES identified as reaches KCR01, KCR02, KCR03, and part of KCR04. Reach KCR01 was rated as highly channelized, low streambank erosion, and poor riparian condition. Reach KCR02 was rated as moderately channelized with moderate erosion, and poor riparian condition. Reaches KCR03 and KCR04 were rated as low level of channelization, moderate levels of streambank erosion, and average riparian condition.

Beginning at the northeast headwaters of Keith Creek, it flows in a small swale and then through agricultural row-crop fields in the portion in Boone County. As the creek comes into suburban Loves Park, it flows through a rock-lined channel and into a series of rock-lined stormwater basins. Portions were observed to be algae covered suggesting high nutrient loads. These rock-lined channels and online detention basins are not considered best management practices for water quality. Keith Creek then runs in a tree-lined channel through the Mercyhealth Sportscore complex, the Javon Bea Hospital campus, and under Interstate 90. This corresponds to RES reach KRC01 referenced above. Except the rock-lined section and online basins, this stretch was observed to be moderately channelized with a riparian corridor that is mostly naturally vegetated. As further development occurs in this area, it can provide an opportunity to improve the riparian corridor with native vegetation and maintain the natural floodplain functions. Naturalized detention provided offline will provide better water quality and habitat benefits.

The next reach of Keith Creek is largely a wooded corridor through residential neighborhoods with some wetlands present along the channel. It also runs through Aldeen Golf Club. These reaches correspond



to KCR02 and KCR03 described above. Through most of this area the creek has a weedy, but naturalized, vegetated riparian corridor. In Aldeen Golf Club the creek is boulder-lined but with some native plantings and vegetated shorelines. West of Aldeen Golf Club, in Reach KCR04, Keith Creek flows through a largely wooded residential area where it is more deeply channelized. Public access to the creek is minimal if any in this reach.

WETLANDS

Wetlands are areas where water covers the soil or is present either at or near the surface of the soil for a significant portion of the time during the growing season. Water saturation (hydrology) largely determines how the soil develops and the types of plant and animal communities living in and on the soil. Wetlands may support both aquatic and terrestrial species. The prolonged presence of water creates conditions that favor the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils.

Functional wetlands provide significant water quality improvement and flood reduction. In addition, intact wetlands typically provide habitat for a wide variety of plant and animal species. They also provide groundwater recharge, filter sediments and nutrients, and slowly discharge to streams thereby maintaining water levels in streams during drought periods. The importance of wetlands has resulted in their regulation through section 404 of the federal Clean Water Act as administered by the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency. In many areas isolated (non-federal) wetlands are regulated by local ordinance. The Rockford Stormwater Ordinance has limited wetland protections that apply only for USACE permitted impacts.

Historically, a diverse network of wetlands and wet prairie occurred along Keith Creek until the late 1830s when European settlers began to alter significant portions of the watershed's natural hydrology and wetland processes. Where it was feasible, wet prairie, sedge meadow, and marsh communities were drained, streams channelized, and existing vegetation cleared to build settlements or farm the rich soils. In the draft watershed-based plan, RES indicated there were approximately 1054 acres of wetlands (12% of

the watershed) in the watershed prior to European settlement based on the most up to date hydric soils mapping provided by the USDA Natural Resources Conservation Service (NRCS). According to existing wetland inventories, about 51 acres or 5% of the pre-European settlement wetlands remain watershed wide.

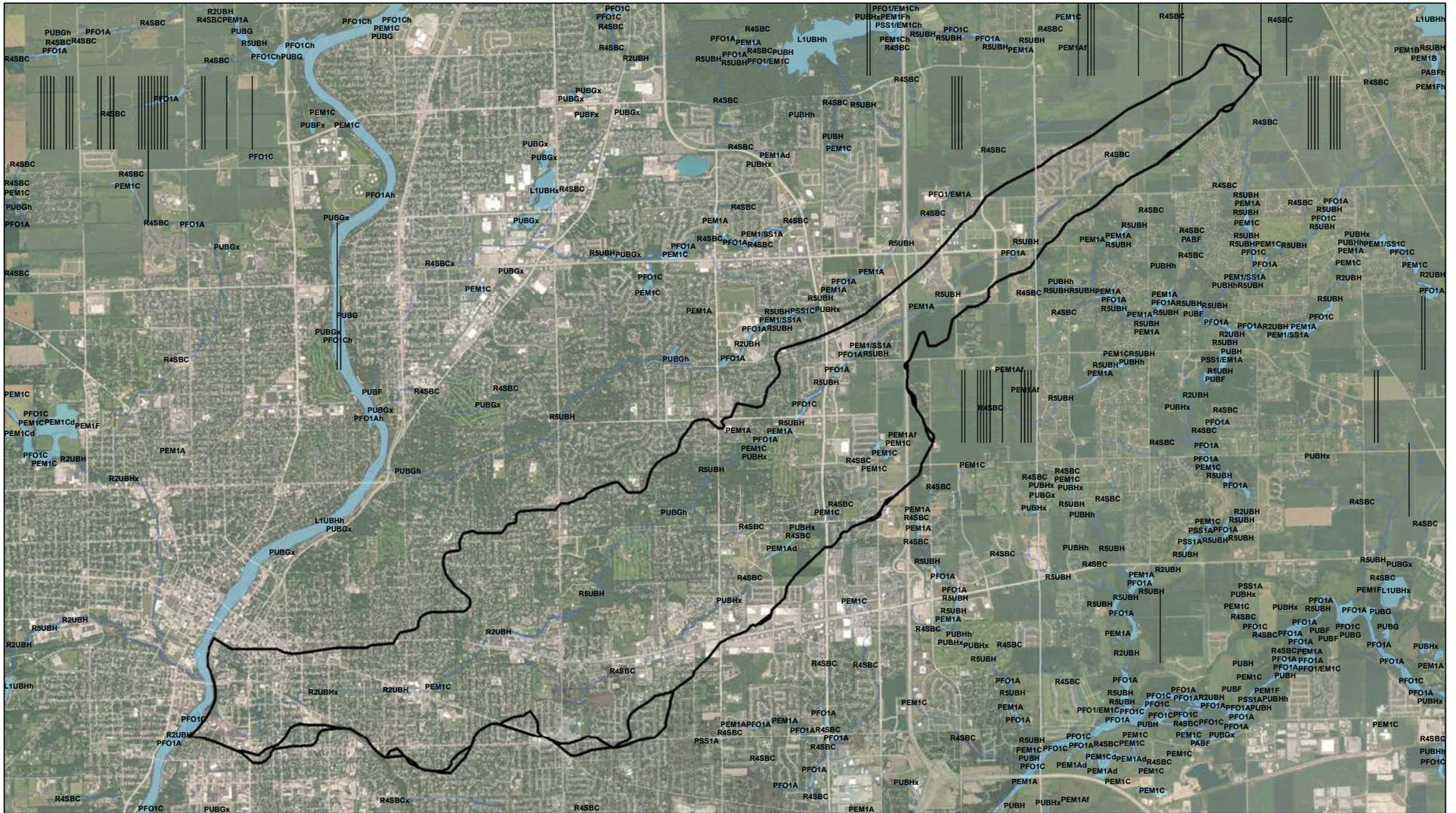
Very few wetlands exist along Keith Creek today and what wetlands do remain are narrow and found immediately adjacent to the stream corridor. Invasive species such as purple loosestrife (*Lythrum salicaria*), buckthorn (*Rhamnus* spp.), reed canary grass (*Phalaris arundinacea*), box elder (*Acer negundo*), and common reed (*Phragmites australis*) now dominate most of these wetlands. Some wetlands are emergent and some are forested, but all are degraded and lack significant native character. This loss of wetlands in the Keith Creek watershed contributes significantly to the frequent flood damages experienced along the creek in past decades. Figure 17 provides a map of the extent of wetlands currently in the Keith Creek corridor based on the National Wetland Inventory (NWI). While this is based on the latest NWI digital database, the NWI is still a national database that is created using remote sensing and not ground truthing or delineations.

In the draft watershed-based plan, RES identified 3 potential wetland restoration sites in the watershed. However, two of these are outside the Keith Creek Corridor Study Area along I-39/90. The third is in the headwaters of Keith Creek in Boone County where drained hydric soils currently farmed could be restored to wetland. There may also be opportunities to restore riparian wetlands where the channel and riparian corridor can be modified to have gentle side slopes and allow high flows to access the natural floodplain areas. This could occur in such areas as Aldeen Park, Church Park, and the Keith Creek greenway.



Invasive species Reed Canary Grass (Above), Loosestrife (Middle), Common Reed (Below) have grown in place of wetlands.

Figure 18: National Wetland Inventory Layer



Prepared by:

Hey and Associates, Inc.
Engineering, Ecology and Landscape Architecture

Scale:



Project Number: 21-0188

Orientation:



Date: 1/19/2022

Legend:

- National Wetland Inventory
- Kieth Creek Corridor Study Area

Project Name:

Keith Creek Corridor Planning

Prepared For:

Lakota

County:

Winnebago

Exhibit Title:

Lakota Wetlands

Exhibit:

2

TREES AND WOODLANDS

Urban trees provide critical benefits and services to people and animals who live in a given metro area. Studies show that the size and health of the urban tree canopy directly relate to the benefits and services these trees provide. Urban trees are part of the urban infrastructure, just like roads, storm sewers, or water mains. Every year, trees in the Rockford region intercept and absorb billions of gallons of stormwater, sequester and store millions of tons of carbon and tons of pollution, reduce heat island effects saving millions in building energy usage, and offset impacts to a changing climate. The urban forest also provides important economic benefits such as increased property values and improved sales in commercial areas. Trees provide important physical and mental benefits such as improved mental and physical health, social cohesion, reduced crime, and improved community engagement, and they provide important habitat for wildlife especially migratory birds.

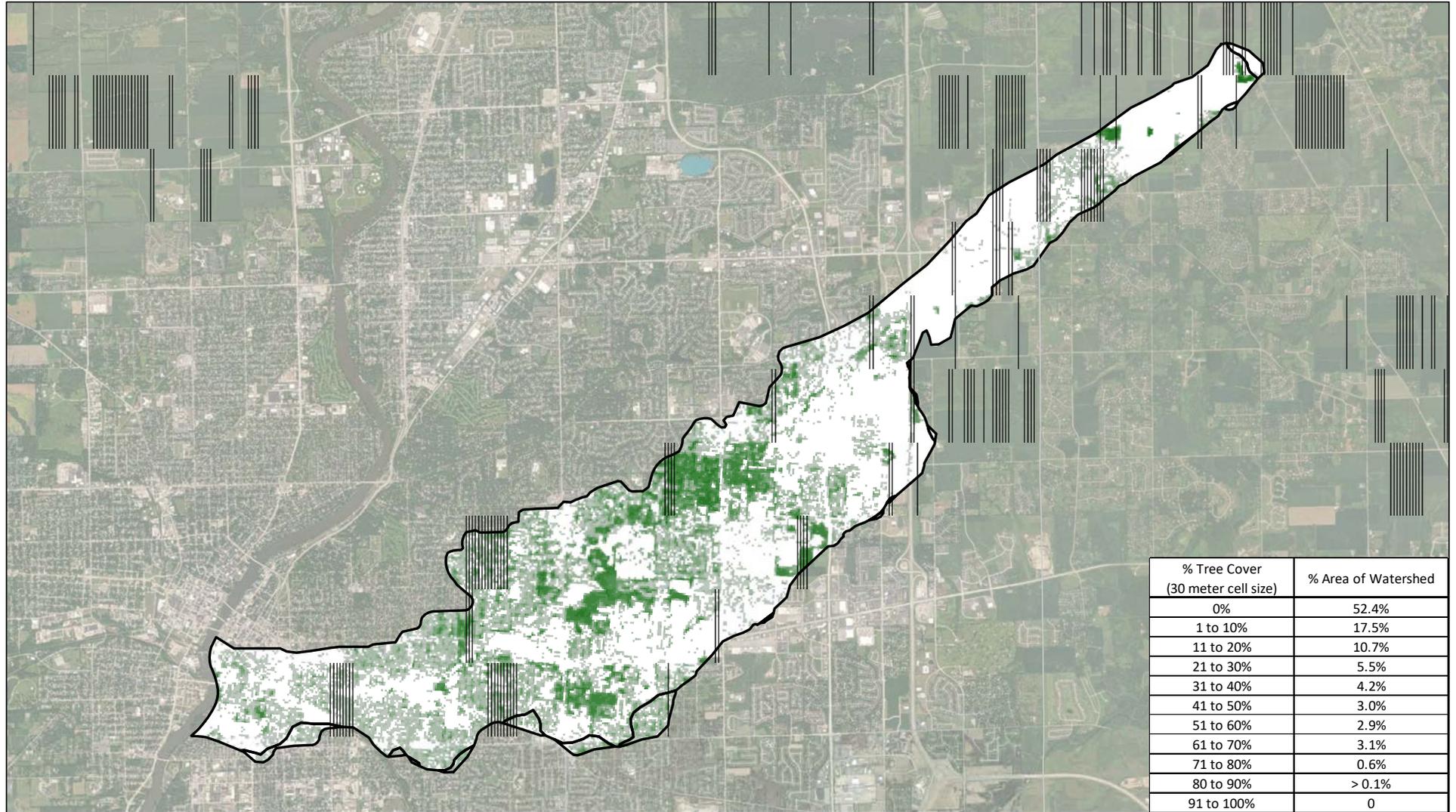
In a study conducted by The Morton Arboretum and the US Forest Service in 2010, Urban Trees and Forests of the Chicago Region, it was revealed that 30 percent of the 157 million trees in the Chicago region are the exotic invasive species European buckthorn and

Amur honeysuckle. This proportion is likely similar in the Keith Creek watershed within the Rockford metro region. These species grow aggressively and replace desirable species in the landscape. Invasive species change the soil structure and chemistry, making it inhospitable for native plant species, which can harm wildlife. Urban tree species diversity is generally low and when diversity of species in an urban forest is low, the opportunity for catastrophic loss due to a pest or pathogen that attacks a specific species increases.

Figure 19 shows the urban tree canopy within the Keith Creek corridor based on landcover data which used 30 meter square cells to assess tree canopy from satellite data. Only 9% of the Keith Creek watershed has 40% or more tree canopy. More than 50% of the watershed has zero tree canopy. In some places such as Aldeen Park, this canopy includes mature native hardwoods such as oaks and hickories. However, much of the Keith Creek tree canopy is fast-growing weedy species that have colonized the narrow riparian corridor. It is important to protect and enhance that tree canopy for the benefits described above, but also to seize opportunities to replace the invasive buckthorn, Eurasian honeysuckle, callery pear, and others with native hardwood species.



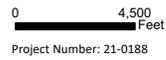
Figure 19: Tree Canopy Cover Map



Prepared by:

Hey and Associates, Inc.
Engineering, Ecology and Landscape Architecture

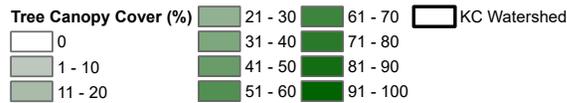
Scale:



Orientation:



Legend:



Project Name:

Keith Creek Corridor Planning

Prepared For:

Lakota

County:

Winnebago

Exhibit Title:

Tree Canopy Coverage

Exhibit:

3

WILDLIFE HABITAT

The Keith Creek is largely urban and suburban with the exception of the headwaters reach which remains rural. And as described above the vast majority of the native vegetation, including wetlands, prairies, and savannas, are gone. The remaining riparian corridor is mostly very narrow and highly modified. Thus, it is expected that the wildlife present in this corridor is mostly urban-adapted species such as raccoons, skunks, gray squirrels, chipmunks, cottontail rabbits, and migratory birds such as the American robin, northern cardinal, house sparrow, house finch, house wren, European starling, common grackle, and others.

A search of the Illinois Department of Natural Resources (IDNR) EcoCAT database for a broadly defined project corridor (the online mapping application is not designed for linear corridor projects) included the Rock River Rockford Segment INAI (Illinois Natural Areas Inventory) site, the gravel chub (*Erimystax s-punctatus*), and the river redhorse (*Moxostoma carinatum*). These are all in reference to the Rock River and not Keith Creek.

The EcoCAT report also included the rusty-patched bumblebee (*Bombus affinis*). This species is state-listed and federally listed as endangered. In the U.S. Fish and Wildlife Service (USFWS) online map viewer of the rusty-patched bumblebee range most of the Keith Creek corridor is mapped as High Potential Zone for this species where its presence should be assumed for consultation purposes, or their Low Potential Zone (as opposed to not mapped as either) where the species may be present.

The rusty patched bumble bee's life history is similar to other bumble bee species and follows an annual cycle. These bumble bees live in colonies that include a single queen and female workers. Unlike the honey bee, which maintains a hive through all seasons and over many years with over 10,000 individual bees, bumble bee colonies only survive from spring through fall with 50 to 1000 individuals. Only new queens survive over winter. These queens emerge in spring and mate in late summer and fall; the old queen, males and all workers die before

winter and the cycle repeats. Bumble bees need areas that provide nectar and pollen from flowers, nesting sites (underground and abandoned rodent cavities or clumps of grasses), and overwintering sites for hibernating queens (undisturbed soil).

The USFWS online iPAC system was also searched for federally listed species and migratory birds that may be present in the Keith Creek corridor. This report listed the Indiana bat (*Myotis sodalis*), the northern long-eared bat (*M. septentrionalis*), the Hine's emerald dragonfly (*Somatochlora hineana*), the monarch butterfly (*Danaus plexippus*), the eastern prairie fringed orchid (*Platanthera leucophaea*), and the prairie bush clover (*Lespedeza leptostachya*). Note that while this system is geographically based, the results still tend to be species that may be present on a county basis.

The Indiana bat is listed as federally endangered, and the northern long-eared bat is listed as federally threatened. Both bat species use caves for hibernation, and trees with loose exfoliating bark, cracks, and crevices for summer roosting. They feed on flying insects often near bodies of water such as the Rock River.

The Hine's emerald dragonfly is federally endangered and lives in groundwater fed wetlands. There is no suitable habitat present along the Keith Creek corridor for this species.

The monarch butterfly is a very widespread species that is considered a candidate for listing under the federal Endangered Species Act due to its recent precipitous declines in population. There are many programs now focused on providing nectar sources for this and other insect species. The Keith Creek corridor provides many areas that could be vegetated with native species to benefit this and other pollinators.

Finally, the IPAC database lists two plant species that are federally threatened, the eastern prairie fringed orchid and the prairie bush clover. Both are species of relatively intact prairie remnants and no such habitat is present in the Keith Creek corridor.



Prairie Bush Clover



From Top Left, Clockwise: Rusty Patched Bumble Bee, Amur Honeysuckle, Hines Emerald Dragonfly, Boxelder, House Wren, Chipmunk

FLOODING AND STORMWATER MANAGEMENT: CURRENT CONDITIONS

OVERVIEW

The Keith Creek watershed drains approximately 9,000 acres through 20 miles of creek or channel. The main channel of the creek starts on the eastern end of the City of Loves Park and meanders southwest into the heart of the city of Rockford (City) and to the Rock River. The impacts of climate change and more frequent occurrences of severe rain events in the Keith Creek watershed have caused the City of Rockford and surrounding communities to place a greater emphasis on the need for management of urban stormwater to control flooding.

CITY OF ROCKFORD STORMWATER MANAGEMENT GOALS AND STRATEGIES

The City's 2015 Stormwater Management Plan (SWMP) identifies several notable goals and strategies to minimize stormwater flooding including:

Updating codes to regulate development and require post construction stormwater management plans of the stormwater systems onsite.

Development of a creek inspection program to evaluate the conditions of the channels and prioritize bank restoration projects.

Encouragement of low-impact development and green infrastructure that best replicates pre-development hydrologic conditions.

Removal and/or widening existing bridges as needed to reduce the restrictions to stormwater flow in the creek.

Development of a community engagement process to identify and prioritize stormwater improvement projects.

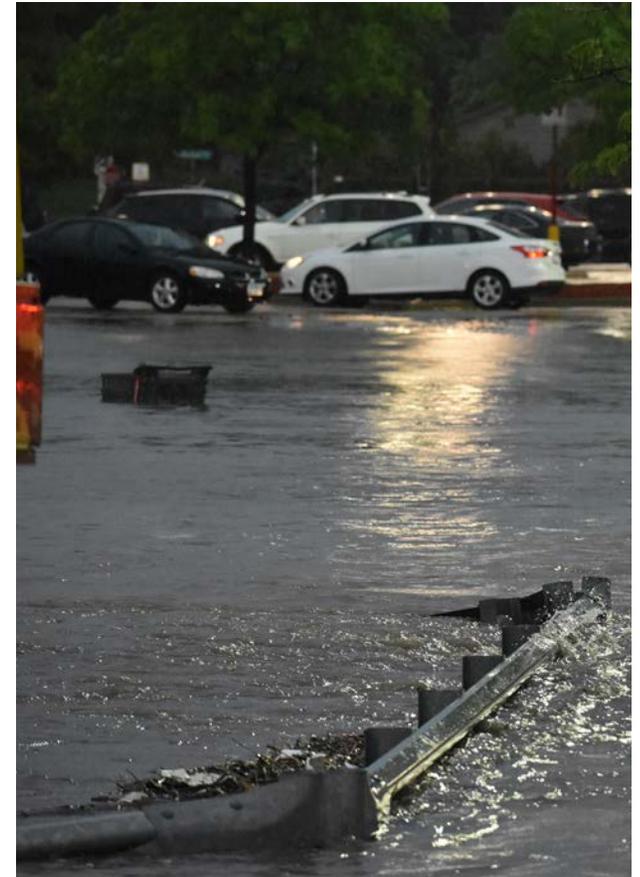
Completion of waterway planning for Keith Creek.

The purpose of this study is to assist R1 Planning, the City, and other partners in meeting these stormwater goals through collaborative project planning.

The following reports have been reviewed:

- Rockford's 2015 Stormwater Master Plan (2015 SWMP)
- Winnebago County's 2019 Multi-Hazard Mitigation Plan
- The City of Rockford Stormwater Management Ordinance and Stormwater Technical Manual
- The City of Rockford 2021 to 2025 Capital Improvement Program
- Rockford's Keith Creek Hydrologic and Hydraulic Modeling Study (Keith Creek H&H Study)
- RPC's 2021 Greenways Plan
- Elements of the United States Army Corps of Engineers (USACE) 2012 Keith Creek & Alpine Dam Flood Risk Management Feasibility Study.

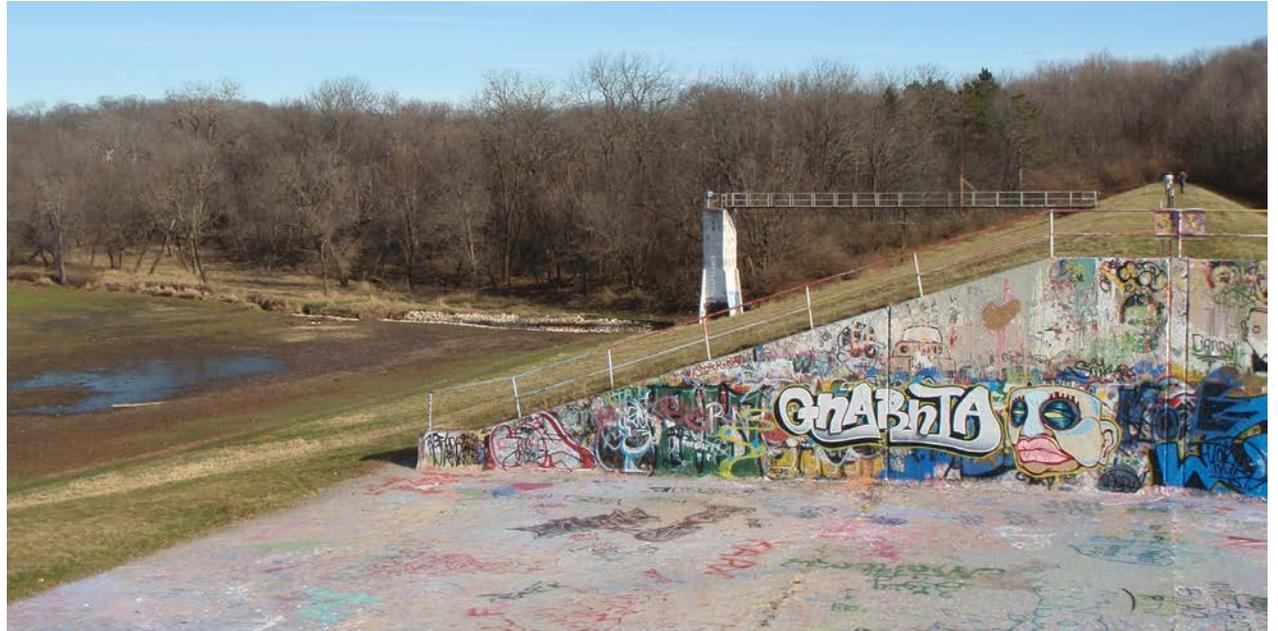
The review of these documents in combination with stakeholder feedback indicates much work is still needed to address flooding along the Keith Creek corridor. The areas of greatest flood risk along the creek are located at the Alpine Dam, Charles Street to 9th Street, and the Schnucks Rockford Plaza (2642 Charles Street).



Flood at 2642 Charles Street

ALPINE DAM

Alpine Dam: The City of Rockford has undertaken multiple projects to improve the resiliency and operation of the dam to prevent dam failure and flooding downstream. In 2021, the City completed improvements to electrical and mechanical components to allow automated operation of the dam. In addition, structural repairs to the existing concrete spillway were performed. In 2022, the City plans to add an auxiliary earthen spillway west of the existing concrete spillway for an additional factor of safety to prevent dam breach. These repairs will allow the dam to be permitted by the federal government and be eligible for future disaster relief funding. The City's ongoing Keith Creek H&H Study includes an evaluation of current dam operating conditions.



Alpine Dam

CHARLES STREET TO 9TH STREET

Following back-to-back extreme flooding events in 2006 and 2007, the City started the process of acquiring and demolishing homes in the flood-prone Churchill Park neighborhood. Since 2008, the City has removed 115 homes and continues to pursue funding to acquire and demolish buildings that are flood prone.

The City most recently applied for Hazard Mitigation Assistance Grant funding in July 2021 to remove properties at 2233 Charles Street, 1642 7th Avenue, and 801 9th Street. The City's goals for the corridor are to widen the channel to increase stormwater conveyance capacity and provide a linear community green space with recreational amenities and safe access to the creek. The City has applied for grant funding twice to implement projects in this corridor but has not been successful. The City's ongoing Keith Creek H&H Study includes an evaluation of channel modifications between Charles Street and 9th Street.



The existing Charles Street box culvert showing sedimentation and plant growth in the concrete channel. The culvert is currently being evaluated by the City for replacement to increase conveyance capacity.

SCHNUCKS ROCKFORD PLAZA (2642 CHARLES STREET)

The Schnucks Rockford Plaza parking lot has a history of flooding, most notably during the 100-year flood events in 2006, 2007, and 2018. In July 2018, the southern one-half of the parking lot was inundated by adjacent Keith Creek floodwaters and overtook several vehicles that required emergency rescue. According to City staff, the parking lot was designed to provide flood storage during significant rain events to protect structures onsite. The City has historically dealt with sedimentation of the existing box culvert under Charles Street, which reduces conveyance capacity downstream. The existing box culvert was constructed in 1940. In 2020, the City performed structural repairs to the sidewalls, top slab, and base slab. The City also removed sediment in the culvert. Rockford's ongoing Keith Creek H&H Study includes an evaluation of additional stormwater storage in Dahlquist Park (upstream of Schnucks Plaza) and replacement of the box culvert under Charles Street (downstream of Schnucks Plaza) to increase stormwater capacity.

ADDITIONAL KEITH CREEK CORRIDOR PROJECTS

Rockford's 2015 SWMP and City's 2022 to 2026 Capital Improvement Program identify the following projects to be completed in the study corridor.

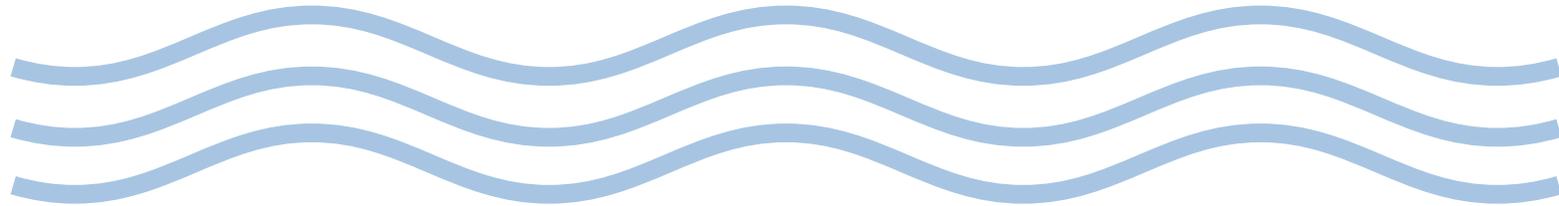
- Abandoned railroad bridge abutment removal upstream of 18th Street.
- Continued wall repairs and bank stabilization as needed.
- Continued clearing of debris and sediment as needed.
- The addition of backflow preventers at outfalls to the creek.



Bank erosion and remnants of the former railroad bridge abutment protruding into Keith Creek upstream of 18th Street.



Mapping from 9th Street to Dalquist Park provided by USACOE in their 2012 report showing the 100-year storm event flood inundation limits.





Section 3

OPPORTUNITIES & CHALLENGES

DEVELOPMENT IMPROVEMENT OPPORTUNITIES, CHALLENGES, AND IMPEDIMENTS

The Study Area was mapped, and 32 opportunity sites identified. The opportunity sites include vacant or underutilized sites, sites with industrial or undesirable uses, sites owned by the City of Rockford or other government entity, sites ready for development, redevelopment, or improvement or one or more of these factors. The sites were identified by size, address, zoning, and existing use. The sites were also indicated by mobility options (RMTD refers to Rockford Mass Transit District), environmental factors and development or improvement potential.

The sites identified include the R-1, Single-Family and R-3, Multi-Family Zoning Districts, which allow single-family and multi-family uses, other residential facilities, religious facilities, assembly uses, schools, private recreation, and others. They also include the C-3, General Commercial District, and Industrial districts, I-1 and I-2.

The purpose of the I-1, Light Industrial/Business Park District is to accommodate low-impact manufacturing, wholesaling, warehousing, distribution, and similar activities that occur within enclosed buildings. It is intended to promote new industrial development within a “park like” environment. The purpose of the I-2, General Industrial District is to accommodate moderate-impact manufacturing, wholesaling, warehousing, and distribution uses, including storage and work-related activities that occur outside of enclosed buildings. The I-2 District is intended to accommodate more intensive industrial activities than the I-1 District.

Unfortunately, from a land use perspective, the primary purpose of the C-3 District is to accommodate a broad range of commercial uses. The C-3 District represents the highest intensity of commercial zoning districts in the city including most retail and service uses. It allows

nearly any type of commercial use including those with outdoor operations and storage. The C-3 district will generally be destination-oriented and a very large percentage of customers will arrive by automobile. Some consideration of rezoning these sites should occur to make them more pedestrian friendly and conducive to activities more walkable.

The R-1, Single-Family District includes lot standards of 7,700 square feet and minimum lot area per dwelling unit of the same. The R-3, Multi-Family District includes lot standards of 8,800 square feet and minimum lot area per dwelling unit of 2,900 square feet. All residential districts include maximum impervious surface area coverage, 0.40 or 40% for R-1 and 0.60 or 60% for R-3. They also include setback provisions, height requirements and character standards.

Development, redevelopment, or improvement potential was also evaluated based on the factors identified. Development is most likely to occur on vacant sites or sites with no improvements, redevelopment is most likely to occur on sites with some development or improvements already on the site, and improvements are most likely to occur on sites where redevelopment would occur but are smaller and of a lesser-scale to bring the site into compliance or alleviate flooding issues.

Consideration was given to the sites available, location and access, proximity to existing and future parks, greenways, and recreation opportunities, and economic development opportunities. Environmental factors were also highlighted, including if the sites were brownfield locations. Some sites were identified as brownfield locations, areas where contamination is likely. Other environmental factors included locations approximate to the railroad, because contamination of the site is higher in these locations, locations approximate to industrial

users, or current and former use as a gas station. Other factors included use and location, proximity to residential or existing park uses, ownership, and flooding or areas susceptible to inundation. Development, redevelopment, or improvement potential was given a “low, medium or high” score based on these factors.

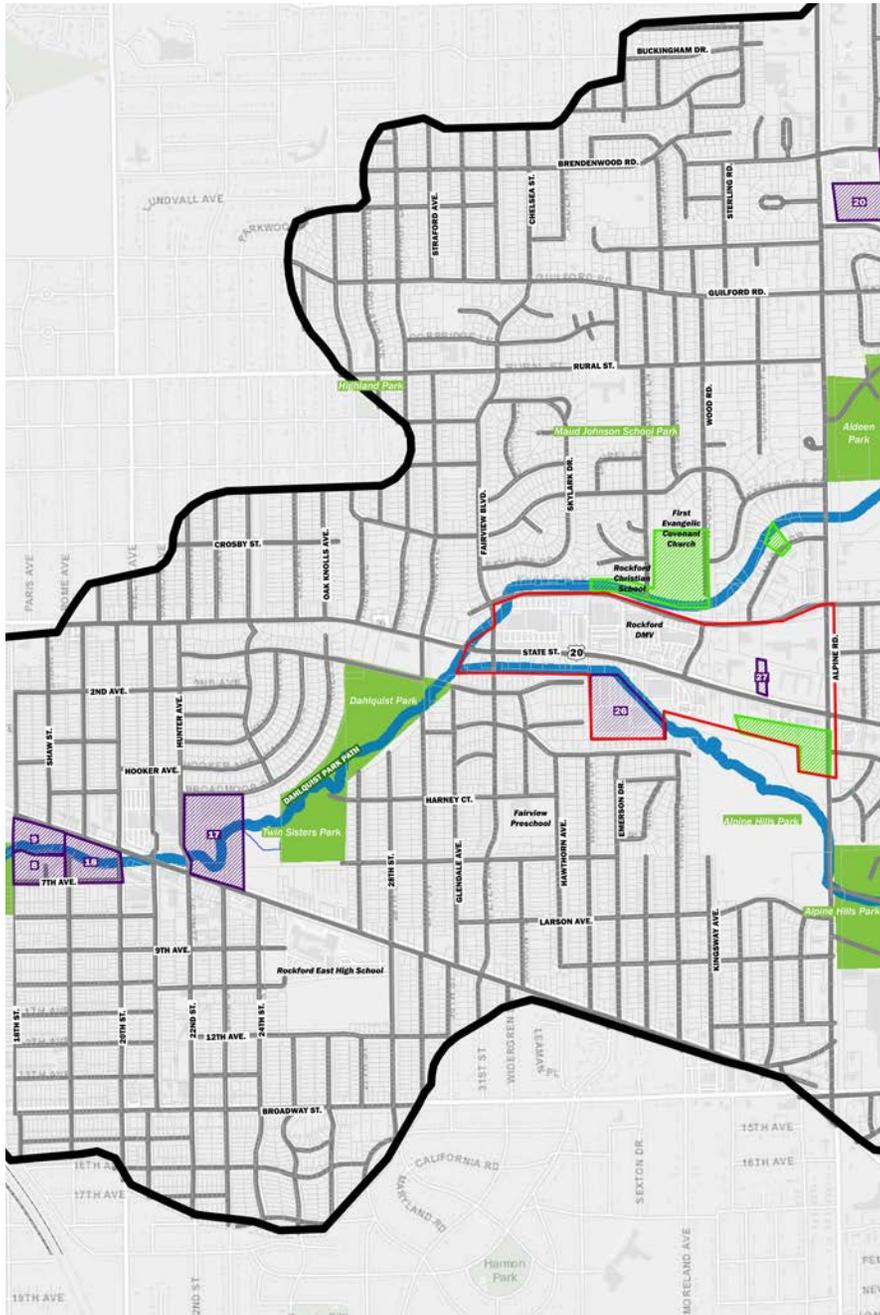
Some corridor challenges and impediments were also identified. These include the location of utilities, the creek itself and uses around the creek. A large sanitary sewer line runs along a portion of the creek which may inhibit redevelopment or future use of the creek. This utility should be relocated, if possible, to a location outside the creek and more accessible. Other utilities could also inhibit redevelopment. The location of the creek itself may also be a challenge. It is difficult to access and may prove difficult to improve in some locations. The uses adjacent to the creek include private residential or commercial uses which may have no interest in redevelopment or improvements on their property.

The Study Area was mapped, and 32 opportunity sites identified. The opportunity sites include vacant or underutilized sites, sites with industrial or undesirable uses, sites owned by the City of Rockford or other government entity, sites ready for development, redevelopment, or improvement or one or more of these factors.

Figure 20: Sub-Area 1 Opportunity Sites



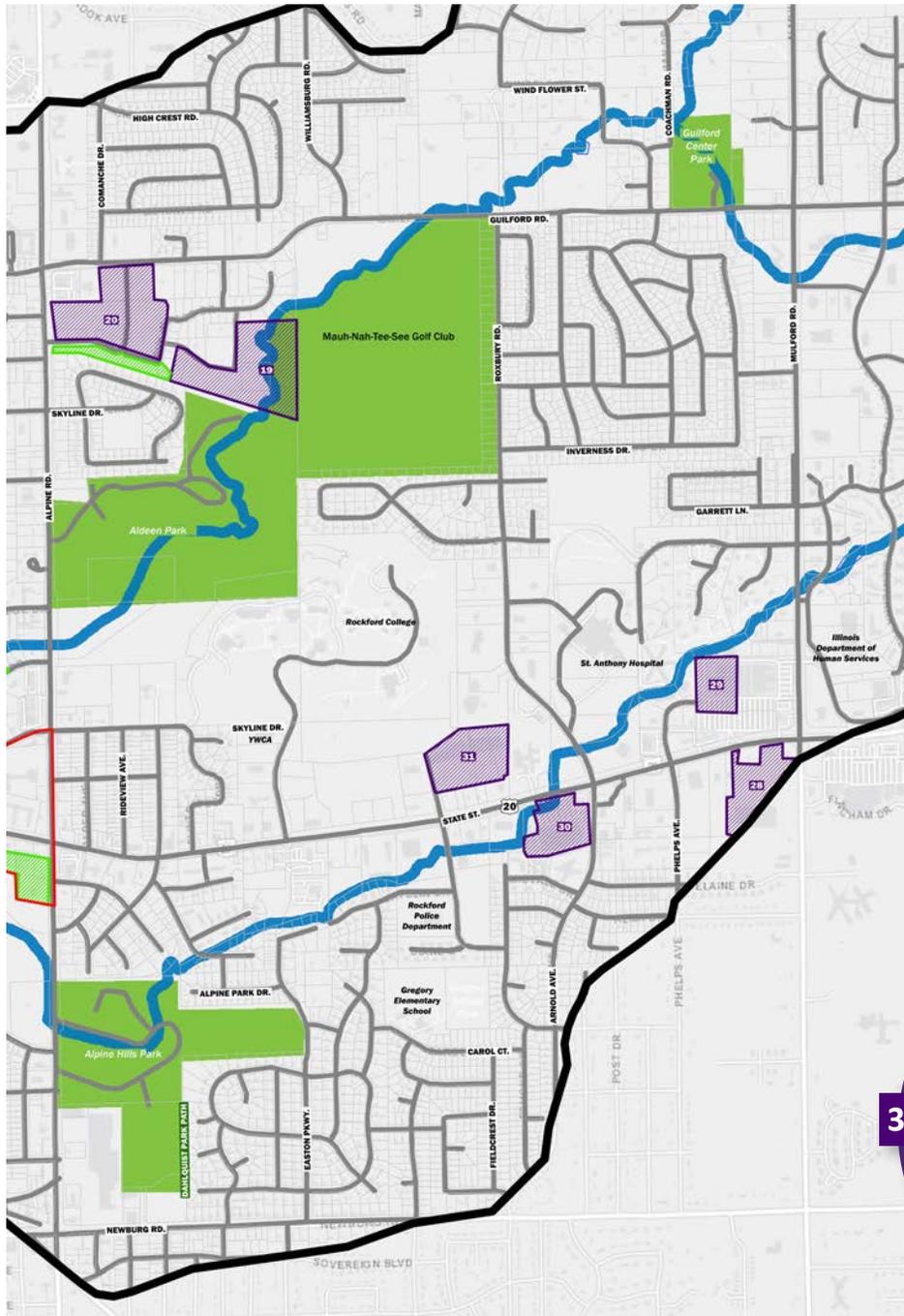
Figure 21: Sub-Area 2 Opportunity Sites



- Legend**
- Keith Creek Corridor Study Area
 - Keith Creek
 - Parcels
 - Railroad
 - Parks
 - Golf Courses
 - Miracle Mile District
 - Opportunity Sites
 - Greenway Opportunity Sites



Figure 22: Sub-Area 3 Opportunity Sites



- Legend
- Keith Creek Corridor Study Area
 - Keith Creek
 - Parcels
 - Railroad
 - Parks
 - Golf Courses
 - Miracle Mile District
 - Opportunity Sites
 - Greenway Opportunity Sites



Figure 23: Sub-Area 4 Opportunity Sites



Keith Creek Opportunity Sites

Site ID	Address (Approximate)	Size/Area (Acres)	Zoning	Existing Use	Access/Mobility	Environmental Factors	Development/Improvement Potential
1	620 Gregory St	7.2	R-3	Constance Lane Elementary School/Vacant	Kishwaukee St and 6th St	Part of Constance Lane Elementary	Low
2	802 5th +	3.2	R-1/R-3	Vacant and SFH	5th St and 8th Ave, near bikeway	Listed as Brownfield Site	Medium
3	818 6th	2.1	C-3	Gas Depot	8th Ave and 7th St, near bikeway and RMTD 35 and 45	Existing industrial user, close to railroad	Low
4	820 7th	6.7	I-1	Vacant	8th St and Railroad Ave, near bikeway and RMTD 35 and 45	Close to railroad	Low
5	801 9th St	1.7	I-1	Industrial	9th St and Railroad Ave, near bikeway and RMTD 35 and 45	Close to railroad	Low
6	1100 Seminary St +	71.6	I-1/R-1	Industrial	Kishwaukee St and 10th Ave, near bikeway and RMTD 34 and 35	Existing industrial user (Behr)	Low
7	602 14th St	3.7	R-1	Vacant	6th Ave and 15th St, near RMTD 12	Listed as Brownfield Site	High
8	718 18th St +	4.3	I-1	Vacant	7th Ave and 18th St, near bikeway and RMTD 12	Listed as Brownfield Site, railroad site	High
9	2203/2207 Charles St +	4.0	C-3	Ali's Sandwich Shop/ Surface Parking Lot	Charles St and 18th St, near bikeway and RMTD 12	Former/current gas station	High
10	6958 Spring Creek Rd	23.8	C-3	Vacant	Spring Creek Rd and Perryville Rd, near RMTD 36	None, tight site, near residential	Medium

Keith Creek Opportunity Sites

Site ID	Address (Approximate)	Size/Area (Acres)	Zoning	Existing Use	Access/Mobility	Environmental Factors	Development/Improvement Potential
11	2925 N Perryville Rd +	13.6	C-3	Vacant	Olde Creek Rd and Perryville Rd, near RMTD 36	None, tight site, near residential	Medium
12	8055 Springbrook Rd	104.1	Unknown	Vacant	Jane Addams Memorial Tollway and Spring Brook Rd, near RMTD 18 and 36	None, near Javon Bea	High
13	3650 Lyford Rd +	149.0	C-3/I-1	Vacant/Detention Basin	Riverside Blvd and Paladin Pkwy, near RMTD 16	None, near Javon Bea and Sportscore	High
14	Not Listed	44.5	Unknown	Vacant	Argyle Rd and Orth Rd	None, near Sportscore Park	High
15	901 9th/1232 9th	3.2	I-1	Storage Facility	9th St and 9th Ave, near bikeway and RMTD 35 and 45	Railroad parcel	Low
16	716 6th St +	3.8	C-3	Buildings with Surface Parking	6th Ave and 6th St, near bikeway and RMTD 35 and 36	Existing industrial user	Low
17	2642 Charles St	13.2	C-3	Schnucks Grocery/Pharmacy with Surface Parking	Charles St and Hunter Ave, near bikeway and RMTD 12	Schnuck's, flooding issues	Medium
18	2303/2305 Charles St +	6.0	I-1/C-3	Retail/Surface Parking	Charles St and 20th St, near bikeway and RMTD 12	Backs up to creek	High
19	1125 Murphy Woods Ln	19.1	R-1	Residential	Alpine and Guilford Rd, near bikeway and RMTD 36	None, adjacent to golf club	Medium
20	4591/4609 Guilford Rd +	17.7	C-3/R-3/C-1	Vacant, Detention Basin	Alpine and Guilford Rd, near bikeway and RMTD 36	None, near golf club	High

Keith Creek Opportunity Sites

Site ID	Address (Approximate)	Size/ Area (Acres)	Zoning	Existing Use	Access/Mobility	Environmental Factors	Development/ Improvement Potential
21	85XX Spring Brook Rd +	20.4	C-3	Vacant	Riverside Blvd and Paulson Rd, near RMTD 16	None, near Sportscore Park	High
22	74XX Olde Creek Rd +	94.6	C-1/ Unknown	Vacant	Spring Creek Rd and Bell School Rd, near RMTD 36	None	High
23	2215 Reid Farm Rd +	34.4	C-3	Vacant	Perryville Rd and Spring Creek Rd, near RMTD 36	None, part of golf club	Medium
24	68XX Rote Rd +	14.4	C-1	Bank/Surface Parking/ Vacant	Perryville Rd and Rote Rd, near RMTD 36	None, part of golf club	High
25	1023 Seminary	5.5	I-2	Rockford Auto Parts	Seminary St and Baker Pl, near RMTD 34 and 45	Near Nelson Park, existing industrial user	Low
26	3915 State St	9.6	C-3	Vacant	Fairview Ave and State St, near bikeway and RMTD 11, 18, 19 and 42	None	High

Keith Creek Opportunity Sites

Site ID	Address (Approximate)	Size/Area (Acres)	Zoning	Existing Use	Access/Mobility	Environmental Factors	Development/Improvement Potential
27	4312 State St	0.8	C-3	Retail/Surface Parking	State St and Alpine, near bikeway and RMTD 11, 18, 19 and 42	Former big box use	High
28	5909 State St	7.8	C-3	U-Haul Moving and Storage with Surface Parking	State St and Mulford Rd, near RMTD 32, 40 and 42	None, surface parking	High
29	5880 State St	5.7	C-3	Retail/Surface Parking	State St and Mulford Rd, near RMTD 32, 40 and 42	None	Medium
30	5505 State St	7.8	C-3	River Valley Rockford Community Church/Retail with Surface Parking	State St and Arnold Ave, near RMTD 32, 40 and 42	None, surface parking	High
31	5410 State St +	11.0	C-3	Vacant Building with Surface Parking	State St and Roxbury Rd, near RMTD 32, 40 and 42	None, surface parking	Medium
32	2601 Bell School Rd +	123.4	C-3	Vacant	Jane Addams Memorial Tollway and Olde Creek Rd, near RMTD 36	None	High

SUMMARY AND CONCLUSIONS

Keith Creek is a two-branch creek system that runs primarily south and west through the Rockford area. The north branch originates in Boone County where the land use is a mix of agricultural and low-density residential. This portion of the creek is also located on the eastern border of the City of Loves Park. The south branch originates in eastern Winnebago County near Bell School Road, where the land use is similar to that of the north branch. The confluence of the two branches is just west of the intersection of Fairview Avenue and East State Street. From there, Keith Creek continues through pre-1950s era development and is channelized in a number of sections until it outfalls to the Rock River near downtown Rockford. The eastern reaches of the creek meander through suburban development and rural areas. It is anticipated that this area will continue to develop with commercial and residential uses in the future. The western reaches flow through some of the oldest residential and early industrial areas of the City. Bridges, utilities, and culverts are prevalent. In total, the Creek passes through eleven parks, two golf courses, open space of all kinds, and educational institutions as it travels from east to west. It eventually outfalls to the Rock River in downtown Rockford. The Keith Creek Study Area is approximately five miles in length. The north and south branches consist of 20.2 miles of creek channel. The watershed for Keith Creek is approximately 14.2 square miles in size.

KEITH CREEK BACKGROUND

Keith Creek has a history of recurring flooding. It has flooded many times since the late 1800's. Numerous planning efforts have also focused on the Keith Creek area in the last twenty years. These vary from water quality to open space and landscape studies. The City of Rockford has also invested in a number of improvements in recent years.

SUB-AREAS

Because the Study Area is so large, it has been broken into Sub-Areas. Four Sub-Areas were created to analyze the area more easily and effectively. Sub-Area 1 is located in the western part of the corridor closer to Downtown Rockford. It is located from the Rock River to 20th Street. Sub-Area 2 is located east of Sub-Area 1. It is located from 20th Street to Alpine Road. Sub-Area 3 is located from Alpine Road to Mulford Road. Sub-Area 3 includes a golf club and Aldeen Park with its spillway. Sub-Area 4 is located in the eastern section of the corridor. It includes the headwaters of the Creek and reaches into Boone County.

DEMOGRAPHICS

The demographic analysis examines data from the Study Area located in the City of Rockford within Winnebago County, Illinois. The northeastern section of the Study Area is located outside of Rockford city limits and extends into Boone County. Data for the demographic analysis has been collected from US Census Bureau, American Community Survey, 2015-2019 and ESRI 2021 estimates. Demographic information can provide insights into a community and help inform planning assumptions, strategies and recommendations.

The demographic analysis examines population, housing, diversity, income, education, and age. The population of the Study Area has been decreasing. The diversity has been increasing. The Keith Creek Study Area has been aging. As far as housing, 60% are owner occupied, while 40% are renter occupied. Home ownership in Rockford is slightly lower, and it is substantially higher in Winnebago County. The household income in the Study Area was higher than the Rockford household income, although it was lower than the Winnebago County income. Income is expected to increase in the next five years. The Keith Creek Study Area has a higher level of education than the surrounding area.

DIVERSITY, EQUITY, AND INCLUSION ANALYSIS (DEI)

The DEI analysis takes a closer look at certain demographic factors in specific census tracts located within the Study Area. These tracts include 6, 10-18, and 21, are located in CDBG eligible areas and are more likely to have low income concentrations. They have lands abutting or in close proximity to Keith Creek. DEI factors have been selected because they are either indicative of barriers faced by the population or because they are known to be a barrier to equitable and inclusive treatment and quality of life. The relevant factors include race, income, age, education, citizenship, language, disability, means of transportation to work, poverty status, and food stamp usage.

The DEI analysis suggests that areas in the western portion of the Study Area have a higher percentage of non-white residents, have lower educational attainment, and are less likely to be U.S. citizens. People in this area are more likely to have a disability and use food stamps. Residents in this area also have lower household incomes and are more likely to speak

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a language other than English at home. They are likely to drive alone to work and there are more than twice as many residents above the poverty level than in non-DEI census tracts. Those who reside in western portion of the Study Area, in census tracts 6, 10-18, and 21, are more disadvantaged and face more hardships than the rest of Rockford.

CORRIDOR ASSETS AND ACTIVITY GENERATORS

SCHOOLS

There are many schools within the Study Area from elementary to higher education. These include Constance Lane Elementary and Gregory Elementary both of which partner with local organizations. Rockford University is located near the center of the Study Area and is considered a top rated regional university.

PARKS AND GREENSPACE

There are eleven parks in the Study Area managed by the Rockford Park District, and many have recreational programs. Other green space is located in the Study Area such as Mau-Nah-Tee-Cee Golf Club and the Aldeen Golf Club. Rock Cut State Park is located about 2 1/2 miles from the Study Area. Other open space or green spaces and natural areas are located in the Study Area.

BUSINESS DISTRICTS AND CORRIDORS

There are a number of commercial districts and corridors that offer restaurants, businesses, and services that draw residents and visitors to the area. They include the 7th Street and Midtown District, the Charles/20th Street auto-oriented commercial area, Downtown, and the Miracle Mile business district. Suburban style shopping centers and uses are located throughout the east portion of the Study Area.

ORGANIZATIONS

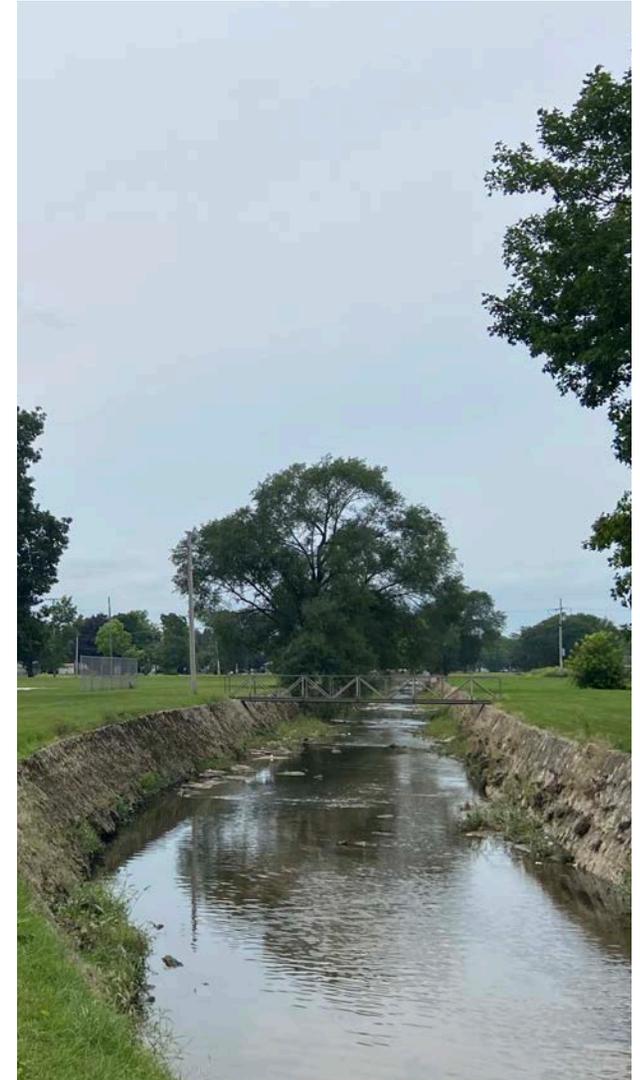
There are a number of neighborhood organizations in the Study Area including the Keith Creek Neighborhood Association. A number of churches are also located within the Study Area and hold community events. The Miracle Mile Business District Association also generate activity and host a number of events.

HEALTH

There are three major health systems located within the Study Area. These include the Swedish American Health System, the Rockford Health System, and the Mercy Health System. The OSF Saint Anthony Medical Center is also located within the Study Area.

HOUSING

The Study Area generally has good quality and mix of housing stock. The area in the west closer to Downtown is somewhat less stable than the area in the east. The eastern area is more established and single-family in nature. The Study Area overall provides housing to low income and senior populations. There are existing affordable and senior housing developments located in the Study Area.



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LAND USE, ZONING, AND DEVELOPMENT

LAND USE

The Study Area is predominantly residential. Other uses such as commercial, industrial, and institutional are also located in the Study Area. The land use mix transitions from rural to urban as one travels from northeast in Boone County to the southwest in Downtown Rockford near the Rock River. The land use transitions from large, auto-oriented parcels and large uses to smaller parcels but is still largely auto-oriented along Charles and State Streets. Then as one gets closer to the River and Downtown to more walkable and the smallest properties including single-family, industrial, service, and retail uses. Open space, parks and natural areas also comprise the Study Area.

ZONING

The City of Rockford Zoning Ordinance covers most of the Study Area and was amended in 2008 and 2017. Other county or unincorporated areas exist but those documents are not described in this report because they contain such small locations of the Study Area. The City of Rockford's ordinance provides comprehensive development standards and regulations for all zoning districts in the City, including Residential, Commercial, Mixed-Use, and Industrial. The zoning is appropriate for the area and the City does good work to keep its ordinance updated and relevant.

TRANSECTS

The Study Area can be identified by transect zones as it travels from an urban to suburban environments then

to rural environments. In general, transect zones are used to identify environments, and to reinforce existing or to create new mixed-use environments. The Natural-to-Urban Transect is a means for considering and organizing the environments in a continuum of intensity that ranges from the most rural condition to the most urban. This concept is largely used as an evaluation technique when considering zoning updates to a Form Based Code, but also assists to identify the character and form, intensity of development, and type of place; and, secondly the mix of uses within the area. For this purpose and to aid in analysis of the Study Area, it has been divided into transect zones based on the existing conditions. These zones have been fully described in this report.

- Urban Center Zone
- General Urban Zone
- Suburban Zone
- Rural Zone

MOBILITY AND CONNECTIVITY

The City of Rockford has a Complete Streets Policy. Complete Streets seek to accommodate the motorized and non-motorized traveler. Values such as safety, equity, accessibility, connectivity, and convenience are critical to improving commute and non-commute trip outcomes for the city's non-motorized travelers. Recent plans and policies including the City of Rockford 10-Year Bike Plan, the City of Rockford Complete Streets Resolution, and the Region 1 Planning Council Greenways Plan aspire to create a multimodal transportation network that incorporates each of the above values. The City's land use will change over time

and development will influence this change. The City's transportation system will also influence this change.

Non-motorized users can encounter travel times that exceed the typical travel times of motorists, especially in the south and west sections of the Study Area. Commercial development in parts of the City compounds non-motorized accessibility, especially when those trips are needed to access employment and critical services. Sidewalks may be difficult to navigate due to utility placement, poor existing conditions in general, or a lack of sidewalks altogether. These conditions become even more challenging for individuals who use a mobility-assist device, such as a wheelchair, to access their destinations, especially in the west or DEI areas. Connectivity, paths, and greenways are methods to control the situation and add accessibility back into the equation

TRANSPORTATION AND UTILITIES INFRASTRUCTURE

EXISTING SYSTEMS

To analyze existing conditions a variety of reports were reviewed. The review of these documents in combination with stakeholder feedback indicates the need for more transportation improvements and utility relocations along the corridor.

WATER

The City's Water Division provides drinking water to the majority of the Keith Creek area including some service in the Township of Rockford while some of the residents are still on private wells. The Water Division monitors water main crossings of Keith Creek to verify

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adequate cover is maintained. The Water Division has also focused on the replacement of older water mains in the City over the past five years and will continue to make replacement a priority. The age of the system increases as it approaches the Rock River in the west making this area a priority.

SANITARY SEWER

The Four River Sanitary Authority (FRSA) provides sanitary sewer service to the Keith Creek watershed areas in the City, parts of the Township of Rockford and the City of Loves Park. Similar to water distribution, portions of the township in the watershed area are not served with municipal service. The system flows by gravity and naturally follows the Creek until it reaches the treatment facility in the west near the river. The sewer pipe material in this area is typically vitrified clay or reinforced concrete and ranges from 50 to 75 years old and needs to be replaced. The system generally runs along Charles Street, it follows 7th Avenue until it enters Keith Creek at 14th Street. From here, it continues mainly down the center of the creek channel until 10th Avenue. This section of the sewer is directly impacted by the creek and is the most difficult for FRSA to maintain. Funding is needed to maintain, line, rehabilitate, and relocate the sewer system.

TELECOMMUNICATIONS

High-speed internet and a fiber optic network are coming to the City based on a recent development agreement between the City and SiFi Networks (SiFi). SiFi will develop a City-wide fiber optic network. The City should leverage this opportunity along the Keith Creek corridor by considering installing City provided WiFi networks connecting the parks and gathering areas.

BICYCLES AND PEDESTRIANS

The corridor includes constraints in several areas that will limit bicycle and pedestrian improvement opportunities. Currently there are no multiuse paths routed along Keith Creek outside of current park or open space areas. There are several streets in the Keith Creek corridor network with bike and pedestrian facilities such as State Street and Charles Street, but those also contain gaps and lack proper wayfinding. These constraints should be removed or significantly reduced, and bicycle and pedestrian access should be improved.

ENVIRONMENTAL CONSIDERATIONS

RIPARIAN CORRIDOR

The Keith Creek headwaters is in Boone County northeast of the Javon Bea Hospital area in a rural setting. Keith Creek generally drains from northeast to southwest before entering the Rock River in Downtown Rockford. This report is focused on the creek corridor itself and does not encompass the entire watershed. A separate but similar report for a water quality based plan for the Keith Creek watershed is also being conducted. The riparian corridor would benefit from ecological restoration and public or economic development appropriate within a floodplain. Some areas offer improvement for wildlife habitat, water quality, and vegetation. Other areas are channelized and largely enclosed by concrete or other hard surfaced structures. From an open space, ecological, and water quality perspective channelized areas are the worst condition.

WETLANDS

Wetlands may support both aquatic and terrestrial species. They can provide significant water quality improvement, flood reduction, and habitat for a wide variety of plant and animal species. They also provide groundwater recharge, filter sediments and nutrients, and slowly discharge to streams thereby maintaining water levels during drought periods. Very few wetlands exist along Keith Creek today and what wetlands do remain are narrow and found immediately adjacent to the corridor. Invasive species are common. Some wetlands are emergent, and some are forested, but all are degraded and lack significant native character. This loss of wetlands in the Keith Creek watershed contributes significantly to the frequent flood damages experienced along the creek in past decades. Wetland restoration should be a goal of this plan. There may be opportunities to restore wetlands where the channel can be modified to have gentle slide side slopes and allow access to the natural floodplain. This could occur in such areas as Aldeen Park, Church Park, and the Keith Creek greenway.

TREES AND WOODLANDS

Trees provide important physical and mental benefits such as improved mental and physical health, social cohesion, reduced crime, and improved community engagement, and they provide important habitat for wildlife especially migratory birds. Only 9% of the Keith Creek watershed has 40% or more tree canopy. More than 50% of the watershed has zero tree canopy. In some places, such as Aldeen Park, this canopy includes

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mature native hardwoods such as oaks and hickories. However, much of the Keith Creek tree canopy is fast-growing weedy species that have taken over the narrow riparian corridor. Increasing the tree canopy is a goal of this plan. It can replace invasive species and increase urban trees and wildlife.

WILDLIFE HABITAT

Keith Creek is largely urban and suburban with the exception of the headwaters which remains rural. The vast majority of the native vegetation, including wetlands, prairies, and savannas, are gone. The remaining riparian corridor is mostly very narrow and highly modified. The wildlife present in this corridor is mostly urban-adapted species such as raccoons, skunks, gray squirrels, chipmunks, cottontail rabbits, and migratory birds. Minimal habitat exists for threatened or endangered species. Habitat does not currently exist for threatened plant species. Increasing green space and natural habitat will increase areas for endangered wildlife and plants.

FLOODING AND STORMWATER MANAGEMENT

The City has a Stormwater Management Plan (SWMP) to control and manage stormwater. The City has undertaken multiple projects to improve the resiliency, control run-off, and operation of stormwater. The Keith Creek watershed drains approximately 9,000 acres through 20 miles of creek or channel. The main channel of the creek starts in the east and ends in the west at the Rock River. The impacts of climate change and more frequent occurrences of severe rain events in the Keith Creek watershed have caused the City of Rockford and surrounding communities to place a greater emphasis on the need for management of urban stormwater to control flooding. Flooding and stormwater management

are important considerations to be taken seriously and can cause financial hardships on both residents and the City. The City's SWMP and Capital Improvement Program identify the following projects to be completed in the study corridor.

- Abandoned railroad bridge abutment removal upstream of 18th Street.
- Continued wall repairs and bank stabilization as needed.
- Continued clearing or debris and sediment as needed.
- The addition of backflow preventers at outfalls to the creek.

OPPORTUNITIES AND CHALLENGES

The Study Area was mapped, and 32 opportunity sites identified. The opportunity sites include vacant or underutilized sites, sites with industrial or undesirable uses, sites owned by the City of Rockford or other government entity, sites ready for development, redevelopment, or improvement or one or more of these factors. The sites were identified by size, address, zoning, and existing use. The sites were also indicated by mobility options, environmental factors and development or improvement potential. Some corridor challenges and impediments were also identified. These include the location of utilities, the creek itself and uses around the creek. A large sanitary sewer line runs along a portion of the creek, west of 18th Street, which may inhibit redevelopment or future use of the creek, this is likely the largest impediment to redevelopment. There are plenty of sites in the Study Area that would allow for redevelopment or improvement potential. The next phase of this project will evaluate those sites.

