

# Rivanna River

## AREA PLAN

## EXISTING CONDITIONS

## FINAL REPORT

2018



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**COVER IMAGE COURTESY OF RIVANNA RIVER COMPANY**

# ACKNOWLEDGMENTS

The City of Charlottesville and Albemarle County initiated a Rivanna River Planning Effort, which officially began in September of 2017. While the Thomas Jefferson Planning District Commission (TJPDC) facilitated the initial phase of the planning process, several groups and individuals contributed to work completed on an Existing Conditions Report, outlined in the following pages. The TJPDC would like to thank those who contributed their time, resources, and creativity to the start of the planning process. Their efforts will be integral in developing the Rivanna River Area Plan and process, to be completed in the next phase of work.

## Technical Committee Members:

- Elaine Echols, *Albemarle County: Chief of Planning-Long Range*
- Dan Mahon, *Albemarle County: Outdoor Recreation Supervisor*
- Missy Creasy, *City of Charlottesville: Assistant Director NDS*
- Chris Gensic, *City of Charlottesville: Park and Trail Planner*
- Kristel Riddervold, *City of Charlottesville: Environmental Sustainability Manager*
- Robbi Savage, *Rivanna Conservation Alliance: Executive Director*
- Andrea Terry, *Rivanna Water and Sewer Authority: Water Resources Manager*
- Anne Coates, *Thomas Jefferson Soil and Water Conservation District: District Manager*

- David Hannah, *Albemarle County: Natural Resource Manager*
- David Fox, *Albemarle County: Neighborhood Planner*
- Cameron Langille, *Albemarle County: Senior Planner*

## Steering Committee Members:

### Elected Officials

- Ann Mallek, *Albemarle Board of Supervisors*
- Norman Dill, *Albemarle Board of Supervisors*
- Heather Hill, *Charlottesville City Council*
- Mike Signer, *Charlottesville City Council*

### Planning Commissioners

- Tim Keller, *Albemarle Planning Commission*
- Daphne Spain, *Albemarle Planning Commission*
- Lisa Green, *Charlottesville Planning Commission*
- Genevieve Keller, *Charlottesville Planning Commission*

### Citizens and Stakeholders

- Bill Emory, *Appointed Citizen*
- Marvin Moss, *Rivanna River Basin Commission*
- Justin Doyle, *James River Association*



# ACKNOWLEDGMENTS

## **Charlottesville City Council:**

- Ms. Nikuyah Walker, *Mayor*
- Ms. Heather Hill, *Vice-Mayor*
- Dr. Wes Bellamy
- Ms. Kathy Galvin
- Mr. Mike Signer

## **Albemarle County Board of Supervisors:**

- Ms. Ann Mallek, *Chair*
- Mr. Norman Dill, *Vice-Chair*
- Mr. Ned Gallaway
- Ms. Diantha McKeel
- Ms. Liz Palmer
- Mr. Rick Randolph

## **Thomas Jefferson Planning District Commission Staff:**

- Chip Boyles, *Executive Director*
- Will Cockrell, *Director of Planning*
- Wood Hudson, *Transportation Programs Manager*
- Nick Morrison, *Senior Planner II*



# TABLE OF CONTENTS

Acknowledgments . . . . .	1
Executive Summary . . . . .	4
Existing Conditions Phase Findings . . . . .	5
<b>CHAPTER 1: INTRODUCTION.</b> . . . .	<b>6</b>
Background . . . . .	7
Existing Conditions Phase Planning Process . . . . .	7
Committees . . . . .	7
The Study Area . . . . .	9
<b>CHAPTER 2: EXISTING CONDITIONS</b> . . . . .	<b>10</b>
Existing Data Summary . . . . .	11
Summary of Thematic Maps . . . . .	11
Land Cover . . . . .	13
Environmental Features . . . . .	14
Parks . . . . .	15
Recreational Amenities . . . . .	16
Infrastructure . . . . .	17
Population Density . . . . .	18
Land Ownership . . . . .	19
Hydrology . . . . .	20
Recurring Themes From Committee . . . . .	21
<b>CHAPTER 3: NEXT STEPS</b> . . . . .	<b>23</b>
Next Steps . . . . .	24
Phase Flow Chart . . . . .	24
Next Deliverables. . . . .	24

# EXECUTIVE SUMMARY

The Rivanna River Area Plan is a joint effort between the City of Charlottesville and Albemarle County, in partnership with various stakeholders, to develop a unified vision and action plan for their shared segment of the Rivanna River. The planning process will help to bring attention to a river that commonly goes unnoticed, due to its high banks and wooded corridor that can veil its waters. The Rivanna River Area Plan will help the localities and stakeholders coordinate on making a cleaner, safer and more livable waterway that serves as a catalyst for community investment. The Thomas Jefferson Planning District Commission (TJPDC) facilitated this process through the initial phase, collecting and mapping existing conditions within the study area.

The Existing Conditions Phase is the beginning of the planning process, serving as the first element of a River Area Plan and laying the groundwork for visioning and public engagement tasks. The initial study area, for this first phase, encompasses a mile-wide corridor that is centered by the Rivanna River. This corridor begins at the South Fork Reservoir dam and meanders to Milton Road bridge, near Shadwell. Through the Existing Conditions Phase, the Steering and Technical Committees defined a more focused study area for the remainder of the planning process.

According to the Scope of Work, there were five deliverables in the Existing Conditions Phase:

1. **Maps:** Set of corridor maps highlighting environmental, historical, cultural, recreational and planning related resources
2. **Website:** Project website with corridor maps, information about the committees, and a public engagement portal

(<http://tjpd.org/rivanna-corridor/>)

3. **Committees:** Creation of Technical and Steering Committees
4. **Report:** Final Report on existing conditions, describing mapping and data gathering
5. **Scope of Work:** Proposal for the Visioning Phase, including development of the River Area Plan

In recent years, local officials and stakeholders began to refocus on the Rivanna River, as a natural and community asset. In 2013, the TJPDC managed the One Community effort, to create a more livable region through regional coordination. In 2014, Charlottesville and Albemarle held a joint Strategic Planning Meeting, where officials identified the Rivanna River as a top priority for inter-governmental coordination. The localities requested that the TJPDC convene an appointed group of elected officials, planning commissioners, staff and non-profits to begin joint planning discussions around common sections of the Rivanna River. There were nine subsequent meetings with these stakeholders, to discuss a variety of topics and recommendations for how to move forward. In 2015, The TJPDC presented these recommendations at a City-County joint planning session. In 2016, the City and County approved the concept to move forward with the first of a three-phase Rivanna River Planning Initiative.

The Rivanna River Area Plan process officially began in 2017. With completion of the Existing Conditions Phase, the process spans one year. As is evident, the actions and discussions that led to this point span many years.

# EXISTING CONDITIONS FINDINGS

While the Existing Conditions Phase lacks an analysis of the collected data, there were findings from the planning process. The Technical Committee and Steering Committee outlined needs in the following areas, for subsequent phases of the river planning process.

## The Need for Additional Study

One of the key findings to come out of this process was the need for a more robust effort, to continue in a second phase. Numerous data sets exist that could not be explored with the limited resources of the initial phase. There is need to analyze: environmental quality, zoning, land use, view sheds, etc. While existing work provides foundational elements, development of a Rivanna River Area Plan can build upon the data thus far examined. Many of the stakeholders provided valuable suggestions for data collection and analysis that were beyond the initial scope of work. To gain the envisioned, holistic understanding of the river corridor, analysis will need to occur. These tasks are detailed in the Rivanna River Area Plan: *Scope of Work*.

## Coordination

There are a number of concurrent planning efforts that are underway, such as: the latest update to Charlottesville's Comprehensive Plan, the County's Pantops Master Plan update, a County project to map and identify sites of cultural and historic significance, and ongoing work by the Rivanna Conservation Alliance. While there are multiple groups dedicated to the wellbeing of the River, there can be limited coordination.

## Community Interest & Awareness

There is increasing community interest in the river becoming more of a community asset for recreation, green infrastructure, environmental services, and economic development opportunity.

## Comprehensive Scope

The City and County Comprehensive Plans call for a coordinated and comprehensive planning effort for the Rivanna River, conducted between the two localities. This joint effort should include existing and past work, as much has been done. A more holistic approach to the Rivanna, incorporating community engagement and visioning for the river corridor, could lead to a more defined set of recommendations that clearly address the many different elements of this community asset.

## More Timely Action

While much work has been done in the past, stakeholders identified the need to develop immediate action items and implementation strategies to achieve the desired community vision for the Rivanna River corridor and proactively plan for the future. Developing these specified strategies will enable policy makers, community members, and stakeholders to create a detailed action plan.





An aerial photograph of a lush green valley with a winding river in the foreground. In the background, there are rolling hills and mountains under a clear blue sky. The image is split vertically, with the left side being a darker, semi-transparent version of the same scene.

**1**

# INTRODUCTION



## BACKGROUND

In July of 2014, the Albemarle County Board of Supervisors and the Charlottesville City Council held a joint, strategic planning meeting. One of the priorities they identified was the need for improved coordination and cooperation between the two localities regarding the Rivanna River corridor. In the fall of 2014, the Thomas Jefferson Planning District Commission (TJPDC) began facilitating a joint river corridor planning effort.

Between 2014 and 2016, the TJPDC convened a stakeholders group to identify priorities for future river corridor planning efforts. Through a series of nine meetings, this group discussed a variety of topics related to the river and provided a set of recommendations on how to move the planning effort forward. At the suggestion of the group, the staff developed a Memorandum of Agreement (MOA) between the City of Charlottesville, Albemarle County, and the TJPDC to execute this initial phase. Both the City and County decided to proceed with the initial phase, signing the MOA in June of 2017. Work began in September of 2017.

## EXISTING CONDITIONS PHASE

The Existing Conditions Phase of the Rivanna River Area Planning effort focused on developing the necessary foundation, structure, and information to lay the groundwork for completing an eventual joint area plan for the shared boundaries between Charlottesville and Albemarle County. Per the MOA, deliverables included:

- 1. Maps:** Set of corridor maps highlighting environmental, historical, cultural, recreational and planning related resources
- 2. Website:** Project website with corridor maps, information about the committees, and a public engagement portal

(<http://tjpd.org/rivanna-corridor/>)

- 3. Committees:** Creation of Technical and Steering Committees
- 4. Report:** Final Report on existing conditions, describing mapping and data gathering
- 5. Scope of Work:** Proposal for the Visioning Phase, including development of the River Area Plan

The following timeline overviews project milestones during the initial phase

### 2017:

- Identification of Steering and Technical Committee Members

### Fall of 2017:

- Finalized Study Area
- Held Technical Committee Meeting
- Held Meetings with Local Staff and Stakeholders
- Identified Mapping Themes

### Winter 2017 | 2018:

- Collected Data and Developed Maps
- Launched Webpage/Online Portal
- Completed Mapping Series
- Held Technical Committee Meetings

### Spring 2018:

- Held Technical and Steering Committee Meetings
- Drafted Existing Conditions Report

### Summer 2018:

- Finalized Existing Conditions Report
- Developed Visioning Phase, Scope of Work

## COMMITTEES

In order to fulfill the above deliverables, the TJPDC convened two committees to help guide the Existing Conditions Phase and subsequent development of the Rivanna River Area Plan.

## Technical Advisory Committee

The Technical Advisory Committee was charged with guiding and coordinating technical matters related to the initial phase. They met six times throughout the course of this project and their feedback was crucial in defining the project study area, providing technical data used in the existing conditions thematic maps, and helping to define and scope for a Rivanna River Area Plan.

Committee membership included representatives from:

- Albemarle County's Community Development Department
- Albemarle's Parks and Recreation Department
- Charlottesville's Neighborhood Development Services
- Charlottesville's Environmental Sustainability Division
- Charlottesville's Parks and Recreation Department
- Rivanna River Basin Commission
- Rivanna Conservation Alliance
- Rivanna Water and Sewer Authority
- Thomas Jefferson Soil and Water Conservation District

## Steering Committee

The Steering Committee was charged with providing general guidance to the overall planning effort, with the critical role of acting as advocates for advancing the planning process.

Committee membership consisted of:

- Two elected officials from the City of Charlottesville
- Two Planning Commissioners from the City of Charlottesville
- One City-Appointed citizen
- Two elected officials from Albemarle County
- Two Planning Commissioners from Albemarle County
- One County-Appointed citizen

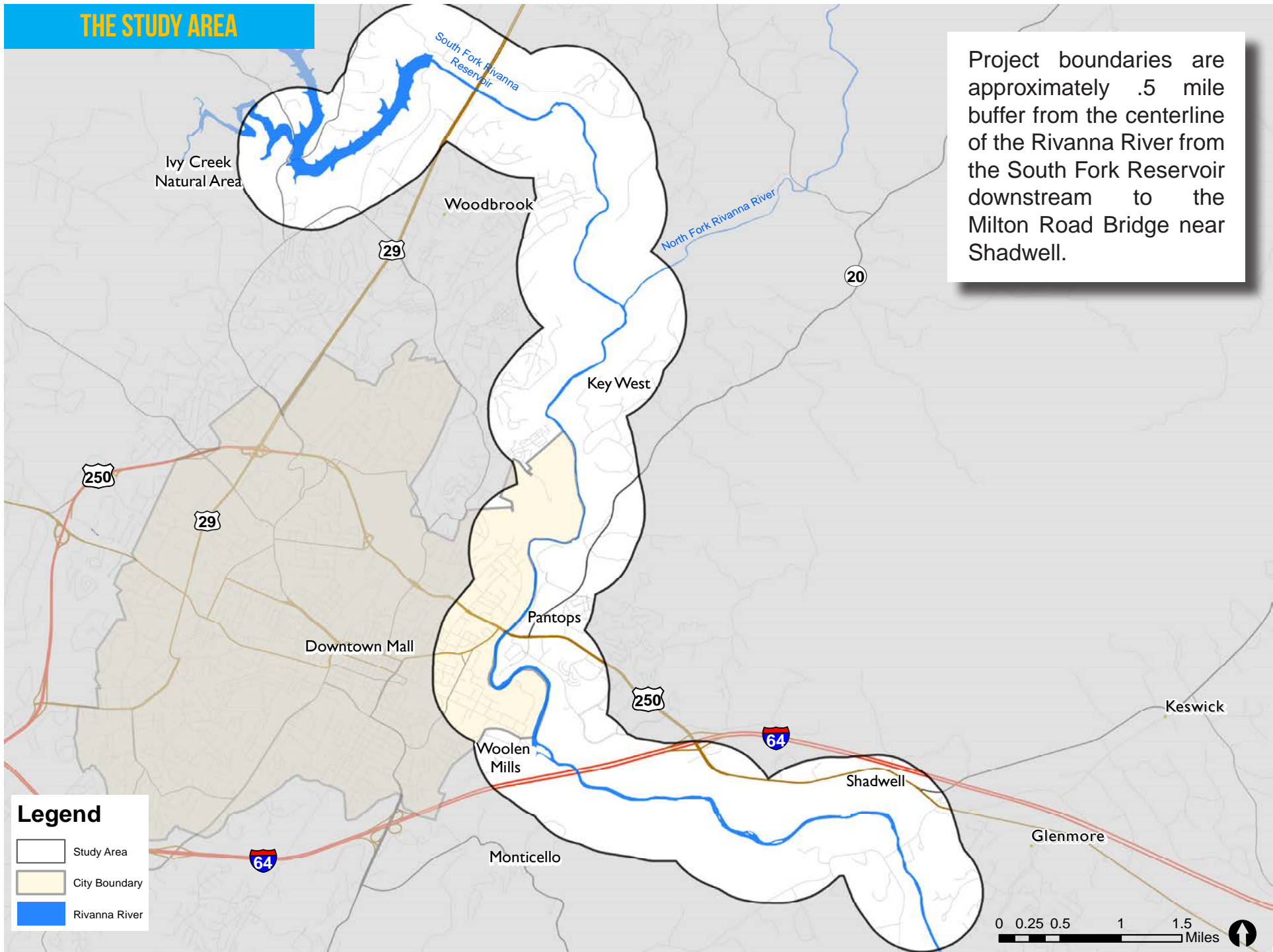
Both the Technical Advisory and the Steering Committee are proposed to continue into the next phase of the planning process. They will both function much the same as they have, with the added task of helping staff engage with the community to help build the vision for the master plan for the river.

## Study area map

The study area consists generally of the areas within approximately half a mile of the Rivanna River from the South Fork Reservoir dam downstream to the Milton Road bridge near Shadwell. The study area is located within the jurisdiction of Charlottesville and Albemarle. A map of the study area can be seen to the right.



# THE STUDY AREA



Project boundaries are approximately .5 mile buffer from the centerline of the Rivanna River from the South Fork Reservoir downstream to the Milton Road Bridge near Shadwell.





2



EXISTING  
CONDITIONS

## EXISTING DATA SUMMARY

A crucial step in any planning process is understanding and documenting the current conditions of the study area. The Technical Committee members helped direct this process by identifying a series of themes to base the existing conditions report around. The five themes identified include: 1) recreational amenities, 2) utility infrastructure, 3) environmental features, 4) population density, and 5) land ownership. These themes were chosen by the Technical Committee as a first step in identifying the most pressing issues related to the river corridor. For instance, mapping the existing recreational amenities, such as trails and parks, helps policy makers identify gaps and portions of the study area underserved by the existing amenities. Environmental features such as the possible location of wetlands and habitats identifies areas in need of special consideration in the Rivanna River Area Plan. Understanding the clustering of population is crucial in trend forecasting. Finally, land ownership identifies parcels in the study area that can inform development or redevelopment opportunities. The Technical Committee members were crucial in helping the project team gather relevant data sets and compile them into the comprehensive thematic maps on the following pages. Together, these existing conditions themes will help direct future study. The next phase of this planning process will involve a more detailed look at focused areas of the corridor and may involve a more robust existing conditions analysis.

## SUMMARY OF THEMATIC MAPS

### Land Cover:

This map uses data provided by the Virginia Department of Environmental Quality and the Virginia Geographic

Information Network and is based on 2011-2014 4 band orthophotography that analyzes satellite imagery to identify land cover characteristics. The categories include:

- **Hydrology:** Bodies of water
- **Impervious surfaces, both extracted from the satellite imagery and from local datasets:** This category includes roads, buildings, and parking lots
- **Barren:** low vegetation, rocks or sand
- **Forest:** Dense vegetation of tree coverage
- **Tree:** Less dense tree vegetation
- **Scrub/Shrub:** Smaller shrubs and underbrush
- **Harvested/Disturbed:** An example of this land cover category would be land used for logging
- **Turf/Grass:** Examples include lawns, golf courses, and parks
- **Pasture:** Examples include grazing areas for farm animals and undeveloped vacant land
- **Cropland:** Farm crops
- **Wetlands:** While this data has limitations, the National Wetlands Inventory, developed by the U.S. Fish & Wildlife Service, provides a generalized location of where wetlands may exist

### Environmental Features:

This map incorporates a range of environmental characteristics. Lands held in conservation easement are highlighted in yellow, which are land areas that have various development and use restrictions. The dark green shading shows the possible location of wetlands and the light blue shows the location of the 100 year floodplain. Steep slopes with a grade greater than 25% are shown in red.

### Parks:

This map shows the location of all of the City and County parks and greenways located within the study area. Several of



those parks are highlighted with call-out boxes that include a picture. It was the technical committee's recommendation to separate the original recreation amenities thematic map into two individual maps. The parks map focuses solely on parks, while the other includes a range of recreation amenities in the study area.

### **Recreation Amenities:**

Closely related to the parks map, the recreation amenities map identifies those amenities in the study area. Updated trail data from the City and County are shown in green. The locations of existing boat launches, both formal and informal, are shown in magenta. The Rivanna Conservation Alliance provided data on the location of their informational kiosks, shown in brown, that are along the banks of the river. The Lewis and Clark Exploratory Center at Darden Towe Park is labeled, as is the Rivanna River Company's put-in location for kayaks and tubes near Free Bridge.

### **Infrastructure:**

The infrastructure map identifies crucial infrastructure assets in the study area. Mapping these data points can help policy makers pursue certain topics like identifying areas in the study area that may lack appropriate stormwater management facilities or areas with adequate utility infrastructure that may be more desirable for development or redevelopment. Data provided from the City and County identify the location of stormwater management facilities, shown in purple, along with stormwater pipes shown in green. Also included on this map are the locations of overhead electric transmission lines, shown in yellow, the location of railroad tracks, shown in brown, and the building footprints of existing structures in both the County and the City shown in gray.

### **Population Density:**

Using 2016 U.S. Census data provided in the American Community Survey, this map highlights the distribution of population in and around the study area. Each red dot represents 15 people. Population clusters in the study area can be found around Pantops, Woolen Mills, and the western reaches of the City boundaries. Understanding current population density trends can help policy makers forecast population projections that are critical in planning for future community needs.

### **Land Ownership:**

This map shows parcels that are publicly owned, either by the County or by the City, along with access easements, and land owned by the Thomas Jefferson Foundation. The technical committee recommended this map as a means of representing locations where future development could occur. Differentiating between publicly held and privately held land can help target redevelopment efforts for select parcels. In the next phase, staff will undergo a legal analysis of the ownership of the river, to define what entities have influence over each part of the study area.

### **Hydrology:**

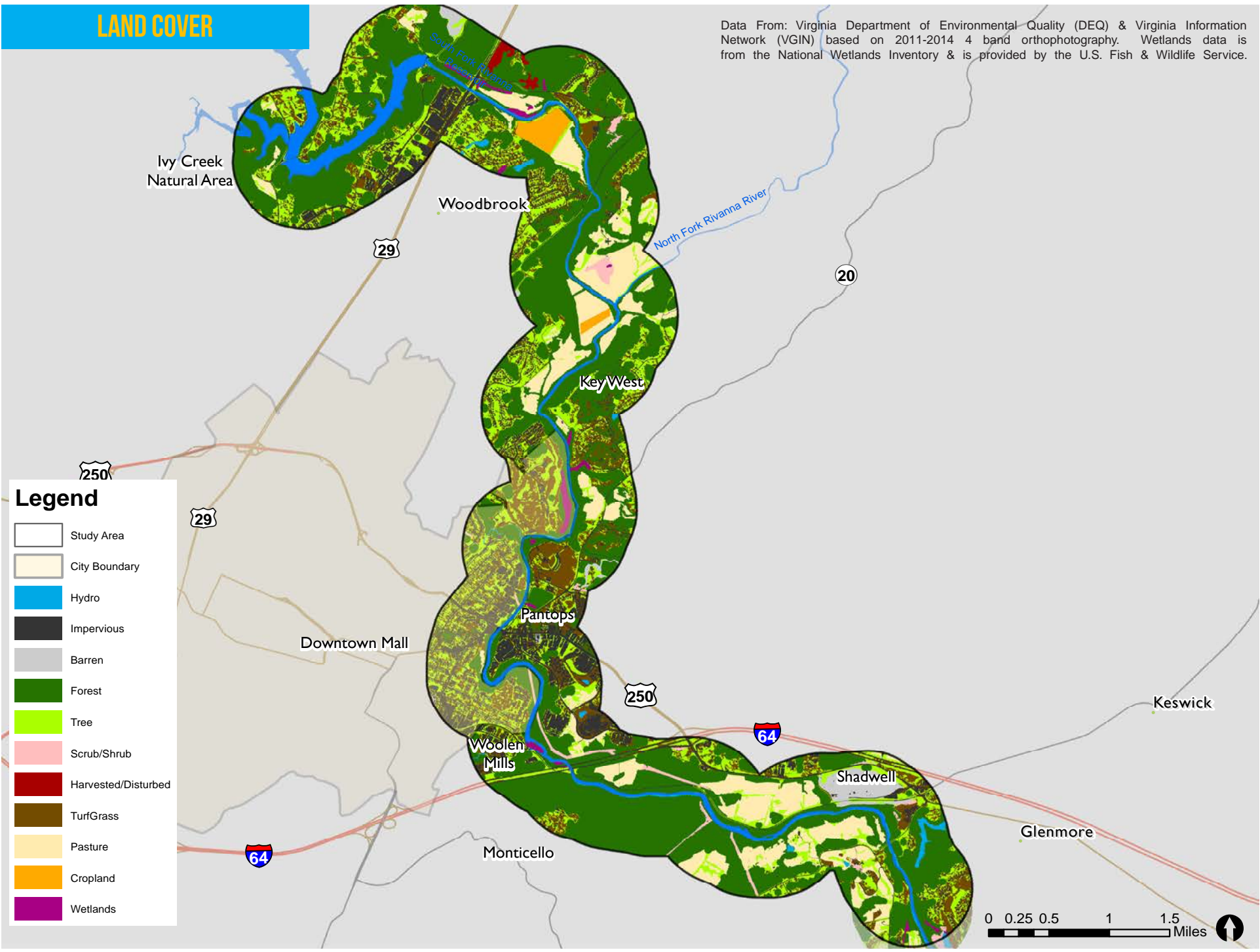
The hydrology map shows the location of the Rivanna and its tributaries.





# LAND COVER

Data From: Virginia Department of Environmental Quality (DEQ) & Virginia Information Network (VGIN) based on 2011-2014 4 band orthophotography. Wetlands data is from the National Wetlands Inventory & is provided by the U.S. Fish & Wildlife Service.

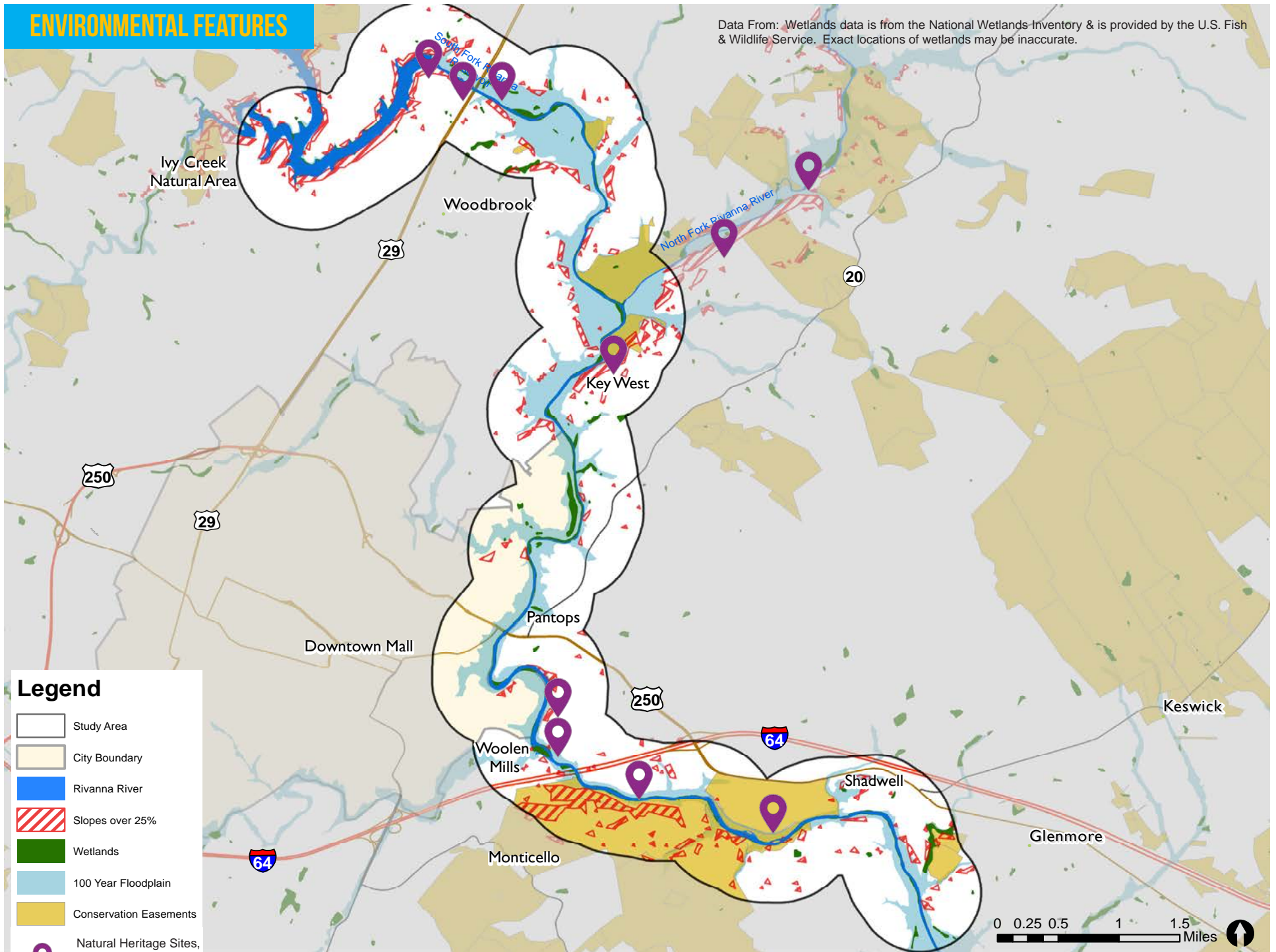


**Legend**

- Study Area
- City Boundary
- Hydro
- Impervious
- Barren
- Forest
- Tree
- Scrub/Shrub
- Harvested/Disturbed
- TurfGrass
- Pasture
- Cropland
- Wetlands

# ENVIRONMENTAL FEATURES

Data From: Wetlands data is from the National Wetlands Inventory & is provided by the U.S. Fish & Wildlife Service. Exact locations of wetlands may be inaccurate.



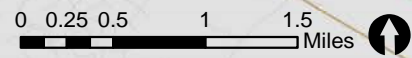
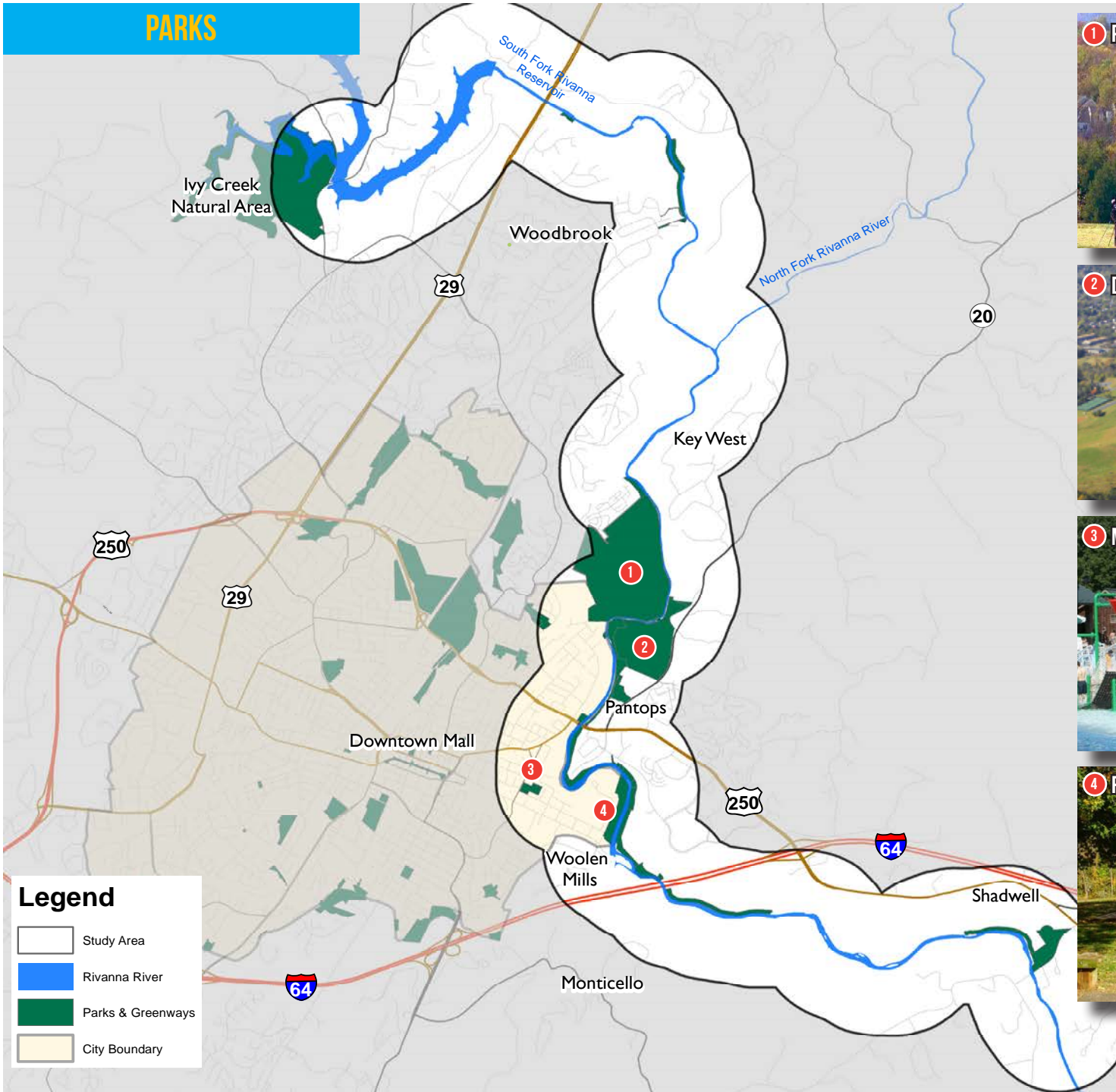
**Legend**

- Study Area
- City Boundary
- Rivanna River
- Slopes over 25%
- Wetlands
- 100 Year Floodplain
- Conservation Easements
- Natural Heritage Sites, Albemarle County

\*The markers for Natural Heritage Sites do not represent the exact center or extent of the site, but rather the general location of the site

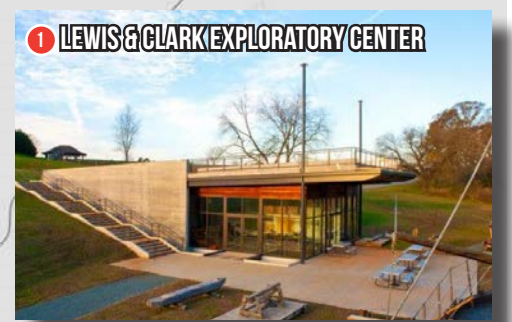
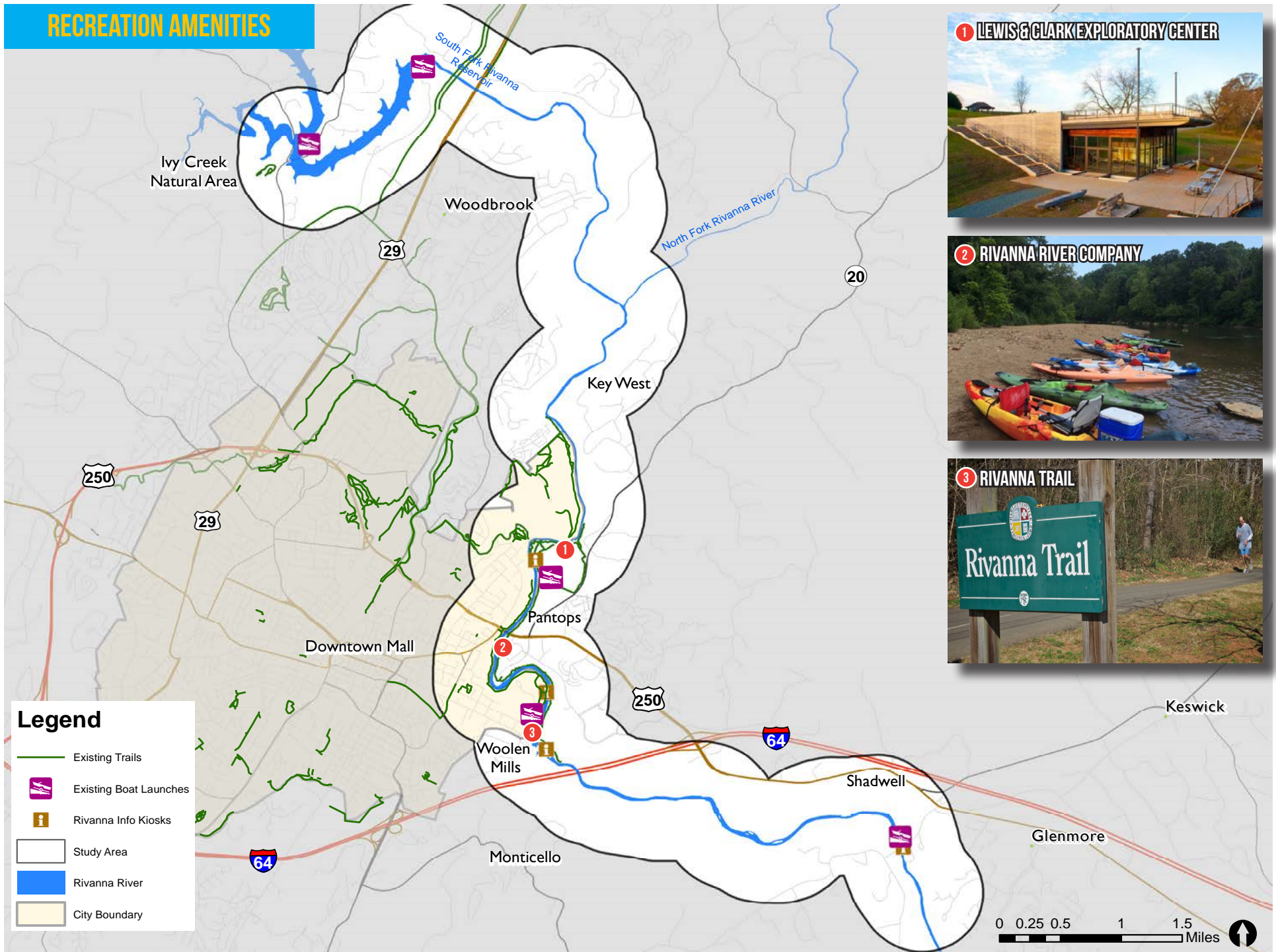


# PARKS



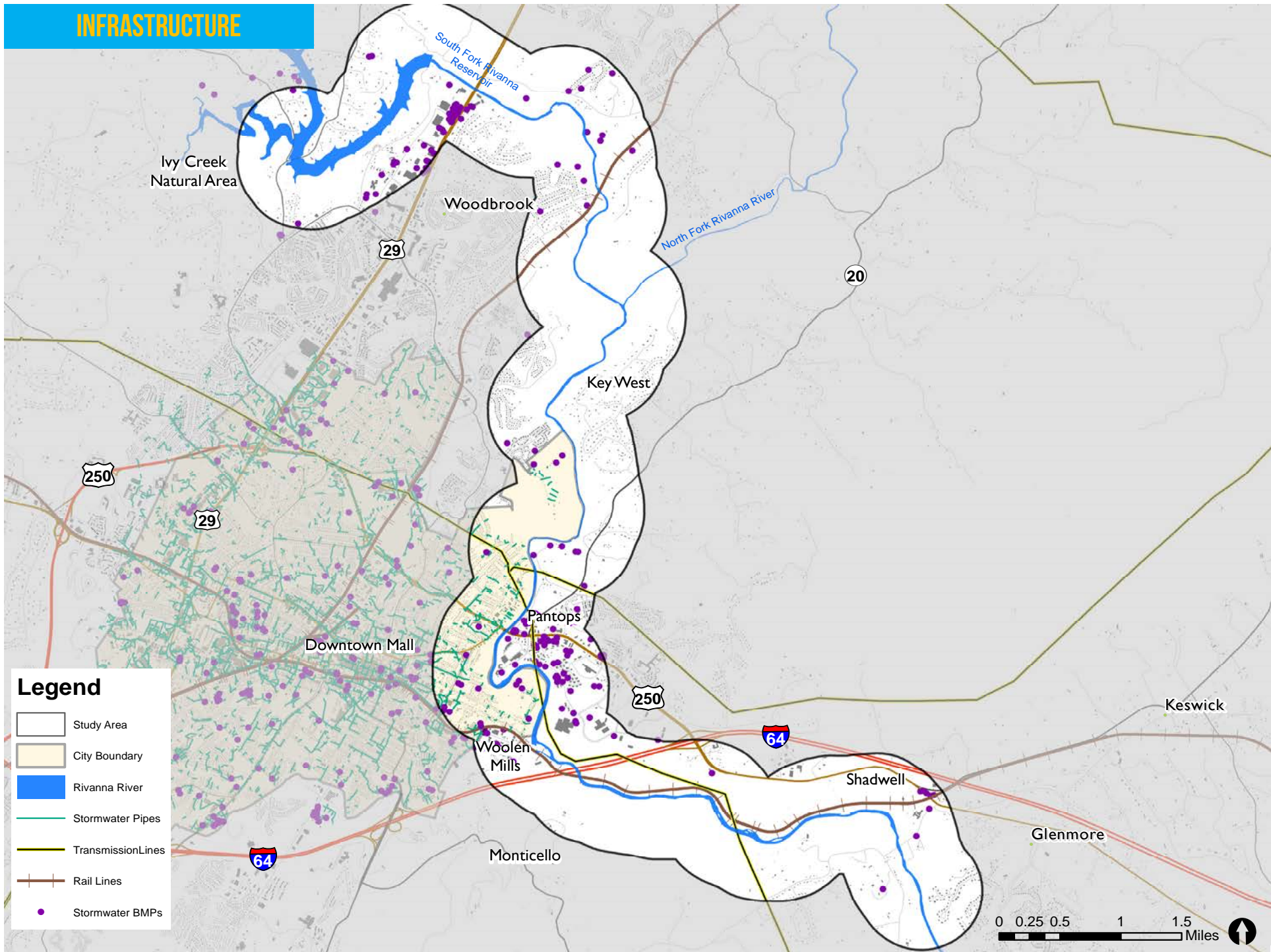


# RECREATION AMENITIES



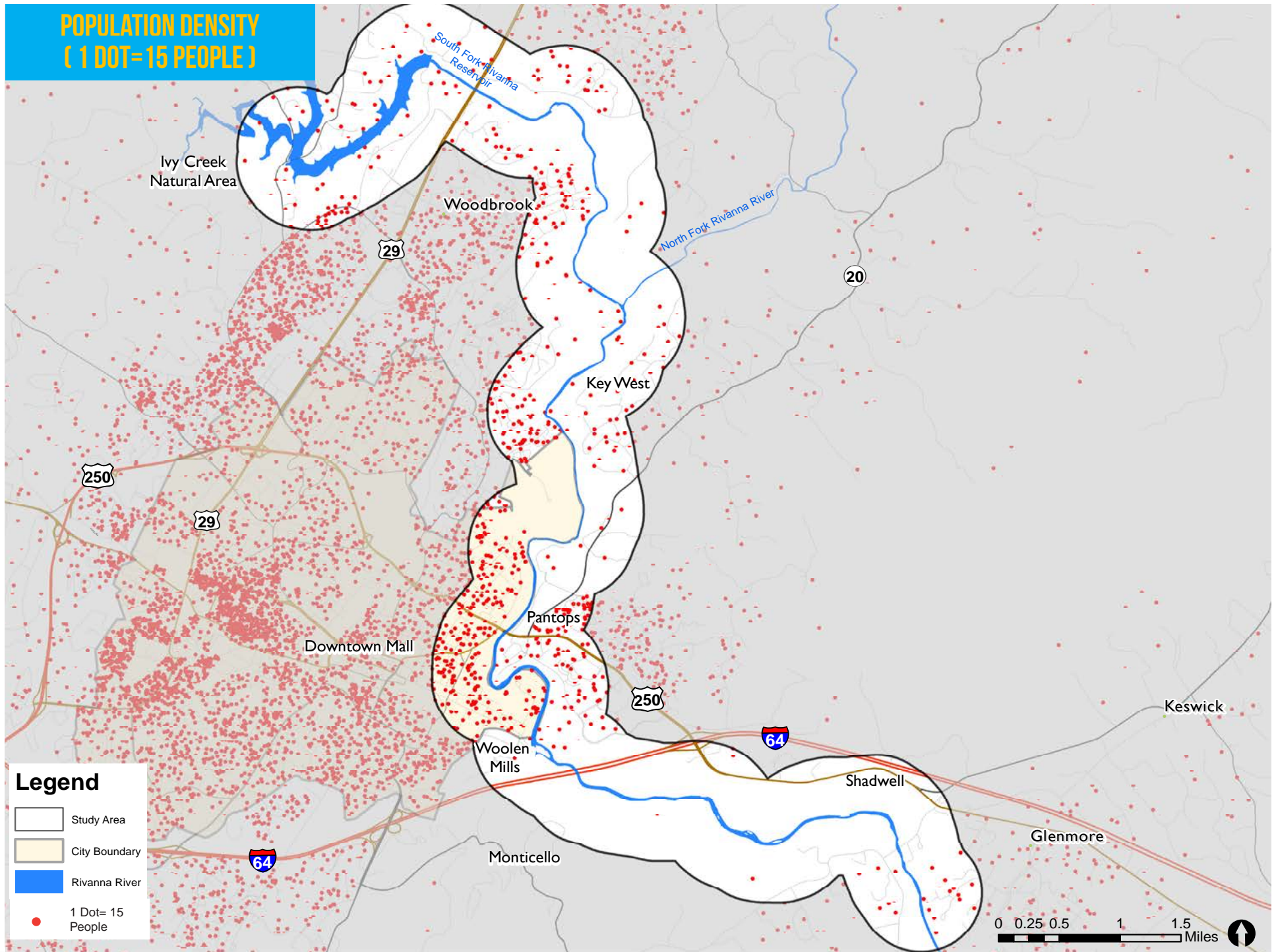


# INFRASTRUCTURE





# POPULATION DENSITY ( 1 DOT=15 PEOPLE )

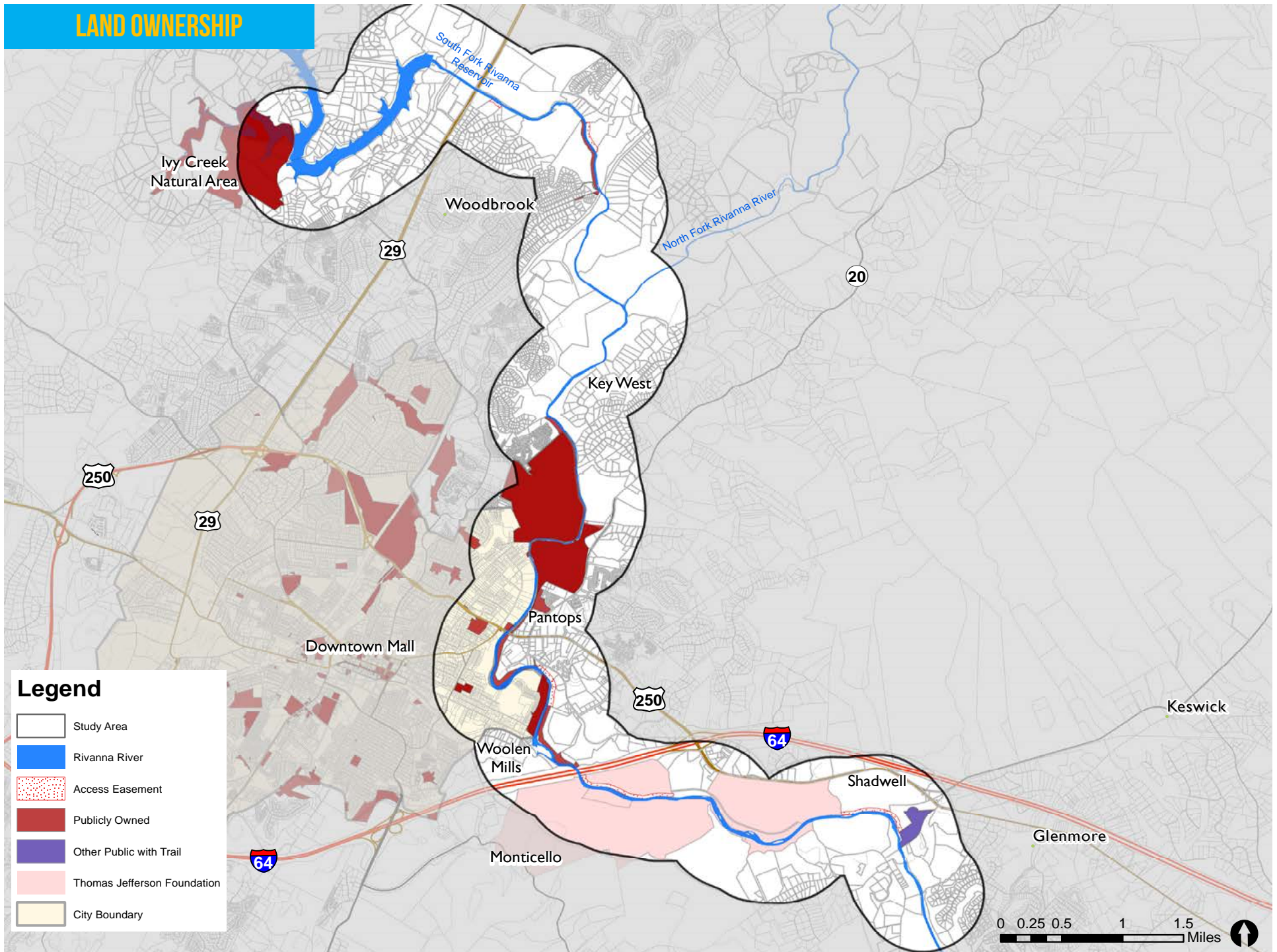


## Legend

- Study Area
- City Boundary
- Rivanna River
- 1 Dot= 15 People

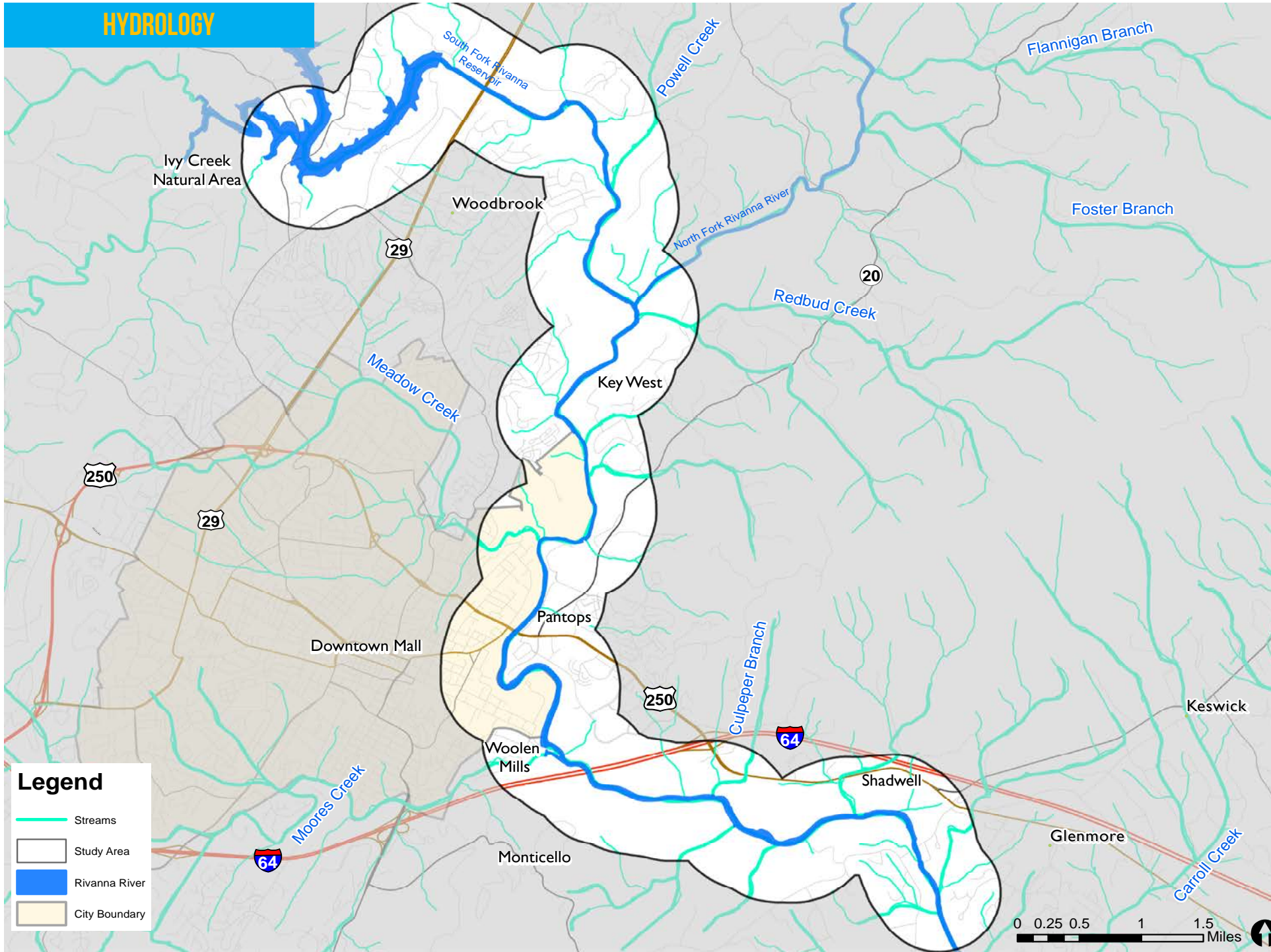


# LAND OWNERSHIP





# HYDROLOGY





## RECURRING THEMES FROM COMMITTEE

With the conclusion of the existing conditions phase, several recurring themes became evident. These themes are broad trends identified by both the Steering Committee and Technical Committee from the data collection and will help direct more in-depth review in the Rivanna River Area Plan.

### **Balancing Economic Development with Environmental Preservation:**

As development pressures continue on both sides of the Rivanna, ensuring that an agreed upon balance between economic development efforts and the preservation of the Rivanna's ecosystems and habitats is achieved will be crucial. Throughout the initial phase of this process, several conversations pointed to some in the community not wanting any additional river access or economic development to occur along the river for fear that it would disrupt the environmentally sensitive areas, while others wanted to look at ways to attract more development to utilize the river as an amenity. Environmentally sensitive strategies for how to balance both development and preservation desires will need further examination and community engagement.

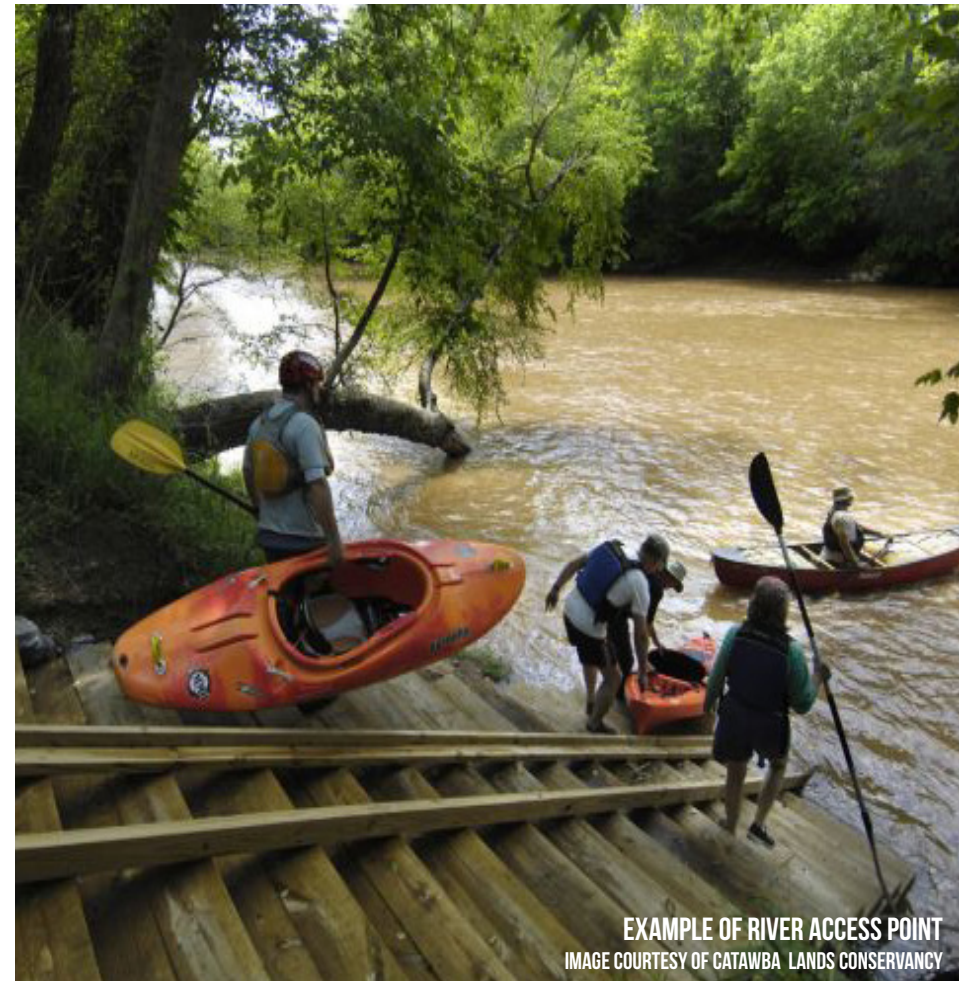
### **River Access Points:**

One recurring topic that came out of this process was the need for an increase in the number of safe public access points to the river. Connecting residents to the river has the potential to enhance the social, recreational, and economic conditions of the Rivanna River Corridor. Four boat launches currently exist in the study area, along with the Rivanna River Company's input site at Pantops, but opportunities exist to supplement these formal access points. Several informal points exist along the river in the study area, but with no formal access easements

or agreements in place, these informal spots require residents to trespass on private property. Identifying key access points that protect the sensitive ecosystems along the waterway will be tantamount, and further study will need to occur in the Visioning Phase to strategically identify these access points.

### **Park and Trail Connections:**

Great effort has been put into increasing the trail and park network along the river. However, it was noted that there are gaps in these linkages. The land ownership map on the preceding pages could serve as a starting point for identifying



EXAMPLE OF RIVER ACCESS POINT  
IMAGE COURTESY OF CATAWBA LANDS CONSERVANCY



and targeting parcels for filling in gaps in the network to help create a linear park or greenway system along the river. For bike and pedestrian trail connections the Charlottesville Bike and Pedestrian Master Plan has identified several proposed locations for connections across the river as well as potential shared use path and trail connections. Further exploration for connecting these networks across the river and establishing a network of adjacent trails on either side of the river should occur in the next steps.

### **Historic & Cultural Awareness:**

An important topic discussed throughout the planning process was the need to acknowledge and honor the historic and cultural history tied to the river. The Rivanna has a rich history serving as a crucial asset for past populations, including the Monacan Indian Tribe. While not mapped as part of this exercise, the County has taken steps to spatially document cultural and historic assets. Their data could be used in conjunction with other data sets to begin to build a more robust historical narrative in the next phase and to identify other opportunities for honoring the area's past.

### **Opportunities for Continued Cooperation:**

One of the goals of the Existing Conditions Phase was to facilitate coordination efforts between the City and County and other stakeholder groups. Both committees cited the need for continued coordination among stakeholders. With the County's ongoing work updating the Pantops Master Plan and the City in the final stages of updating its Comprehensive Plan, continuing the coordination process will create a better and more representative planning process. Providing an ongoing opportunity for the City and County to continue the dialogue surrounding planning for the river is important.



EXAMPLE OF BIKE & PEDESTRIAN BRIDGE  
IMAGE COURTESY OF SMITH SECKMAN REID, INC.



RIVANNA RIVER AT FREE BRIDGE

An aerial photograph of a campus or park area. A river flows through the center, with a baseball field on the right bank. A large building complex is visible in the lower-left corner, and a road runs along the bottom. The background shows a residential area with houses and trees.

**3**

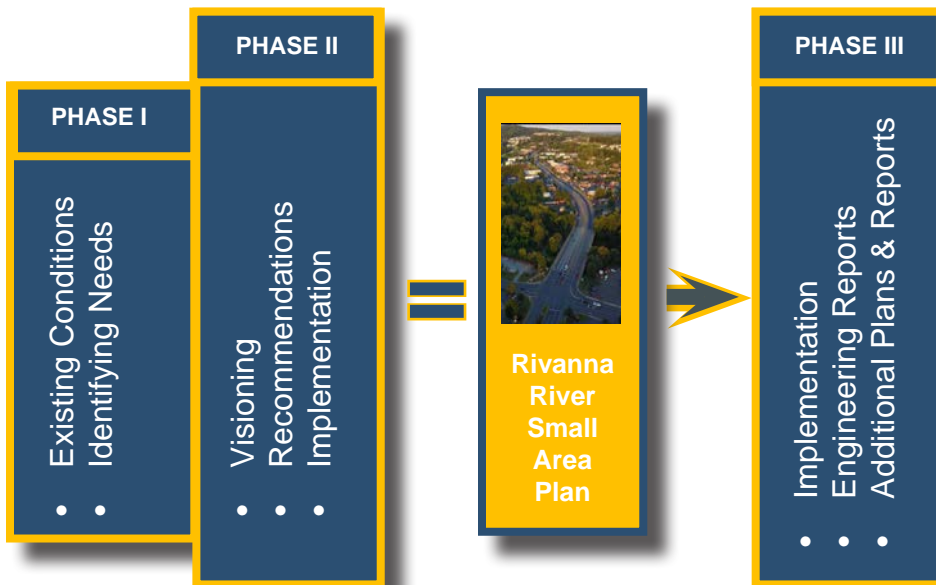
**NEXT STEPS**



## NEXT STEPS

With the Existing Conditions Phase completed, the question turns to “where do we go from here?” The existing work helped spatially map data related to land cover, existing recreational assets, population concentrations, environmental features, infrastructure, and land ownership. By examining these existing conditions, the project team, with the help of both committees, was able to identify the need for a more in-depth process, to develop the Rivanna River Area Plan. The existing conditions and thematic mapping laid the groundwork for further study, engagement, vision development, and implementation.

## PHASE FLOW CHART



## NEXT DELIVERABLES

At the end of the project period, the following materials will be delivered to the City of Charlottesville and Albemarle County:

- **Rivanna River Area Plan:** The Area Plan will include several elements, including:
  - **Unified Vision:** The planning process will result in a holistic vision for the various community elements in the Study Area, incorporating: parks and recreation, economic development, land use, historic preservation, transportation, and environmental resources. This will be a shared policy statement, with a diverse array of goals, objectives and actions.
  - **Guiding Principles:** Guiding Principles will direct future planning work with subsequent scopes of work that may be needed.
  - **Paired Map:** An Official Map will illustrate the River Area Plan, showing locations for preservation, capital investments (in recreational facilities and transportation), private investment, land use changes and river restoration. This map will serve like the Future Land Use Map of a comprehensive plan.
- **Concurrent Implementation:** The TJPDC and Committees will act on agreed upon recommendations that can proceed in parallel with the planning process.
- **Scopes of Work:** Detailed scopes of work, based on the Unified Vision and Guiding Principles, will define work on any additional planning or engineering reports.
- **Public Outreach:** A comprehensive and inclusive public engagement process, with detailed documentation of the process.
- **Concise Version:** A concise version of the plan will serve as an easy guide for decision-makers.