

MAURICE RIVER CORRIDOR STUDY 2024



Captain Joseph Buck Waterfront Park

Prepared for:

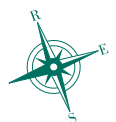


South Jersey
Transportation
Planning Organization



Prepared by:

Michael Baker
INTERNATIONAL





MAURICE RIVER CORRIDOR STUDY

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- Appendix G: Existing Conditions Maps**
- Appendix H: Bicycle Network Recommendations Table**
- Appendix I: Public and Stakeholder Comments**



EXECUTIVE SUMMARY



PURPOSE AND SCOPE

The purpose of the Maurice River Corridor Study is to promote beneficial, sustainable economic development that utilizes the river as an amenity while preserving and enhancing its ecological integrity and assets. The South Jersey Transportation Planning Organization (SJTPO), in partnership with Cumberland County, hired a consultant Michael Baker International, Inc. (Michael Baker) to help lead this Study. This effort sets the groundwork for the future connectivity of Cumberland County into the more extensive South Jersey Trails or Circuit Trail networks while guiding the preservation and enhancement of the Corridor. The intent of the Maurice River Corridor Study is to provide planning recommendations and implementation strategies to advance connectivity, ecotourism, economic development, and preservation in the Corridor.

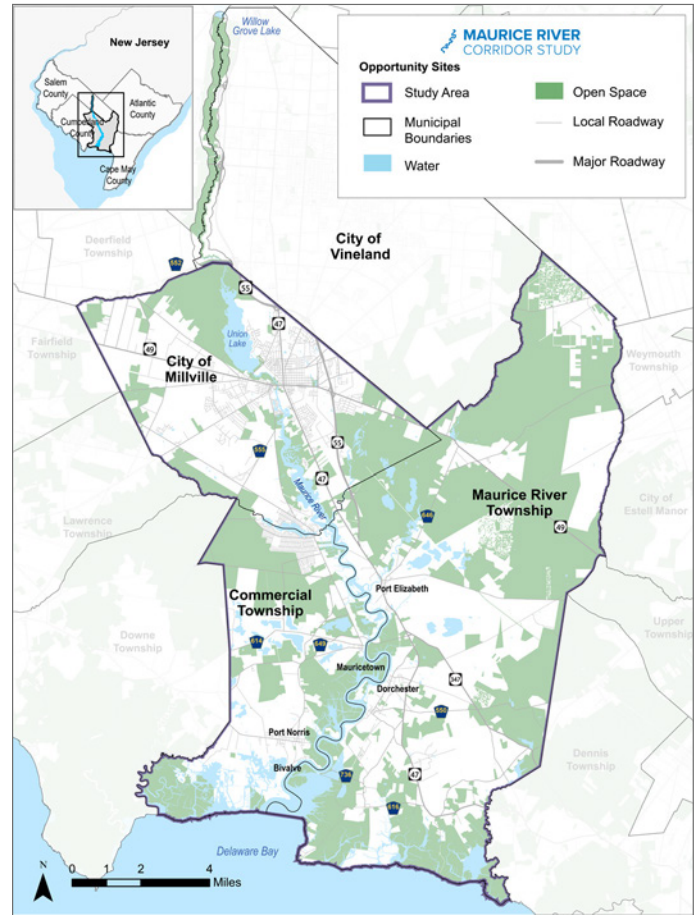
BACKGROUND

The Maurice River Corridor is a pristine Atlantic coastal river with national and international ecological significance. As part of the Atlantic Flyway, its clean waters and related habitats are vitally important to the migration of many bird species and fish. Other essential resources include a rare and endangered joint vetch, short-nose sturgeon and striped bass. Historically, the Maurice River is home to a rich fishing, boating, oystering heritage and a pre-historic settlement site. The river is a critical link between the Pineland National Reserve and the Delaware Estuary and serves as the western boundary of the Pinelands.

The Maurice River was designated a National Scenic and Recreational River in the 1990s. Many historical and cultural activities, such as fishing, shipbuilding, and other maritime industry-related industries, dominate the lower portion of the corridor. Newer activities include sand mining and a wind port. Communities are looking at how these new industries are impacting traffic and conservation efforts and how the recent economic activity will shape the region.

STUDY AREA

The Maurice River Corridor Study Area includes the municipalities of Commercial Township and Maurice River Township (including where the River meets the Delaware Bay), the City of Millville (including Union Lake), and the river corridor along Vineland and Salem County boundary, ending at Willow Grove Lake.



Ecotourism is defined as responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education (The International Ecotourism Society).

Heritage Tourism is defined as traveling to experience the places and activities that authentically represent the stories and people of the past. It includes historic, cultural and natural resources (National Trust for Historic Preservation).

SECTIONS OF THE REPORT

1.0 PLANNING PROCES

- Discusses the outreach and engagement throughout the project timeframe, including the formation of an Advisory Committee, focus groups, and public meetings and survey.
- Includes a summary of the survey and public meeting results.

2.0 EXISTING CONDITIONS

- Details relevant data and research gathered to develop preliminary concepts for the subsequent phases of the Maurice River Corridor Study
- Provides a summary of findings from the literature review, the demographic and economic analysis, and the transportation analysis.

3.0 REGIONAL PLANNING RECOMMENDATIONS

- Details the regional planning recommendations for the study area including the transportation network, economic development, marketing and branding, educational opportunities, and environmental opportunities.

4.0 DESIGN CONCEPTS

- Includes conceptual designs of the recommendations discussed in this Section 3.0 at five locations, referred to as “Opportunity Sites.”

5.0 POTENTIAL FUNDING SOURCES

Includes potential funding sources available to implement the regional planning recommendations and design concepts.

6.0 NEXT STEPS

Concludes this report with next steps to implement the planning recommendations and design concepts.

APPENDICES

- Appendix A: Public Outreach Plan
- Appendix B: Public Engagement Summary
- Appendix C: Literature Review Summary
- Appendix D: Transportation Analysis
- Appendix E: Economic Development Analysis
- Appendix F: Meeting Materials
- Appendix G: Existing Conditions Maps
- Appendix H: Bicycle Network Recommendations Table
- Appendix I: Public and Stakeholder Comments



1.0 PLANNING PROCESS

Throughout the development of this study, Michael Baker involved Maurice River Corridor communities and stakeholders in order to promote awareness of the study and its goals, as well as generate public feedback to further understand local issues through identification of opportunities and concerns as they relate to the Study. As part of the public engagement process, the Project Team created an Advisory Committee, hosted two focus groups, attended a community event, held two public meetings, and distributed a public survey. Section 2.0 Planning Process provides a summary of the planning process.

PROJECT TEAM



Consultants

Michael Baker
INTERNATIONAL



CITY OF VINELAND
WHERE IT'S ALWAYS GROWING SEASON

Maurice River Corridor Study Plan Participants



Southern NJ's Leading Watershed Organization



SUMMARY OF PLAN PARTICIPATION:

27
FOCUS GROUP MEMBERS

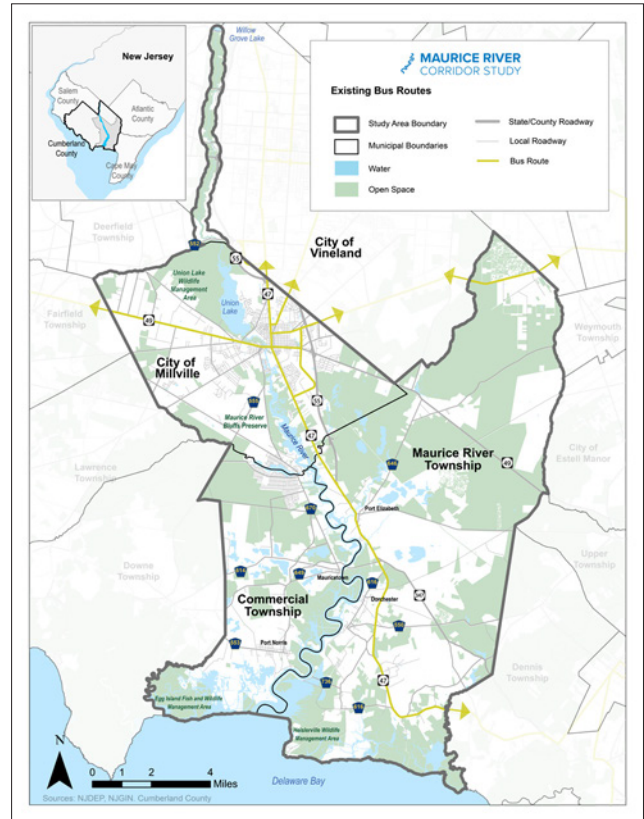
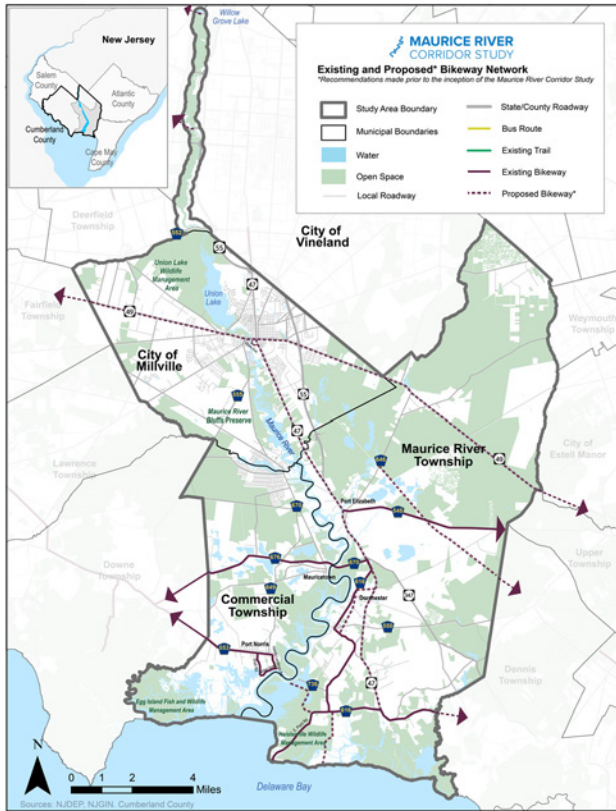
25
ADVISORY COMMITTEE MEMBERS

250
PUBLIC SURVEY RESPONSES

2.0 EXISTING CONDITIONS

The existing conditions section includes information on the Corridor’s transportation network, including bicycle facilities, trails, and public transit, and analysis on the demographics and local economy of the Corridor.

EXISTING TRANSPORTATION NETWORK



DEMOGRAPHICS & ECONOMY IN THE CORRIDOR AT A GLANCE*



38.5
Average Age



\$60,623
Median Income



12
Marine industry
businesses employing
5+ people



16,600
Residents ages
16+ who are either
employed or seeking
work



62
Businesses that could
potentially support
ecotourism activity

*as of 2022

3.0 REGIONAL PLANNING RECOMMENDATIONS

The Project Team created a list of best practices from other corridor studies and evaluated the list against the impacts and outcomes of transportation and connectivity, heritage tourism, and implementation readiness. The Project Team then tailored the list of best practices to address the concerns heard from stakeholders and the public and advance the goals of this study, resulting in the creation of five regional planning recommendation categories.



Transportation Network

- Bicycle Facility Recommendations
- Bicycle Amenities
- Trail Connectivity
- Traffic Calming Strategies
- Shuttle Services



Economic Development

- Existing Restaurants Provide To-Go Or Off-Site Food
- Encourage Short-Term Rentals
- Trip Planner/Guide Service
- Agritourism
- Working Waterfront Node Designation
- Public Facility Improvements to Support Ecotourism



Market and Branding

- Branding Plan
- Uniform Wayfinding Signs
- Website and StoryMap



Education Opportunities

- Bayshore Center at Bivalve
- Outdoor Exhibits
- School Programming

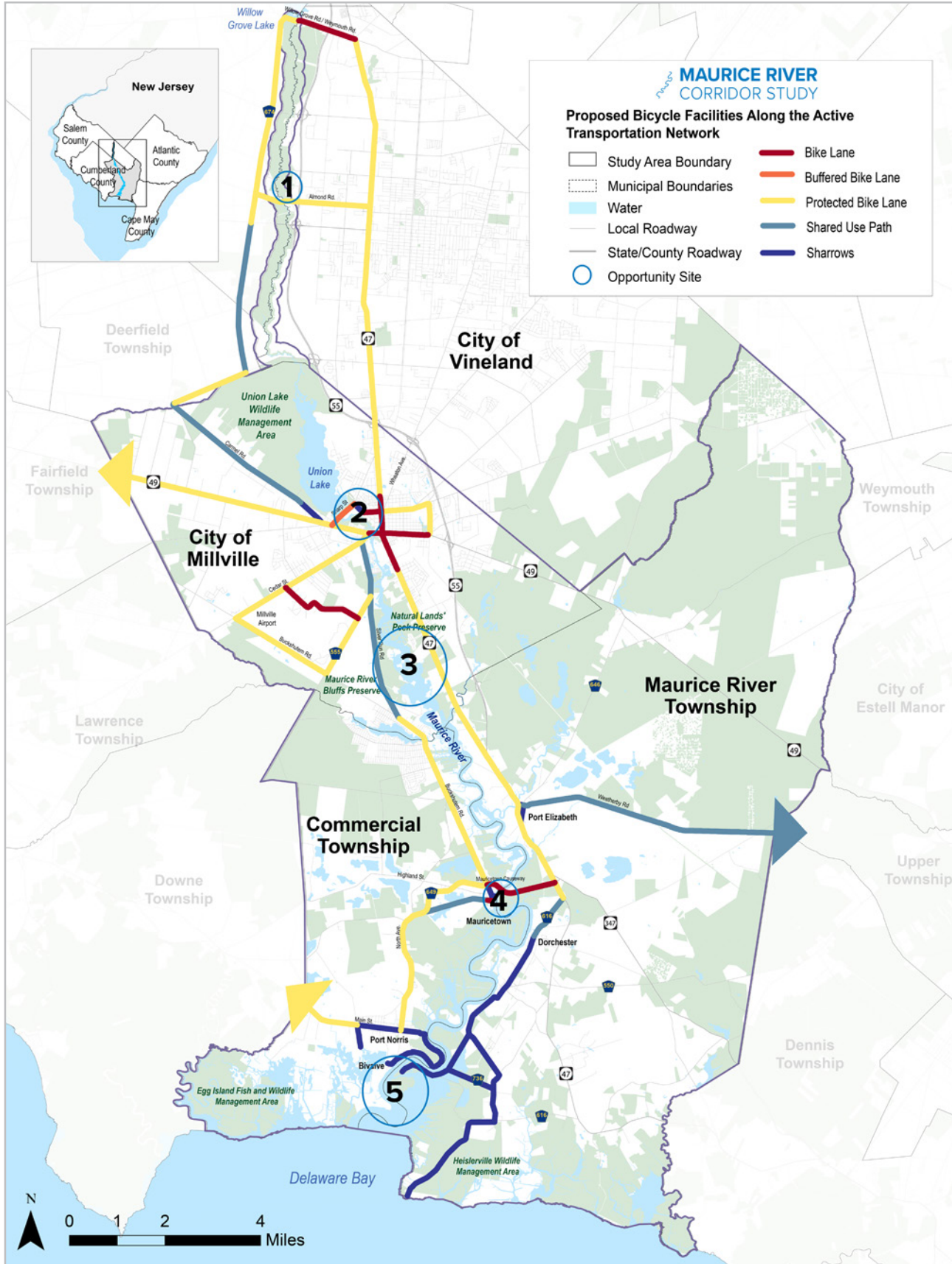


Educational Opportunities

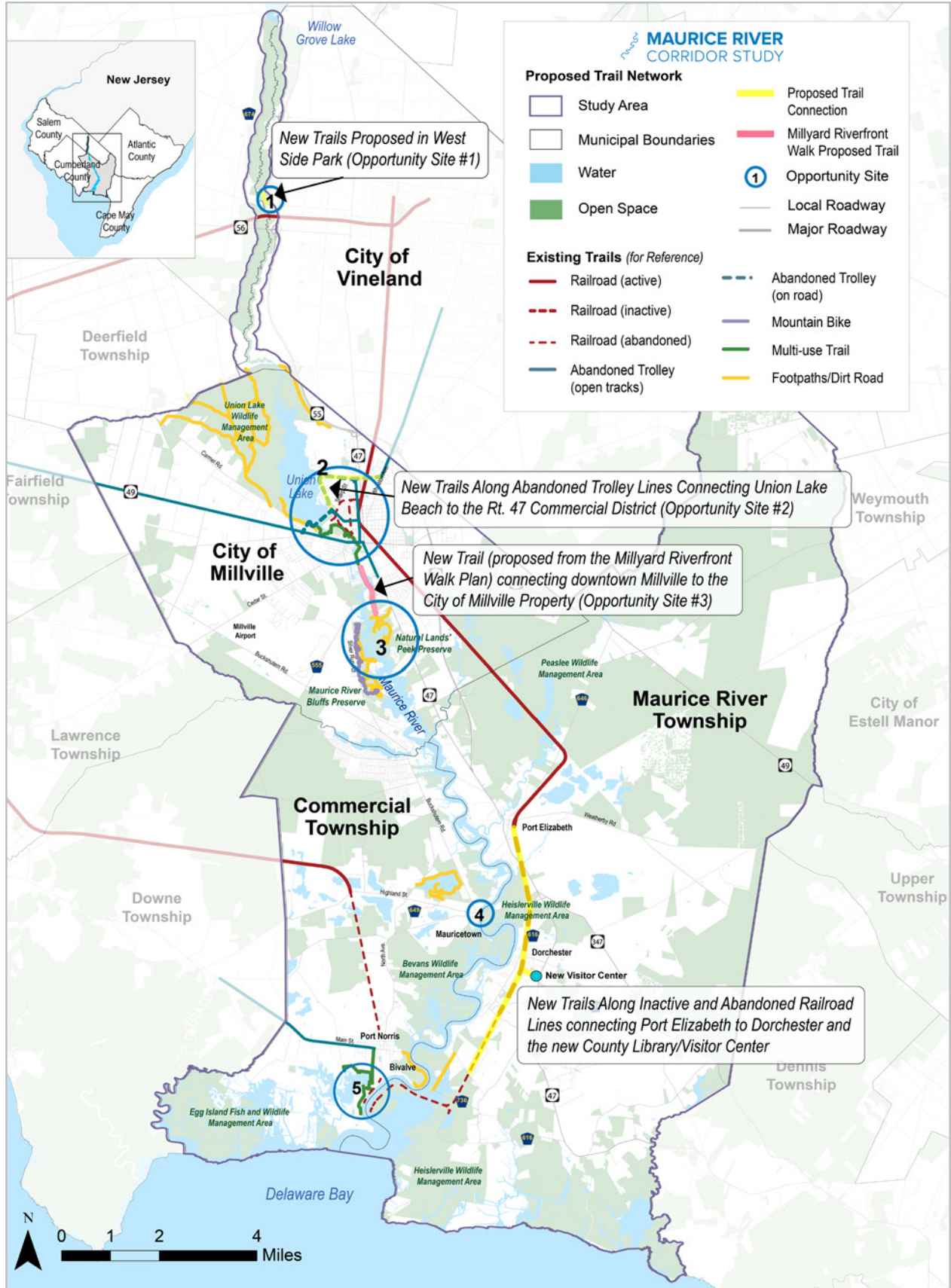
- Corridor Maintenance Program
- Improve Water Quality
- Nature-Based Solutions



TRANSPORTATION NETWORK: PROPOSED BICYCLE FACILITY NETWORK



TRANSPORTATION NETWORK: PROPOSED TRAIL NETWORK



4.0 DESIGN CONCEPTS

The Project Team created design concepts for five opportunity sites within the Corridor to demonstrate some of the planning and design recommendations that resulted from the best practices review, stakeholder and public outreach, and transportation, demographics, and economic analysis. These design concepts aim to encourage trail development and connectivity in and along the Maurice River Corridor.

DESIGN CONCEPT PROCESS



OPPORTUNITY SITES

Opportunity Site #1 - West Side Park: During the Heritage and Tourism Focus Group, stakeholders discussed the need for more green space within the City of Vineland. West Side Park has parking available and is close to residential areas. The proposed design concept aims to attract visitors to the Corridor by providing access to the river via a restored beach area, kayak launch, fishing dock, a new trail through the northern portion of the property for birdwatching and hiking, and amenities such as a upgraded playground, food trucks parking with picnic tables, fire pits and grills, a new septic public restroom, and eco-friendly landscaping and beautification efforts.

Opportunity Site #2 - Union Lake Beach to Waltman Park: This concept proposes to restore the beaches along Union Lake, improve connectivity between Union Lake, Waltman Park and Captain Joseph Buck Park, and provide a centrally located tourist designation to the Corridor since this area has the highest population density within the Corridor. This concept will revitalize the existing waterfront by offering new amenities, such as tennis and pickleball courts, an outdoor roller-skating rink for the summer that can serve as an ice-skating rink in the winter, riverwalk swings, picnic areas, an interactive water feature, and an event lawn. The concept also includes restoring the existing amenities such as the existing kayak launches and Maurice River Walking

and Bicycle Trail, which needs removal of invasive species and replanting of native plants.

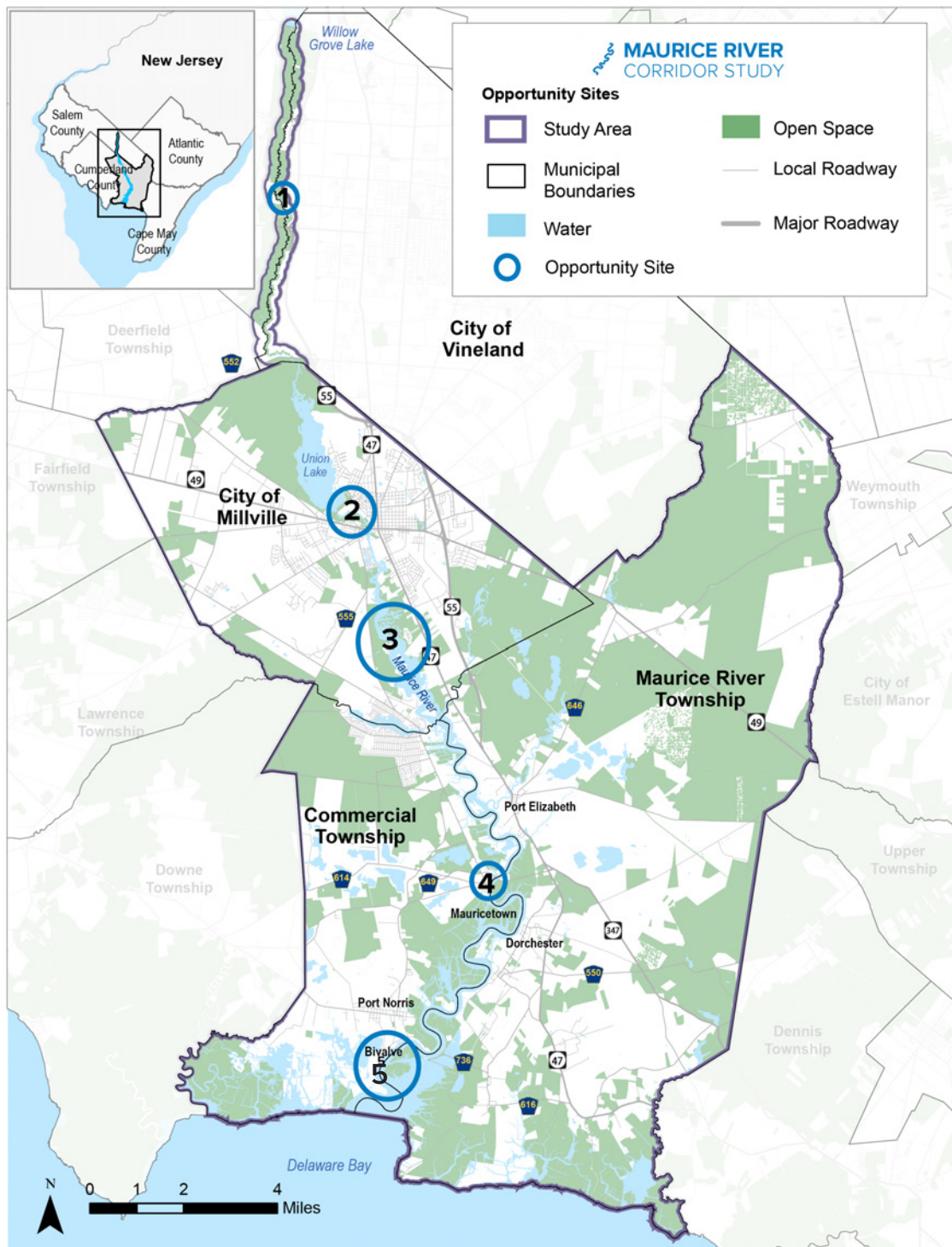
Opportunity Site #3 - Connecting the Preserves: The Maurice River Bluffs Preserve currently has a 6.0-mile mountain bike trail, hiking areas, and points of interest. This proposed concept aims to connect the frequently visited Maurice Bluffs Preserve across the river to the Harold N. Peek Preserve and riverfront property owned by the City of Millville via kayak launches and additional trails. By activating the City of Millville property with an elevated canopy trail, archery range, and log jam inspired nature playground, visitors will have more activities to do while visiting the two preserves.

Opportunity Site #4 - Mauricetown: This concept aims to encourage more tourists to the Mauricetown Historic District and Maurice River Township by offering a new cafe with restrooms and adjacent picnic area at Mauricetown Riverfront Park, a place to rent bicycle for the day to cross the Mauricetown Causeway and visit the river overlook to observe wildlife along the river. In addition to the river overlook, there is an elevated walkway, raised platform overlook with shaded pavilion, a boat ramp with a bulkhead, and a floating dock. This design will connect Mauricetown and Commercial Township to Maurice River by a bike lane along the Causeway, which is wide enough to support a safe bike lane.

Opportunity Site #5 - Bivalve: This concept proposes to enhance and bring awareness to existing amenities within Bivalve, including the Germantown Ave. trailhead and the Strawberry Ave. Boardwalk, while also adding new amenities such as a new bicycle rental station, upgraded restrooms and

restaurant at the Bayshore Center at Bivalve, and new public art installations to teach visitors about the local oyster industry. By marketing the Working Waterfront designation, Bivalve can increase its resilience to flood risk while restoring the maritime industry and natural amenities.

OPPORTUNITY SITE MAP



OPPORTUNITY SITE #1 WEST SIDE PARK

PROPOSED DESIGN CONCEPT

- ① An **adaptive fishing dock** located near the Almond Rd. bridge
- ② New **grilling area**
- ③ **Picnic shelter** to remain with restored **Beach area** with no lifeguard on duty signage
- ④ New **fire pit area**
- ⑤ Upgraded **playground**
- ⑥ New **septic restroom** facility built above the BFE
- ⑦ **Food truck area** with picnic tables
- ⑧ New **adaptive kayak launch**
- ⑨ New **walking and hiking trails** (paved and crushed stone)
- ⑩ **Birdwatching stations** along the walking and hiking trails
- ⑪ **Interpretive signage with wayfinding** highlighting the wildlife habitats and ecosystems



PRECEDENT IMAGERY - DESIGN INTENT

- ⑫ **Lookout point** towards Alliance Beach with birdwatching station and benches
- ⑬ Designed area for portage



① Adaptive fishing dock
Source: Boardsafe Docks



④ Fire pits
Source: Project for Public Spaces



⑦ Food truck area with seating
Source: KGUN9 Oro Valley News

OPPORTUNITY SITE #2

UNION LAKE BEACH TO WALTMAN PARK

PROPOSED DESIGN CONCEPT



- ① Basketball courts to remain
- ② New tennis and pickleball courts
- ③ An outdoor roller-skating rink that operates as an ice skating rink in the winter
- ④ Renovations to existing playground
- ⑤ New restaurant or brewery connecting to the riverfront
- ⑥ New wildlife meadow that helps with water absorption during wet seasons
- ⑦ New interactive water feature
- ⑧ Repairs to kayak launches
- ⑨ New riverwalk swings
- ⑩ New picnic shelters
- ⑪ Repaired Maurice River Trail will remain over the Freshwater Tidal Marsh and Hardwood Swamp
- ⑫ New beach area
- ⑬ Event lawn overlooking Union Lake
- ⑭ New restroom facility

PRECEDENT IMAGERY - DESIGN INTENT



③ Outdoor roller-skating/ice skating rink
Source: Glass City Riverwalk



⑦ Interactive water feature
Source: Metoparks Toledo



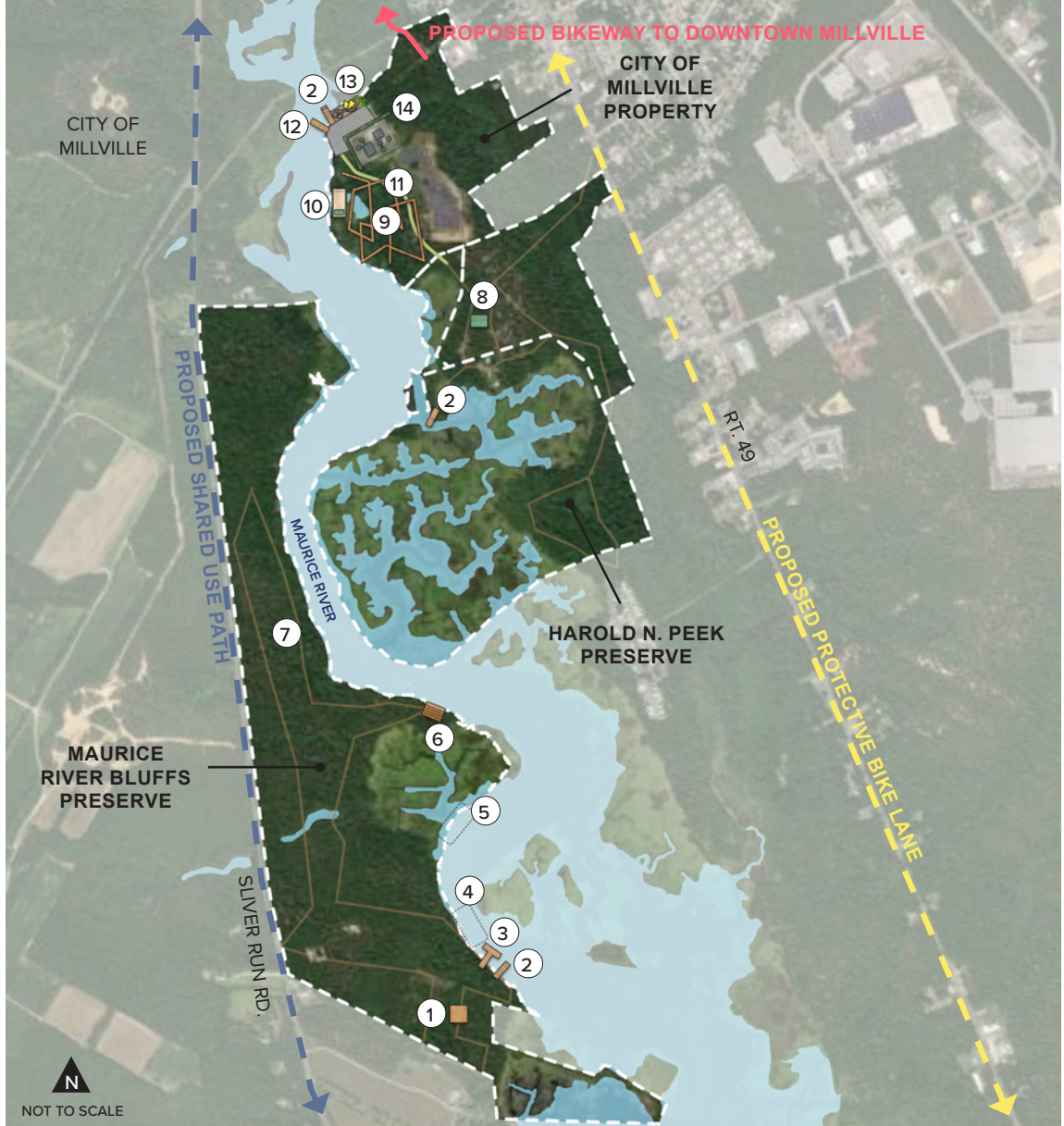
⑨ Riverwalk swings
Source: Cincinnati Enquirer

OPPORTUNITY SITE #3

CONNECTING THE PRESERVES

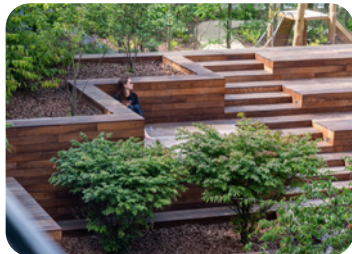
PROPOSED DESIGN CONCEPT

- ① Existing **birdwatching station** to remain
- ② **New adaptive kayak launches** to connect the three sites
- ③ Existing **fishing dock** to remain
- ④ Designated **paddleboard area**
- ⑤ **Designated area for boats** to pull up to the shore
- ⑥ **River's edge seating terrace** provides a scenic resting area for hikers
- ⑦ Existing **mountain bike trail** to remain separated from walking trails
- ⑧ Existing **restroom facility** to remain
- ⑨ **Elevated canopy trail** to connect visitors to the forested canopy
- ⑩ **New archery range**
- ⑪ **New trail connecting** the City of Millville property to Harold N. Peek Preserve



- ⑫ Existing **boat launch** to remain
- ⑬ **New log jam inspired nature playground**
- ⑭ **Greenscreen fence** around the sewage treatment center

PRECEDENT IMAGERY - DESIGN INTENT



⑥ River's edge seating terrace
Source: Landezine



⑨ Elevated canopy trail
Source: Tree to Tree Cape May



⑬ New log jam inspired nature playground
Source: City of Cincinnati, OH

OPPORTUNITY SITE #4

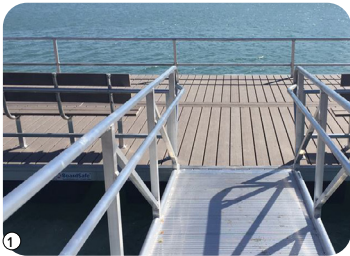
MAURICETOWN CAUSEWAY

PROPOSED DESIGN CONCEPT



- ① Adaptive fishing dock
- ② Bike rental station
- ③ Picnic area
- ④ Cafe with restrooms
- ⑤ A river overlook to watch the wildlife along the river
- ⑥ Elevated walkway with bump outs for fishing
- ⑦ Raised platform overlook with shaded pavilion
- ⑧ Boat ramp with bulkhead
- ⑨ Floating dock
- ⑩ Clamshell parking area
- ⑪ Park area
- ⑫ Paved roadway with parking on one side
- ⑬ Interpretive signage with wayfinding highlighting the wildlife habitats and ecosystems
- ⑭ Clamshell walking path

PRECEDENT IMAGERY - DESIGN INTENT



① Adaptive fishing dock
Source: Boardsafe Docks



② Bike rental station
Source: Wheel Fun Rentals



③ Picnic area near cafe
Source: Tourism Richmond



④ New Cafe in Mauricetown
Source: Kat Robinson



⑤ River overlook
Source: City of Eugene, OR



⑥ Elevated Walkway
Source: Wetlands Institute

OPPORTUNITY SITE #5

BIVALVE

PROPOSED DESIGN CONCEPT

① **Hybrid breakwaters** to create acres of subtidal/intertidal oyster reef habitat

② **New rock revetment**

③ Introduce **public art** that can get wet during storms and reflects the history oyster industry

④ Additional **birdwatching stations**

⑤ **Existing dock** to remain with new public art

⑥ **Enhance the existing trailhead**

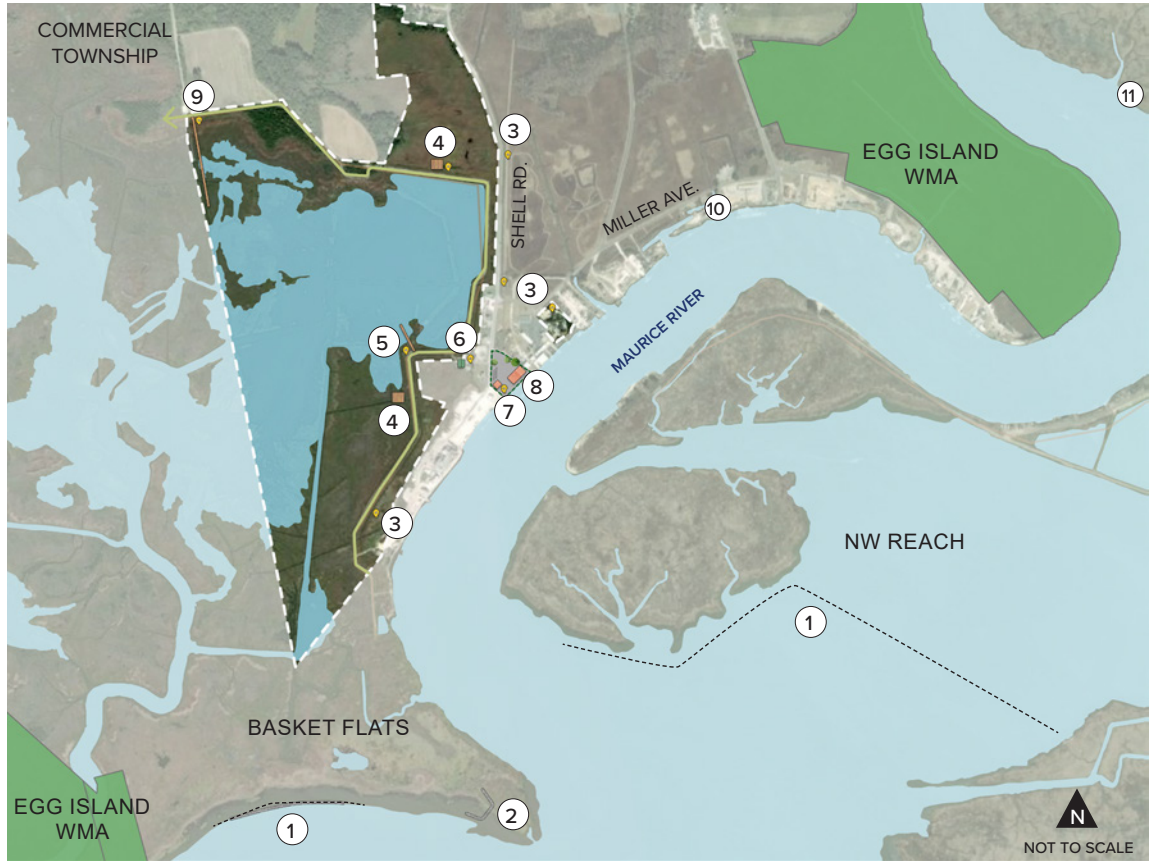
⑦ **New bicycle rental station**

⑧ **Reestablish a restaurant**, upgrade the restrooms, and expand education program at the Bayshore Center at Bivalve.

⑨ Enhance the existing **Strawberry Avenue Boardwalk** with public art

⑩ Market the **Working Waterfront designation** to developers to restore the maritime industry

⑪ Shellfish-based **Living Shorelines**



PRECEDENT IMAGERY - DESIGN INTENT



① Basket Flats hybrid breakwaters
Source: American Littoral Society



③ Resilient oyster public art
Source: Icon Poly Studio



④ Additional birdwatching stations
Source: South Jersey Trails



⑥ Trailhead
Source: CBS Austin



⑦ Bike rental station
Source: Wheel Fun Rentals



⑧ Reestablish a restaurant
Source: SNJToday

5.0 POTENTIAL FUNDING SOURCES

This section includes potential funding sources to implement the recommendations from this report. Each potential funding program is detailed with a brief overview description with funding eligibility and amount available. The list below includes the potential grants available:

- National Park Service Wild and Scenic Rivers Program
- Every Kid Outdoors Small Grants Program
- Local Freight Impact Fund
- Rural Business Development Grants
- NJ Small Business Development Center at Stockton University
- Farmers Market Promotion Program
- Building Resilient Infrastructure and Communities (BRIC)
- Green Acres Program
- Outdoor Recreation Legacy Partnership Grants
- Open Space Institute Programs
- Association Of New Jersey Environmental Commissions Open Space Stewardship Grants
- National Fish and Wildlife Foundation Grants
- Active Transportation Infrastructure Investment Program (ATIIP)
- Carbon Reduction Program (CRP)
- Congestion Mitigation and Air Quality Improvement (CMAQ) Program
- Highway Safety Improvement Program (HSIP)
- National Highway Performance Program (NHPP)
- Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program
- Surface Transportation Block Grant Program (STBG)
- Transportation Alternatives (TA) Set-Aside
- Recreational Trails Program (RTP)
- Safe Routes to School (SRTS)
- National Scenic Byways Program (NSBP)
- Reconnecting Communities and Neighborhoods Grant Program (RCN)
- Safe Streets and Roads for All (SS4A) Grant Program
- Rebuilding American Infrastructure with Sustainability and Equity (RAISE)
- INFRA Grant Program
- NJDOT Local Aid - Bikeways
- NJDOT Local Aid - Municipal Aid

FOR MORE INFORMATION ON THE MAURICE RIVER CORRIDOR STUDY

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1.0 PLANNING PROCESS

As part of the public engagement process, the Project Team created an Advisory Committee, hosted two focus groups, attended a community event, held two public meetings, and distributed a public survey. Section 2.0 Planning Process provides a summary of the planning process. For additional information, such as key opportunities and concerns that resulted from stakeholder meetings, refer to Appendix A: Public Outreach Plan, Appendix B: Public Engagement Summary, and Appendix F: Meeting Materials.

1.1 PROJECT TEAM

The Project Team is led by SJTPO and Cumberland County Department of Planning, Tourism, and Community Affairs with support from the consultant team comprised of Michael Baker as the Lead/Prime Consultant and RES Advisors as the Sub-Consultant. Throughout the planning process, the Project Team met biweekly with SJTPO, Cumberland County, and the City of Vineland to discuss the overall project workplan execution and status and to prepare for upcoming planning tasks, meetings, and key deliverables.

1.2 ADVISORY COMMITTEE

The Advisory Committee collaborated with the project team throughout the development of the study, providing local knowledge and feedback during every step. Members of the Advisory Committee were identified in partnership with the client, including local representation from each of the four municipalities within the study area, civic groups, nonprofit and advocacy groups, regulatory agencies, local and County Planning Boards, historical groups, and tourism organizations.

Advisory Committee Members

- Maurice River Township
- City of Millville
- City of Vineland Cumberland County Improvement Authority
- Cumberland County Board of County Commissioners
- Federal Emergency Management Agency (FEMA)
- Atlantic Capes (oystering)



Public Meeting #1

- Whibco, Inc. (sand mining)
- Citizens United to Protect the Maurice River and Its Tributaries (CU Maurice River)
- New Jersey Conservation Foundation
- Cross County Connection Transportation Management Association (TMA)
- Partnership for the Delaware Estuary
- American Littoral Society, Delaware Bay Watershed
- Salem County
- Planning Board, Cumberland County

Meetings

Kick off Meeting

The Advisory Committee kick-off meeting took place virtually on June 15, 2023. The meeting consisted of a project overview as well as a brainstorming session of strategies. Discussion was centered around the use of a Miro Board so that attendees could attach their



PLANNING PROCESS AT A GLANCE



250
Survey Responses



27
Focus Group Members



100+
Comments Captured during the Public Meeting #1 mapping exercise



25
Advisory Committee Members



Mapping Exercise at Public Meeting #1

brainstorming comments to specific locations on a map of the Maurice River Corridor. Topics discussed included overall river accessibility and specific access points, recreational outfitters and equipment, the history of the area, swimming areas, traffic and transportation, and compatibility of “competing uses.” The meeting ended with an overview of the public outreach strategy and identified next steps.

Advisory Committee Meeting #2

The second Advisory Committee meeting took place on September 27, 2023, at the Cumberland 4H Extension Center and online on MS Teams. The meeting consisted of a project update and overview of the work completed up to that point including existing conditions and transportation and economic analysis findings. The economic analysis was conducted by subconsultant RES Advisors. Discussion at this meeting centered on the economic analysis as well as other projects ongoing around the County.

Advisory Committee Meeting #3

The third Advisory Committee meeting took place on February 29, 2024, at the Cumberland 4H Extension

Center and online on MS Teams. The purpose of this meeting was to present the regional recommendations and draft design concepts to the Advisory Committee, while also providing an update on the schedule and stakeholder and public outreach conducted since the last meeting. The Advisory Committee provided helpful comments to the recommendations and concepts during the meeting and had two weeks following the meeting to provide comments, which generated over 60 additional comments. After this meeting, the Project Team updated the regional recommendations and design concepts to address the Advisory Committee’s comments (located in Appendix B: Public Engagement Summary).

Advisory Committee Meeting #4

Prior to the fourth Advisory Committee meeting, the Project Team emailed the draft study to the Advisory Committee. The meeting took place on May 22, 2024, at the Cumberland 4H Extension Center and on MS Teams where Project Team gave an update on the schedule, reviewed changes to the report since the last meeting, and provided takeaways from public meeting #2. After providing an update on the study,

Advisory Committee members had the opportunity to voice questions and concerns on the draft study. Following this meeting, the Project Team made final revisions to the design concepts to integrate their feedback.

1.3 FOCUS GROUPS

The Project Team hosted two focus groups centered around specific topics relevant to the project: “Transportation and Connectivity” and “Heritage and Tourism.” The Advisory Committee identified 47 stakeholders to invite to the focus groups meetings, which had not been engaged at this point in the project. These focus groups served as a resource to more fully understand local issues and areas of concern and opportunity that could be further explored at a public open-house event.

Focus Group Members

- Al & Sam’s Canoe & Kayak Rental
- City of Vineland Planning Department
- South Jersey Transportation Authority
- City of Vineland Environmental Commission
- Whibco, Inc.
- American Littoral Society
- EconomicDevelopment District
- New Jersey Department of Environmental Protection (DEP), New Jersey Fish and Wildlife
- Rutgers Haskin Shellfish Research Lab
- Vineland Historical and Antiquarian Society
- Jersey Off Road Bicycle Association (JORBA)
- New Jersey Bike and Walk Coalition

Meetings

Focus Group #1: Heritage Tourism

The focus group for Heritage Tourism took place on July 26, 2023, at the Cumberland 4H Extension Center. The meeting consisted of a brief project overview followed by a brainstorming session of strategies. The goals of this focus group include discussing emerging open space opportunities, tourism facilities and destinations, new industries, historic preservation efforts, and the local tax system and regulatory environment. Also discuss strategies for preserving and protecting natural, cultural, historic, and recreation resources, ecological restoration, and initiatives that promote sustainable economic development and resilient development.

Opportunities identified by the Focus Group Members include proximity to residential areas, improving access to the tributaries of the Maurice River, ongoing implementation of living shorelines and nature-based solutions, historic districts, and partnership with The Nature Conservancy. Concerns included poor maintenance, ownership constraints, lack of public transportation, reduced accessibility to the river, few eco-tourism supporting businesses, and risk of sea-level rise.

Focus Group #2: Transportation & Connectivity

The focus group for Transportation and Connectivity took place on July 27, 2023, at the Cumberland 4H Extension Center. The meeting consisted of a brief project overview followed by a brainstorming session of strategies. The goals of this focus group include discussing strategies for increasing public access to open space and community assets, pedestrian and bikeway connectivity, traffic calming and safety, vehicular access, and enhancing overall circulation in the corridor.

Opportunities identified by the Focus Group Members include mountain biking, the Rails to Trails program, regional transportation coordination and the Trail Towns Program. Concerns included flood and sea-level rise vulnerability, lack of public transportation, equity, and losing historic value of the area.

1.4 PUBLIC MEETINGS

Public Outreach for the Maurice River Corridor Study consisted of a community event, a public survey, and two public meetings. In order to bring public awareness to the Study, the Project Team, alongside Cumberland County, attended the Mauricetown RiverFest event on September 16, 2023, where handouts on the Study were distributed to the public at the Cumberland County table. The Project Team created a handout with information on the Study including project background, desired outcomes, and a map of the Corridor area. The flyer contained a scannable QR code and link to the survey, the Project Lead’s contact information (email and phone number), and information on the date and location of the first public meeting held on November 2, 2023.

Public Meeting #1

Public Meeting #1 took place on November 2, 2023, at the Cumberland 4H Extension Center. The meeting’s

purpose was to give all residents and visitors of the Corridor an opportunity to discuss ideas and strategies for enhancing the Maurice River Corridor. Michael Baker started the meeting with a brief PowerPoint presentation on the project overview, including the purpose of the Study, the Study Area, goals of the Study, and schedule. The second part of the meeting included a mapping exercise with four stations that had large printouts of the Study Area. Michael Baker asked members of the public to place colored dots on the map where they identified specific opportunities or issues/needs. Michael Baker asked if the public had specific concerns or suggestions to place a sticky note with comments explaining the opportunity or issue/need.

Each color dot corresponds to a certain topic area, as listed below.

- Green: Areas where you would like to see more recreation and trail connectivity
- Red: Areas where you would like more amenities (shops, restaurants, restrooms) Which specific amenities would you like to see
- Green with Black Dot: Areas where you would like better trail connectivity.
- Blue: Areas where you would like more access to the river
- Yellow: Where are your favorite areas? What do you like about these places? (please use post it notes)
- Red with Black Dot: Where are areas which you tend to avoid? What is the reason? What would cause you to visit them more often?

The public provided roughly 100 comments on the map, in addition to the colored dots on the outreach maps. Michael Baker will use the results from the outreach maps to guide recommendations for trail development and connectivity in and along the Maurice River Corridor. Additionally, the outreach mapping exercise will assist Michael Baker with prioritizing recommendations based on opportunities or issues/needs identified by the public. Appendix B: Public Engagement Summary includes the public feedback.

Public Meeting #2

The second Public Meeting took place on May 15, 2024 at the Cumberland 4H Extension Center. The Project Team discussed the planning process



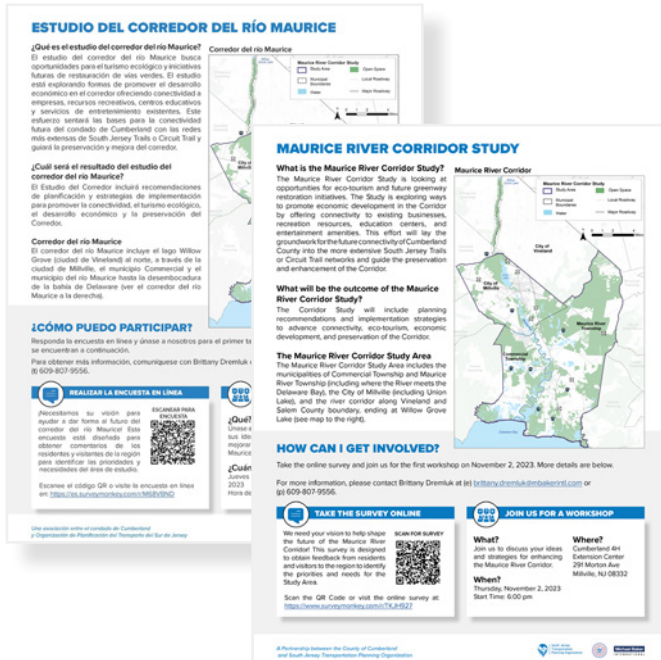
Colored dot mapping exercise at Public Meeting #1

and community outreach, existing conditions, the planning recommendations and design concepts, potential funding sources, and next steps. After the presentation, the Project Team opened the discussion to the public to ask questions and provide comments on the draft study. Following the meeting, the draft study was sent to attendees of both the first and second public meeting and accepted comments until May 24, 2024.

1.5 PUBLIC SURVEY

The Project Team created a survey with questions designed to obtain feedback from residents and visitors to the region to identify the priorities and needs for the Study Area relating to recreation, tourism, and connectivity. Questions were provided to the Advisory Committee for feedback. Once the questions were finalized, they were translated into

Figure 2-1. English and Spanish Flyers with information on the Public Survey and First Public Meeting



Spanish in an effort to reach an even greater segment of the population of the Corridor. Both the English and Spanish versions of the survey were uploaded to SurveyMonkey where a link and QR code could be created to disseminate the survey.

The Maurice River Corridor survey was launched at Mauricetown Riverfest on September 16th, 2023, and was live through November 17, 2023. The survey was promoted and available via hard copy at the following local community events:

- Mauricetown RiverFest (September 16, 2023)
- Hopewell Day (September 30, 2023)
- Kids Community Day at the Sheriff's Office in Bridgeton (September 30, 2023)
- Wheaton Arts Festival of Fine Arts (October 7 and 8, 2023)
- Freedom Farm Fall Festival in Cedarville (October 21, 2023)
- Downe Home Day (October 21, 2023)
- Oyster Festival in Bivalve (October 21, 2023)
- Greenwich Artisans Fans (November 11 and 12, 2023)

The flyer with Study information and a scannable QR code to access the survey was also given to the County Planning Board, Cultural and Heritage

Key Takeaways from Public Meeting #1

- Union Lake to Waltman Park had a high density of red dots (more amenities) and blue (more access to river) dots.
- Favorite areas included Union Lake, Maurice River Bluffs, Egg Island Fish and Wildlife Management Area, and Heislerville Wildlife Management Area.
- High density of green dots (more recreation) were north of Union Lake including West Side Park and Alliance Beach.
- High density of red dots (more amenities) along the southern portion of the study area.

“Guided boat tours out of Millville. No amenities.”

7 related comments to lack of amenities

“Better parking facilities for water access to kayak/ water recreation areas.”

8 related comments to parking and access

“People leave the region for better quality food and experience.”

6 related comments to needing more restaurants

“Need better trail markers/ purpose for trail.”

4 related comments to unmarked trails



Commission, Tourism Advisory Council, Delaware Bayshore Council, City of Millville, City of Vineland, Commercial Township and Maurice River Township for distribution amongst those groups. The survey garnered a total of 250 responses.

Summary of Survey Responses

Participants

- 248 English responses
- 2 Spanish responses
- Less than half of participants were residents to the corridor (41%).
- Survey participants skewed to age 56 and older (68%).

Survey Findings: Current Use

- Over 80% of participants utilize the waterfront monthly and 30% use it daily.
- Parks, walking/hiking trails and views of the waterfront are the top recreation uses in the corridor.
- Maurice River Bluffs Preserve and Union Lake were the most popular recreation destinations in the corridor.
- 62% of respondents said natural assets and beauty were voted the greatest strength of the corridor.

Concerns within the Corridor

- Pollution is ranked as the top local environmental concern followed by water quality and invasive species.


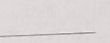
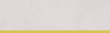
- Lack of sidewalks and bike lanes is the top transportation concern within the Corridor.
- Lack of access and amenities were the top barriers to accessing recreational opportunities.

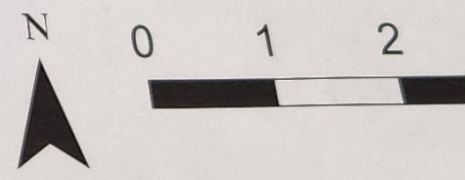
Preferred Strategies

- Improved trail networks and river access is seen as the best strategy to encourage visitors to the corridor.
- Better information about where to access recreation areas was seen as the factor that would most increase the use of recreation facilities within the corridor.
- The top visitor friendly businesses respondents would like to see are restaurants/cafes, followed by arts and cultural events.
- Nature walks, birding, and backpacking/hiking, were the top ecotourism activities.
- “Promote historic assets as a tourist destination and point of interest” was the top strategy participants would like to see future investment in the heritage and history.
- Restroom facilities and water fountains, seating and rest areas, and parking areas are the three most necessary amenities when it comes to trail development and recreational design.
- Mountain biking, archery, and tennis/pickleball courts were the top preferred active recreation options.



Maurice River Corridor Study

-  Open Space
-  Local Roadway
-  Boundaries



Michael Baker

2.0 EXISTING CONDITIONS

2.1 LITERATURE REVIEW

The Project Team collected relevant data from the participating jurisdictions and other sources in order to develop preliminary concepts for the subsequent phases of the Maurice River Corridor Study. The Team created a library of plans to research in order to identify where work similar to the goals of this study has already occurred in order to focus on where there are gaps in planning opportunities for ecotourism and trail connectivity. The literature review helped the Team ensure the concepts, planning recommendations, and implementation strategies are consistent with State, County, and local master plans and other guidance documents and help to establish a vision and goals for this study.

Existing Guidance Documents Covered in this Review

- Commercial Township Local Plans
 - » Commercial Township Master Plan (2006)
 - » Commercial Township Master Plan Re-examination (2016)
- Maurice River Township Local Plans
 - » Maurice River Master Plan (2000)
 - » Maurice River Township Master Plan Re-examination (2012)
 - » Maurice River Open Space and Recreation Plan (2014)
- City of Millville Local Plans
 - » City of Millville Master Plan (2000)
 - » City of Millville Environmental Sustainability Plan (2009)
 - » Maurice Riverfront Development Plan (2006)
 - » City of Millville Re-examination (2012)
 - » City of Millville Transportation Improvement Study (2013)
 - » City of Millville Municipal Public Access Plan (2015)
 - » City of Millville Land Use Plan Element (2016)
 - » City of Millville Coastal Vulnerability Assessment (2017)
- Municipal Zoning , Subdivision, and Land Development Ordinances
 - » Commercial Township Zoning Map (2006)
 - » Maurice River Township Zoning Map (2005)
 - » City of Millville Zoning Map (2015)
- Cumberland County Open Space and Recreation Master Plan (2011)
- Comprehensive Conservation & Management Plan for the Delaware Estuary (2019)
- Comprehensive Management Plan for the Maurice National Scenic and Recreational River (2001)
- Cumberland County Farmland Preservation Plan (2022)
- Feasibility Study for Various Rails to Trails Projects within the County of Cumberland (2010)
- Cumberland County Delaware Bayshore Recovery Plan (2013)
- Cumberland County Bikeways Inventory (2015)



Maurice River Bluffs Preserve



DEMOGRAPHICS & ECONOMY IN THE CORRIDOR AT A GLANCE*



38.5

Average Age



\$60,623

Median Income



12

*Marine industry
businesses employing
5+ people*



16,600

*Residents ages
16+ who are either
employed or seeking
work*



62

*Businesses that could
potentially support
ecotourism activity*

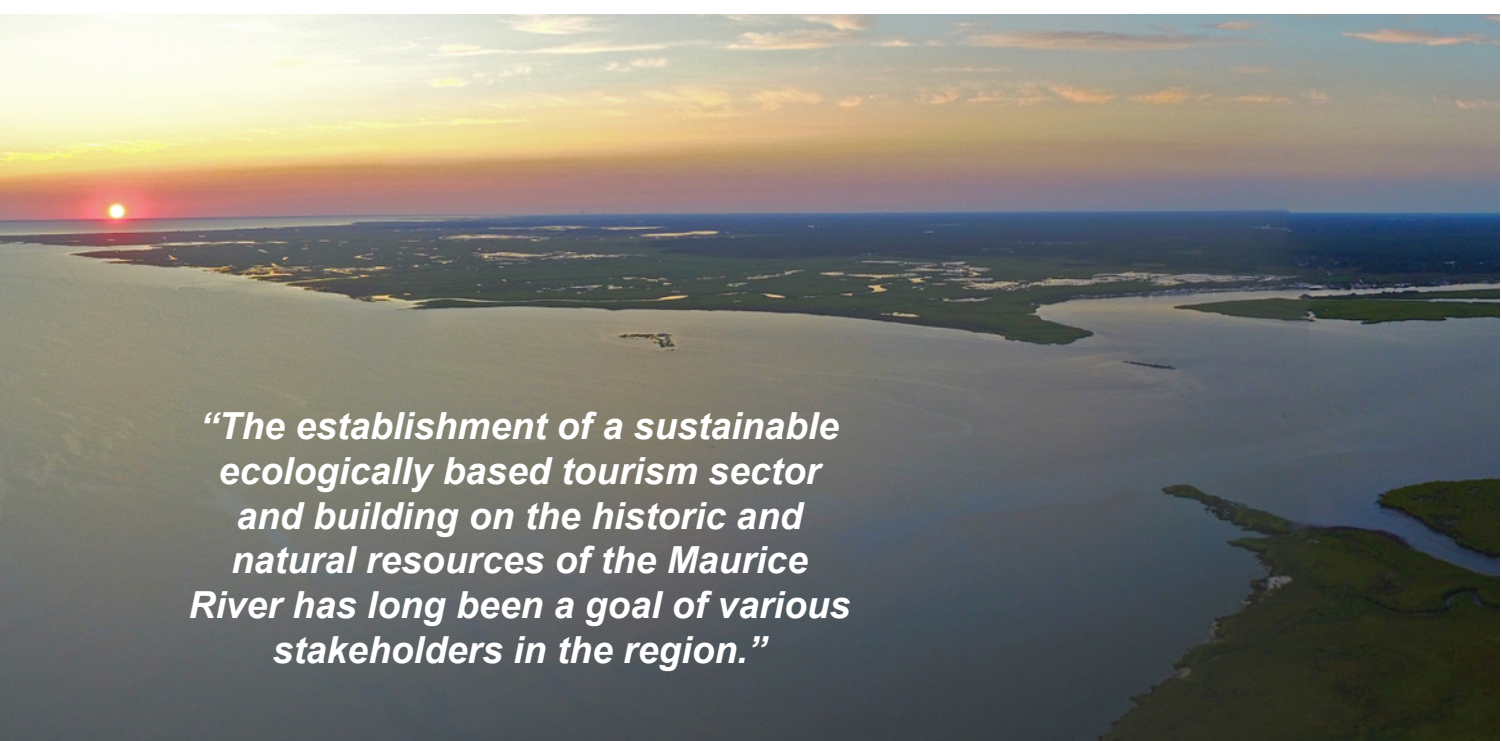
*as of 2022

Appendix C. Literature Review includes the summary of findings and an analysis of existing planning policies and regulations throughout the study area including the document's purpose and goals, a relevant content summary, and examples of tables, drawings, or other relevant figures.

Findings From Literature Review

- Consistent theme across master plans within the study area is the vision of harmony between nature and human development as the basis and foundation of a unique way of life.
- The Cumberland County Open Space plan finds much of the area along the Delaware Bay is not easily accessible to County residents. In addition, public access to the Maurice River for activities such as kayaking and fishing is minimal or nonexistent in many locations.
- The establishment of a sustainable ecologically based tourism sector and building on the historic and natural resources of the Maurice River has long been a goal of various stakeholders in the region.
- Long term resilience to flooding, drought, and other extreme weather events should also be incorporated in any recommendations, taking into account potential future conditions of the corridor.

- Much of the study area is regulated in one way or another in a way which limits development. In various plans, ecotourism is seen as a potential way to pursue economic growth under those constraints.
- Previous plans have identified the strengths of the region including:
 - » Tidal wetlands located along the Maurice River and Delaware Bay are appropriate for passive recreation activities such as hiking, fishing, or bird watching.
 - » Due to its flat topography, the corridor could become a destination for cyclists.
 - » And because of its relatively undeveloped condition, there is opportunity to plan and develop off-road trails including aquatic trails.
- Previous plans contain recommendations which we may be able to build upon such as the Cumberland County Rails to Trails Feasibility Study.



“The establishment of a sustainable ecologically based tourism sector and building on the historic and natural resources of the Maurice River has long been a goal of various stakeholders in the region.”

Figure 2-1. Workforce inside the Corridor



2.2 ECONOMIC AND DEMOGRAPHIC CONDITIONS

It is important to consider future projections in population and the economy when determining planning recommendations to attract residents and visitors to the Corridor while promoting economic development initiatives. Overall, the Maurice River Corridor experienced a slight reduction in total population from 41,554 in 2010 to 37,983 in 2022 (US Census Bureau, Esri, RES). Some decline can be attributed to a displacement of residents in the aftermath of Superstorm Sandy, especially along the Delaware Bay. A summary of the demographics and economic analysis is included below. For the full report, refer to Appendix E: Economic and Demographics Analysis.

Economic Development and Ecotourism

Cumberland County has made great strides in leveraging the area’s agricultural heritage to develop a food manufacturing and distribution cluster. Glass production also continues to thrive in the County. The presence of high-quality silica sand in the Bayshore region drove the glass industry in Cumberland and Gloucester Counties, which continues to provide both construction sand as well as high quality processed sand for industrial use. Marinas and boatyards on the Maurice River are appropriately located to serve both commercial and recreational boaters, and eventually will be a resource supporting offshore wind development. While recreational boating activity has declined, commercial repair and retrofit services are thriving because it is more cost-effective to have a facility and storage on the Delaware Bay than in Cape May where land values continue to increase.



Recovery planning conducted after Superstorm Sandy recommended that economic development activities in the Maurice River Corridor should aim to preserve and strengthen opportunities for maritime industries (primarily commercial fishing/shellfishing and related packing operations, marinas, and boat repair facilities) that had suffered from a weak economy and storm damage. Additionally, activities should support and expand on eco-tourism to leverage the region’s natural resources and create sustainable economic activity. These two objectives are not mutually exclusive—the maritime history of the Bayshore is unique and is a potential draw to tourists interested in both heritage and nature focused activities.

After conducting the focus groups and interviewing economic stakeholders within the Corridor, the Project Team noticed the following key-takeaways regarding the existing economic and ecotourism conditions of the Maurice River Corridor:



Union Lake Dam

- **Lack of amenities along the River:** Many River access points are under-developed and do not offer a positive experience for residents and visitors who enjoy boating, fishing, swimming, or hiking. The City of Millville has made strides in activating the Riverfront in its downtown, but areas to the south of the City and out to the mouth of the Maurice River have lower population density and fewer public visitor amenities.
- **Lack of businesses to support visitors:** Paddlers and hikers frequent the upper reaches of the River. Eco-tourism visitation (including birding) has grown in the Bayshore part of the Corridor, but there “is nowhere for these people to spend money.”
- **Disjointed ecotourism and tourist activities:** The types of eco-tourism and other tourist activities available are diverse and spread over an extensive geographic area (paddling, hiking, hunting, fishing, visiting the East Point Light House and historic villages, museums, the motorsport complex, Wheaton Arts, etc.). Visitors often come for one activity while passing through or for a day trip, which limits their exposure to other options and potential expenditures in the surrounding community.
- **Traffic concerns:** Truck traffic serving both shellfishing and sand operations in the Bayshore can be incompatible with eco-tourism activities such as cycling. This is primarily a problem in Port Norris/Bivalve where trucks move sand from the mining areas to barge wharfs on the River. The trucking companies are independent operators, thus local businesses reportedly have limited control over vehicle speeds once the trucks leave their facility.
- **Regulatory constraints:** Areas to the west of Route 47 are subject to Coastal Area Facility Review Act (CAFRA) restrictions, which limit the percentage of impervious coverage allowed on a parcel. Areas to the east are under the jurisdiction of the New Jersey Pinelands Commission and require additional approvals. DEP also regulates marshes, riparian areas, and floodplains, which can make permitting activities adjacent to waterbodies difficult to navigate.
- **Lack of public sewer service in areas:** The urban areas of Cumberland County are in sewer service areas. This has allowed these communities to attract light industrial businesses. Outside but near the study area, Downe Township is building a small sewer system to serve its roughly 400 households. One motivation is to allow new lodging and food establishments that restore ratables lost after Blue Acres buyouts of damaged residential properties. There have been discussions about establishing sewer service in Port Norris, but there are no current plans to do so.

Section 3.0 Regional Planning Recommendations proposes strategies to strengthen the Corridor’s economic development and ecotourism industry.

2.3 TRANSPORTATION ANALYSIS

The Maurice River Corridor is home to several open space and recreation areas that promote walking and cycling. These spaces, as well as the commercial districts and the riverfront, can benefit from a safe and connected transportation network that is accessible to all users. This section will provide a summary of the bikeway network, trail network, automobile analysis through a summary of crash statistics between 2016

and 2020. This exercise helped identify potential gaps in the transportation network and high-density crash areas that will inform safety and design recommendations for the Corridor. For a full review of the existing active transportation network, please see Appendix D: Transportation Analysis.

Bikeway Network

The Maurice River Corridor Study Area’s Transportation Management Association, Cross County Connection, hosts an online interactive map identifying existing bikeways in Cumberland County. According to this map, the study area’s existing bike lanes and multi-use paths are found only in the southern portions of Maurice River Township and

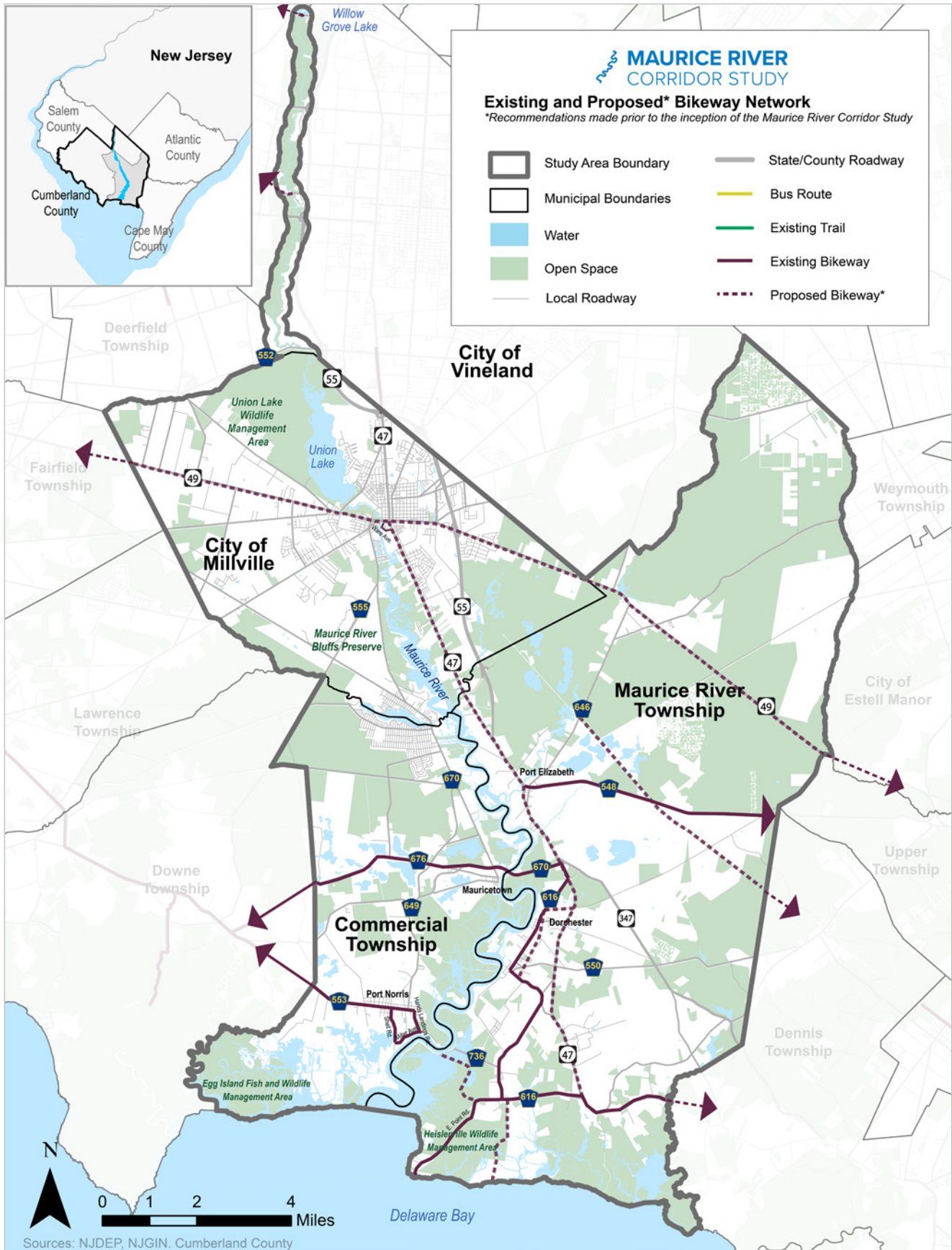
Commercial Township, and in the commercial district of the City of Millville.

According to Cross County Connection, Maurice River Township has the largest bikeway network in Cumberland County, with 26.55 miles of bikeways, followed by Commercial Township with a total of 9.13 miles of bikeways. However, a desktop survey revealed that the bikeway network lacks proper infrastructure including a shoulder, a shared lane marking on the asphalt, and signposts. Table 2-1 below provides a status of infrastructure along the identified bikeway network, and Figure 2-2 maps the identified Cross County Connections’ existing and proposed bikeway network.

Table 2-1. Infrastructure Status of Identified Bikeway Network

Municipality	Roadway	Direction	Infrastructure Status
Commercial Township (Bivalve)	Hands Landing Rd. from Main Street to Miller Avenue	North-South	Sharrows
Commercial Township (Bivalve)	Miller Avenue from the Port Norris Marina to the Haskins Shellfish Research Laboratory	East-West	Sharrows
Commercial Township (Bivalve)	Shell Road to Germantown Avenue	North-South	Sharrows
Commercial Township	County Route 553/Main Street	East-West	Listed as on-street Bikeway route shared lane that lacks a shoulder, shared lane markings on the asphalt, and signposts
Commercial Township	County Route 676/Highland St.	East-West	Listed as on-street Bikeway route shared lane that lacks a shoulder, shared lane markings on the asphalt, and signposts
Commercial Township	County Route 670, between Rt. 47 and the Mauricetown Causeway	East-West	Sufficient shoulder for Bikeway use, but there are no markings on the asphalt or signage indicating it is a bike route
Maurice River Township	Mauricetown Causeway	East-West	Sholder width is sufficient to allow space for a bike lane, however there are no markers on the asphalt, nor signage instructing motorists to share the road.
Maurice River Township	Weatherby Road/CR 548	East-West	Listed as on-street Bikeway route shared lane that lacks a shoulder, shared lane markings on the asphalt, and signposts
Maurice River Township	County Route 616	North-South, and East-West	Listed as on-street Bikeway route however it lacks Bikeway facilities of any kind and there is minimal shoulder on either road to accommodate a variety of users.
Maurice River Township	East Point Road	North-South	Listed as on-street Bikeway route lacks Bikeway facilities of any kind and there is minimal shoulder on either road to accommodate a variety of users
City of Millville	Ware Avenue	Loop	Listed as on-street Bikeway route lacks Bikeway facilities of any kind and there is minimal shoulder on either road to accommodate a variety of users

Figure 2-2. Existing and Proposed Bikeway Network



Level of Bikeway Compatibility and Connectivity Analysis

To understand more about the bikeway network, the Project Team used North Jersey Transportation Planning Authority’s (NJTPA) Bikeway assessment of New Jersey’s roadways. The Assessment analyzed the Level of Bikeway Compatibility (LBC) and Connectivity Analysis based on cycling suitability, also referred to as level of traffic stress (LTS) or Bikeway comfort. LBC values are assigned for each roadway using attributes such as speed limit, number of lanes, and inclusion of bike facilities to determine scoring. LBC 1 segments have the lowest level of stress for most cyclists, while LBC 4 roads are most suitable for experienced cyclists. LBC 5 roads are considered “Barrier Roads” such as toll roads and interstates which prohibit Bikeway use. Characteristics of the roadway like the LBC were used to provide recommendations to improve the safety and connectivity of the Corridor (Section 3.0 Regional Planning Recommendations).

LBC Analysis Summary:

- There are no LBC 1 segments (segments with the lowest level of stress for most cyclists) in Commercial Township, Maurice River Township, or the City of Millville.
- LBC 2, considered accessible for most adult cyclists, includes portions of Main Street, Brown Street, Temperance Street, and Samuel Drive (Commercial Township), Quaker Street (Maurice River Township), and most streets in the downtown core of the City of Millville.
- LBC 3, which includes principal arterials without bike lanes and roads with pavement widths greater than 30 feet, are generally appropriate for confident adult cyclists. LBC 3 includes the majority of roads in Commercial Township,
- LBC 3 and LBC 4 and are more appropriate for confident and skilled cyclists which includes Main Street west of the denser Main Street area, North Avenue, Highland Street, Bayshore Heritage Byway, Steep Run Road, E. Buckshutem Road, Battle Lane, and Narrow Lane Road (Commercial Township), most roads in Maurice River Township, and regional connectors in the City of Millville (Rt. 49 and 47).



Captain Joseph Buck Waterfront Park

Trail Network

The following is a list of facilities that offer walking and/or bikeway trails within the study area. This list may not be exhaustive as available data was used from sources like SJTPO, NJDOT, NJDEP, Cumberland County, municipal websites, online crowdsourced community sites, and non-profit websites such as The Nature Conservancy and Natural Lands Trust, and the Jersey Off Road Bicycling Association (JORBA).

Commercial Township

- Strawberry Avenue Boardwalk: Nature trail and observation tower.
- Bevans/Millville Wildlife Management Area (WMA): Includes trails such as a 3.1 mile trail near Lake Audrey.
- Port Norris Pathway: An unpaved, off-road trail with bike route signage at both ends of the path.

Maurice River Township

- Belleplain State Forest: A portion extends into the eastern portion of Maurice River Township, offering trails for cycling and walking.
- Heislerville WMA: Located on the southern portion of Maurice River Township, the WMA offers hiking trails and other activities such as birding, fishing, crabbing, and hunting, provided it does not conflict with hunting/fishing seasons.

- Peaslee WMA: Includes trails for walking and cycling, provided it does not conflict with hunting/fishing seasons.
- Manumskin River Preserve: Includes walking trails
- Earth Dike (connecting Menhaden Road to Matt's Landing Road): A multi-use path but no markings, signage or shoulder for Bikeway users.

City of Millville

- **Maurice River Bluffs Preserve:** A 500-acre nature preserve offering six miles of hiking trails and six miles of mountain biking trails that were designed following International Mountain Biking Association standards (Figure 2-3).
- Menantico Ponds WMA: Hiking paths, provided it does not conflict with hunting/fishing seasons.
- **Union Lake WMA:** Offers miles of unmarked trails for hiking, provided it does not conflict with hunting/fishing seasons.
- Corson Park: Includes walking paths.
- Maurice River Trail: A multi-use path that is currently closed because the dike is falling into the water.
- Captain Joseph Buck Waterfront Park: Includes a Riverfront Walk from Main Street to the Maurice River Trail.
- Riverview Park: Provides access to the Maurice River Trail that connects to Captain Joseph Buck Waterfront Park and Waltman Park.
- **Harold N. Peek Preserve:** Offers 1-3 miles of hiking trails (Figure 2-4).

City of Vineland (within the River Corridor)

- West Side Park: walking paths within the park property.

In addition to walking trails, there are active, inactive, and abandoned railroad lines and abandoned trolley lines throughout the Corridor that serve as unofficial trails. Figure 2-5 displays the Existing Trail Network.

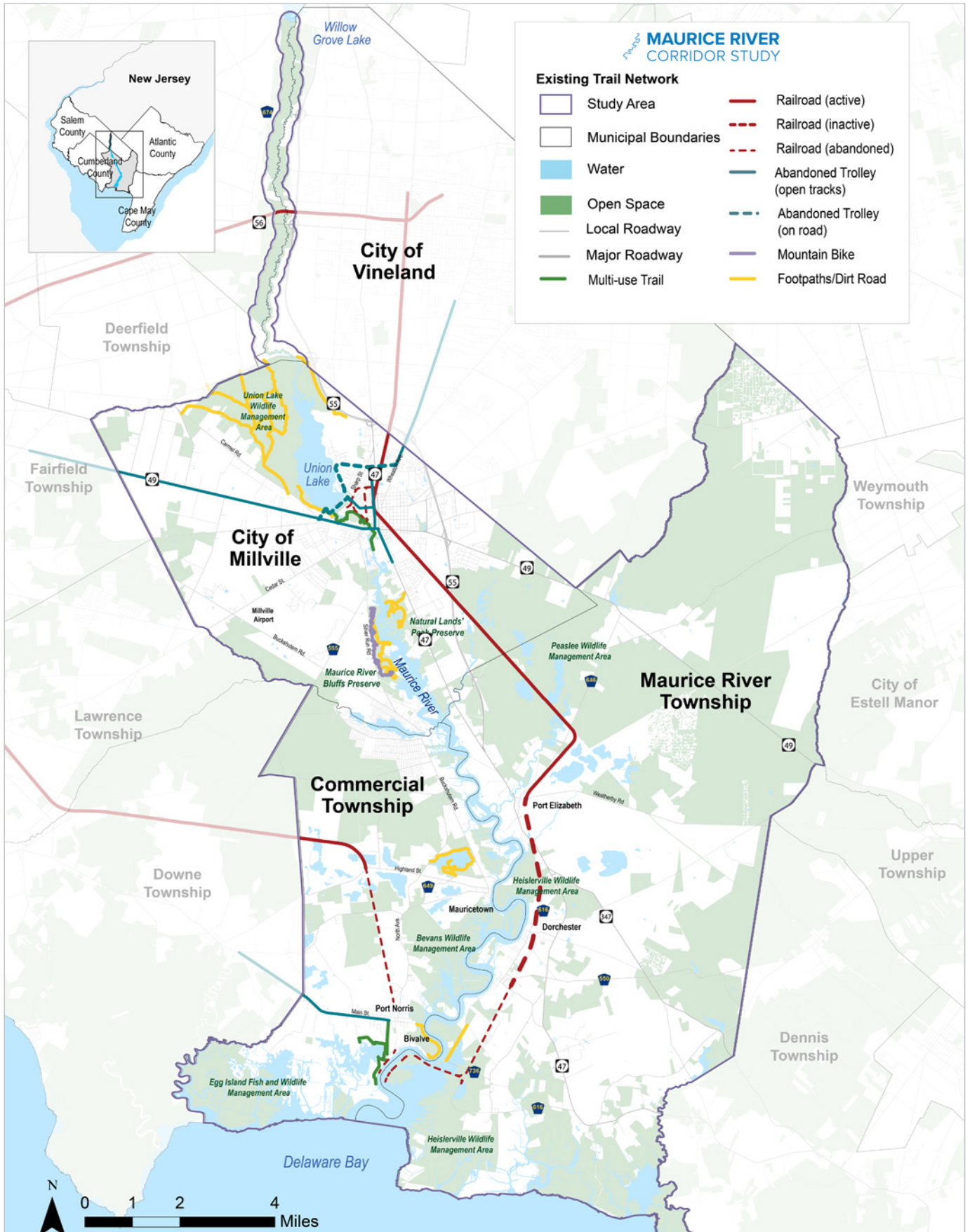
Figure 2-3. Maurice River Bluffs Preserve Map



Figure 2-4. Harold N. Peek Preserve Map



Figure 2-5. Existing Trail Network





Sharp Street has a high crash density and serves as the access point to Riverview Park in Millville.

Crash Analysis

In order to conduct an automobile crash analysis, the Project Team downloaded the five-year period from 2016 to 2020 using New Jersey Department of Transportation's (NJDOT) Safety Voyager tool. At the time of the analysis, 2020 represented the most recent year for which reliable crash data is available. Below includes a summary of the findings. For the full crash analysis and crash maps for the the municipalities within the study area, please see Appendix D. Transportation Analysis.

Between 2016 and 2020 there were a total of 4,667 crashes in the Maurice River Corridor study area. There were 41 fatal injury crashes and 66 suspected serious injury crashes. The City of Millville had the highest number of crashes, followed by Maurice River Township, and Commercial Township, respectively. The area with the highest crash density within the study area is Route 47 in Millville (Figure 2-6). Knowing the locations of these high-accident areas within the Corridor helped the Project Team identify where to recommend traffic calming strategies and protected bike lanes. Overall, the Maurice River Corridor has many bicycle and pedestrian amenities that are primarily located in parks and protected areas. These areas lack connectivity and are dispersed throughout the area. Bridging network gaps between existing facilities and improving connectivity to the waterfront will encourage alternative modes of travel. Opting for design treatments that consider the safety of all road users will help to reduce crashes and ensure that walking and cycling are accessible to all.

Bus Routes

There are three NJ Transit bus route lines that run throughout the Corridor, including NJ Transit Lines 313, 408, and 553 (Figure 2-7). These routes can provide access to the river for populations that do not have a car, or do not wish to find parking, as many residents and visitors stated during the public outreach that there was not enough parking available along the Maurice River. As an alternative to just increasing parking areas along the river, NJ Transit can transport visitors to the Corridor with better coordination and awareness.

Figure 2-6. Crash Density Map

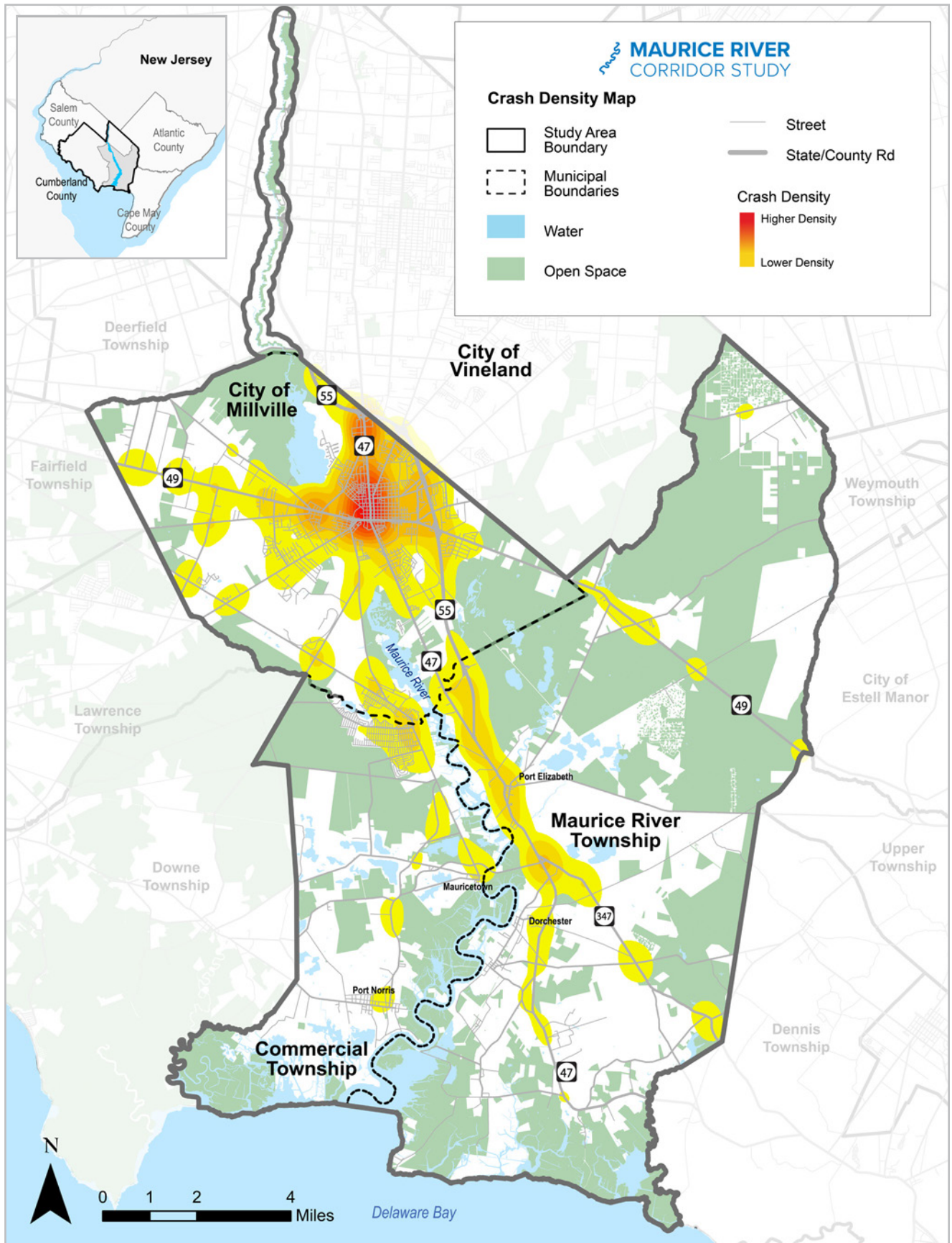
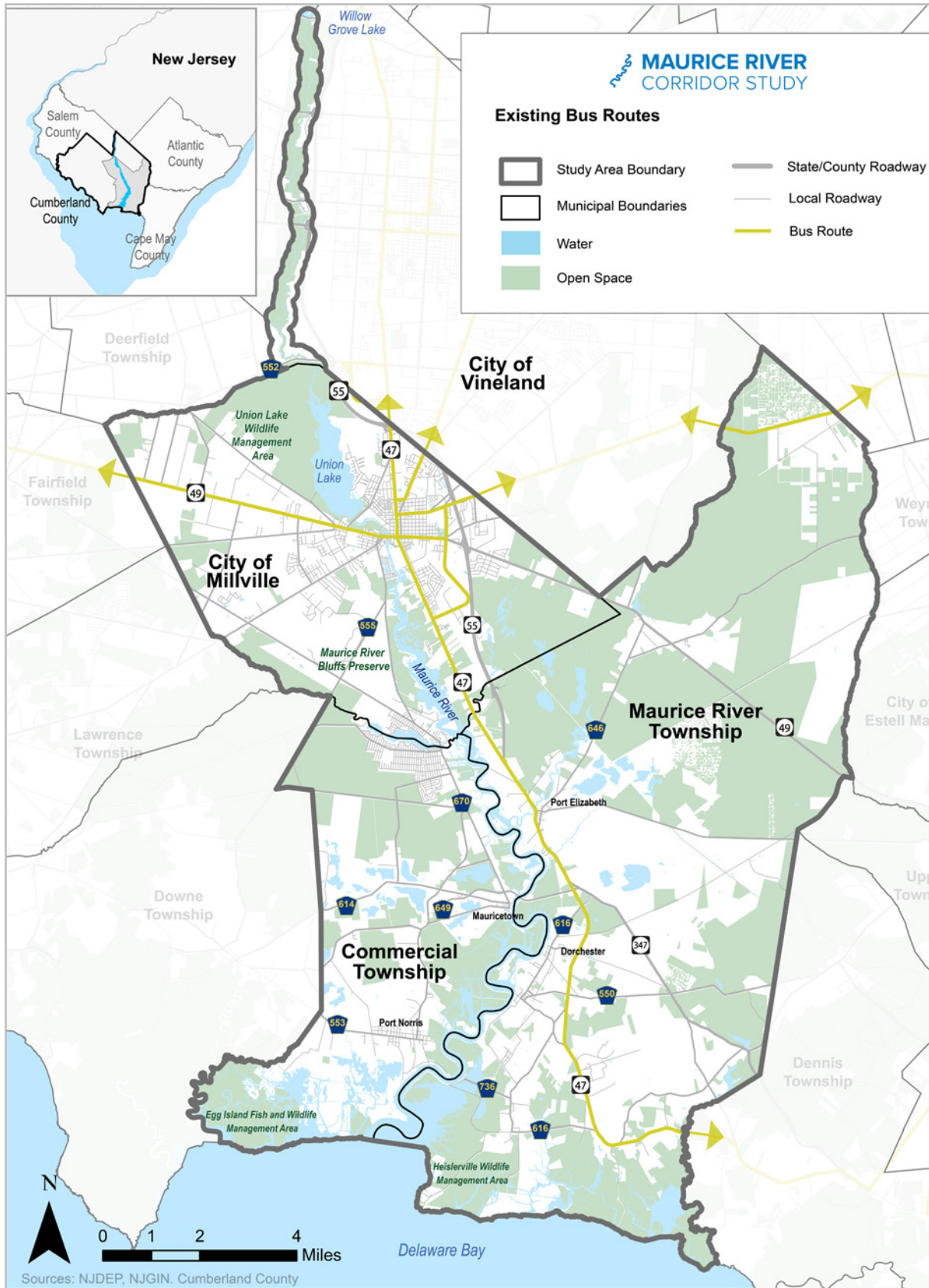


Figure 2-7. Existing Bus Routes



Active Transportation Network Analysis

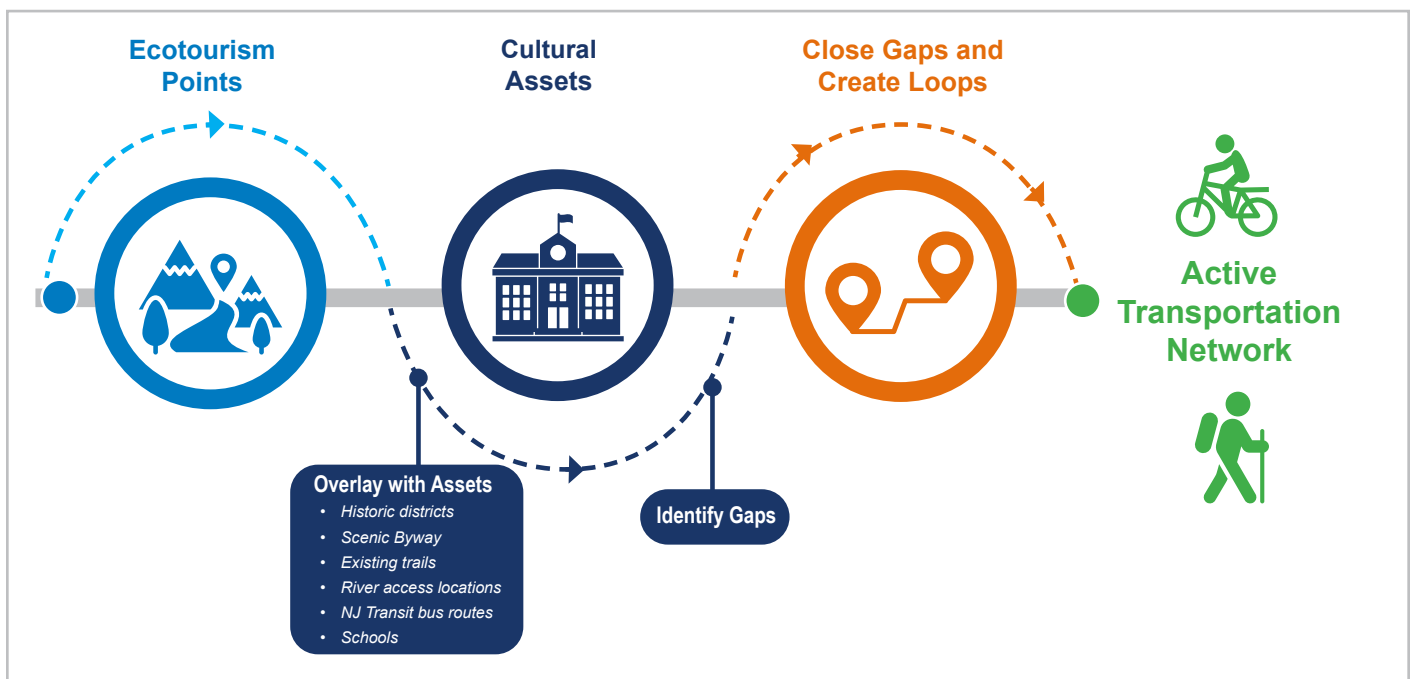
According to the U.S. Department of Transportation, an active transportation network includes bike lanes, sidewalks, and multi-use trails, which help create vibrant communities by providing safe, comfortable, convenient, reliable, efficient, and affordable ways for people to get around. To create an active transportation analysis, the Project Team assessed existing conditions by mapping data points in Geographic Information System (GIS) including the study area’s road network, NJ Transit bus routes, open spaces, historic districts, historic properties, byways, trails, river access points, ecotourism businesses, and schools. The Project Team used existing trails, byways, and NJ Transit bus routes to assess where existing active transportation networks are present and how transit routes may currently or potentially bridge gaps between points of interest. The locations of schools were used to help determine the mobility needs of a younger population that do not have vehicle access but could benefit from increased connectivity through active transportation. Finally, river access, ecotourism businesses, historic districts, and historic properties were assessed to determine where additional tourist destinations are spatially located in relation to the existing transportation network.

In addition to the existing facilities, other factors were considered for the network analysis based on data gathered from outreach activities. Main Street (CR 553) in Port Norris, Commercial Township was identified as an area of concern by the Advisory Committee, where truck traffic is present, and speeding occurs. CR 553 is an important east-west connection between Port Norris, which is one of the denser areas of Commercial Township, to Downe Township and the rest of Cumberland County to the west. CR 553 is also the main access route to several river-related activities including the Strawberry Avenue Boardwalk, the Port Norris Pathway, the Bayshore Center, and the Cape May Salt Oyster Farm. Focus Groups also identified active recreation locations that are not formalized but locally known such as Alliance Beach in Pittsgrove Township. These informal locations were considered but are not comprehensive in the analysis due to the lack of a complete and reliable inventory of the study area’s facilities beyond local knowledge.

Kernel Density Analysis

To understand how the existing roadway network and key destinations relate to river access, a kernel density analysis on ecotourism business determined tourist “hotspots”, as shown on in Figure 2-9.

Figure 2-8. Kernel Density Analysis





Willow Grove Lake in the City of Vineland is northern point within the study area

The Kernel Density tool is geoprocessing tool that calculates density from point or polyline feature. In this scenario, the point data is ecotourism businesses with the study area as the barrier or boundary for the calculation. The Project Team then overlaid the Kernel analysis with existing cultural assets to identify gaps in the networks. The final step was to plot the network to incorporate as many ecotourism businesses and river access points as possible and create loops where possible for overall regional connectivity. Visually, a network of destinations appears, generally aligning with the river corridor and State Route 47 with some branches to the west near the Millville Executive Airport, along Mauricetown Causeway (CR 670)/CR 649 (which provides one of the few river crossings in the study area), and along River Road near Leesburg (Figure 2-9).

The analysis reveals some north-south gaps in the existing active transportation network. Millville has the highest density of ecotourism related businesses with additional clusters in the Port Elizabeth, Mauricetown, Port Norris, and Heislerville areas. The existing Pine Barrens Scenic Byway and Bayshore Heritage Byway do not travel north of Mauricetown and Port Elizabeth, isolating the southern destinations in the study area from the north. Additionally, the northernmost point of the study area, which terminates at Willow Grove Lake, is also disconnected with no formal trails or other access points for cyclists traveling through the study area.

There are also east-west gaps in the study area due to infrequent river crossings. There is currently one bridge between Commercial Township and Maurice River Township: the Mauricetown Causeway. The Bayshore Heritage Byway traverses this route, but there are no dedicated cyclist facilities connecting both sides. While the study area contains several natural and historic destinations which often contain trails and pathways, there are no links between these facilities, requiring cyclists or pedestrians to have to either share high speed roads with vehicles or drive to each location.

Based on the kernel density analysis, the Project Team recommends the following Maurice River Corridor Active Transportation Network that connects those clusters while also aligning with transit routes and schools (Figure 2-10). While the network does not connect to every data point in the study area, it generally leverages existing infrastructure – specifically roadways and trails – while prioritizing connections to the river, existing trails and open spaces, and ecotourism businesses, creating a route that offers connections north, east, and west. With a regional Maurice River Active Transportation Network identified, the Project Team created specific improvement strategies depending on the street context and characteristics such as lane widths, shoulder presence, speed limits, LBC, and other factors. Transportation Recommendations are included in Section 3.0. For more information on the Active Transportation Network Analysis, refer to Appendix D. Transportation Analysis.

Figure 2-9. Ecotourism Kernel Density Map

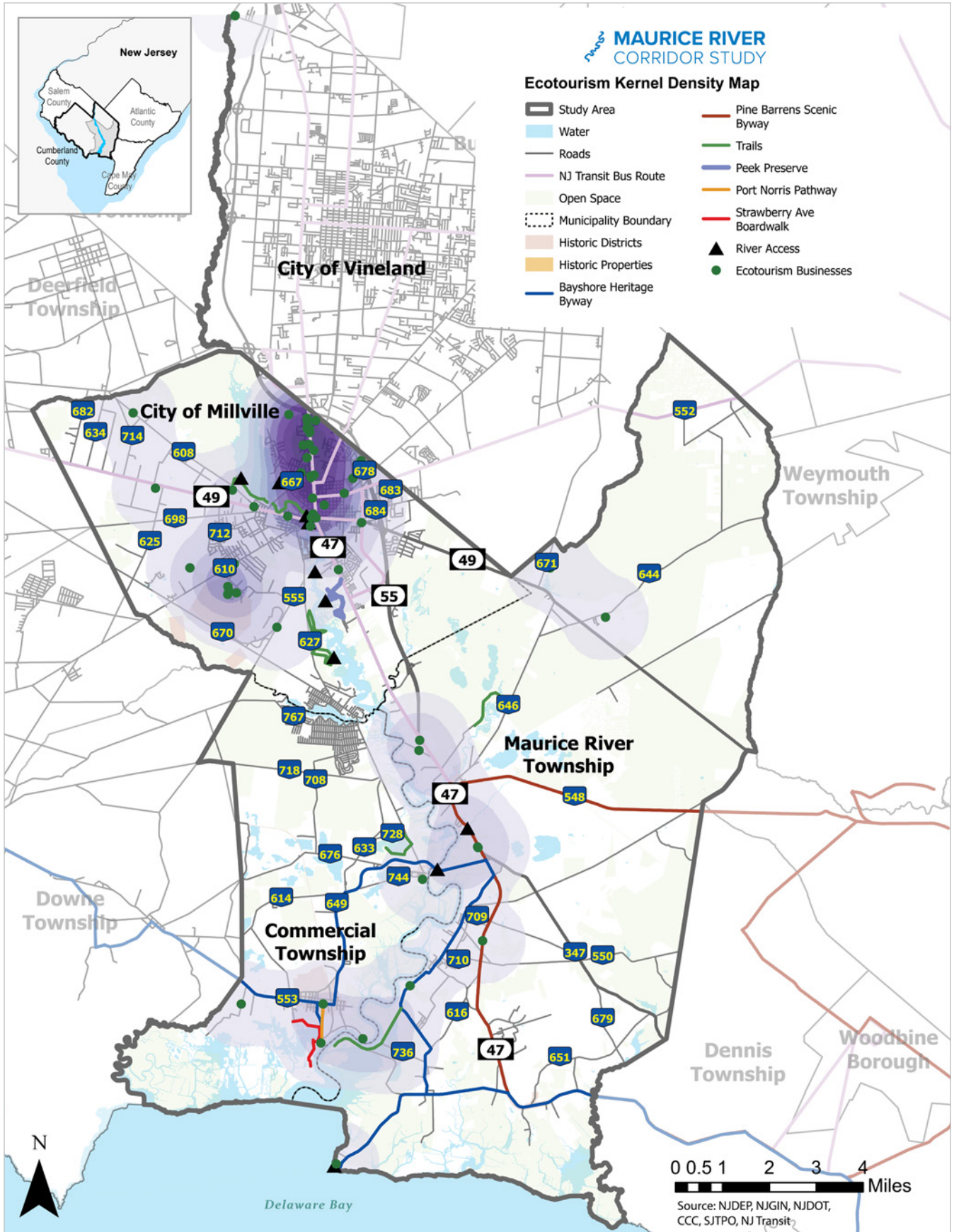
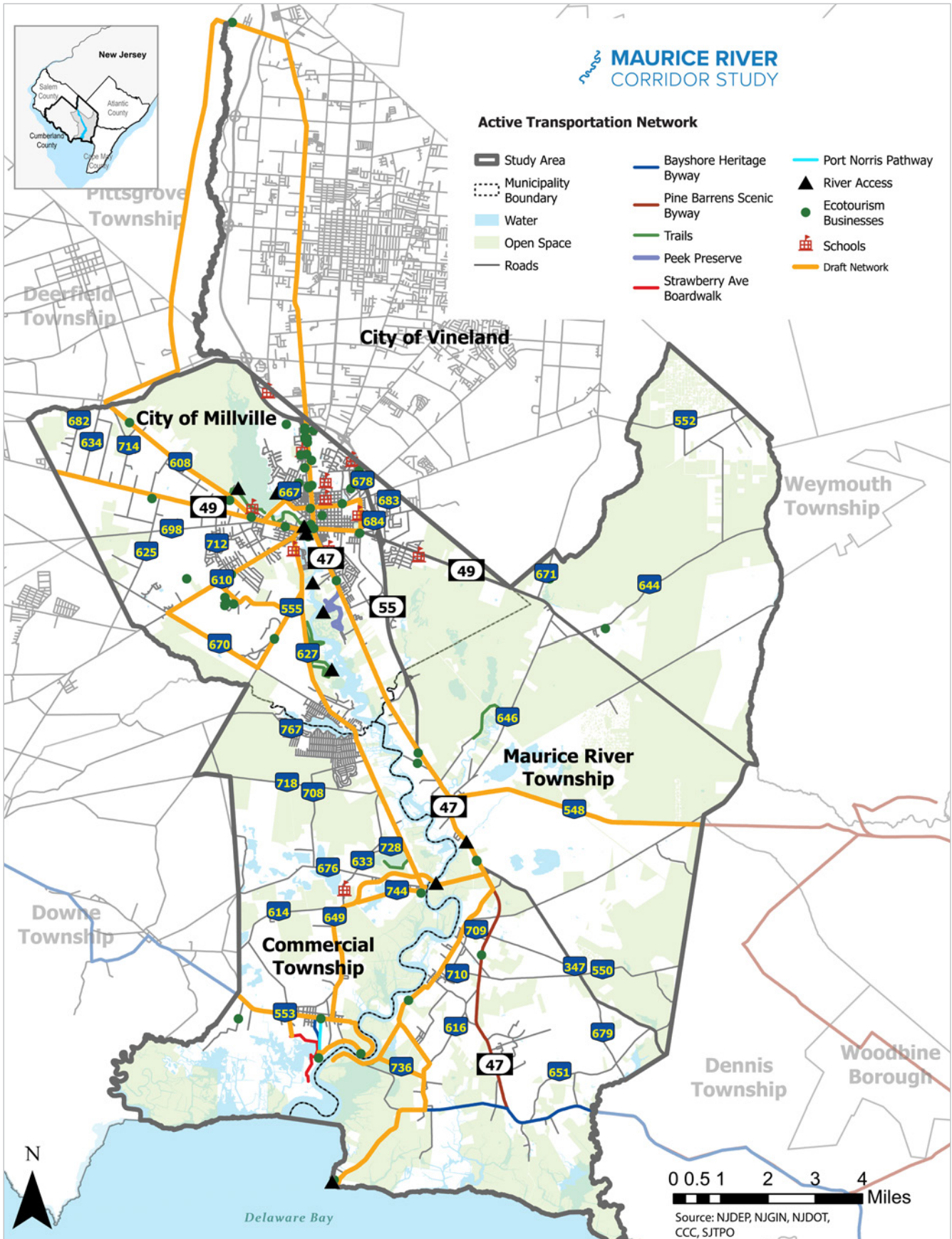


Figure 2-10. Active Transportation Network



“Recovery planning conducted after Superstorm Sandy recommended that economic development activities in the Maurice River Corridor should aim to preserve and strengthen opportunities for maritime industries that had suffered from a weak economy and storm damage.”



Matt's Landing

3.0 REGIONAL PLANNING RECOMMENDATIONS

The Project Team researched river corridor studies throughout the country that had similar goals and objectives, opportunities, and constraints of the Maurice River Corridor. Some of the river corridor studies reviewed include the Buffalo Bayou and Bayou Greenways in Houston, Texas, the Great River Passage in Saint Paul, Minnesota, the Grand River Corridor in Grand Rapids, Michigan, Glass City Riverwalk in Toledo, Ohio, the Schuylkill River Trail in southeastern Pennsylvania, and Delaware River through central Philadelphia, Pennsylvania.

The Project Team created a list of best practices from other corridor studies and evaluated the list against the impacts and outcomes of transportation and connectivity, heritage tourism, and implementation readiness. The Project Team then tailored the list of best practices to address the concerns heard from stakeholders and the public and advance the goals of this study, resulting in the creation of six regional planning recommendation categories:

- Transportation Network
- Economic Development
- Marketing and Branding
- Educational Opportunities
- Environmental Opportunities
- Partnerships

While these recommendations can be implemented throughout the entire Maurice River Corridor, the Project Team created design concepts to illustrate how some of the recommendations discussed in this section can be applied in five opportunity areas, which are discussed in more detail in Section 4.0.

3.1 TRANSPORTATION NETWORK

As discussed in Section 3.0 Existing Conditions, the Project Team conducted an analysis on the existing bikeway and trail network, public transit, and a crash analysis to recommend a Maurice River Corridor Active Transportation Network that leverages existing



Captain Joseph Buck Waterfront Park

infrastructure, specifically roadways and trails, while prioritizing connections to the river, existing trails and open spaces, and ecotourism businesses, creating a route that offers connections north, east, and west. Using this Transportation Network, the Project Team developed recommendations to improve the safety and connectivity of the Corridor through the following four categories of recommendations:

- Bicycling Facility Recommendations
- Trail Connectivity
- Traffic Calming Strategies
- Shuttle Services



CATEGORIES OF REGIONAL PLANNING RECOMMENDATIONS



*Transportation
Network*



*Education
Opportunities*



*Economic
Development*



*Educational
Opportunities*



*Market and
Branding*

Bicycle Facility Recommendations

The Maurice River Corridor Active Transportation Network was broken down into segments based on changes in road cross sections or changes in surrounding context. The characteristics of the roadway like number of lanes, width, volume, speed, and the Level of Bicycle Compatibility (LBC) were then used to recommend a facility type using the Federal Highway Administration’s (FHWA) Bikeway Selection Guide and the National Association of City Transportation Officials’ (NACTO) Urban Bikeway Design Guide (Figures 3-1 and 3-2).

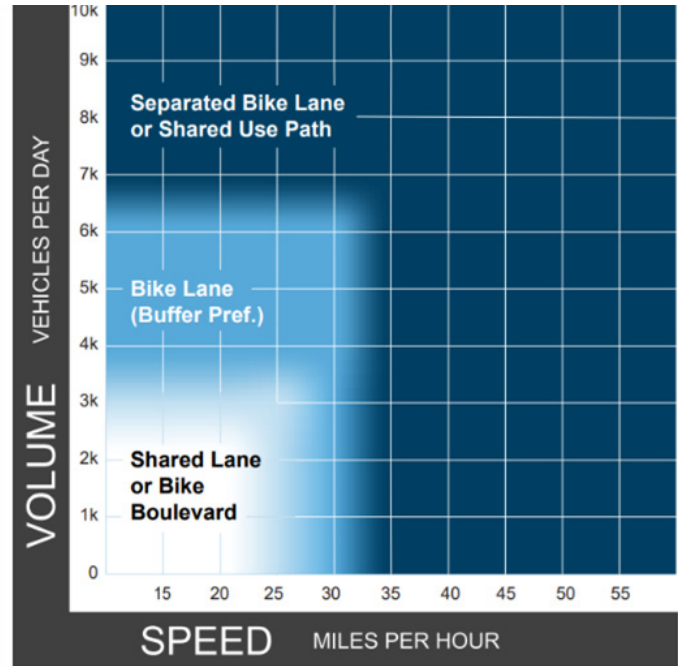
- **Number of Lanes:** Determined using Google Maps.
- **Roadway Width (feet):** Determined using Google Maps. These are only approximations and depending on the segment, roadway cross sections may vary in width. Widths were recorded when the segment was at its narrowest to plan for facilities where the road would be the most constrained.
- **Speed:** Posted speed limits varied for some of the segments. The top speed was used to ensure the safest facility was recommended.
- **Road Volume:** Road volumes were rounded to nearest hundred. Not all roads had available traffic counts from the New Jersey Department of Transportation (NJDOT).
- **Facility Type:** Bicycle facility recommendations were based on the above variables, local contexts and landuse, and the FHWA Bikeway Selection Guide in conjunction with the NACTO Choosing an All Ages and Abilities Bicycle Facility.

This analysis resulted in the creation of five types of proposed bikeway facilities: Bike Lane, Buffered Bike Lane, Protected (Separated) Bike Lane, Shared Use Path, and Sharrows, which are illustrated in Figure 3-3. Bike facility recommendations for the Maurice River Corridor Active Transportation Network are mapped on Figure 3-4.

Appendix H: Bicycle Network Recommendations Table accompanies Figure 3-3 by providing characteristics and recommendations by roadway segment within the Active Transportation Network. General recommendations include speed reduction in areas where sharrows are recommended, and existing posted speed limits are higher than 25 mph. Existing travel lanes may also need to be narrowed

to at least 11 feet, when existing lanes are 12 feet or wider to accommodate bicycle facilities on roads with narrow right-of-ways.

Figure 3-1 .Preferred Bikeway Type for Urban, Urban Core, Suburban and Rural Town Contexts



Source: Bikeway Selection Guide, FHWA 2019.



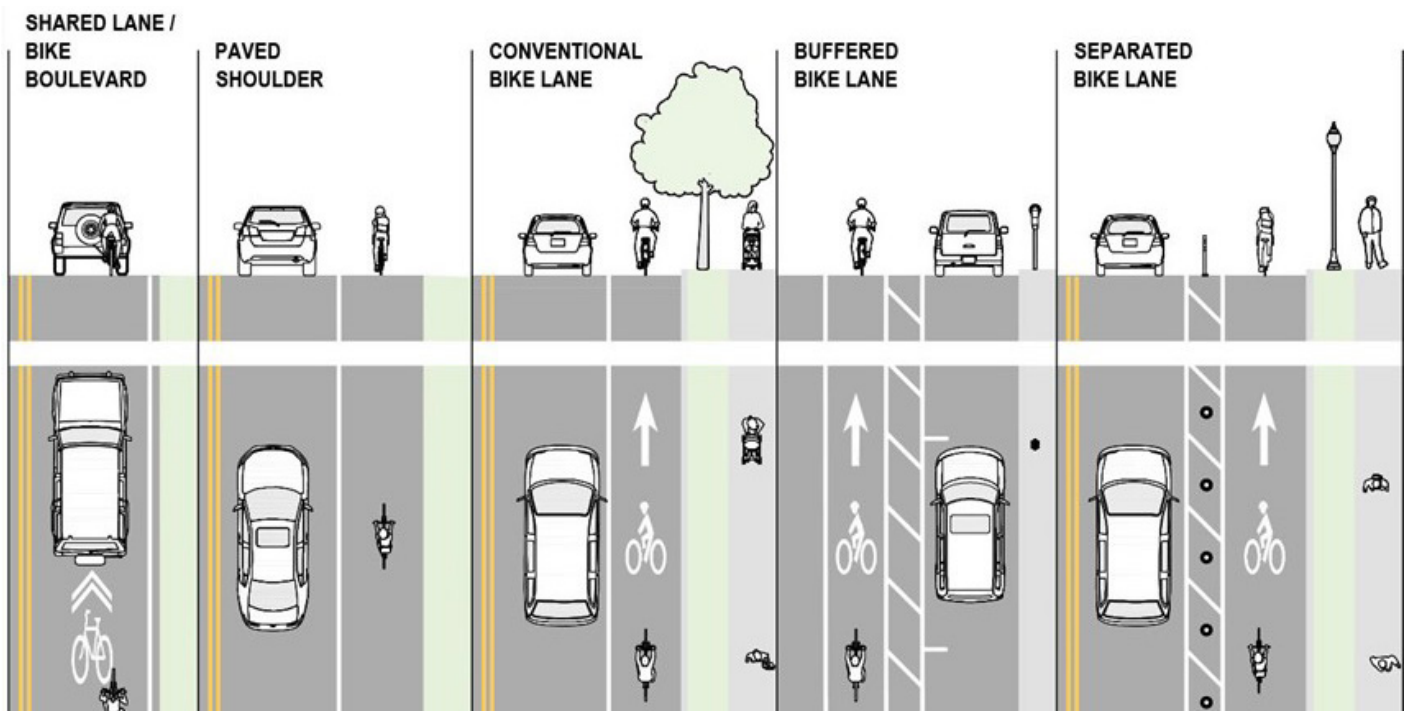
Separated Bike Lane

Figure 3-2. Contextual Guidance for Selecting All Ages and Abilities Bikeways

Roadway Content				All Ages & Abilities Bicycle Facility
Target Motor Vehicle Speed	Target Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		Any	<i>Any of the following:</i> high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts‡	Protected Bicycle Lane
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	Shared Street
≤ 20 mph	≤ 1,000 – 2,000		< 50 motor vehicles per hour in the peak direction at peak hour	Bicycle Boulevard
≤ 25 mph	≤ 500 – 1,500	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane
	≤ 1,500 – 3,000			Buffered or Protected Bicycle Lane
	≤ 3,000 – 6,000	Protected Bicycle Lane		
	Greater than 6,000	Multiple lanes per direction		Protected Bicycle Lane
Greater than 26 mph	≤ 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	Protected Bicycle Lane, or Reduce Speed
		Multiple lanes per direction		Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed
	Greater than 6,000	Any	Any	Protected Bicycle Lane
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		Any	High pedestrian volume	Bike Path with Separate Walkway or Protected Bicycle Lane
			Low pedestrian volume	Shared-Use Path or Protected Bicycle Lane

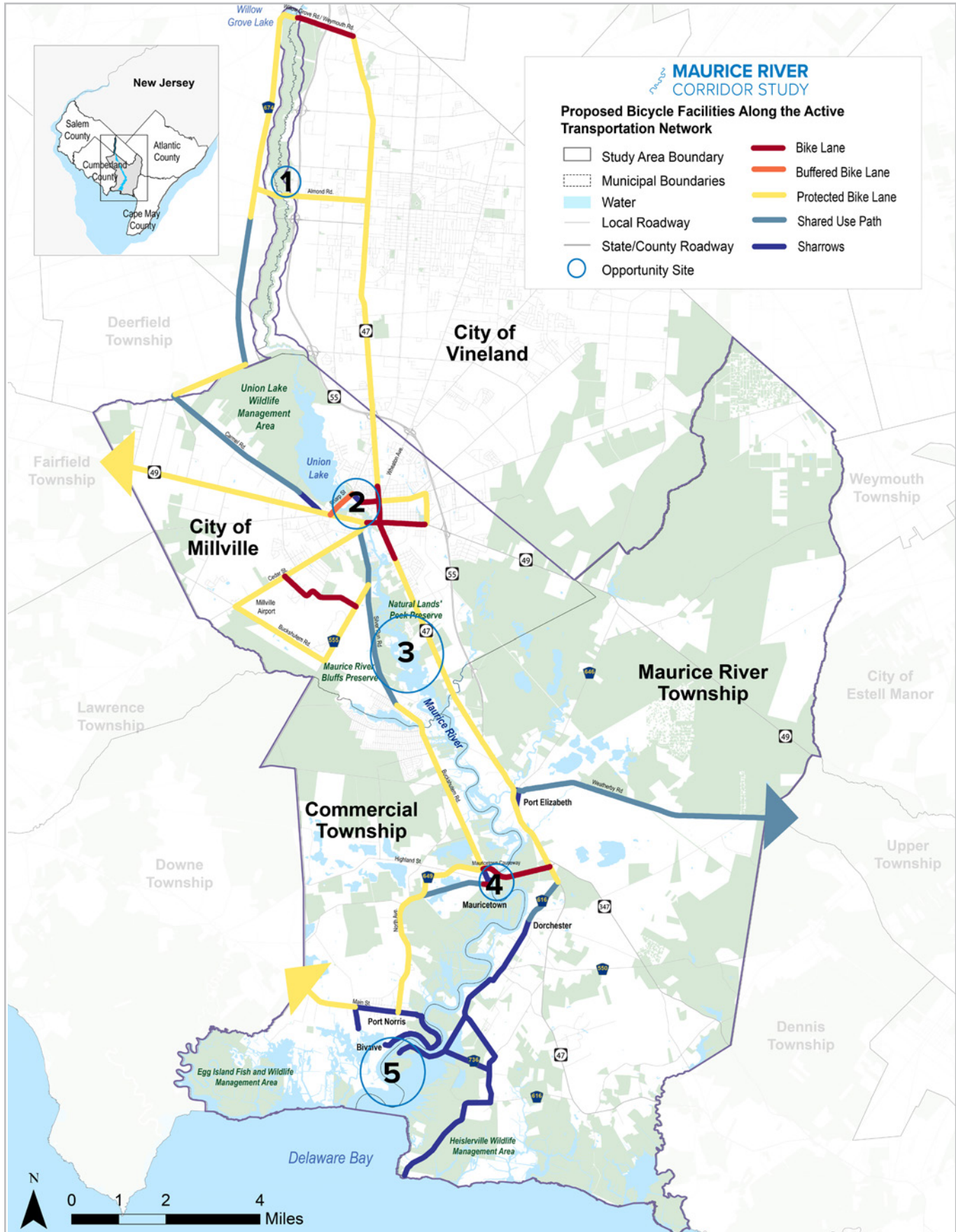
Source: *Urban Bikeway Design Guide*, NACTO

Figure 3-3. Type of Bicycle Facilities



Source: Ohio Department of Transportation

Figure 3-4. Proposed Bicycle Facilities Along the Active Transportation Network



Bicycle Amenities

In addition to adding bicycle facilities, additional bicycle amenities need to be added throughout the Corridor, including bike racks, repair stations, and signage (covered in Section 3.3 Marketing and Branding). Bicycle racks are important in attracting visitors so the riders can explore the Corridor with their bicycles secured. The first step is to inventory the Corridor’s bicycle racks and assess the locations that need new or updated racks, work with local businesses on the status of their bicycle racks and add additional racks when streetscapes or parks get updated. The Project Team recommends placing bike racks where riders can easily spot them, making sure they’re well-lit at night, and making them a bright, visible color. The racks can also play on the Corridor’s logo to reinforce branding and consistency.

Figure 3-5. Bicycle Repair Stations



Source: [Dou-Guard](#)

Riders are more likely to use a trail that has repair stations to make adjustments or minor fixes to their bicycles. The repair station should have hanger arms, an air pump, and set of wrenches giving cyclists a convenient place to tune up. Companies like [Dero Bike Racks](#) offer attractive, easy-to-install fix-its. The Project Team recommends repair stations be located in convenient and visible areas, ideally within a business district, such as the City of Millville or neighborhoods such as Bivalve, Port Norris, Port Elizabeth, and Mauricetown. Coordination with local bicycle shops, such as Mojo Bicycle Shop in Vineland, will help implement this recommendation by having local bike shops sponsor the stations with signage directing cyclists back to the shop for larger repairs.

Trail Connectivity

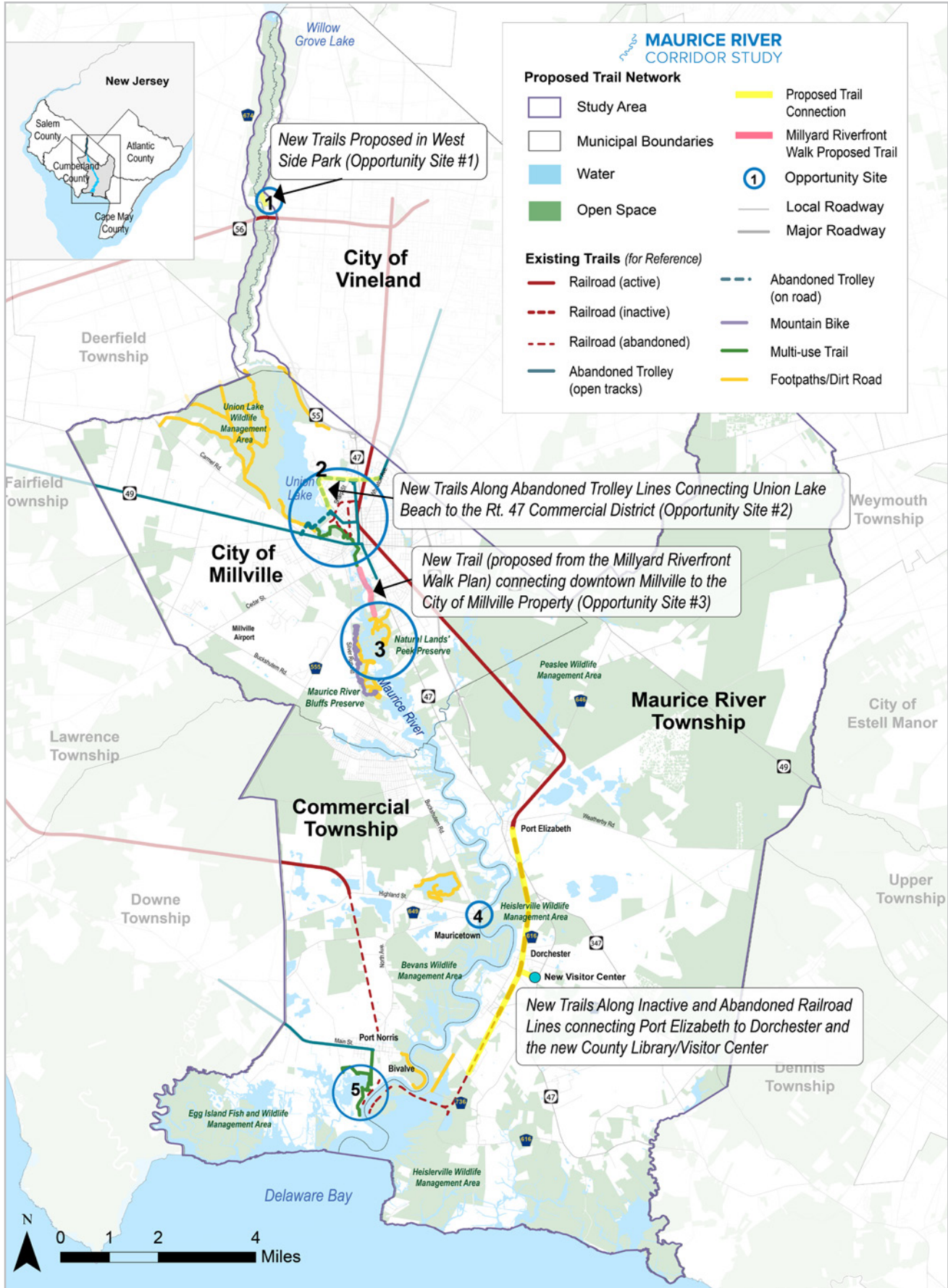
There are two types of trail connectivity for the Maurice River Corridor: local and regional connectivity. The local connectivity recommendation includes four areas where trails can be added to increase connectivity within the Corridor. The first trail connectivity is reflected in Section 5.0 Concept Designs for Opportunity Site #1: West Side Park in the City of Vineland (labeled “A” in Figure 3-6). While there are existing walking trails on the park, the Project Team recommends building out the trail network along the river and into the forest, including adding birdwatching stations, benches, and interpretive signage with wayfinding to highlight the wildlife habitats and ecosystems. There is an area in the northwest corner of the park that is targeted for a lookout point and connection to Alliance Beach on the other side of the river.

The second trail connection proposed (labeled B in Figure 3-6) is reflected in Section 5.0, Concept Designs for Opportunity Site #2 Union Lake Beach to Waltman Park. There is an abandoned trolley line in Union Beach Lake that runs to Wheaton Ave in the City of Millville. This trolley line could be developed into a trail, connecting to Rt. 47 Commercial District. The abandoned trolley line dates back to the early 1900s when this site was an amusement park with a roller coaster, theatre, booths, a merry-go-round, a bowling alley, and a trolley stop. There is great potential to restore this trolley line with a trail to not only bring trail connectivity to the corridor but highlight the unique past of this site.

The third trail connection (labeled C in Figure 3-6) also reflected in Section 5.0, Concept Designs for Opportunity Site #3 Connection of the Preserves, where the Project Team recommends connecting Maurice River Bluffs Preserve to Harold N. Peek Preserve (also called the Natural Lands’ Peek Preserve) and the City of Millville property through kayak launches and trail development. The Team proposes extending the trails in the Harold N. Peek Preserve to the City property, where we recommend an elevated canopy trail, playground, and archery range. Connecting these three sites will attract more people to the area and provide more opportunities for ecotourism.

The fourth trail connection (labeled D in Figure 3-6) is located in Maurice River Township along an

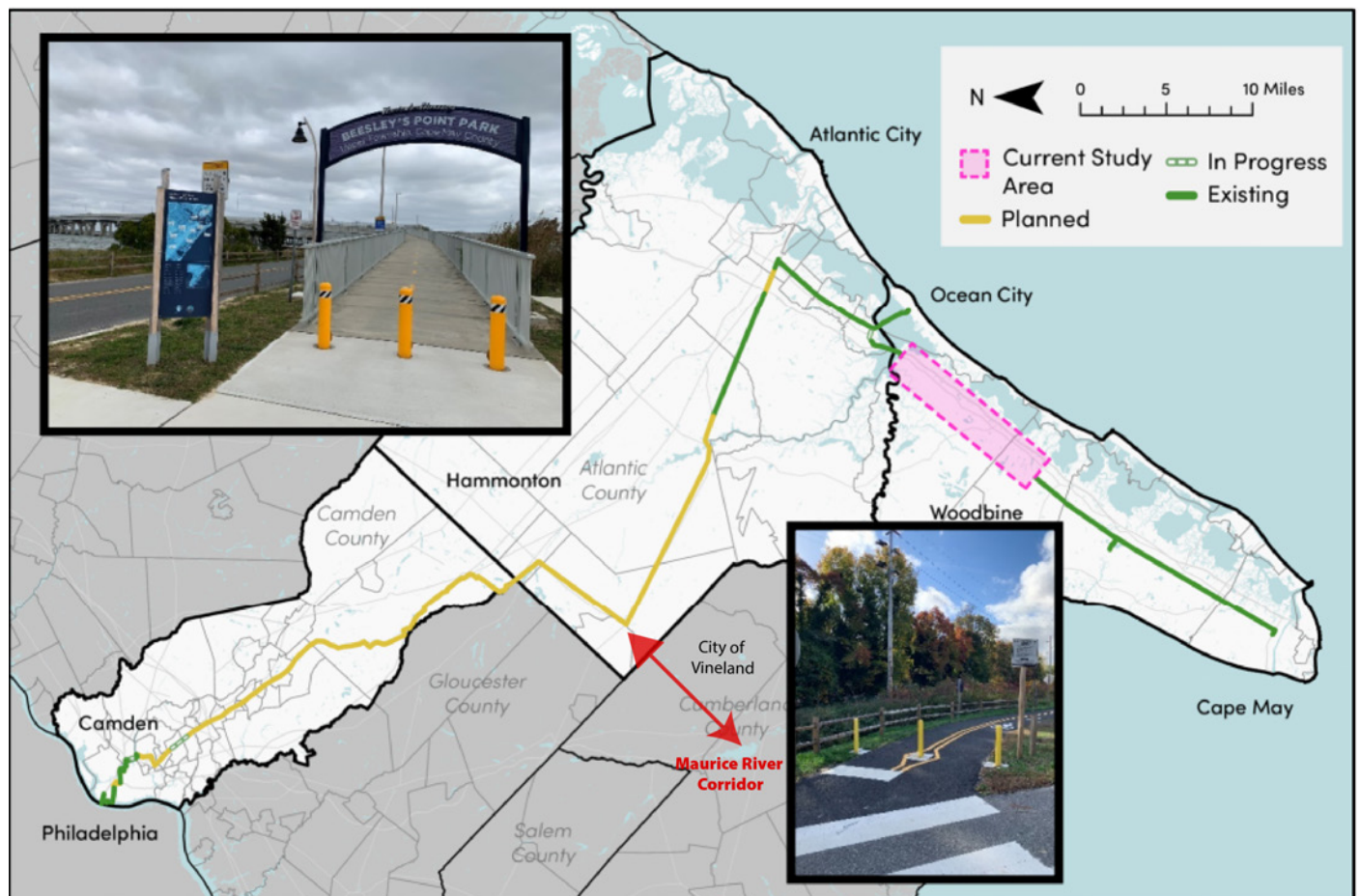
Figure 3-6. Proposed Trail Network



inactive railroad from Port Elizabeth to Dorchester, the new County Library/Visitor Center, and ending at the Heislerville Wildlife Management Area (WMA). This rail to trail can be placed directly on the track-bed in the inactive sections to function as a multipurpose public path. Due to the flat topography of the trail line, these areas are ideal for walking, bicycling, wheelchair use, inline skating, cross-country skiing, and horseback riding. While there are other locations within the Corridor with active, inactive, or abandoned rail lines, many of those lines are still very active or run through a WMA. For example, the Winchester and Western Railroad is in the process of restoring rail service to Whibco's plant at 377 Port Cumberland Road, in Port Elizabeth. Whibco will be constructing a hopper and load out facility over the rail line adjacent to the plant that may make bike riding in the railroad right of way unsafe. Due to this industry's use and the ongoing hunting activities in WMAs, the Project Team decided to only recommend one trail along an inactive rail line at this time.

The regional connectivity of the Study Area includes a long-term recommendation to connect into the more extensive South Jersey Trails and Circuit Trail networks. There is a planned trail connection from Atlantic County (near Mays Landing) to the Circuit Trails Network in Camden County (Winslow Township), known as the Cross Camden County Trail. The planned trail goes through Buena Vista Township, which is adjacent to the City of Vineland. There is an abandoned trolley line that runs through a portion of Vineland along S. Main Street that has potential to be developed into a trail. If developed, this trail could extend north into Atlantic County and connect to the regional trail. The Project Team marked this on a map from SJTPO's Regional Trail Network Feasibility Study for Cape May County in Figure 3-7 below. For more information on these regional trails, see [Cross Camden County Trail Feasibility Plan](#) or the Regional Trail Network Feasibility Study for Cape May County.

Figure 3-7. Regional Trail Connection



Original Map is from SJTPO's Regional Trail Network Feasibility Study for Cape May County

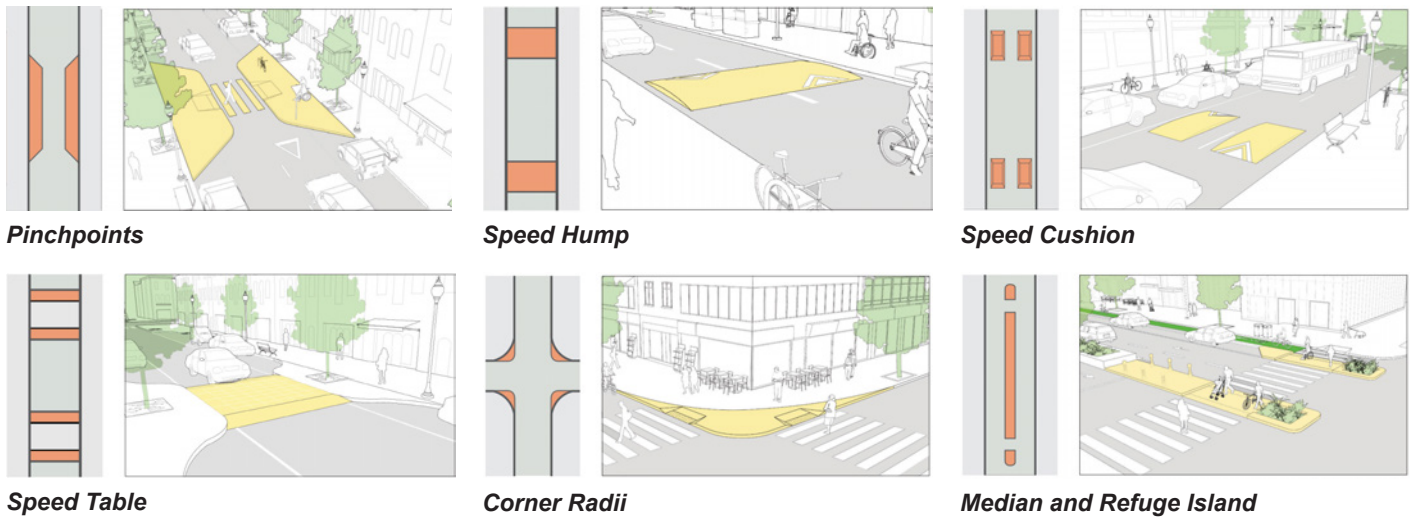
Traffic Calming Strategies

Using information from the Crash Density Maps for the Corridor and hearing safety concerns from the public and stakeholders on high automobile speed throughout the corridor, the Project Team recommended 10 areas to implement traffic calming measures (Table 3-1). The Institute of Transportation Engineers defines traffic calming as “the combination of measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users. Traffic calming consists of physical design and other measures put in place on existing roads to reduce vehicle speeds and improve safety for pedestrians and cyclists” (U.S. DOT). The Project Team recommends the following calming strategies to reduce vehicle speed in the Corridor.

- **Lane Narrowing:** Narrow lanes reduce speeds and minimize crashes on streets by way of reducing the right-of-way and making drivers wary of traffic and adjacent users. Use the additional space for pedestrian space, cycle facilities, or green infrastructure.¹
- **Pinchpoints:** Narrow the roadway at a mid-block point. This can be combined with speed tables to create high-quality pedestrian crossings. This can also be used on low-volume, two-way streets to require facing motorists to yield to one another.¹

- **Speed Humps:** Formed by raising sections of the road in a sinusoidal shape, typically 10–15 cm high and 4–6 m long. The dimensions can be tailored to match the target speed of the street. These are typically constructed of the same material as the roadway but can be of different materials.¹
- **Speed Cushions:** Similar to speed humps but have wheel cut-out openings to allow large vehicles like buses to pass unaffected while reducing car speeds.¹
- **Speed Tables:** Similar to speed humps, but have a flat top, typically 6–9 m long. When speed tables are combined with pedestrian crossings, at the intersection or mid-block, these are called raised crossings.¹
- **Corner Radii:** Narrowing corner radii reduce vehicle turning speeds as well as pedestrian crossing distances. Minimizing the size of a corner radius is critical to creating safe and compact intersections.¹
- **Medians and Refuge Islands:** Raised center medians and pedestrian refuge islands can be used to reduce lane width for vehicles, even on relatively narrow streets. This can also be used to organize traffic at intersections or to block access at strategic points.¹

Figure 3-8. Traffic Calming Strategies Recommended for the Corridor¹



1. Global Designing Cities Initiatives. (2016) Global Street Design Guide. <https://globaldesigningcities.org/publication/global-street-design-guide/>

Table 3-1. Proposed Locations of Traffic Calming Strategies

Road	Distance	Intersection	Municipality	Ownership
Almond Rd	0.8 miles	Gershal Ave. to Maurice River Parkway	Pittsgrove Township (Salem County) and City of Vineland	Cumberland and Salem County
Sharp St.	1.66 miles	Main Street/Rt. 49 to High Street	City of Millville	Cumberland County
Sliver Run Rd	3.82 miles	Cedar St. and W. Buckshutem Rd	City of Millville	Cumberland County
Rt. 47	5.11 miles	Main St./Rt. 49 and Rt. 55	City of Millville	Cumberland County and NJDOT
Mauricetown Causeway	1.5 miles	E. Buckshutem Rd. to Rt. 47	Commercial and Maurice River Townships	Cumberland County
Rt. 553	1.02 miles	York Wock Rd. to North Ave.	Commercial Township	Cumberland County
Rt. 47	2.15 miles	Rt. 55 to E. Broad St.	City of Millville	NJDOT

Where additional space is created (pinchpoints, medians and refuge islands, and corner radii) the incorporation of stormwater management through vegetated curb extensions is recommended to help manage stormwater while reducing vehicle speed and improving safety for pedestrian and cyclists.

Shuttle Services

The Cumberland Mall in the City of Vineland and the commercial area off Rt. 47 in the City of Millville have large surface parking lots that are often unused and remain empty (Figure 3-10). Sections of these large parking lots, located the furthest distance from the store’s entrance, can be designated as a park and ride for visitors of the Corridor with a shuttle transporting people to and from the River. This shuttle service would help bring the urban population from Vineland to the Corridor while reducing the need to provide more parking in a flood zone and environmentally sensitive areas along the river. The shuttle service would make various stops along the Maurice River Corridor through out the day, during summer months when more people are visiting the area. The shuttle service could also work to pick up cyclists, hikers, or paddlers (and their equipment) at the end of the route.

Potential stops could include Willow Grove Lake, West Side Park, Union Beach Lake, downtown Millville, the City of Millville property next to the Harold N. Peek Preserve, Port Elizabeth, Mauricetown, Bivalve, and ending at the Maurice River Bluffs Preserve. A shuttle system like this is common in shore towns,

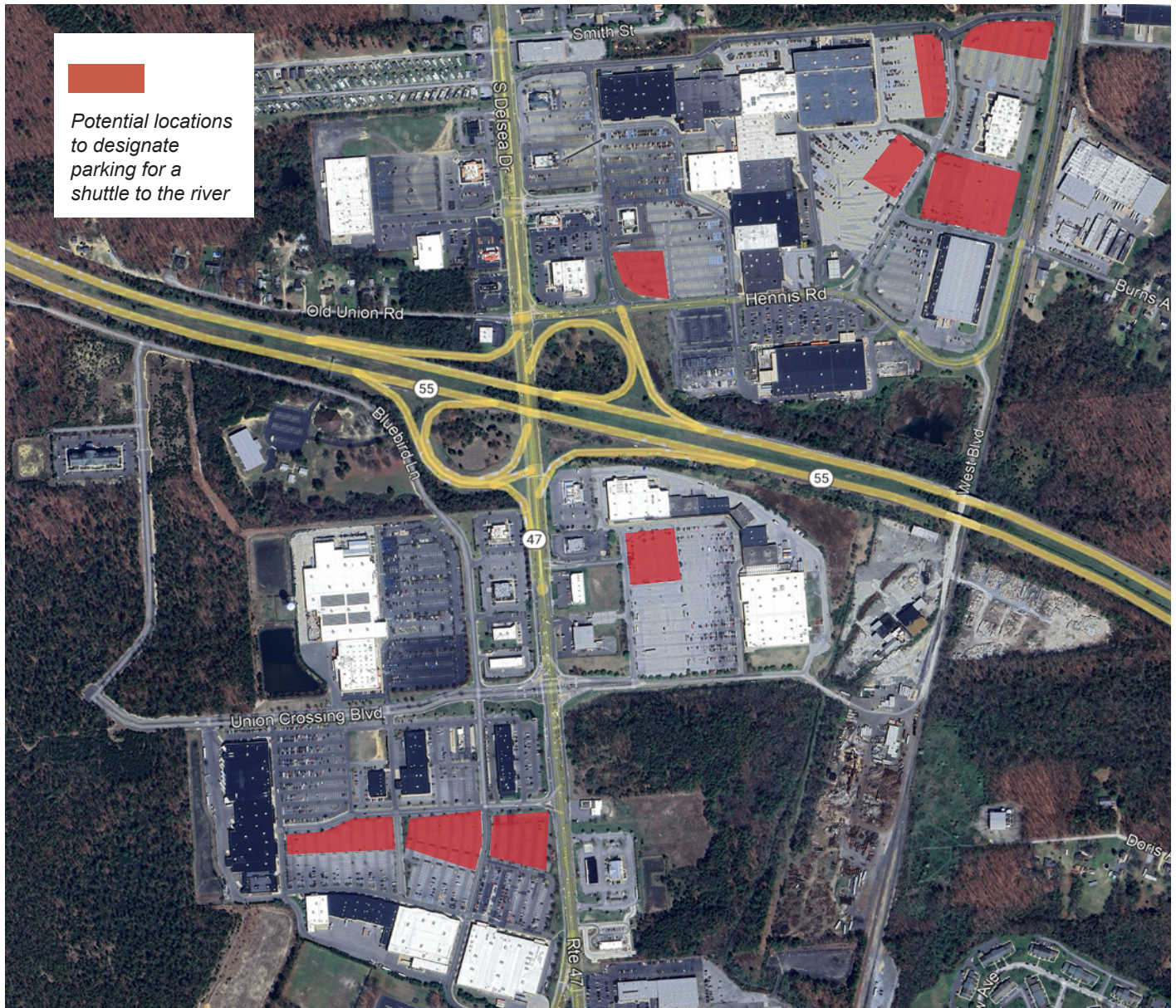
where visitors get picked up at train stations and get shuttled to the beach. In Long Beach Island, there is a shuttle that runs during the summer that connects the mainland (Manahawkin, NJ) to the island shore community, stopping along main attractions (Figure 3-9). This is also common along the Delaware River in the Delaware Water Gap where visitors get dropped off at a northern point of the river and they water tube down the river and get picked up at the end of their ride. This recommendation would require a communication and an outreach campaign to bring awareness of the timing and schedule of the shuttle, along with the section of the parking lots in Millville and Vineland that are designated as a park and ride.

Figure 3-9 LBI Shuttle



Source: *The SandPaper*

Figure 3-10. Diagram of Potential Parking Surfaces for Park & Ride Shuttle



3.2 ECONOMIC DEVELOPMENT

As mentioned in Section 2.0, economic development activities in the Maurice River Corridor should aim to preserve and strengthen opportunities for maritime industries and support and expand on ecotourism to leverage the region’s natural resources and create sustainable economic activity. The Project Team has identified the following recommendations to improve visitor experience, fill gaps in businesses that serve eco-tourists, further major infrastructure investments, and expand eco-tourism assets.

Existing Restaurants Provide To-Go or Off-Site Food

The business inventory shows that many full- and limited-service restaurants are located in the northern section of the Corridor. Visitors at the southern end of the Corridor have very limited options for dining. The low population density in Commercial and Maurice River Townships makes it difficult to support a restaurant that is open daily. Restaurants reportedly also have trouble finding staff, which impacts their ability to open. Although Bayshore visitors could travel to food and beverage options in the three Cumberland County cities, in

practice most people consider it too far away from the River. Opportunities may exist to utilize existing restaurants at the northern end of the Corridor to provide food to go or off-site (box lunches, meal set up for organized group activities, catered meals for events, etc.) for tourists and event attendees in the Bayshore area. The Project Team’s recommendation is for Cumberland County to gather local officials, non-profits organizations, and restaurant owners to discuss a plan to provide food to-go and off-site food. This could include restaurants using social media to announce their to-go options for visitors heading to the river or park area for the day. Restaurants could also support off-site food during community events that occur in the Corridor – or even invest in food trucks and travel around the Corridor selling their food similar to Opportunity Site #1 where a food truck area is proposed for West Side Park in Vineland (see Section 4.0).

Encourage Short-term Rentals

Within the Maurice River Corridor, there are few lodging alternatives to the hotels and motels chains clustered in the City of Millville and the City of Vineland. The Charlesworth Hotel is a boutique hotel offering a restaurant and four guest rooms in Fortescue (Downe Township) and is the only boutique hotel in the Bayshore region. This business has been able to draw guests from New York City. The Project Team identified only 14 short-term rental options (AirBnB, VRBO) in the study area. One rental property on the Maurice Riverfront, the Lokal A-Frame, has received positive press coverage in the wider Philadelphia metropolitan area.

The Project Team recommends that the City of Millville, and Commercial and Maurice River Townships review their zoning codes to permit boutique hotels and short-term rentals like Lokal A-frame. A specific zoning update for the City of Millville would be to revise the code provision that requires that the owner of a short-term rental must reside in Millville City. Revising this language to eliminate the local residence requirement will allow more businesses to provide short-term rentals in the Corridor. [Lokal A-frame](#), a short-term rental, markets the Maurice River to Philadelphia City and suburban residents that might not otherwise know about the Maurice River Corridor. The business highlights the natural amenities of the Corridor on their website,

Figure 3-11. Lokal A-Frame’s Short Term Rental [Webpage](#)



including a beach area on the Maurice River and the variety of birds and ecosystems on site. Similarly, the Charlesworth Hotel marketing reaches beyond the south Jersey region and can help to promote eco-tourism in the Maurice River Corridor to a broader audience.

Trip Planner/Guide Service

A trip planner/guide service can design an itinerary and route for walking, biking, or water trails by making arrangements for equipment, lodging, food enroute, and shuttle services to pick up participants and their equipment. There are businesses that provide these services for multi-day trips on rail trails or on behalf of clubs or interest groups. There are opportunities for the local non-profits to work with trip planners and guide services to bring more visitors to the area.

One example of a trip planner and guide service is the [Lehighton Outdoor Center](#) in Lehighton, Pennsylvania, which markets themselves as the “Destination For Outdoor Adventure.” They sell bikes, offer bike rentals, and whitewater rafting trips. The Center also offers bicycle trips with planned trail routes, trail guides on staff, and a bike shuttle service that offers a one-way shuttle service to the several points along the Delaware & Lehigh trail. Bringing a business to the Corridor that offers similar services would broaden active recreation options and bring more visitors to the Corridor.



Bivalve can capitalize on torking Waterfront Node designation and apply for funding to increase Bivalve’s resilience to flood hazard risk and market this designation to developers to restore the maritime industry within Bivalve.

Agritourism

Cumberland County ranks first out of all New Jersey counties in greenhouse, nursery, floriculture, sod, and the overall value of agricultural goods sold. Farmland makes up an estimated 70,000 acres in the County. Several vineyards have been established in the County and are attracting residents and visitors interested in locally produced wine. Agricultural businesses in the Corridor have products that lend themselves to visitation and programming, such as wildflowers and alpaca farms. The Project Team’s recommendation is for the County and its municipalities to work with local agriculture businesses to create awareness and invite visitors to their establishment/the Corridor through creating or expanding their social media platforms, partnering with community organizations to promote family-friendly events, working with community boards to showcase their business, and coordinating with the Chamber of Commerce to identify cross-promotional opportunities with other businesses and organizations in the Corridor. The new County library that will be built in Dorchester will also serve as a visitor center for the Corridor. There are opportunities for the County to work with local businesses to have agritourism marketing materials present at the new visitor center.

Working Waterfront Node Designation

New Jersey’s Coastal Management Program is coordinating with local communities to support the conservation of existing and historic resilient working waterfronts, which are a critical use of ocean resources, including changes that consider climate change and offshore wind development goals. Bivalve received a Working Waterfront Node designation from the State of New Jersey that will result in permitting relief, including a reduced CAFRA impervious coverage ratio requirement. The designation may also provide extra points when applying for grants. The Project Team recommends that Commercial Township work with the County to capitalize on this designation and apply for funding to increase Bivalve’s resilience to flood hazard risk and market this designation to developers to restore the maritime industry within Bivalve. The Project Team recommends the County work with other municipalities to establish additional working waterfronts within the Corridor.

Public Facility Improvements to Support Ecotourism

Basic infrastructure such as public restrooms, designated parking areas, access to wi-fi and cell

service is important for businesses and visitors alike. Cumberland County pursued and received an “Enabling Middle Mile Broadband Infrastructure” grant to extend fiber along roads throughout the County. Homeowners and businesses then pay for the installation to their homes. Ultimately, sewer service expansion would create more opportunities in the Bayshore part of the Corridor for businesses and facilities that support eco-tourism. Finding wastewater management solutions for Port Norris should be a priority.

3.3 MARKETING AND BRANDING

To unite the Maurice River Corridor, there needs to be a promotional campaign to consistently market and brand the Maurice River Corridor as a visitor destination in the region and beyond. The promotional campaign can include the following elements: branding plan, wayfinding signs, a website with an ArcGIS StoryMap. Once the marketing and branding materials are developed, local information centers that distribute information and help support local businesses and activities should be located within that Study Area, including the new County library that is going to be built in Dorchester that will serve as the Corridor’s visitor center.

Branding Plan

In 2024, Cumberland County completed a Branding Plan for the Cumberland County Mid-County Park & Fairgrounds using a variety of iconographic photography of Cumberland County. The Branding Plan created a color palette pulled directly from the image, which are expressed as specific Pantone colors (Figure 3-12). The Project Team recommends creating a similar Branding Plan for the Maurice River Corridor Study that is complementary to the

Figure 3-12. Cumberland County’s Branding Plan for the Cumberland County Mid-County Park

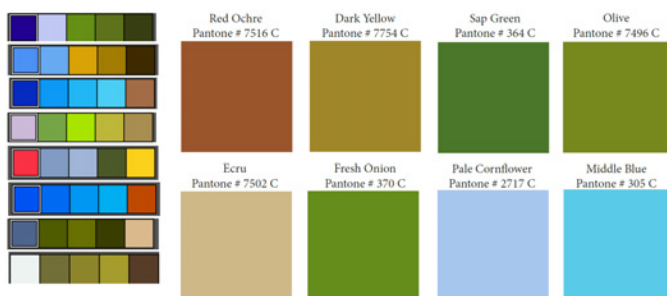


Figure 3-13 Wayfinding Signage the Michael Baker Team Designed in Colorado



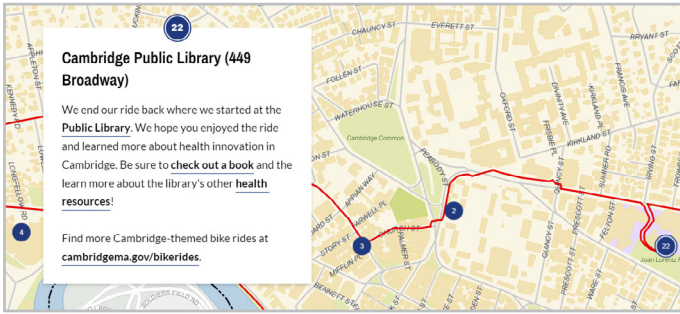
branding of Mid-County Park & Fairgrounds that provides design guidelines on font, signage material, and graphic design and iconography.

Uniform Wayfinding Signs

The quality and effectiveness of signage is uneven throughout the Corridor reflecting funding limitations and the loss of specific project champions. The attractive byway signs seen in the study area often show only the “branded” image, with no additional text or reference to online information (QR code, web address, name of byway). Signage will improve awareness of eco-tourism opportunities for both individuals commuting into study area communities for work, and individuals driving through the area to reach the Jersey Shore.

According to the Trail Town Program’s Guide, signage should only include two letter styles on one sign, use a simple, legible font, and should use natural materials like wood, stone, or rock. Signs at trailheads should cover some standard details including Maurice River Corridor and Cumberland County, the direction and distance to the nearest neighborhood, and to the next three to four destinations either way along the trail. Signs should also identify the River and other major natural feature, directions to dining, drinks, lodging or camping, and trail rules. Within each

Figure 3-14. The City of Cambridge has a virtual bike ride StoryMap that highlights Health Innovation



neighborhood (Port Norris, Bivalve, Port Elizabeth, Dorchester, Mauricetown and Millville) there should be a kiosk or display with a local map, regional map, business directory and area information.

Website and StoryMap

To bring attention to the Corridor, the Project Team recommends developing a website for the Maurice River Corridor and linking it to the County's website, municipal websites, and nonprofit websites. The website should have both a plan view of all the parks and trails (similar to the Concept designs in Section 4.0) and an interactive ArcGIS StoryMap with information on park and trail hours, rules, amenities, trail distances, ecological and historic information. Citizens United to Protect the Maurice River and Its Tributaries, Inc. (CU Maurice River), a local nonprofit organization, is in the progress of developing a StoryMap of the Maurice River Watershed; the recommended StoryMap should build off of CU Maurice River's map.

3.4 EDUCATIONAL OPPORTUNITIES

The Project Team recommends coordination with educational partnerships, including higher education institutes such as Cumberland County Technical Education Center and Cumberland Campus of Rowan College of South Jersey, to include the history and ecology of the Corridor in their environmental programming to bring awareness of the region while also implementing the recommendations of this study. There are also opportunities to coordinate with local school districts to offer field trips and courses on the Maurice River Corridor.

Bayshore Center at Bivalve

Support and expand environmental education programming at the Bayshore Center at Bivalve.

With its floating classroom, museum, and community events, the Bayshore Center is already an anchor destination of the southern corridor. Supporting its programming will reinforce its educational mission and further connect visitors to the region's historic waterfront and robust aquatic environment.

Outdoor Exhibits

Install outdoor exhibits and signage throughout the Corridor that highlight its environmental, historic, and cultural elements and points of interest. The landscape and character of the corridor are dynamic and diverse. Installing educational exhibits will help orient and inform visitors about what makes the corridor unique. Maps, interpretive signage, and art installations throughout the Corridor will add to the Maurice River experience.

School Programming

Provide opportunities for school children to visit the Bayshore region. This will encourage a lifelong appreciation of natural resources and commercial activity along the River and the Bay. Field trips during the school year or day camps during school breaks could provide hands-on opportunities for nature-based learning. Additional programming for school-aged children through youth-serving organizations (Boys and Girls Club) could cultivate environmental leadership and develop specialized skills.

3.5 ENVIRONMENTAL OPPORTUNITIES

The public survey revealed that pollution was ranked as the top local environmental concern, followed by water quality and invasive species. Continued coordination with environmental groups, such as the CU Maurice River, The Nature Conservancy, and New Jersey Conservation Foundation to address to coastal erosion, water quality, and flooding is paramount to sustain the ecosystem of the Corridor.

Corridor Maintenance Program

The forest along the Maurice River Walking and Bicycle Trail in Millville is laden with fuel for fire and is riddled with invasive flora species. Both are degrading the outdoor experience and deter visitors. The Project Team recommends establishing a formal Maurice River Corridor Maintenance Program that works with the New Jersey Forest Fire Service to conduct prescribed burning to mitigate the risk of

wildfires, enhance habitats for plants and animals, and safeguard ecosystems as well as improve habitat quality and the recreational experience. This maintenance program should also create a plan to remove invasive species and replace with native plants and eco-friendly landscaping in park revitalization and beautification efforts. Additionally, this Program should address the need for additional trash and recycling cans throughout the Corridor.

Improve Water Quality

The Project Team recommends implementation measures to improve water quality so that water bodies throughout the corridor are swimmable and fishable. Adopting a Geese Control Program to deter geese with landscaping interventions could reestablish swimming areas that are currently undesirable or inaccessible. Toms River Township in Ocean County, New Jersey, extended a contract with the United States Department of Agriculture (USDA) for a goose management program that seeks to keep the species out of local parks and recreational fields. The Township installed audio and visual deterrents, and fencing and wire exclusion, effectively disrupting the geese’s habituation to human-dominated landscapes.

In addition to adopting a Geese Control Program, the Project Team recommends conducting an environmental study to improve water quality for the Corridor to establish swimming areas along the River.

Nature-Based Solutions

Another strategy to improve water quality throughout the Corridor is to integrate nature-based solutions with future infrastructure projects. These solutions can include installing rain gardens, green roofs, permeable pavement, tree trenches, vegetated swales, rainwater harvests, and green streets. The Project Team recommends implementing nature-based solutions when adding traffic calming strategies and any improvements to streetscapes and park improvements throughout the Corridor. Commercial Township is designated as a FEMA Community Disaster Resilience Zone, which prioritizes financial and technical for the planning and implementation of resilience projects. The inclusion of nature-based solutions in future resilience projects will not only address the risk of flooding but also improve the environmental quality of the Corridor.



4.0 DESIGN CONCEPTS

The Project Team created design concepts for five opportunity sites within the Corridor to demonstrate planning and design recommendations that resulted from the best practices review, stakeholder and existing conditions analysis, and nationwide best practices. These design concepts are located along publicly-owned lands with the greatest riverfront access potential for recreation and future greenway connectivity, ecological restoration, and initiatives that promote economic development.

The steps that led the Project Team to the creation of these design concepts started with the literature review of previous studies, such as the Maurice Riverfront Development Plan (2006) which recommended Captain Joseph Buck Waterfront Park enhancements and the creation of a multi-level Glassworks Riverfront Park. The Project Team built off these recommendations to develop Opportunity Site #2. The Project Team then solicited feedback

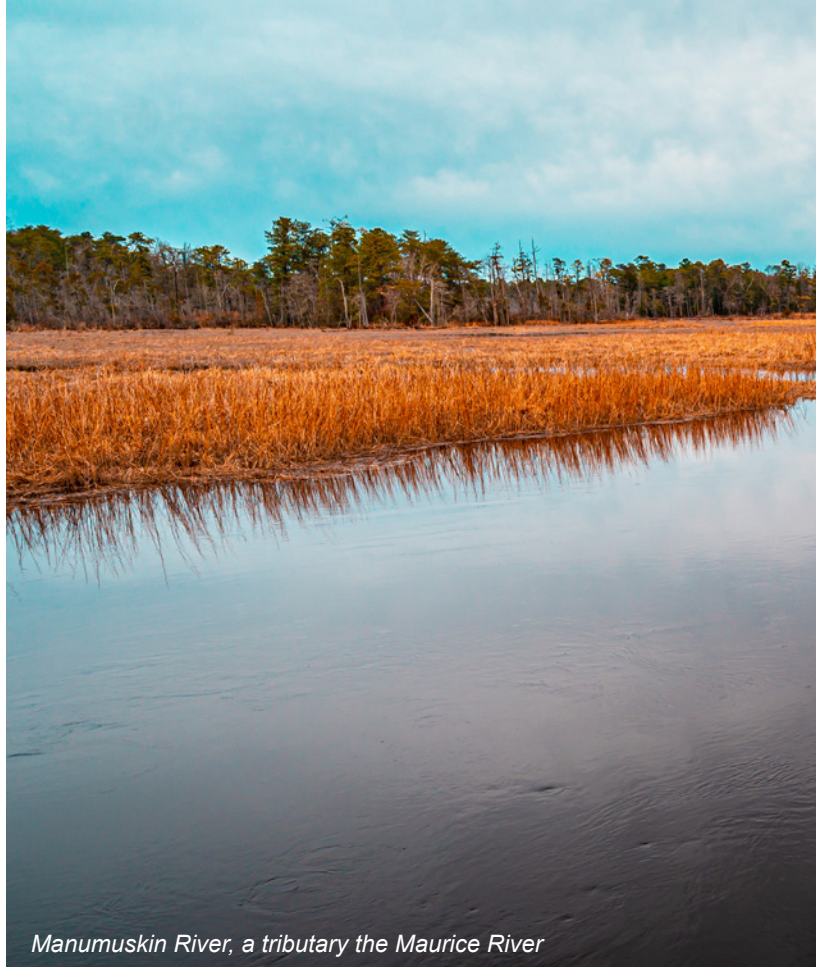
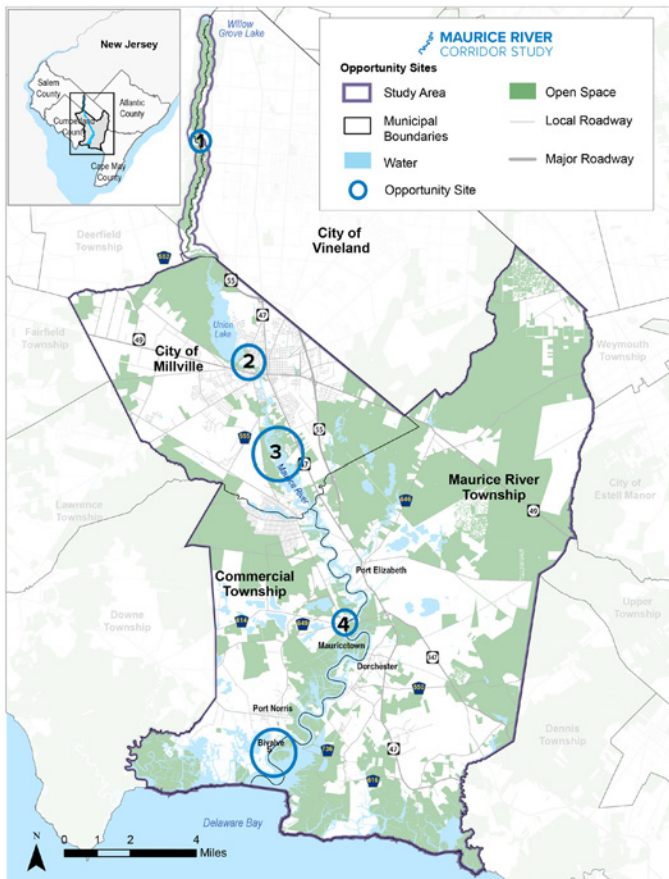


Figure 4-1. Opportunity Sites



on preferred park amenities, river access points, trail connectivity, and ecotourism activities from stakeholders and the public, while conducting an existing conditions analysis to understand where opportunities and constraints exist within the corridor.

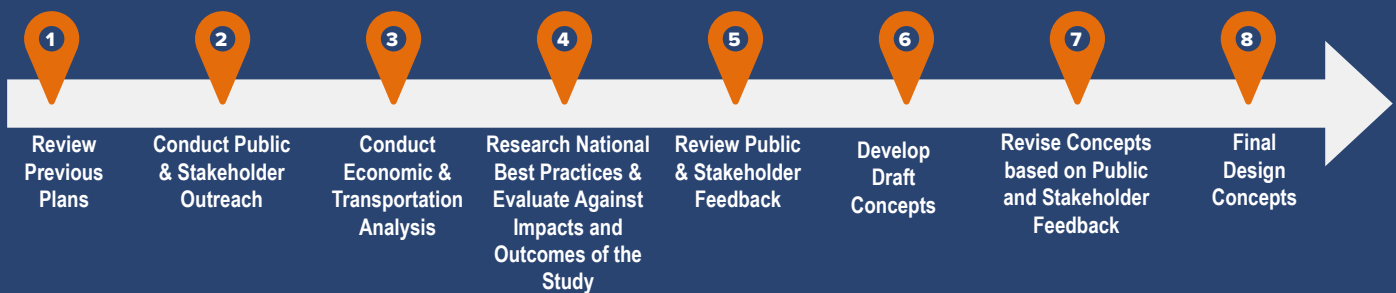
Once all the feedback was collected and the existing conditions analysis was complete, the Project Team conducted a best practice review of river corridors nationwide that experience similar opportunities and constraints as the Maurice River Corridor. The Team then drafted planning recommendations that were evaluated against the impacts and results of the transportation and connectivity analysis, heritage and tourism assessment, and the implementation readiness. Additional factors considered included land ownership, potential environmentally sensitive lands, local support and needs, and the cost and scale of improvements. The Project Team presented the draft concepts to stakeholders and the public for feedback and made revisions accordingly.



The locations of the five opportunity sites include publicly owned land or land that is owned by a non-profit organization. Figure 4-1 displays the location of the five opportunity sites along the Corridor.

Each design concept includes a brief description of the recommendations, a cost estimate, an existing conditions image, and precedent vignettes that show design intent.

DESIGN CONCEPT PROCESS



WEST SIDE PARK

PROPOSED DESIGN CONCEPT

During the Heritage and Tourism Focus Group, stakeholders discussed the need for more green space within the City of Vineland. West Side Park has parking available and is close to residential areas. The proposed design concept aims to attract visitors to the Corridor by providing access to the river via a restored beach area, kayak launch, fishing dock, a new trail through the northern portion of the property for birdwatching and hiking, and amenities such as a upgraded playground, food trucks parking with picnic tables, fire pits and grills, a new septic public restroom, and eco-friendly landscaping and beautification efforts.

- ① An **adaptive fishing dock** located near the Almond Rd. bridge
- ② New **grilling area**
- ③ **Picnic shelter** to remain with restored **Beach area** with no lifeguard on duty signage
- ④ New **fire pit area**
- ⑤ Upgraded **playground**
- ⑥ New septic **restroom** facility built above the BFE
- ⑦ **Food truck area** with picnic tables
- ⑧ New **adaptive kayak launch**
- ⑨ New **walking and hiking trails** (paved and crushed stone)
- ⑩ **Birdwatching stations** along the walking and hiking trails
- ⑪ **Interpretive signage with wayfinding** highlighting the wildlife habitats and ecosystems
- ⑫ **Lookout point** towards Alliance Beach with birdwatching station and benches
- ⑬ Designed area for **portage**



Property Owner (as of 2022):
City of Vineland


NOT TO SCALE

COST ESTIMATE: \$343,000

Fishing dock	\$7,000	Walking and hiking trails	\$10,000
Fire pit and grilling area	\$10,000	Birdwatching stations	\$6,000
Kayak launch	\$5,000	Interpretive signage (10 signs)	\$30,000
Restroom facilities (septic)	\$150,000		
Food truck area	\$125,000		

EXISTING CONDITIONS



Looking south toward the existing playground

PRECEDENT IMAGERY - DESIGN INTENT



① Adaptive fishing dock
Source: Boardsafe Docks



④ Fire pits
Source: Project for Public Spaces



⑥ Restroom facilities
Source: Asbury Park Press



⑧ Adaptive kayak launch
Source: Boardsafe Docks



⑦ Food truck area with seating
Source: KGUN9 Oro Valley News



⑪ Interpretive signage with wayfinding
Source: Pulse Design, Inc.

4.0 DESIGN CONCEPTS

OPPORTUNITY SITE #2

UNION LAKE BEACH TO WALTMAN PARK

PROPOSED DESIGN CONCEPT

This concept proposes to restore the beaches along Union Lake, improve connectivity between Union Lake, Waltman Park and Captain Joseph Buck Park, and provide a centrally located tourist designation to the Corridor since this area has the highest population density within the Corridor. This concept will revitalize the existing waterfront by offering new amenities, such as tennis and pickleball courts, an outdoor roller-skating rink for the summer that can serve as an ice-skating rink in the winter, riverwalk swings, picnic areas, an interactive water feature, and an event lawn. The concept also includes restoring the existing amenities such as the existing kayak launches and Maurice River Walking and Bicycle Trail, which needs removal of invasive species and replanting of native plants.

- ① Basketball courts to remain
- ② New tennis and pickleball courts
- ③ An outdoor roller-skating rink that operates as an ice skating rink in the winter
- ④ Renovations to existing playground
- ⑤ New restaurant or brewery connecting to the riverfront
- ⑥ New wildlife meadow that helps with water absorption during wet seasons
- ⑦ New interactive water feature
- ⑧ Repairs to kayak launches
- ⑨ New riverwalk swings
- ⑩ New picnic shelters
- ⑪ Repaired Maurice River Trail will remain over the Freshwater Tidal Marsh and Hardwood Swamp
- ⑫ New beach area
- ⑬ Event lawn overlooking Union Lake
- ⑭ New restroom facility



Property Owner (as of 2022):
City of Millville

COST ESTIMATE: \$867,500

New tennis and pickball courts	\$100,000	Riverwalk swings	\$50,000
Outdoor rolleskating/ice rink	\$250,000	Picnic shelters	\$10,000
Playground renovations (4)	\$50,000	Repaired Maurice River Trail	\$7,500
Wildlife meadow	\$10,000	Beach area	\$10,000
Interactive water feature	\$10,000	Event lawn	\$150,000
Kayak launch repairs (4)	\$20,000	Restroom	\$200,000

EXISTING CONDITIONS



Joe Buck Park Riverfront Walk

PRECEDENT IMAGERY - DESIGN INTENT



② Pickleball courts
Source: Design Concepts



③ Outdoor roller-skating/ice skating rink
Source: Glass City Riverwalk



⑥ Wildflower meadow with trails
Source: Visit Boulder, The Convention and Visitors Bureau



⑦ Interactive water feature
Source: Metoparks Toledo



⑨ Riverwalk swings
Source: Cincinnati Enquirer



⑬ Event lawn
Source: River for All Grand River Corridor

4.0 DESIGN CONCEPTS

CONNECTING THE PRESERVES

PROPOSED DESIGN CONCEPT

The Maurice River Bluffs Preserve currently has a 6.0-mile mountain bike trail, hiking areas, and points of interest. This proposed concept aims to connect the frequently visited Maurice Bluffs Preserve across the river to the Harold N. Peek Preserve and to the riverfront property owned by the City of Millville via kayak and additional trails. There is also a proposed bikeway connecting the City of Millville property to Downtown Millville (Millville Riverfront Walk plan). By activating the City of Millville property with an elevated canopy trail, archery range, and log jam inspired nature playground, visitors will have more activities to do while visiting the two preserves.

- ① Existing **birdwatching station** to remain
- ② **New adaptive kayak launches** to connect the three sites
- ③ Existing **fishing dock** to remain
- ④ Designated **paddleboard area**
- ⑤ **Designated area for boats** to pull up to the shore
- ⑥ **River's edge seating terrace** provides a scenic resting area for hikers
- ⑦ Existing **mountain bike trail** to remain separated from walking trails
- ⑧ Existing **restroom facility** to remain
- ⑨ **Elevated canopy trail** to connect visitors to the forested canopy
- ⑩ **New archery range**
- ⑪ **New trail connecting** the City of Millville property to Harold N. Peek Preserve
- ⑫ Existing **boat launch** to remain
- ⑬ **New log jam inspired nature playground**
- ⑭ **Greenscreen fence** around the sewage treatment center



Property Owners (as of 2022):
City of Millville; Natural Land Trust, LLC; The Nature Conservancy



COST ESTIMATE: \$590,000

Kayak launches (3)	\$12,000	Archery range	\$50,000
Signage for paddleboard area	\$3,000	New Trail	\$3,000
Signage for boat area	\$3,000	Nature playground	\$65,000
River's edge seating terrace	\$100,000	Greenscreen fence	\$4,000
Elevated canopy trail	\$350,000		

EXISTING CONDITIONS

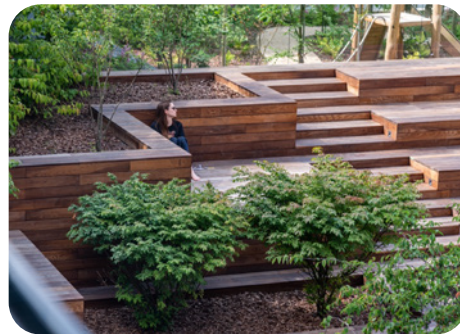


Maurice River Bluffs Preserve

PRECEDENT IMAGERY - DESIGN INTENT



① Existing birdwatching station to remain
Source: South Jersey Trails



⑥ River's edge seating terrace
Source: Landezine



⑨ Elevated canopy trail
Source: Tree to Tree Cape May



⑩ Archery Range
Source: County of Union, NJ



⑬ Log jam inspired nature playground
Source: City of Cincinnati, OH



⑭ Greenscreen fence
Source: Landscaping Network

4.0 DESIGN CONCEPTS

MAURICETOWN CAUSEWAY

PROPOSED DESIGN CONCEPT

This concept aims to encourage more tourists to the Mauricetown Historic District and Maurice River Township by offering a new cafe with restrooms and adjacent picnic area at Mauricetown Riverfront Park, a place to rent bicycle for the day to cross the Mauricetown Causeway and visit the river overlook to observe wildlife along the river. In addition to the river overlook, there is an elevated walkway, raised platform overlook with shaded pavilion, a boat ramp with a bulkhead, and a floating dock. This design will connect Mauricetown and Commercial Township to Maurice River by a bike lane along the Causeway, which is wide enough to support a safe bike lane.

- ① Adaptive fishing dock
- ② Bike rental station
- ③ Picnic area
- ④ Cafe with restrooms
- ⑤ A river overlook to watch the wildlife along the river
- ⑥ Elevated walkway with bump outs for fishing
- ⑦ Raised platform overlook with shaded pavilion
- ⑧ Boat ramp with bulkhead
- ⑨ Floating dock
- ⑩ Clamshell parking area
- ⑪ Park area
- ⑫ Paved roadway with parking on one side
- ⑬ Interpretive signage with wayfinding highlighting the wildlife habitats and ecosystems
- ⑭ Clamshell walking path



Property Owners (as of 2022):
Maurice River Township, Commercial Township



COST ESTIMATE: \$496,500

Fishing dock	\$15,000	Elevated walkway	\$15,000
Bike rental station	\$5,000	Platform overlook	\$20,000
Picnic area	\$6,000	Boat ramp with bulkhead	\$30,000
Cafe	\$350,000	Floating Dock	\$5,000
River overlook	\$20,000	Paved roadway	\$20,000
Clamshell parking lot and walkway	\$7,500	Interpretive signage (3)	\$3,000

EXISTING CONDITIONS



Mauricetown Riverfront Park

PRECEDENT IMAGERY - DESIGN INTENT



① Adaptive Fishing Pier
Source: Boardsafe Docks



② Bike rental station
Source: Wheel Fun Rentals



③ Picnic area near cafe
Source: Tourism Richmond



④ New Cafe in Mauricetown
Source: Kat Robinson



⑤ River overlook
Source: City of Eugene, OR



⑥ Elevated Walkway
Source: Wetlands Institute

4.0 DESIGN CONCEPTS

OPPORTUNITY SITE #5

BIVALVE

PROPOSED DESIGN CONCEPT

This concept proposes to enhance and bring awareness to existing amenities within Bivalve, including the Germantown Ave. trailhead and the Strawberry Ave. Boardwalk, while also adding new amenities such as a new bicycle rental station, upgraded restrooms and restaurant at the Bayshore Center at Bivalve, and new public art installations to teach visitors about the local oyster industry. By marketing the Working Waterfront designation, Bivalve can increase its resilience to flood risk while restoring the maritime industry and natural amenities.

① **Hybrid breakwaters** to create acres of subtidal/intertidal oyster reef habitat

② **New rock revetment**

③ Introduce **public art** that can get wet during storms and reflects the history oyster industry

④ Additional **birdwatching stations**

⑤ **Existing dock** to remain with new public art

⑥ **Enhance the existing trailhead**

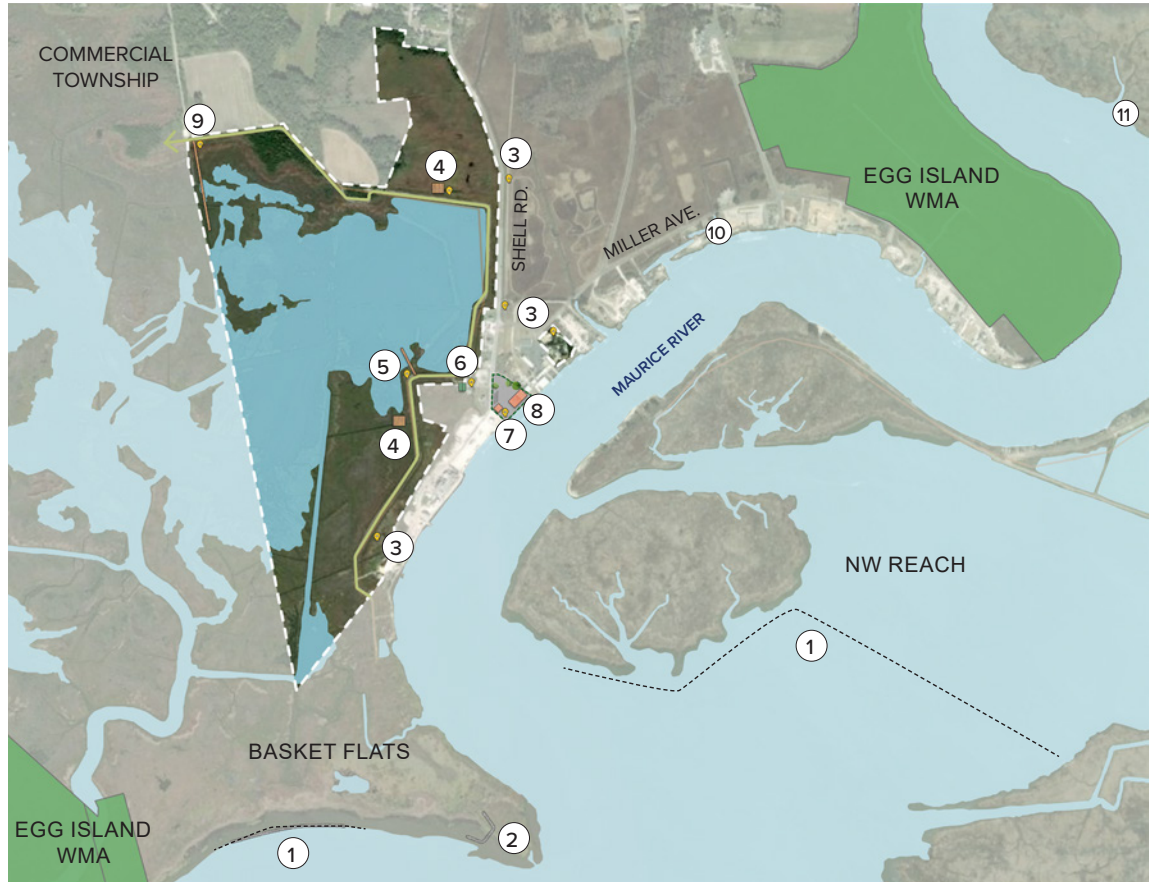
⑦ **New bicycle rental station**

⑧ **Reestablish a restaurant**, upgrade the restrooms, and expand education program at the Bayshore Center at Bivalve.

⑨ Enhance the existing **Strawberry Avenue Boardwalk** with public art

⑩ Market the **Working Waterfront designation** to developers to restore the maritime industry

⑪ Shellfish-based **Living Shorelines**



Property Owners (as of 2022): Rutgers University, Public Service Enterprise Group (PSEG), Commercial Township, Schooner Clyde Phillips, Inc.



COST ESTIMATE: \$132,500

Public art installation	\$15,000
Birdwatching stations	\$5,000
Trailhead enhancement	\$7,500
Bicycle rental station	\$5,000
Improvements to Bayshore Center	\$100,000

EXISTING CONDITIONS



Bayshore Center at Bivalve

PRECEDENT IMAGERY - DESIGN INTENT



① Basket Flats hybrid breakwaters
Source: American Littoral Society



③ Resilient oyster public art
Source: Icon Poly Studio



④ Additional birdwatching stations
Source: South Jersey Trails



⑥ Trailhead
Source: CBS Austin



⑦ Bike rental station
Source: Wheel Fun Rentals



⑧ Reestablish a restaurant Bayshore Center at Bivalve.
Source: SNJToday

4.0 DESIGN CONCEPTS

5.0 POTENTIAL FUNDING SOURCES

This section includes potential funding sources to implement the recommendations of this report. Each potential funding program is detailed below with funding eligibility and amount available. At the end of this section, Table 5-1 details the funding sources available specific to the bicycle facility recommendations.

National Park Service Wild and Scenic Rivers Program

The National Park Service (NPS) [Wild and Scenic Rivers \(WSR\) Program](#) provides support to NPS affiliated WSRs, which includes the Maurice Wild and Scenic River. The Program's purpose is to protect and enhance river resources, improve internal and external communication and coordination, and educate about the importance of WSRs.

Every Kid Outdoors Small Grants Program

National Park Trust, in partnership with the United States Department of Agriculture (USDA) Forest Service, developed the [Every Kid Outdoors Small Grants Program](#), supporting the needs of non-profits and schools that are connecting elementary school-aged youth to public parks, lands, and waters. The Program awards grants of up to \$5,000 to schools and non-profits.

National Park Trust recognizes that the lack of transportation is often one of the greatest barriers to youth connecting with the outdoors and that the outdoors is an excellent classroom and the perfect setting to help young people understand the importance of public lands and waters. Facilitating these experiences for younger generations creates a lifelong connection to their natural, cultural, and historical heritage.

Local Freight Impact Fund

New Jersey Department of Transportation (NJDOT) [Local Freight Impact Fund \(LFIF\) Grant Program](#) is established for the purpose of assisting counties and local municipalities with the mitigation of impacts on the local transportation system associated with the State's freight industry. There are five project categories: pavement preservation, truck safety and



mobility, bridge preservation, new construction, and pedestrian safety.

Rural Business Development Grants

The U.S. Department of Agriculture's [Rural Business Development Grants](#) program funds projects that benefit rural areas or towns outside the urbanized periphery of any city with a population of 50,000 or more. The Cities of Vineland and Millville are eligible. The purpose of the program is to promote economic development and job creation projects through the awarding of grant funds to eligible entities. Applications will compete in two separate categories, business opportunity grants and business enterprise grants, for use in funding various business and community projects that serve rural areas.

NJ Small Business Development Center at Stockton University

The [NJ Small Business Development Center](#)



[\(SBDC\)](#) of Atlantic, Cape May and Cumberland Counties, located at the Carnegie Library Center in Atlantic City, provides business assistance services to establish new enterprises and promising start-ups with the objective of increased economic activity. The program delivers management consulting and training programs to nascent entrepreneurs, start-ups and existing small businesses as well as specialized and more advanced services to high-impact, growth-oriented businesses.

Farmers Market Promotion Program

The U.S. Department of Agriculture’s [Farmers Market Promotion Program](#) (FMPP) offers four types of projects: 36-month Capacity Building, 36-month Community Development Training and Technical Assistance, 24-month Turnkey Marketing and Promotion, and 24-month Turnkey Recruitment and Training. FMPP’s purpose is to support the development, coordination, and expansion of direct

producer-to-consumer markets to increase access to and availability of locally and regionally produced agricultural products. The Agricultural Marketing Service (AMS) will competitively award grants to eligible applicants for projects that meet the purpose of this grant program.

Building Resilient Infrastructure and Communities (BRIC)

The [Building Resilient Infrastructure and Communities](#) (BRIC) program aims to categorically shift the federal focus away from reactive disaster spending and toward research-supported, proactive investment in community resilience. The BRIC program’s guiding principles include supporting communities through capability and capacity-building; encouraging and enabling innovation, including multi-hazard resilience or nature-based solutions; promoting partnerships; enabling large, systems-based projects; maintaining flexibility; and providing consistency.

Eligible applicants include any state, tribe, or territory that has had a major presidentially declared disaster declaration in the seven years prior to the application period start date. Sub-applicants also include local governments and non-federally recognized tribes. Sub-applicants may apply to state or territory Emergency Management Office/SHMO for funding under BRIC. During the last cycle, BRIC prioritized projects that incorporate nature-based solutions, projects promoting equity in disadvantaged communities, and the adoption and enforcement of modern building codes. Designated Community Disaster Resilience Zones (CRDZs), are eligible for an increased federal cost share of up to 90% and are prioritized to receive BRIC Direct Technical Assistance as well as Benefit-Cost Analysis (BCA) assistance to support their BRIC project proposals. The Townships of Commercial and Maurice River are currently participating in the BRIC program, having received the FY2022 Direct Technical Assistance grant

Additional FEMA Assistance

Maurice River has been subject to periodic coastal flooding events, including structural failure of an existing flood protection structure. Commercial Township is receiving support with project identification and scoping to address coastal flooding along the Delaware Bay and the Maurice River and augment a preliminary approach to coastal resiliency. Technical assistance is intended to bridge the capacity gap in navigating the design and environmental permitting to implement the conceptual design.

Green Acres Program

New Jersey Department of Environmental Protection's (DEP) [Green Acres Program](#) was created in 1961 to meet the State's growing recreation and conservation needs. The mission of the program is to achieve, in partnership with others, a system of interconnected open spaces, whose protection will preserve and enhance New Jersey's natural environment and its historic, scenic, and recreational resources for public use and enjoyment. Any municipality, county or non-profit may apply for funding. Total funding in the FY 2024 cycle amounted to \$108 million

Green Acres Local Assistance Grants & Loans

Eligible Projects include the following:

Land Acquisition

- Projects that result in the acquisition of land for outdoor recreation and/or conservation purposes, including, but not limited to, the purchase of forests, natural areas, linear parkland for trails, historic sites, conservation areas, water bodies, and open space for active or passive recreation purposes.

Park Development

- Projects that create, restore, or expand outdoor recreation opportunities. Eligible recreation facilities include, but are not limited to, athletic fields and courts, recreational trails and trail amenities, and facilities for picnicking, fishing, boating, biking, hiking, swimming, camping, nature and historic interpretation, and similar activities.

Stewardship

- Creation, restoration, or protection of natural resource areas, including wetlands, meadows, and woodlands
- Historic landscape restoration for properties listed on the New Jersey and/or National Historic Registers

Inclusive Playgrounds

- Creation of a Completely Inclusive Playground on municipally or county owned parkland, designed in compliance with DCA Regulations

Urban Parks Projects

- Eligible land acquisition, park development, and historic preservation projects following above guidance located in Overburdened Communities Subject to Adverse Cumulative Stressors in Urban Aid Municipalities.

Outdoor Recreation Legacy Partnership Grants

NPS' Land and Water Conservation Fund's [Outdoor Recreation Legacy Partnership \(ORLP\)](#) program is a dollar-for-dollar matching grant program, with a minimum award of \$300,000 and maximum award of \$15M. ORLP funds the acquisition or development of new parks, or substantial renovation of parks, in economically disadvantaged cities or towns of at least 30,000 people (as of the 2020 U.S. Census). ORLP

focuses on providing new or significantly improved nature-based parks in urban, disadvantaged communities lacking access to walkable outdoor recreation.

Applications must be submitted to NPS by the State; in New Jersey, the NJDEP Green Acres Program is the lead agency. States are required to conduct an internal competitive review process and select proposals that best meet the ORLP program’s intent, based on the federal guidelines, prior to submitting pre-applications to NPS for the nationwide competition. Participating states are not guaranteed an award. The national review committee will grant awards to the most competitive applications received nationwide.

Open Space Institute Programs

Open Space Institute (OSI) accelerates the rate and effectiveness of conservation by providing grants and low-cost loans for land protection in the eastern United States and Canada. There are two applicable funds to the Maurice River Corridor: Delaware River Watershed Protection Fund and the Delaware River Watershed Revolving Fund.

Delaware River Watershed Protection Fund

Launched in 2014, the [Delaware River Watershed Protection Fund](#) seeks to ensure abundant, clean water through support of land protection and improved land use planning, as part of the broader Delaware River Watershed Initiative, a coordinated effort involving 65 organizations working together to protect and restore clean water in the Delaware River watershed.

Through the Fund, OSI provides three types of grants:

- Capital Grants for the purchase of land and easements to permanently protect important watershed lands;
- Transaction Grants to jumpstart land conservation efforts; and,
- Catalyst Grants to integrate water quality science into strategic conservation or forest management plans, such as Open Space Plans, ordinances, or other mechanisms for the protection and stewardship of water resources. OSI encourages proposals that address climate change, flood hazard, and/or water justice.

Funding: Although there is no minimum or maximum grant size, Capital Grant awards are typically between \$75,000 and \$450,000 but may exceed that amount on a case-by-case basis for a project of large scale and high watershed resource value. Transaction Grants are capped at \$25,000, unless otherwise agreed upon with Fund staff. Catalyst Grants typically range from \$10,000 to \$35,000.

Delaware River Watershed Revolving Fund

The [Delaware River Watershed Revolving Fund](#) (“Fund”) seeks to achieve watershed protection goals in the Delaware River Basin by providing interim financing for projects where available capital is insufficient at the time it is required. Non-profit organizations, local governments (counties and municipalities), or state or federally recognized tribes

Eligible Projects include the following:

- Forest Land Protection
- Agricultural Restoration and Stormwater
- Recreational Access Projects and Environmental Educations Centers
- Innovation Projects

The Fund will make simple-interest loans and financial guarantees generally of at least \$100,000 and no more than \$1 million at no more than 1.5% annual interest, for a term generally not to exceed 18 months.

Association Of New Jersey Environmental Commissions Open Space Stewardship Grants

Association Of New Jersey Environmental Commissions (ANJEC) provides grants to environmental commissions to support projects that advance local open space stewardship and help to raise the profile of the environmental commission in the community through publicity and public participation or collaboration with local groups on the project. NJ environmental commissions that are established by ordinance are eligible. Funding includes one-year grants of up to \$1,500.

Suitable projects include, but are not limited to:

- Pollinator gardens
- Trail building, signage, maintenance
- Printed or online guides, maps, inventories of open space, trails
- Open space or trails assessments, plans, maps
- Multi-town plans to link open space or trails
- Conservation easement inventory, monitoring, outreach, education
- Management of invasive species
- Habitat enhancement on open lands
- Restoration or maintenance of riparian areas within preserved public open space
- Educational stormwater management projects on preserved public open space

National Fish and Wildlife Foundation Grants

The National Fish and Wildlife Foundation (NFWF) provides funding on a competitive basis to projects that sustain, restore and enhance our nation's fish, wildlife and plants, and their habitats. The Foundation supports more than 70 grant programs. Applicable NFWF programs include Acres for America, Delaware River Program, and Northeast Forests and Rivers Fund.

Acres for America

The [Acres for America](#) program to conserve lands of national significance, protect critical fish and wildlife habitat, and benefit people and local economies.

Program priorities:

- Conserve critical habitats for birds, fish, plants and wildlife
- Connect existing protected lands to unify wild places and protect migration routes
- Provide access for people to enjoy the outdoors
- Ensure the future of local economies that depend on forestry, ranching and recreation

Delaware River Program

The [Delaware River Program](#) is dedicated to restoring the fish and wildlife habitats and water quality of the Delaware River and its tributaries. The Delaware River Program currently awards grants through two competitive funding opportunities - the Delaware Watershed Conservation Fund and [Delaware River Restoration Fund](#).

Program priorities:

- Increase delivery of agriculture best management practices (BMPs) to reduce nutrient and sediment loads
- Expand conservation outreach to new farmers and landowners
- Restore stream banks, shoreline and wetlands
- Establish, expand and improve riparian buffers
- Promote and install green stormwater infrastructure BMPs and reduce suburban runoff
- Improve municipal policies for green stormwater infrastructure
- Identify and restore priority sites for aquatic habitat
- Reach, train and provide technical assistance to new audiences
- Engage significant numbers of new volunteers

Northeast Forests and Rivers Fund

[Northeast Forests and Rivers Fund](#) is dedicated to restoring and sustaining healthy forests and rivers that provide habitat for diverse native bird and freshwater fish populations in the Northeastern United States. The program annually awards competitive grants ranging from \$75,000 to \$300,000 each.

Program priorities:

- Restore Stream and Riparian Habitats
- Improve Upland Forest Health
- Increase Grassland Bird Habitat

Table 5-1. Bicycle Facility Funding Sources

Grant	Bicycle Lanes on Road	Bicycle Parking	Lighting (bike and ped scale)	Separated Bicycle Lanes	Shared Use Paths/Trails	Signing for Pedestrian or Bicycle Routes
Active Transportation Infrastructure Investment Program (ATIIP)	X	X	X	X	X	X
Carbon Reduction Program (CRP)	X	X	X	X	X	X
Congestion Mitigation and Air Quality Improvement (CMAQ) Program	X	X	O	X	X	X
Highway Safety Improvement Program (HSIP)	X		X	X	X	X
National Highway Performance Program (NHPP)	X	X	X		X	X
Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program	X		X	X	X	X
Surface Transportation Block Grant Program (STBG)	X	X	X	X	X	X
Transportation Alternatives (TA) Set-Aside	X	X	X	X	X	X
Recreational Trails Program (RTP)		X	X		X	
Safe Routes to School (SRTS)	X	X	X	X	X	X
National Scenic Byways Program (NSBP)	X	X	X	X	X	X
Reconnecting Communities and Neighborhoods Grant Program (RCN)	X	X	X	X	X	X
Safe Streets and Roads for All (SS4A) Grant Program	X	O	X	X	X	X
Rebuilding American Infrastructure with Sustainability and Equity (RAISE)	O	O	X	X	X	X
INFRA Grant Program	O	O	X	X	X	X
NJDOT Local Aid - Bikeways				X	X	
NJDOT Local Aid - Municipal Aid	X			X	X	

X= Eligible for funding

O= Eligible, but only competitive if part of a larger project

6.0 NEXT STEPS

The Maurice River Corridor has ample potential to become a larger, regional designation for ecotourism and heritage tourism within the State. To keep the momentum of this Study going, the Project Team recommends establishing a formal Maurice River Corridor Committee to implement the recommendations of this Study. Quarterly meetings with the stakeholders identified in this study can propel the planning recommendations into implementation. The quarterly meetings can be used to review progress on the recommendations of this study, coordinate on new and ongoing activities, identify potential partners to bring the recommendations to fruition, and discuss existing and new funding opportunities available.

The Project Team recommends the following next steps:

1. Establish a **Maurice River Corridor Committee**, which could become a subcommittee of a preexisting board, such as the Cumberland County Recreation Commission.
2. **Prioritize Study recommendations** based on available funding and local buy-in, focusing on the design concepts which are located along publicly owned lands with the greatest riverfront access potential for recreation and future greenway connectivity, ecological restoration, and initiatives that promote economic development.
3. **Integrate future plans and regulations** with this Study.

By planning together, the Committee can develop complementary strategies to continue to protect, enhance, and enjoy the unique resource that connects them all – the Maurice River.



Mouth of the Maurice River

