# **PISCATAWAY VALLEY**



# **PISCATAWAY VALLEY GREENWAY**

Graduate Studio III

Fall 2019

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### INTRODUCTION

# **EXECUTIVE SUMMARY**

### Introduction

Piscataway Watershed encompasses approximately 67.6 square miles in southern Maryland just north and adjacent to the Mattawoman Watershed. The main stem of Piscataway Creek, centered in the watershed, flows approximately 20 miles from the upper creeks near Rosaryville, Woodyard and Joint Base Andrews west to Piscataway Bay - enframed by Mockley Point on the south and Fort Washington on the north and opening to the Potomac River below Washington, D.C. across from Mt. Vernon, Virgina. Other tributaries within the Piscataway Watershed include Tinkers Creek, Dower House Branch, Burch Branch, Butler Branch and many numerous smaller tributaries. Occupied by humans dating over 4000 years ago, some of the old and new place names include Clinton, Rosaryville, Woodyard, Piscataway, Accokeek, Thrift, Windbrook, Brooke Jane Manor, Cheltenham, Williamsburg Estates, and Fort Washington Forest. Roads spoking from greater DC and more developed middle Prince George's County mainly cross Piscataway Creek going north to south and include Indian Head Highway, Livingston Road, Piscataway Road, Brandywine Road, Branch Avenue (Route 5) and Surratts Road. Significant parks within or adjacent to Piscataway Watershed include Louise F. Cosca Regional Park (MNCPPC), Fort Washington (NPS), Rosaryville State Park (DNR), and multiple properties that comprise Piscataway Creek Stream Valley Park (MNCPPC).

Portions of the originally planned trails proposed in the Prince George's County Trails Master Plan have been conceptually located along the spine of Piscataway Creek. The main segment of this concept trail from Indian Head Highway to Rosaryville is 99% in the floodplain. In addition, it was conceptualized at a time that some of the development patterns in the watershed had not occurred. The criteria for trail alignment have changed over the decades. Some of the overarching questions as the students explored the project were:

- Should the entire trail or segments of it be realigned out of the floodplain?
- Should there be additional cross trail connections in the scope of work?
- How can we better connect neighborhoods to a proposed trail system?
- How can we encourage hiking to promote health and stewardship?

### **Project Goals**

The overall goal of the project was to research and document the inventory, programming information, and composite analysis to inform and create creative planning and design ideas and interventions that can be used by the Prince George's County Department of Parks and Recreation to assist in the overall goal of the understanding, planning, designing and maintaining the Piscataway Valley Greenway system.

### **Project Objectives**

With this overall goal in mind, specific objectives included:

- assessing and realigning existing main segment of the Piscataway Greenway system including the proposed trail segment adjacent to Piscataway Stream
- avoiding the regulated areas including floodplains, steep slopes, wetlands, stream buffers for proposed trail alignment
- analyzing the impact of topography for proposed alignment
- exploring existing and potential connector trails and enhanced connectivity to adjacent neighborhoods; and parks
- exploring and designing places that provide a sense of identity and potential stewardship.

### **Major Suggestions**

Project outcomes included two types of documentation:

### • Neighborhood Maps and Planning Interventions

Neighborhood maps indicate alignment possibilities for a proposed trail to reduce floodplain exposure and increase connectivity to both existing and proposed residential developments and parks. Collectively, the maps illustrate a Piscataway Valley Greenway with the following characteristics and features:

- 25.7 miles of main segment trail
- 18.5% of the proposed main segment trail is located in the floodplain
- 37 trail connections to communities
- 7 stream crossings
- 1 wetland trail loop primarily on boardwalk

### • Design and Master Plan Interventions

The design and planning interventions offer possible development options for distinct locations in the Piscataway Valley Greenway system. Four thematic master plans are explored in more detailed focus areas. Interventions explored restoration, passive recreation, trailhead development and place identity:

- 4 thematic master plans are provided
- appropriate design interventions in Piscataway Valley Greenway

• 8 individual concept focus areas are provided with supporting plans and sketches to convey

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### Section 4: Individual Project Boards

### INTRODUCTION

## **METHODS**

The overall methodology was an iterative ecological planning and design process focused on the learning objectives of the class, the objectives of the project, and the context of the site.

### **Initial Ideation and Project Goals**

The first step was a review of initial working goals and objectives. The overall goals of this project were to research and document the inventory programming information and composite analysis to inform and create design and planning products that can be used by the Maryland National Capital Park and Planning Commission (MNCPPC) in overall initiatives in the Piscataway Valley Greenway system. There were two specific objectives. The first was to assess the existing Piscataway Trail proposed on a current MNCPPC master plan - but not yet implemented. This proposed trail is closely aligned with the Piscataway Creek and, if built as proposed, a high proportion of the trail would be in the floodplain. The second objective was to propose appropriate places to create opportunities for place making, community connection, and stewardship development.

### **Research and Inventory Approach:**

The research phase was divided into three parts. The first part included GIS mapping exercises using an ABC (ecological planning and design) approach. An ABC approach organizes data into abiotic, biotic, and cultural themes. Individual students were assigned individual abiotic, biotic, and cultural information to produce preliminary maps. This process also served as a learning process for GIS. It helped students understand the abiotic, biotic, and cultural character of the Piscataway Valley and surrounding areas. The second part of site research included the assignment of non-map information, primarily derived from web sources. The third part of the research phase was the assignment of selected planning and design reports including precedent greenway master plans. For all three parts of the research phase, each student created and presented a powerpoint summary of the assigned map information, non-map thematic information, and planning and design reports. This research reporting-out provided a shared understanding of the scope of area and the broader issues of trail and greenway systems.

### Programming

To understand programming for both potential and existing users of the site, students were assigned specific user groups and asked to research the users and present requirements. In addition, students were asked to create user narratives to assist in the design process by roleplaying various user experiences. These user narratives were later revised and were a required element of the focus areas boards.

### **Composite Analysis and Site Field Trip**

Following programming and research, students undertook a map exercise to determine the area's opportunities and constraints. This information was reviewed by project partners. Following this exercise, two field trips allowed students to see and experience the area first-hand, meet with stakeholders, and also photographically document various locations in the neighborhoods.

### **Neighborhood Plans**

The 20-mile long Piscataway Valley was divided into 14 neighborhoods. Each student was assigned two neighborhoods. At the eastern end, Neighborhood 1 adjoined National Park Service property and connections to existing trails to Fort Washington. The eastern location and the upper portion of the Piscataway watershed were located near Rosaryville, and incorporated existing equestrian trails. The primary criteria used for trail alignment were regulated areas (wetland and buffers, steep slopes, streams and buffers, and floodplain), the locations of existing and potential trailheads and locations of existing and proposed adjacent trail systems.

### **Individual Master Plans and Focus Area Design Interventions**

Following the preceding steps, students were asked to create individual and independent master plans and proposals. The final stage in the process involved students selecting two smaller focus areas and executing the ecological planning and design process at this smaller scale. Students created a series of seven boards representing the inventory, programming information, composite analysis, and envisioning design and planning products to meet the objectives of the project and class. Below is a list of the final boards required, the general titles of the boards, and the required elements for each board.

### List of Required Boards and Elements

### **Board 1: Master Plan**

Provide the overall master plan for the project area including proposal and annual events for stewardship promotion.

### **Board 2: Focus Area One Introduction**

Provide the context, design goals, inventory, and analysis of the focus area-problem/opportunity board.

### **Board 3: Focus Area One Plan and Design**

Provide the design solution for the focus area including one plan illustrative, two illustrative sketches, design features, and user narratives.

### **Board 4: Oblique Perspective for Focus Area One**

Provide a single oblique perspective of the overall focus area.

### **Board 5: Focus Area Two Introduction**

Provide the context, design goals, inventory, and analysis of the focus area-problem/opportunity board.

### **Board 6: Focus Area Two Plan and Design**

Provide the design solution for the focus area including one plan illustrative, two illustrative sketches, design features, and user narratives.

### **Board 7: Oblique Perspective for Focus Area Two**

Provide a single oblique perspective of the overall focus area.

### INTRODUCTION



# EXISTING REPORT DOCUMENTATION

Students were assigned existing planning and standards documents. After reviewing the document, students created a 5-10 slide powerpoint summarizing the information. Questions included:

- What are the objectives of the document?
- What are some of the most important data that help us understand the issues of walking and biking?
- What information do you think might be useful in thinking about our project?

Students presented to their peers and the powerpoint were shared. This documentation provided a way to understand existing information including planning and design initiatives, as well as exemplary precedent design and planning examples.



Maryland Trails: A Greener Way to Go (2010)

2040 MD: Bicycle and Pedestrian Master Plan (2019)

Part 2: Trails, Bikeways and Pedestrian Watershed Existing Condition Report Subregion 5 Approved Master Plan for the Piscataway Creek Watershed (2014)



Plan 2035 (2014)



Alliance for Biking & Walking

Bicycling and Walking in the US (2012)



Dangerous by Design (2019)



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Mobility (2009)





Piscataway Creek Watershed Restoration Plan (2015)



Strategic Trails Plan. M-NCPPC Department of Parks and Recreation Prince George's County (2018)







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### RESEARCH



(July 2013)



Each student was asked to generate five goals prior to the planning phase. A word cloud illustrates the primary themes of the collective goals.

### Major Watersheds of Prince George's County

### Prince George's County Department Environmen Resources Major Watersheds Legend POTOMAC -RIVER Major Roads ANACOSTIA 123 Anacostia River PATUXENT Henson Creek RIVER 190 13 Matawoman Creek Oxon Run Patuxent River **Piscataway Creek** 100 150 Potomac River Western Branch WESTERN 202 RUN liors HENSON PISCATAWAY POTOMAC RIVER CREEK PATUXENT RIVER 202 MATAWOMAN CREEK 301 Secology Improve multivalen proximin

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### **Piscataway Creek Watershed**



### **RESEARCH** CONTEXT

The students' designs focused on the Piscataway Creek Watershed.

In their goal setting exercise the students sought to balance resource protection with environmental health and stewardship.

# NEIGHBORHOOD MASTER PLANS







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### **NEIGHBORHOOD MASTER PLANS** OVERVIEW

The 20-mile proposed trail and area was divided into 14 neighborhoods for detailed analysis and planning.

Propose adding 1 additional wetland

1:36,000

**Main Segments** North Route S1 Piscataway Drive to Pendleton Road Connector S2 **Pendleton Road Connector to** Indian Head Highway Underpass **S3** Indian Head Highway Underpass

S4 Indian Head Highway Underpass to **Harrison Avenue Connector** 

**Trail Connections** 

C1 Pendelton Road Trailhead

C2 Trails Leading South







- **Main Segments North Route**
- **Harrison Avenue Connector** Livingston Rd Proposed Bike Path **Tinkers Creek Trail Connector**
- **S3** Indian Head Highway Underpass S4 Indian Head Highway Underpass to **S5 Harrison Avenue Connector to** S6 Livingston Road Proposed Bike Path to **S7** Tinkers Creek Trail Connector to Piscataway Road

- **S8** Piscataway Road

**Trail Connections** 

- **C2** Trails Leading South
- **C3** Harrison Avenue Connector
- C4 Tinkers Creek Trail Connector

**Cross Creek Connections S8** Piscataway Road







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### **NEIGHBORHOOD MASTER PLANS**

**Main Segments North Route S8** Piscataway Road S9 Piscataway Road to Hillantrae Park Loop Trail S10 Hillantrae Park Loop Trail Trail S11 Ex. Hillantrae Park Loop Trail Trail S12 Ex. Hillantrae Park Loop Trail to Jervis Place

**South Route** S13 Floral Park Road Planned Side Path

**Trail Connections** 

- C5 Strawberry Hill Trail Head
- C6 Existing Hillantrae Park North Loop Trail C7 Jervis Place Trail Head

**Cross Creek Connections** 

I1 Hillantrae Park South Loop to Floral Road S8 **Piscataway Road** 







**Main Segments** North Route S11 Ex. Hillantrae Park Loop Trail Trail **S14** Connector to Windbrook Drive S15 Thrift Road to Thrift Creek Trail S16 Thrift Road S17 Thrift Road to Broken Lane Court

South Route **S13 Floral Park Road** 

**Trail Connections** Jervis Place Trail

- **C8** Thrift Creek Trail
- **C9** Little Burch Creek Trail

**Cross Creek Connections** I1 Hillantrae Park South Loop to Floral Road **I2 Windbrook Drive** 









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### **NEIGHBORHOOD MASTER PLANS**

S12 Ex. Hillantrae Park Loop Trail to Jervis Place

C6 Existing Hillantrae Park North Loop Trail C7

### **Main Segments**

**North Route** 

- S17 Thrift Road to Proposed Neighborhood Trail
- S18 Broken Lane Court to Cosca Regional Park Connector
- S19 Thrift Road to Mid-Valley Connector / Cosca Regional Park

### **South Route**

- S13 Planed Floral Park Side Path
- S20 Floral Park Road to Arya Drive
- S21 Arya Drive to Old Marbury Road
- S22 Link to Mid-Valley Connector

### **Trail Connections**

- C10 Proposed Neighborhood Trail
- C11 Proposed Neighborhood Trail
- C12 Arya Drive Trail







### **Main Segments** North

- S19 Thrift Road to Mid-Valley Connector / **Cosca Regional Park**
- to Broken Lane
- S24 Broken Lane to Birchwood Drive
- S25

### South

S22 Link to Mid-Valley Connection

### **Cross Creek Connections and Connections**

- 13
- **Brandywine Road** 14
- **Butler Branch via Wyoming Farm**
- C14 Trail to Old Marbury Road
- **C15** Birchview Drive Trail
- C16 E. Boniwood Drive Trail









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### **NEIGHBORHOOD MASTER PLANS**

S23 Mid-Valley Connector / Cosca Regional Park

**Birchwood Drive to Power Line Easment** 

Mid-Valley Connection to Cosca Regional Park

C13 Cosca Regional Park Trail Connection along

**Main Segments** 

**North Route** 

- S25 Birchwood Drive to Power Line Easement
- S26 Power Line Easement Trail to Mid-River Connection
- S27 Mid-River Trail Connection to Brandywine Road

### **South Route**

S28 Brandywine Road via Burch Hill Road to Mid-River Trail Connection

### **Trail Connections**

- **C17** Power Line Easement Trail
- C18 American Swing Place Trail
- C19 Hermitt Road Trail
- C20 Trail to East Burch Road / East Burch Road

### **Cross Creek Connections**

- I-4 Brandywine Road Planned Bike Lane
- I-5 Mid-River Trail Connection







### **Main Segments**

- **North Route**
- S29 Wetland Loop Trail to Surratts Road

### **South Route**

- S28 Brandywine Road via Burch Hill Road to **Mid-River Trail Connection**
- S30 Knollwood Shared Trail
- S31
- S32 Wetland Loop Trail to Cheltenham Trail

### **Trail Connections**

- C20 Burch Hill Road Trail
- C21 Sand Cherry Way Trail
- **Cross Creek Connections**
- **I5** Mid-River Crossing
- **Crestwood Trail Crossing** 16
- Wetland Loop Trai 17









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### **NEIGHBORHOOD MASTER PLANS**

S27 Mid-River Crossing via Sand Cherry Trail under Route 5 via Crestwood Trail Crossing to Wetland Loop Trail

Knollwood Court Trail to Wetland Loop Trail

**Main Segments** North / West Route

- S27 Brandywine Road to Wetland Loop Trail
- S29 Wetland Loop Trail to Surratts Road
- S35 Surratts Road to Kittama Drive Trail
- **S**36 Kittama Drive Trail to Commo Road

### South / East Route

- S30 Knollwood Shared Trail
- S31 Knollwood Court Trail to Wetland Loop Trail
- S32 Wetland Loop Trail to Cheltenham Trail
- S33 Cheltenham Trail to Cheltenham Youth Facility Trail
- S34 Cheltenham Youth Facility Trail to Surratts Road
- S37 Surratts Road to Commo Road

### **Trail Connections**

- C22 West Kittama Drive Trail
- C23 East Kittama Drive Trail
- C24 Cheltenham Creek Trail
- C25 Boy's Village of Maryland Trail







### **Main Segments** North / West Route

- **S36**
- **S**38 Commo Road
- **S**39

### South / East Route

- S37 Surratts Road to Commo Road
- S40 Commo Road to Spinnaker Street Trail

### **Trail Connections**

- C23 East Kittama Drive Trail
- Boy's Village of Maryland Trail **C25**
- C27 Spinnaker Street Trail

### **Cross Creek Connections I8 Commo Road**









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### **NEIGHBORHOOD MASTER PLANS**

Kittama Drive Trail to Como Road

**Commo Road to Cheltenham Wetland Trail** 

C26 Cheltenham Conservation Trail North Loop

#### **Main Segments**

North / West Route

- S36 Kittama Drive Trail to Commo Road
- **Commo Road to Cheltenham Wetland Trail S**39
- S41 **Existing Cheltenham Conservation Trail**
- **Cheltenham Conservation to Equestrian Trails** S42

#### South / East Route

- S40 Commo Road to Spinnaker Street Trail
- Spinnaker Street Trail to LeFevre Drive Trail **S43**
- LeFevre Drive Trail to Cheltenham Woods Park Trail **S44**
- Cheltenham Park Connector to S. Graystone DriveTrail S45
- **Graystone Drive Trail to Dower House Branch Trail S46**
- **S47 Dower House Branch Trail to Proposed Canter Creek Trail**

#### **Trail Connections**

- C25 **Boy's Village of Maryland Trail**
- **Cheltenham Conservation Trail North Loop** C26
- C27 Spinnaker Street Trail
- East Cheltenham Woods Park Trail **C28**
- C29 East Cheltenham Woods Park Trail
- West Cheltenham Woods Park Trail **C30**
- C31 **Graystone Drive Trail**
- **C32 Proposed Dower House Branch Trail**
- E **Existing Equestrian Trails**







### **Main Segments**

- North / West Route

### South / East Route

- **S47**
- **S50**
- **S51**

### **Trail Connections**

- **C32**
- **C33**
- **C34**
- **Proposed Canter Creek Connection C35**
- **Existing Equestrian Trails**

**Cross Creek Connections Existing Equestrian Crossing** 19









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### **NEIGHBORHOOD MASTER PLANS**

**Commo Road to Existing Equestrian Crossing Existing Equestrian Crossing to Ex. Equestrian Trails Existing Natural Surface Trail** 

**Dower House Branch Trail to Canter Creek Trail Canter Creek Trail to Canter Creek Trail Canter Creek Trail to Canter Creek Trail** 

**Proposed Dower House Branch Trail** 

**Proposed Canter Creek Connection** 

**Proposed Canter Creek Connection** 

### **Main Segments**

North / West Route

- **Existing Rosaryville Equestrian Trails S49**
- **Existing Rosaryville Equestrian Trails S52**
- **Rosaryville Equestrian Trails to Woodyard Road S53**

### South / East Route

- **Canter Creek Trail to Canter Creek Trail S51**
- S54 Dorval Avenue to James Street Connector via Williamsburg Drive
- James Street Connector to Rosaryville Road **S55**
- **S56 Rosaryville Road to Cone Court**
- **Cone Court to Varus Place S57**

### **Trail Connections**

**Existing Equestrian Trails** E.







**Main Segements** North / West Route

South / East Route **S56** Rosaryville Road to Cone Court **S57 Cone Court to Varus Place S58** Varus Place to James Madison Middle School

- **Trail Connections**
- **C**36
- **C**37

**Melwood Elementary School** 









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### **NEIGHBORHOOD MASTER PLANS**

**S53** Rosaryville Equestrian Trails to Woodyard Road

**Proposed Trail to Arrowhead Drive** James Madison Middle School to
**DESIGN INTERVENTIONS** 



# SOLSTICE TRAIL MASTER PLAN

The Solstice Trail offers a journey through time where users can reckon with history even as the present landscape is impacted by climate change.

Pawpaw Park is a place where we steward the land and watch it regenerate, while reckoning with colonial history. At the Mockley Point lookout we watch the land slip away as sea levels rise, contemplating the displacement and resilience of indigenous communities.

### MASTER PLAN: SOLSTICE TRAIL

1. Connect local people with the history and ecology of the landscape through site-specific structures, interpretive features, and installations. 2. Provide a trail system that is accessible to communities, dovetails with existing and planned trail systems, and intervenes minimally in local ecosystems. in land stewardship initiatives, learn about local landscape history, and observe





EMMA PODIETZ / LARC 642 REGIONAL DESIGN STUDIO / FALL 2019 / DAVID MYERS







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### **MASTER PLAN**

# **MOCKLEY POINT** FOCUS AREA ONE

Mockley Point boardwalk is a minimal intervention that elevates users over a historically and culturally significant landscape projected to be entirely underwater in 50 years.

Mockley Point features a progression from deciduous woodland dominated by oaks to a tidal wetland where there remain ghostly trunks of green ash that were decimated by ash borer.

### **MOCKLEY POINT: INVENTORY & ANALYSIS**





TREE CANOPY SHRUBLAND WETLAND WATER







Mockley Point features a progression from deciduous woodland dominated by oaks to a tidal wetland where there remain ghostly trunks of green ash that were decimated by ash borer. The soils

and archaeological remains dating back more than 5,000 vears. At the time of European contact, the Moyaone site was the center of Piscataway society. It currently has minimal interpretive features, with large mowed open fields, a dome structure and the burial site of Turkey Tayac, a significant Piscataway leader and activist.

ossuaries, stockades,





### **OPPORTUNITIES**



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SUN ANGLE ANALYSIS

The solar analysis was done in search of new methods of creating interpretive features. For Mockley Point, the sun angles on December 21 (winter solstice) were used to create a structure which is the endpoint of the walk, and the sun patterns created on the ground highlight text engraved in it.

### SITE OPPORTUNITIES & CONSTRAINTS

### FOCUS AREA ONE



### CONSTRAINTS

### **MOCKLEY POINT: SITE PLAN** CONNECTING TO THE LAND

The Mockley point boardwalk is intended to provide a progression and viewpoint which references the history and cultural significance of the land, while minimally interfering with it. It allows people to learn about the landscape while watching it change through rising sea levels. It also provides a resting point on the Solstice trail, a connection to existing and planned trails within Piscataway Park.

### SITE PLAN



#### 740.0 160

WALK THROUGH DECIDUOUS WOODLAND

WALK THROUGH ASH FOREST

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### 1-4. HISTORY & PASSAGE OF TIME



A series of monoliths offset from the main path point in the direction of Moyaone, the sacred site. Engravings on the floors of the two pavilions offer interpretive text and an opportunity to contemplate landscape history and future. Materials such as oyster shell piles (3) reference local marine life and Piscataway culture.

### 5-7. LOCAL ECOLOGY & ENVIRONMENTAL CHANGE



The boardwalk leads from deciduous woodland (6) through a "forest" of ash trunks, telling the story of the emerald ash borer (5). The "summer solstice" structure offers sweeping views of the Piscataway and the Potomac as well as interpretive features. Visitors watch the landscape change over time as sea levels rise.

### 8-9. COMMUNITY **AMENITIES**



Mockley Point boardwalk

also offers a resting point for the Solstice Trail, bike racks, and connections to the existing Piscataway National Park resources. National Park visitors can easily and safely access the site.









WINTER SOLSTICE STRUCTURE

### **MOCKLEY POINT**



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Parks & Recreation NCSG live more, play more

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### FOCUS AREA ONE

# PAWPAW PARK FOCUS AREA TWO

Pawpaw Park presents a diverse ecology of regenerative forest and wetland while providing opportunities for recreation, education, and land stewardship.

Pawpaw Park designates a large central plot for community agriculture, with the potential for partnerships with local schools, neighborhoods, and organizations. It also provides a resting point and trailhead for the Solstice Trail, with restrooms, bike racks, parking lots, and picnic tables.

### **PAWPAW PARK: INVENTORY & ANALYSIS**

### CULTURAL INVENTORY



### **BIOTIC/ABIOTIC INVENTORY**





CONTOURS



The site is directly across Piscataway Rd from St Mary's Church and Catholic School in the Piscataway historic district. The Piscataway Creek runs directly north of it. The land was previously used for agriculture and is now a regenerating woodland partly owned by the parks department.

St. Mary's Church was founded in the 1600s as a missionary outpost for conversion of the Piscataway Indians. The conversion of a Piscataway leader by Father Andrew White in 1640 remains a much-referenced part of local history.





The woodland, combined with the Riparian buffer and adjacent wetland, provide a rich array of habitats for local wildlife. The forest currently is dominated by red oaks, water oaks, sweetgum, eastern redcedar, American Holly, and American sycamore. The Riparian zone is full of pawpaws and box elders, and the wetland has dead ash trees and hydrophytic grasses. Many bird species were observed there, plus a beaver dam in the Piscataway Creek, and freshwater mussel shells.







Proximity to St. Mary's school and communities

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WATER





Activate .



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### **OPPORTUNITIES**

-Existing ecological diversity in wetland, riparian buffer, and regenerating forest

### FOCUS AREA TWO

### SITE OPPORTUNITIES & CONSTRAINTS

-Adjacency to privately owned parcel

-Green ash forest in wetland decimated by ash borer

CONSTRAINTS -Presence of invasive species

-Sensitive ecological systems necessitates minimizing disturbance

> -Accessibility dangerous road crossing

## **PAWPAW PARK: SITE PLAN**

### CONNECTING TO THE LAND

Pawpaw Park provides a way for communities in the Piscataway area to observe the diverse ecology of a regenerating forest and wetland, as well as opportunities for recreation, education and land stewardship. Here the objective is to experience and nurture Maryland's ecological richness.



### SITE PLAN





Pawpaw Park designates a large central plot for community agriculture, with the potential for partnerships with local schools, neighborhoods, and organizations. It also provides a resting point and trailhead for the Solstice Trail, with restrooms, bike racks, parking lots, and picnic tables.

PARKING LOT & RESTROOMS

### 1. HISTORY & PASSAGE OF TIME

The interpretive features on the site are much like those of Mockley Point (See Board 3). Referential materials, such as snail and mussel shells, are used to reference local ecologies and Piscataway traditions. Interpretive text is engraved into the floor of the outdoor classroom, as well as the boulders in the sitting areas.

### 2-6. LOCAL ECOLOGY & ENVIRONMENTAL CHANGE





forest floor (3), and wetland (4) observatories encourage reflection on local ecologies and provide educational settings.



Student groups can also take advantage of the wetland bird blind overlooking the Piscataway Creek (5). The "summer solstice" outdoor classroom (8) offers substantial shelter as well as interpretive features in ground engravings. The forest canopy walkway and net provides a safe path to experience all levels of the forest (6).

CANOPY WALKWAY

COMMUNITY AGRICULTURE & FOOD FOREST

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1. CLASSROOM & CANOPY WALK

### 2. WOODLANDS & WETLAND BIRD BLIND

BOULDER SITTING

WETLAND **OVERLOOK** 

### PAWPAW PARK



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Parks & Recreation

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### **FOCUS AREA TWO**

# **PISCATAWAY GREENWAY PARKS MASTER PLAN**

These proposals for the Piscataway Greenway celebrate the ecology and cultural heritage of the Piscataway area.

The goal is to provide an outdoor experience centered on the area's ecology and cultural heritage for all who visit. Ideally, visitors will leave having shared a new experience and learned about the area's unique natural and cultural character.



### **PISCATAWAY GREENWAY PROJECT PARKS - MASTER PLAN**

The master plan addresses locations along the mouth of the Piscataway River in Prince Georges County, Maryland. Much of the Potomac shoreline in this area is considered in NOAA's top 50 priority projects to restore coastal habitat, and in recent years, there has been a push to further recognize the culture and history of the area's indigenous peoples heritage. Therefore, the pervasive theme of the site proposals celebrates the ecology and cultural heritage of the Piscataway area.

The sites of main intervention are on the south side of the river mouth, and build on a proposed system of trails connecting Colonial Farms and the Accokeek Foundation to Fort Washington. Further, the site proposals will extend the system by connections to the proposed Piscataway Trail system and to George Washington's Mt. Vernon through a proposed water connection, while also providing space-making opportunities at a site level.

### VISION

### Promote outdoor recreation

### Improve water quality and shoreline stability

### Showcase the area's local ecology and cultural heritage

### GOALS

The main goal is to engage visitors with the local ecology and cultural history of the Piscataway area, as well as offer a multitude of outdoor activities on land and on the water. Providing a cross-river connection to Mt. Vernon enables access to a growing number of visitors. People visiting the site will vary, and include tourists, families, kayakers, anglers as well as bikers traveling the Potomac Heritage Trail. The goal is to provide an outdoor experience centered on the area's ecology and cultural heritage for all who visit the sites. Ideally, visitors will leave with having shared a new experience and learned about the area's unique natural and cultural character.



Master plan of the Piscataway Cultural and Natural Park sites area

### PROPOSALS

Improve Farmington Landing with Design ferry landing incorporating a picnic area and nearby hiking cultural themes at Colonial Farms to connect Mt. Vernon Collect trash from mouth of Enable citizen science at wetlands 5 **Piscataway Creek** and proposed mussel shore near **Mockley Point** Design safe crossing at Indian Create mussel shoal with half-Head Highway moon boardwalk near Hard **Bargain Environmental Center** 

scataway Greenway Master Plan

Designer: Chris Samoray | Dr. David Myers, PLA, ASLA | LARC 642 | Fall 2019



PALS



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### **MASTER PLAN**

Create mussel shoal with halfmoon boardwalk on Piscataway Trail



Increase canoe, kayak, and sailing opportunities at Ft. Washington Marina



Design shoreline protection at Ft. Washington headlands



# **CULTURAL PARK SITE** FOCUS AREA ONE

The Cultural Park site aims to connect existing trails, interact with the Accokeek Foundation using a historic loop trail, and provide water connection to Mt. Vernon.

With a connection across the Potomac River to Mount Vernon and an exploration of colonial-era farming, the Cultural Park proposal will reveal the landscape's history.

Narrative from potential user:

"We're the Williams family. We live nearby, and try to come to the Accokeek Pier and Welcome Garden every other weekend. It's a great place for us and our daughter to engage with nature. We love it!"

### **PISCATAWAY CULTURAL PARK SITE - CONTEXT & ANALYSIS**



Opportunity and constraint map of the Piscataway Cultural Site

### **Opportunities**



### Hydrology



Streams (top) and floodplain (bottom) maps of the Piscataway Cultural Site

### Scenes of the Site







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# Sailing is a popular activity

Soils & Trees

A B C D

### FOCUS AREA ONE



### **Topography & Properties**



Soils (top) and tree cover (bottom) maps of Piscataway Cultural Site

Contour (top) and property line (bottom) maps of the Piscataway Cultural Site

#### FAMILY

We're the Williams family. We live nearby, and try to come to the Accokeek Pier and Welcome Garden every other weekend. It's a great place for us and our daughter to engage with nature. We love it!

#### TOURISTS

Why hello, We're tourists who took the ferry from Mt. Vernon across the river. What a great connection! The views of the water and shoreline are incredible on this side of the river. We'll spend about 2 hours here, but will definitely recommend our friends visit.

#### ANGLERS

Howdy, I'm Bob Wharf. I cherish getting out to the Accokeek Pier on a nice warm weekend day for some anglin'. I spend around 3-4 hours there every Saturday and Sunday morning. The pier has plenty of space, extensions, and the floating wetlands attract fish. So. the kayakers don't bother me none. Hoping to bag. I'll report any invasive catfish I pull up, too.



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#### FOCUS AREA ONE

### PISCATAWAY CULTURAL PARK SITE - PLAN & FEATURES

### **Design Goals**

- 1. Highlight the cultural history of the area
- 2. Include aspects of environmental rehabilitation with floating wetlands
- 3. Connect Accokeek/Colonial Farms to Mt. Vernon, and provide a garden welcome entrance
- 4. Increase visitation to Accokeek cultural and natural areas
- 5. Provide bikers a crossing to the Virginia portion of the Potomac Heritage Trail

### Precedents



The Barangaroo Reserve in Sydney, Australia by Peter Walker & Partners focuses on aboriginal heritage in a coastal context, an inspiration for how to design along a shoreline.



The National Arboretum in Washington, DC has gardens that bloom with lots of color, an inspiration for the site's Welcome Garden.

3

Piscataway Greenway **Cultural Park** 

### Cultural Park Site Plan



Site plan of the Piscataway Cultural Park, showing the Three Sisters Dock and Welcome Garden



### 1.4 m PALS

### **Three Sisters Dock**



III A perspective of the Piscataway Cultural Park Three Sisters Dock shows its popularity and many functi

### Accokeek Welcome Garden



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### PISCATAWAY CULTURAL PARK SITE - AERIAL VIEW



The aerial view of the Piscataway Cultural Park Three Sisters Dock shows its popularity and many functions.



4 SITE OBLIQUE VIEW

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### FOCUS AREA ONE



# **NATURAL PARK SITE** FOCUS AREA TWO

The Natural Park site aims to provide an interactive environmental rehabilitation meadow, water access at Farmington Landing, a trail connection system from Accokeek Foundation, and an additional rehabilitation project on the water.

A living shoreline and mussel shoals rehabilitation will provide environmental protection, education, and recreation.

Narrative from potential user:

"My name is Dan Williams. I like the serenity of this park, and visit during the week after a long work day. It's a great place for thinking, communing with nature, and to spend time with friends."

### **PISCATAWAY NATURAL PARK SITE - CONTEXT & ANALYSIS**



Opportunity and constraint map of the Piscataway Natural Park Site

### **Opportunities**



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### Hydrology



Streams (top) and floodplain (bottom) maps of the Piscataway Natural Site

### Scenes of the Site



A bench at Ft. Washington, across

### Site Users

A/D 8/D C/D

A

Soils & Trees



HIKERS We're Ryan and

much to explore!

LEISURE

### FOCUS AREA TWO



Soils (top) and tree cover (bottom) maps of Piscataway Natural Site





Contour (top) and property line (bottom) maps of the Piscataway Natural Site

What's happening? Faith Bohemia. We live in DC, but visit the Park about once a month to escape the city. When we come we spend all day here. There's so

serenity of this park. work day. It's a great nature, and to spend KAYAKERS Good day to you! I'm Fin Finnigan. I'm an avid kayaker. The Natural Restoration Park in the Piscataway offers a superb spot for a day of kayaking. Nearby is Ft. Washington and Accokeek, but I like the calm waters near the mussel rehabilitation project. It's fun to show others this gem!





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### **PISCATAWAY NATURAL PARK SITE - PLAN & FEATURES**

**Piscataway Creek** 

loodplain Line

**Observation Circles** 

ussel Reh

Trail I oot

Boardw

Site plan of Piscataway Natural Park, showing the successional forest habitat and mussel rehabilitation area.

#### **Design Goals** Natural Park Site Plan

1. Showcase mussels in the Chesapeake Bay

2. Highlight the role mussels play in water quality, as a coastal buffer for storm surge, and as an environmental engineer

3. Engage visitors with an environmental rehabilitation experience

4. Make a loop trail that connects to other proposed trails in the area

5. Provide a trail system and floating dock adaptable to sea level rise

### Precedents

The Living Breakwaters Project by Kate Orff in New York provided inspiration for thinking about ways to buffer against storm surge, which is showcases in the site plan in the mussel shoal rehabilitation area.

Piscataway Greenway Natural Park



0

The Accokeek Foundation has already taken steps to buffer their shoreline from the effects of climate change by installing their "Living Shoreline," a concept the site plan expands upon.

Mature forest



Mature forest

Designer: Chris Samoray | Dr. David Myers, PLA, ASLA | LARC 642 | Fall 2019

Farmington Landi



### Successional Meadow & Forest Trail



### **Mussel Rehabilitation Boardwalk**



56

🔢 A perspective in the successional forest area of Piscataway Natural Park show transition from meadow to early successional forest, with a mature forest in the



### PISCATAWAY NATURAL PARK SITE - AERIAL VIEW



The aerial view of the Piscataway Natural Park Mussel Walk shows users enjoying the length of the boardwalk.



Designer: Chris Samoray | Dr. David Myers, PLA, ASLA | LARC 642 | Fall 2019











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### **FOCUS AREA TWO**



# **ROSARYVILLE** MASTER PLAN

The Rosaryville Master Plan proposes the creation of parks, historic site trails, a nature play space behind James Madison Middle School, stream restoration, equestrian trails, and an agricultural farm buffer.

As surrounding communities redevelope, Rosaryville should take the opportunity to preserve regional character while adding environmental and recreational amenities.

## Map of Planned Interventions



### Vision

As the population in the Washington D.C. increases, surrounding communities in Prince George's County, are quickly being developed. Rosaryville, Maryland is included in this development, and has the opportunity to keep the character of the region as it heads into the future.





### **Rosaryville: Developing the Commity**

### **Planned Interventions**

- 1 Create a park along Woodyard Road
- His Lordship's Kindness Museum
- 3 Create a nature play space behind James Madison Middle School
- **Charles Stream**
- Valley Trail
- 7 Create downtown area for Rosaryville
- 8 Connect equestrian trails to surrounding parks

### **Precedent Town**

Towns such as Rockville, Maryland have faced similar challenges of changing from agricultural land, to becoming a suburnban portion of the Metropolitan D.C. area.



Lauren Gray Dr. David Myers LARC 642, Fall 20 19









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### **MASTER PLAN**

## Master Plan

2 Make a historic sites trail conntecting The Woodyard and

4 Restore the area around the western headwaters of the

5 Create interactive signage around Piscataway Stream

**6** Create Agricultural Farm to buffer Rosaryville State Park



Images of Woodley Gardens Park, local home, and Rockville Town Center in Rockville, MD.



# **DOWNTOWN ROSARYVILLE** FOCUS AREA ONE

The goals for developing Downtown Rosaryville include creation of a central gathering space, high density housing areas to combat suburban sprawl, stream protection, decreased impervious surfaces, and improved water quality.

The zoning and location of this proposed site offer an opportunity to create a walkable downtown that offers housing and amenities.

Narrative from potential user:

"We live in the apartments located on top of the Safeway, in downtown. It's so nice to be able to relax on the big lawn right outside our building. It feels like we have a our own backyard. It's also great to be walking distance to great trails for weekend hikes."



# **Downtown Rosaryville**

### **Concept Development**

As Rosaryville develops, the creation of a central hub for the town will be essential. By creating a downtown area that can be accessed by car, bike, or through walking, the residents and visitors of Rosaryville gain a multifacted space that can accomodate the many needs of a graoing town.

### Existing Conditions: Biotic and Abiotic



Hydrology and Regulated Areas The topography and steep slopes will show geogrphic features and where paths can be placed.

### **Existing Conditions: Cultural**



Topography and Steep Slopes The topography and steep slopes will show geogrphic features and where paths can be placed.



### Vegetation Coverage

This site is little canopy coverage in the center, and the surrounding coverage will soon be destroyed due to residential development to the North of the site.





#### Lauren Gray Dr. David Myers LARC 642, Fall 2019







**Rosaryville: Developing the Commnity** 

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The area to the North of the site is developing in low density residential, while the area South of the site, Rosaryville State Park, remains undevelopted.

Parks and Proposed Trails Local and State parks are in close proximity to the site, with many trails proposed by Prince George's County running adjacent and through the site.

Zoning The topography and steep slopes will show geogrphic features and where paths can be placed.



### **FOCUS AREA ONE**

## Site Inventory

### **Opportunities**

#### Key Location

In close proximity to local schools and parks, with proposed trails within walking distance. Right off of a prominant road, Croom Highway.

#### In the Zone

Correct zoning has already been given to this site. The 2035 Region 6 Master Plan has clear intent on developing commercial industry in this shopping center.

#### Stunning Views

The views behind the shopping center offer amazing views of rolling grass hills, common to this region.

### Constraints

#### Busy Highway

Croom highway is a major throughway for the region, causing danger from heavy traffic and high noise pollution.

#### Steep Slopes

Steep slopes behind the Safeway in the shoppoing center will prohibit the development in the western portion of the site.

#### Streams, Floodplains, and Wetlands

Easements and regulated areas surroundings the streams in the western portion of the site will prohibit development.

### Precedent Images





Top Right: The Glenstone Museum, Top Left: Disney Springs Bottom: Rockville Town Square

Sourced: Google Maps



# **Downtown Rosaryville**

## <u>Overall Site Plan</u>



## **Design Goals**

- Create a central gathering space for the community
- Create a high density housing area to encourage less suburban sprawl
- Attain sensitive area along the stream to protect from development, and retain viewshed

### User Experiences

of the local trail systems
Decrease the amount of impervious surfaces

- Provide safe central location for visitors

 Capture and filter water runoff to help improve water quality for the Charles Stream

### Weekly User

Kelli Southerby, 16 I am a high school student at Frederick Douglas High School, right down Croom Road. I love togo downtown after school with my friends, where we can hang out for hours. The different stores and stuff to do accomodates whatever we want to do. Daily Users Bryan Que and Geof Davidson, 32 We live in the apartments located on top of the Safeway, in downtown. it's so nice to be able to relax on the big lawn right outside our building. It feels like we have our own backyard. It's also great to be walking distance to great trails for weekend hikes.

### **Rosaryville: Developing the Commnity**

# Site Features 1. Rose Court 2. Hillside Lawn 3. Great Lawn 4. Hill Plaza 5. Street Entrance 6. Bike Path 7. Bus Turn Off P: View of Great Lawr

3

Lauren Gray Dr. David Myers LARC 642, Fall 2019

## Site Plan



## **Downtown Rosaryville**



### Rosaryville: Developing the Commnity

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### FOCUS AREA ONE



# ROSARYVILLE AGRICULTURAL PARK FOCUS AREA TWO

The Rosaryville Agricultural Park will act as a necessary buffer from residential development as well as celebrate the area's agricultural history.

As area farmland redevelops, this park would buffer Rosaryville State Park from new development and capture the area's agricultural history.

Narrative from potential user:

"We love to visit the restaurant on the top of the hill when we can get away from the city. The patio allows for beautiful views of the rollings hills in a quiet outdoor setting we don't normally have access to in the city."

### **Concept Development**

With surrounding agricultural land being sold to residential developers, creating a buffer for Rosaryville State Park and th surrounding streams in the Charles Stream watershed will become essential. Creating a park that will provide this buffer, while celebrating the agricultural history within this region will help to make a site that can be enjoyed by local and visiting peoples.

### Existing Conditions: Biotic and Abiotic



Soil Types The majority of the soil being B type will be optimal for possible crop growth as well as give options for infiltration of water.

### **Existing Conditions: Cultural**



Topography and Steep Slopes The topography and steep slopes will show geogrphic features and where paths can be placed.



Vegetation Coverage This site is little canopy coverage in the center, and the surrounding coverage will soon be destroyed due to residential development to the North of the site.







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paths can be placed.

5

**Buildings and Plots** The area to the North of the site is developing in low density residential, while the area South of the site. Rosarvville State Park, remains undevelopted

Parks and Proposed Trails Local and State parks are in close proximity to the site, with many trails pro-

posed by Prince George's County running adjacent and through the site. **Rosaryville: Developing the Commnity** 

### FOCUS AREA TWO

## Site Inventory

### **Opportunities**

#### Good Soil and Sun

This site has B grade soil, a loam or silt loam, this will accomodate many different types of crop types. The hills on which the site resides, are south facing which will provide for many diffetrent crop varieties.

#### Prime Location

The site is surrounded to the north and to the west by newly developed neighborhoods, providing many local users to the site.

#### Connections to the Area

Close proximity to Rosaryville State Park, and the amenities the park supplies. Connections to the proposed Piscataway Creek Trail and the proposed Charles Stewam trail will allow connections to the surrounding region.

### Constraints

#### Locked In

Developing housing to the north, an electrical easement to the east, Rosaryville State Park to the south, and Rosaryville Road to the west, will stop any potential growth to this park.

#### Steep Slopes

Steep slopes in the northwestern and sourthern portions of this site will prohibit the placement of trails and other amenities on the site.

#### Stream and Regulated Areas

Streams cut through the northwestern and southern central portions of the site. Regulated areas around the streams have been added to help protect the integrity of the streams. This will prevent building and development in these areas.

### Precedent Images





op Right: Tondabayashi City Agricultural Park, Top Left: House on the Hill Bottom: Mountain Running Path

Sourced: Google Maps



#### **FOCUS AREA TWO**

# **Rosaryville Agricultural Park**

### **Overall Site Plan**



### **Design Goals**

- Increase canopy coverage
- Provide buffer for Rosaryville State Park from surrounding development
- Retain agricultural heritage
- Provide local park to surrounding neighborhoods
- Connect the Piscataway trail to the Charles trail
- Create a gathering space

## **User Experiences**

#### Daily User Susan Byrd, 32

I walk the bike path that goes along the park and connects to the Charles Branch Stream Trail. This trail system lets me walk around town safely without having to walk along busy roads in a safe and beautiful setting.

Monthly Users Mr. and Ms. Cohen. 50+ We love to visit thee restaurant on the top of the hill when we can get away from the city. The patio allows for beautiful views of the rolling hills in a quiet the outdoor setting we don't normally have access to in the city.



### **Rosaryville: Developing the Commnity**

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## Site Plan



# **Rosaryville Agricultural Park**



### **Rosaryville: Developing the Commity**

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### FOCUS AREA TWO



# **PISCATAWAY VALLEY GREENWAY** MASTER PLAN

The vision for this master plan is to create a network of community-use recreational parks dedicated to the health of local residents and the environment in which they live.

Each community park will include an accessible walking loop, fitness circuit, playground and/or adventure course, multipurpose ballfield or courts, pavilion with restrooms, and open space all set within native wetlands, grasslands, and woodlands.



### Vision

A network of community use recreational parks in the Piscataway watershed dedicated to the health of local residents and the environment in which they live. Each community park will include an accessible walking loop, fitness circuit, playground and/or adventure course, multipurpose ballfield or courts, pavilion with restrooms, and open space, all set within native wetlands, grasslands, and woodlands. The parks will be 30-50 acres in size with a service radius of ½ a mile to 3 miles, and will link to the proposed Piscataway Valley Greenway.

### **Greenway Experiences**

- Walk or bike 1-2 miles along an accessible loop trail with options to return at various points. Boardwalks, stepping stones and bridges will be used in ripar ian environments to protect ecosystem
- Encounter points of interest, which could include geologic features, hydrological features such as a stream or pond, historic or cultural features, a specimen tree or views
- Rest in the shade on a bench or seat wall and rehydrate at a water • station
- Exercise outdoors on state-of-the-art equipment spread out along the walking loop
- Play in a playground (ages 2-5), Adventure Course (ages 5-12) or Court (all ages)
- Enjoy games, picnics, or concerts on open lawn
- Experience a healthy and thriving ecosystem by observing distinct habitats (open field, forest buffer, forest, riparian buffer, pond or stream) along the loop and within activity areas
- Know where you are and how to get where you want to go with directional signs and maps
- Learn about natural features of the park and other topics related to nature, exercise and health through signs, programming, demonstrations, temporary exhibits, or an app
- Stay comfortable with gender neutral, wheelchair accessible restrooms with changing tables
- Connect to another community park along the Piscataway Valley Greenway

### Locations

Potential community park locations were selected by their proximity to dense residential development and to the proposed Piscataway Valley Greenway. Property owners include M-NCPPC, community associations, developers and private individuals. The following design proposals are for a new Canter Creek Park (1) and the revitalization of Hillantrae Park (2).

> Piscataway Valley Greenway Alison Jones, Designer | LARC 462 Regional Design Studio Fall 2019, Dr. David Myers

Master Plan

Landscape Architecture



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### **MASTER PLAN**

# **CANTER CREEK PARK** FOCUS AREA ONE

Canter Creek Park proposes use of 25 acres in order to provide active recreation through use of equestrian trails, walking and biking trails, and recreation facilities for everyone.

Rehabilitating this existing park will make best use of its potential trail connections and offer new recreational amenities, while preserving its streams and wetlands.

Narrative from potential user:

"I commute to my job at Andrews Air Force Base from my home in Holloway Estates. I follow the Dower House Pond Branch Valley Greenway across Frank Tippett Road and then connect to the Piscataway Valley Greenway at Canter Creek Park. It's nice to have an off-road route to work. I enjoy stopping at the park on my way home to watch the skaters or catch a ballgame. The church youth group that I lead often meets at the park pavilion in the summer. The fresh air seems to relax the kids and allow them to talk more freely."



### Context

The Canter Creek subdivision is located in the Piscataway Creek watershed in southern Prince George's County, MD. The park site lies in the center of the subdivision, which is bounded by Piscataway Creek to the west, Frank Tippett Road to the east and Dower House Pond Branch to the south. The site features streams, wetlands, and conservation woodland. Equestrian trails associated with the Merrymount Equestrian Center traverse the site.

Historical aerial and satellite images show that by 1938, all but a band of trees along the Piscataway and Dower House Pond Branch streams had been cleared for agriculture. By 1965, some of the cleared area had filled back in, leaving a rectangular field which was kept mowed until construction began on the Canter Creek development in 2004. Remnants of a 19th century tobacco barn and a 20th century tenant farmhouse and barn have been found on the site.

### Proposal

Wedged between two stream valleys at the heart of the Canter Creek community, Canter Creek Park will provide an active recreation park dedicated to the health of local residents and the environment in which they live. The 25-acre park will serve all ages, with facilities for adults, children and teens. Because of its historic connection to the Merrymount Equestrian Center, the park will include equestrian trails, as well as walking and biking trails that link to the proposed Piscataway and Dower House Pond Branch Valley Greenways and the bikeway along Frank Tippett Road.

Canter Creek Park

Site Inventory Alison Jones, Designer | LARC 462 Regional Design Studio Fall 2019, Dr. David Myers Landscape Architecture

### Abiotic





Biotic



•



Topography

Piscataway Creek.

Soils

From west to east, the site drops

steeply from a high point of 216 feet

above sea level and then levels out

sea level, an overall distance of 44

feet. On the other side of the high point the terrain descends to the

Most of the site is composed of

in the conservation woodland. Soil

and moderately well-drained. Soil

type C/D is poorly drained and

frequently flooded.

hydrological soil type C, with type C/D

type C is made up of fine sandy loam

toward a low point of 172 feet above

The forest stand within the site is a conservation woodland.

#### Wetland

Water bodies on the site include two streams and two ponds.

### Cultural





### **Opportunities and Constraints**

#### Opportunities

Trail Connections—the site's unique location near proposed trails along the Piscataway and Dower House Pond Branch stream valleys, Merrymount Equestrian Center and Frank Tippett Road can provide a hub and a waystation for walkers and bikers. Through traffic will need to be balanced with local traffic.

High Visibilty—views into the park from all sides make it a safe space for children to play. Select screening can offer privacy to residents directly adjacent to the park.

Protected Natural Areas-the forest conservation easement and wetlands on the site as well as the Piscataway and Dower House Pond Branch stream valleys offer opportunities for restoration and education.

#### Constraints

accessible to all.

areas.









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### FOCUS AREA ONE

#### Roads

The roads named on the map were built in Phase 1 of construction. the unamed roads will be built in Phase 2. Dressage Drive leads to Frank Tippett Road.

#### Trails

Prior to development the site served the Merrymount Equestrian Center with a series of natural surface trails between the Piscataway and Dower House Pond Branch stream valleys. The Equestrian Center has an agreement with Canter Creek to continue to use the trails.

Steep Slope—the descent from western slope will require grading to make it the site

- Moderately Well-drained Soils the majority of site will be able to absorb some stormwater runoff from adjacent road and buildings.
- Equestrian Trails—existing trails will need to be redirected away from recreational

Lack of Tree Canopy—clearing of trees from previous use as an agricultural field will require tree replanting for shade in recreational areas.

### **Design Goals**

#### Improve User Experience

- Provide outdoor gathering place for the Canter Creek community
- Provide facilities for active and passive recreation for a range of ages and abilities
- Reflect equestrian and agrarian history in design of amenities
- Create sequential experience along trails to highlight unique natural features such as upland and lowland habitats, moisture patterns, creek crossings, stream overlooks and notable trees
- Connect walking and biking loop the proposed Frank Tippett Road bikeway, Piscataway Creek and Dower House Branch Valley Greenways, and network of equestrian trails

### Enhance Ecological Systems

- Remove invasive vines, forbs, shrubs and trees to improve ecosystem health and clarify woodland layers
- Reforest slope
- Plant 100' critical area riparian buffer around water bodies
- Enhance upland, floodplain and wetland habitats along path with suitable native plant communities

### **Design Features**

- Walking/biking loop of varying lengths and equestrian trail
- Boardwalk with overlooks
- Nature playspace
- Skate Spot
- Multipurpose ballfield
- Pavilion with restrooms and storage area
- Critical area riparian buffer of 100' around water bodies
- Reforested slope







Multipurpose ballfield






Cut through from Canter Creek Park to Piscataway Valley Greenway



Sweetgum Pond and Overlook

### Users

### Local User–Amanda (32), Caden (13) and Dexter (5) Through User–Brandon Allen (25), Bike Commuter 5-6x a week for 1-2 hours

tive boys; Caden, my 13 year old likes to skateboard and Dexter, my 5 year old likes to climb. They run down to the park after school and do their thing and I keep my eye on them from my kitchen window. times or onto one of the greenways if I am feeling ambitious. I love having all of these opportunities to be outdoors so close to home.

I live on Dressage Drive overlooking Canter Creek Park. I have two ac- I commute to my job at Andrews Air Force Base from my home in I live in DC and take horseback riding lessons at the Merrymount Holloway Estates. I follow the Dower House Pond Branch Valley Gre-Equestrian Center in Rosaryville, MD. There are numerous trails enway across Frank Tippett Road and then connect to the Piscataway around the Center to ride on. There has been some development Valley Greenway at Canter Creek Park. It's nice to have an off-road in the area, but we are still able to ride to Rosaryville Park along the Caden and Dexter also play on sports teams that practice on the field route to work. I enjoy stopping at the park on my way home to watch Dower House Pond Branch Greenway and connect to the Piscataway so often I will talk a walk during practice, around the loop a couple of the skaters or catch a ballgame. The church youth group that I lead Valley Greenway at Canter Creek Park. The parks along the route ofoften meets at the park pavilion in the summer. The fresh air seems fer rest stops where I can water my horse. to relax the kids and allow them to talk more freely.





Landscape Architecture

Alison Jones, Designer | LARC 462 Regional Design Studio Fall 2019, Dr. David Myers

Canter Creek Park



Illustrative Drawings



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2x a day for 30 min each way

### FOCUS AREA ONE



### Destination User–Dana Rogers (32), Equestrian 2x per month for a few hours

# HILLANTRAE PARK FOCUS AREA TWO

Hillantrae Trails Community Park connects residents by way of biking and walking trails to restored wetland, grassland, and woodland habitats.

The rehabilitation of a portion of this existing park will provide passive recreation trails and a wildflower meadow.

Narrative from potential user:

"I love to get out of DC on the weekends to go birdwatching. I often go on field trips with the Southern Maryland Audobon Society. Last Sunday we took a hike along the Piscataway Valley Greenway. After lunch at the Hillantrae Park Pavilion we took the boardwalk. The meadow grasses had not yet been cut in order to allow the grassland songbirds to fledge. We saw a Common Yellowthroats in the upper meadow and a Great Blue Heron down by the Creek. We looped back to the Learning Meadow after a few kids told us they had seen Yellow Finches on the Purple Coneflowers. From a bridge over Piscataway Creek we watched a turtle sunbathing on a rock, then continued our hike to Cosca Regional Park."



## Context

Hillantrae Community Park serves the neighborhood of Windbrook Estates in Clinton, MD a suburb in southern Prince George's County that is home to over 300 residents. Most of the park is located in the floodplain of Piscataway Creek which runs just below it. The project area encompasses a portion of the existing 43-acre park, with an entry drive that leads to a parking lot, pavillion, picnic area, playground for ages 2-5, and an asphalt path that leads to a baseball diamond and multipurpose field, then continues along the creek to a turnaround point. Paths also enter the Park from Piscataway Landing Drive and Jervis Place.

Between the 1930's and the 1980's the project area was an agricultural field. By the early 1990's the field had grown over, no longer in use, and by the end of the decade had returned to it's natural state. Windbrook Estates was established in 1998 and by 2005 the pavillion and park had been added.

## Proposal

The revitalized Hillantrae Trails Community Park will allow residents of Windbrook Estates and beyond to experience the ecology of Piscataway Creek by walking or biking through restored wetland, grassland and woodland habitats along an accessible path and boardwalk. The trail will connect to the Piscataway Stream Valley Trail and loops back at several points to offer a range of walking distances. A wildflower meadow near the playground will introduce children to native flora, insects and birds. Wetland and woodland restoration, stormwater collection and tree planting around the pavilion, parking area and neighborhood will improve water and air quality.



# Abiotic



### Topography

The site descends 20 feet from the northeast to the southwest towards Piscataway Creek. A ridge at the top of the site gradually flattens out into the floodplain.

### Soils

The top of the site is composed of well drained hydrological soil type A. The developed area in the center of the site is soil type B/D, made of silt loam which is somewhat poorly drained and occasionally flooded. The remaining wooded portion of the site is composed of soil type C/D which is poorly drained and frequently flooded.

# Biotic



### Tree Canopy and Vegetation

The site is forested with an open field in the center. Vegetation includes broad-leaved deciduous trees and shrubs, persistent emergents, and emergent mosses or lichens.



### Wetland

Most of the site lies within the floodplain of Piscataway Creek which flows along the eastern and southern borders of the site. Numerous tributaries of the creek flow across the site. The non-tidal wetland is subject to temporary flooding. Surface water is present for brief periods during the growing season, but the water table usually lies well below the ground surface.

Stream bank overgrown with invasive vines.









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# Site Conditions



The asphalt path lies within feet of the stream bank.

### FOCUS AREA TWO



### Impervious Surfaces

The site lies below a large residential development and includes a concrete entry drive, parking lot and trail. Stormwater runoff from the development flows across the site and into the creek.

### Paths

Asphalt paths coming from Piscataway Landing Drive, Strawberry Hill Drive and Jervis Place meet in the park and continue down along the creek, ending at a turnaround.



Outfall pipe of tributary that runs beneath path



Pavilion and parking area.

### FOCUS AREA TWO

# **Design Goals**

### Improve User Experience

- Move walking trail out of critical riparian area and add boardwalk that loops back to playground, parking area and Piscataway Landing
- Create <u>sequential experience</u> along trail to highlight unique natural features such as upland and lowland habitats, moisture patterns, creek crossings, stream overlooks and notable trees
- <u>Connect trail</u> to the proposed Piscataway Valley Greenway
- Create <u>meadow</u> near playground and parking lot with walking loop, benches and educational signage
- Design plantings at transition zones to denote shift in ecology

### Enhance Ecological Systems

- Remove invasive vines, forbs, shrubs and trees to improve ecosystem health and and clarify layering of woodland habitat • Plant 100' critical area riparian buffer along streams
- Enhance upland, floodplain, and wetland habitats along path with suitable native plant communities
- Consolidate ball fields into multipurpose field out of critical riparian area
- Add shade trees and vegetated swales to parking area to improve air and water quality
- <u>Increase tree canopy</u> in neighborhood to 40% coverage

# Design Features

- Walking/biking loop of varying lengths
- Boardwalk with viewing pavilions
- Multipurpose ballfield
- Critical area 100' riparian buffer along streams
- Vegetated swales and shade trees parking area
- Children's learning meadow and walking loop





Pond Overloo



Learning Meadow

76







Entering Hillantrae Park from the bridge over Piscataway Creek



Walking from Piscataway Creek to Ironweed Overlook

Hillantrae Park



### cal User–Matt (32) & Max Dixon (3), Dad & Son Through User–Jessica Reiter (38), Bike Commuter 4x a week for 1 hour 2x a day for 30 min each way

Live on Piscataway Landing Drive pear Hillantrae Park. I look forward to changing out of my work outpes at the end of the day and putting Max in his stroller for a walk in the park. The entrance is easy to find, framed by trees and plantings and clearly marked with a sign Screened from the road and houses by wooded slopes, the boardwalk takes us on a peaceful journey through meadows and over a streams. Along the way we see birds, butterflies, squirrels, and occasionally deer. We pass joggers, dog walkers, and bikers. After stopping at the overlook for a snack, Max often likes to take a detour down to the creek to skip stones. If he is energetic we continue past the ballfield to the a short meadow that he loves to explore.

d I commute to my job at the Federal Naw Enforcement Training Center from my home in Windbrook Estates every day of the year, except when the trail is icy: I can link to the Piscataway Creek Stream Valley Trail through Hillantrae Trails Park down the streat. I ride into the park at around 6AM-past the pavilion, playeround and ballfield and

over the Creek to the trail which runs along Floral Park Road. Even at that hour, there are people on the trail, other commuters, joggers, and dog walkers. Where the trail divides to go over the creek, there is a boardwalk that loops back to the neighborhood. Sometimes I'll come back that way on my way home and stop at the overlook pavilion to do some reading or writing before heading home.





Landscape Architecture

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Illustrative Drawings



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### FOCUS AREA TWO



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# RE