

ESOPUS RIVERFRONT

ACCESS AND CONNECTIONS STUDY



OCTOBER 2020



Page Intentionally Left Blank

ACKNOWLEDGMENTS



The Town of Esopus would like to recognize and thank the many people whose assistance has made the completion of the Study a reality.

Riverfront Project Committee

Mercedes Ross, Chairwoman (Waterfront Advisory Board (WAB) Chair)

Shannon Harris, Supervisor
Kathie Quick, Councilwoman
Chet Allen, Resident
Susan Barbarisi, Environmental Board
James Banks, ZBA
Heather Blaikie, Scenic Hudson
Nancy Beard, Assistant Public Information
Officer, Hudson River Estuary Program
Amy Cahill (former member)

Alex Dean, Community Outreach Coordinator
Diane Dintruff, Ph.D., Kayak Meet-up
Coordinator
Margaret Phelan, WAB
Vincent Coq, WAB
Rita Shaheen, Scenic Hudson
Eli Schloss, WAB
Carol Carson-Tomassetti, WAB
Dale Wolfield, WAB
Marion Zimmer, WAB

In Partnership with Scenic Hudson



Prepared by:



Partial funding for this Project was provided by the NYSDEC Hudson River Estuary Program



Laberge Group Project: 2019031



An additional thank you to the following who contributed their valuable time and ideas to the study.

Resource Center for Accessible Living

Anthony Mignone, Interim CEO

Kathy Hochman, Director of Community Based Health Care Services



NYSDEC



**Department of
Environmental
Conservation**

Central Hudson Gas and Electric



The Dock Doctors, LLC



TABLE OF CONTENT

SECTION 1: INTRODUCTION..... 1

- Elements of the Plan2
- Community Engagement3
- Site Visits.....4
- NYSDEC Pre-Application Meeting5

SECTION 2: REVIEW OF PAST PLANS 6

- Town of Esopus Comprehensive Plan 20196
- Town of Esopus Local Waterfront Revitalization Program (1987)9
- Town of Esopus Scenic Resources Inventory (Draft 2016)10
- Ulster County Main Streets: A Regional Approach: Port Ewen and Milton Case Studies.....11
- John Burroughs-Black Creek Trail Plan (2017).....12
- Tidal Rondout Creek Watershed Management Plan (2015).....13
- Mid- Hudson Regional Economic Development Council Strategic Plan/Progress Reports.....13

SECTION 3: EXISTING CONDITIONS 15

- Sleightsburgh Park15**
 - Location..... 15
 - Amenities 16
 - Easements, Restrictions, and Permitting 21
 - Natural Resources and Ecological Conditions..... 22
 - Cultural and Historic Resources 25
 - Surrounding Lands and Connections 26
- George Freer Memorial Beach Park29**
 - Location..... 29
 - Amenities 29
 - Easements, Restrictions, and Permitting 38
 - Natural Resources and Ecological Conditions..... 38
 - Cultural and Historic Resources 41
 - Surrounding Lands and Connections 41
- Lighthouse Park and Esopus Meadows Preserve44**
 - Location..... 44
 - Amenities 45
 - Easements and Restrictions and Permitting 49
 - Natural Resources and Ecological Conditions..... 50
 - Cultural and Historic Resources 52
 - Surrounding Lands and Connections 52
- Black Creek Preserve56**
 - Location..... 56
 - Amenities 57



Easements and Restrictions 59
Natural Resources and Ecological Conditions 59
Cultural and Historic Resources 62
Surrounding Lands and Connections 62

SECTION 4: PROJECT RECOMMENDATIONS..... 67

Sleightsburgh Park67
Recommendations 67
Regulatory Needs..... 73
George H. Freer Memorial Park75
Recommendations 75
Regulatory Needs..... 82
Lighthouse Park84
Recommendations 84
Regulatory Needs..... 87
Esopus Meadows Preserve89
Recommendations 89
Regulatory Needs..... 89
Black Creek Preserve90
Recommendations 90
Regulatory..... 94

SECTION 5: IMPLEMENTATION PLAN 95

LIST OF FIGURES

Figure 1. Sleightsburgh Park Location15
Figure 2. Sleightsburgh Park Area Zoning.....26
Figure 3. Freer Park Location29
Figure 4. Freer Park Area Zoning.41
Figure 5. Lighthouse Park and Esopus Meadows Preserve Location.....44
Figure 6. Lighthouse Park and Esopus Meadows Preserve Area Zoning52
Figure 7. Future Land Use Map.....53
Figure 8. Black Creek Preserve Location.....56
Figure 9. Black Creek Preserve Area Zoning62
Figure 10. John Burroughs Black Creek Trail Concept Plan65

LIST OF MAPS

Sleightsburgh Park Existing Conditions
Sleightsburgh/Freer Beach Parks Vicinity
George H. Freer Memorial Beach Existing Conditions
Lighthouse Park Existing Conditions
Esopus Meadows Preserve Existing Conditions



Lighthouse Park/Esopus Meadows Preserve Vicinity
Black Creek Existing Conditions
Black Creek Vicinity

CONCEPT PLANS

Sleightsburgh Park Concept Design
Freer Park Concept Plan CLA-01
Lighthouse Park Concept Plan CLA-02
Park Connectivity Improvements – Lighthouse Park and Esopus Meadows Preserve
Black Creek Riverfront Access Improvements

APPENDICES *Under Separate Cover*

Appendix A. Public Input Summaries
Appendix B. ADA Site Visit Summary
Appendix C. Project Cost Estimates
Appendix D. NYSDEC Pre-Application Meeting Summary
Appendix E. Sleightsburgh Park Access Mediation Summary



Page Intentionally Left Blank

SECTION 1: INTRODUCTION

The Town of Esopus, in partnership with Scenic Hudson and with the help of Laberge Group and CLA Site, prepared this Esopus Riverfront: Access and Connections Study (Riverfront Study) to evaluate opportunities for new and enhanced recreational access to the Hudson River and tidal sections of the Rondout Creek. In addition to enhancing access at existing waterfront recreation areas, a key focus of the Riverfront Study is to reinforce connections from shoreline recreation areas to regional



Sleightsburgh Park Southern Shoreline

water-based networks including the Hudson River Valley Greenway Water Trail, the Wallkill River Water Trail, and the John Burroughs Black Creek Trail, as well as land-based connections to other inland recreational locations. The Riverfront Study also took into consideration long-term resiliency to sea-level rise and flooding at waterfront access locations. As part of this effort, the following Town parks and Scenic Hudson preserves were evaluated: Sleightsburgh Park, George H. Freer Memorial Beach Park, Lighthouse Park, Esopus Meadows Preserve and Black Creek Preserve. The New York State Department of Environmental Conservation (NYSDEC) Hudson River Estuary Program is providing partial funding for this project, supplementing investments by the Town of Esopus and Scenic Hudson.

The need to evaluate existing conditions and identify opportunities to increase public waterfront access was formally identified in the Town of Esopus Comprehensive Plan 2019. During the preparation of the 2019 Plan, the lack of suitable public waterfront access and related recreational opportunities was a major issue raised by the public. The request for additional access was made despite the fact that the Town of Esopus has over 24 miles of shoreline along the Hudson River, Rondout Creek and Wallkill River, in addition to the numerous streams, lakes and ponds nestled among its ridges, valleys and forests. While the Town has a notable amount of shoreline, overall public access is limited as are deep water access points. Only the Rondout Creek provides opportunities for deep water access and improvements should be considered to provide additional access.

While the Town and Scenic Hudson both own waterfront recreation areas, there are no formal hand launch locations for launching and retrieving canoes, kayaks and other small watercraft that do not require a trailer to launch. Sleightsburgh Park provides the only boat ramp which can be used to hand launch canoes, kayaks and other small watercraft. There are currently no ADA compliant waterfront access sites at any Town Park or Scenic Hudson property evaluated in this Study.

The Town has not been able to take full advantage of the recreation and eco-tourism opportunities along its waterfront that adjoining and nearby waterfront communities enjoy, including waterfront dining, shopping and entertainment options, along with events such as the Kingston Kayak Festival, New Paltz Regatta, and the Rhinecliff Waterfront Festival, to name a few. This is due in part to existing shoreline development, along with steep shorelines that are incompatible for establishing recreation and/or economic development opportunities.



Kayaking and Swimming on the Hudson River

As a result, the 2019 Comprehensive Plan recommended increasing waterfront access to optimize the Town's unique waterfront resource assets and leverage these improvements to take advantage of emerging eco-tourism opportunities. The comprehensive planning process involved several meetings with key stakeholders, including Scenic Hudson and the Hudson River Maritime Museum, among others. The Town of Esopus recognizes the eco-tourism potential at town-owned waterfront parks and other public lands in combination with Scenic Hudson properties. Furthermore, the Town understands that a mutually-beneficial relationship with Scenic Hudson to plan for and design enhanced waterfront access and connections is critically important, and proceeded to share resources to prepare this Riverfront Study.

Elements of the Plan

This Riverfront Plan is divided in the following sections:

- The **Introduction** presents an overview of the planning process, along with the history and intent/purpose of the study and discusses the community engagement and site evaluation methods utilized in the planning process.
- The **Review of Past Plans** provides an overview of the recommendations within previous planning studies and projects relevant to enhancing shoreline recreational access.
- The **Existing Conditions** provides an overview of the five waterfront parks and preserves subject to the Riverfront Study, including a summary of each site's recreational amenities, deficiencies, and opportunities, along with a review of adjacent land influencing characteristics and potential future connections.
- The **Project Recommendations** section details the proposed projects that were identified by the Riverfront Project Committee (RPC) in collaboration with stakeholders and the general public. Concept plans depicting the proposed improvements are provided in this section as well. Cost estimates for projects at Freer and Lighthouse Parks are provided in **Appendix C. Cost Estimates**.
- The **Implementation Plan** outlines the Riverfront Study's implementation strategy, likely partners and potential funding sources.

It is important to note that projects and strategies outlined in the Riverfront Plan are not requirements nor are they guaranteed to be implemented. While certain recommendations should be implemented as funding is available and regulatory approvals possible, others are intended to stimulate creativity, inspiration, volunteer interest, and focus and direction for future decisions making regarding resource allocation, programing and partnerships. It will be up to the Town and Scenic Hudson to decide on an ongoing basis which initiatives to advance and at what schedule. Immediate choices to begin implementing will often be based on opportunities and “low-hanging fruit” and available funding while other initiatives, which may be equally important but are more complex take time to evolve. In addition, many of the proposed projects will require permits from NYSDEC and possibly other agencies, which will need to be taken into consideration.

Finally, this project is being completed as the Town of Esopus and every other community deal with the immediate health and economic implications of COVID-19, and the yet-to-be determined long-term impacts on the local, regional and national economies. As a result, it is understood that implementing waterfront access recommendations outlined in this plan may have to wait until 2021 or beyond.

Community Engagement

The Riverfront Study included multiple opportunities for public and stakeholder engagement, including an initial public informational meeting, a public design workshop, site visits and stakeholder discussions along with an opportunity for public engagement to review this draft report. In addition to public and stakeholder engagement, an advisory committee was formed to assist in the preparation of the Riverfront Study. The Riverfront Project Committee (RPC) is made up of the Town’s existing Waterfront Advisory Committee (WAB), Scenic Hudson Staff, NYSDEC Hudson River Estuary Staff, and supplemented by additional Town residents with relevant waterfront and recreational experience. The WAB is the legislatively-designated committee in charge of implementing the Town’s Local Waterfront Revitalization Program (LWRP) Plan and to conduct consistency reviews of relevant local projects.



Residents Discussing Waterfront Improvements at the Design Workshop

The RPC has conducted eight working committee meetings and two public workshops to date, interacted with Town residents and visitors at the parks and preserves along with other stakeholders, and conducted several site visits. Their involvement has been key to understanding not only current issues, opportunities and constraints at each site but also in the region, which is closely interconnected from a recreational perspective, especially water-based recreational opportunities.

The initial public informational meeting was held on May 22, 2019 at the Esopus Town Hall. Approximately 45 members of the public attended. The workshop began with a brief PowerPoint presentation introducing the attendees to the project goals, objectives and schedule along with the results of the initial RPC site visits, existing conditions analysis and potential improvements being considered. Following the presentation was a productive discussion period with the attendees that resulted in important information and guidance for the RPC going forward. A summary of the public discussion and the PowerPoint presentation are provided in **Appendix A: Public Input Summaries**.



Riverfront Project Committee Touring Black Creek Preserve

The second outreach event was the Public Design Workshop held on July 24, 2019, at the Esopus Town Hall. The purpose of the workshop was to gauge public reaction to preliminary RPC recommendations and to receive additional input and recommendations. Large poster boards depicting the preliminary recommendations at Sleightsburgh, Freer and Lighthouse Parks along with Black Creek Preserve were available for review. Those in attendance were asked to provide their input and offer additional recommendations. The RPC and Laberge Group were on hand to discuss the preliminary improvements and answer questions. The preliminary concepts were also posted on the Town's Facebook page and the Town's website to provide the public with additional opportunities for review and comment. The input received helped further refine the preliminary concepts and alerted the RPC to additional issues and ideas not already being considered.

The RPC released a public draft of the Esopus Riverfront Access and Connections Study on July 6, 2020. During a July 7, 2020 Town of Esopus Town Board meeting, Laberge Group provided a public presentation of the Draft Study. Due to the necessary social distancing and the current ban on large gatherings in response to COVID-19, the presentation was live-streamed through the Town's ZOOM and Facebook platforms. The RPC received public and agency comments through September which contributed to improving the Final Draft. The July 7, 2020 PowerPoint presentation and public and agency comments received are provided in **Appendix A: Public Input Summaries**.

Site Visits

Three sets of site visits were conducted during the preparation of the Riverfront Plan. The first set of site visits occurred on April 24, 2019, at the outset of the planning process and involved the full RPC as well as Hudson River Estuary Staff. Each park and preserve were visited to get a better understanding of current conditions, issues, concerns, and potential opportunities. For each site, the RPC evaluated existing access roads, parking lots, Americans with Disabilities Act (ADA) accessibility, recreational opportunities and

amenities, pedestrian and bicycle safety conditions, existing structures, restrooms, signage, flooding and erosion issues, among other existing condition elements.

The second set of site visits occurred on July 1, 2019 and involved staff from NYSDEC to evaluate the initial improvements proposed for Freer and Lighthouse Parks. NYSDEC staff provided important guidance regarding desired shoreline improvements, associated regulatory issues, and recommendations for proceeding.



ADA Accessible Parking at Esopus Meadows Preserve

The third set of site visits to all parks and preserves were held on August 28, 2019 for the purposes of evaluating existing ADA accessibility and to identify opportunities to increase accessibility. RPC members and Laberge Group staff were joined by Kathy Hochman and Anthony Mignone from the Resource Center for Accessible Living (RCAL). RCAL provided professional guidance and recommendations to enhance ADA accessibility. Results of the ADA site visits are found in **Appendix B. ADA Site Visit Summary**.

NYSDEC Pre-Application Meeting

Laberge Group and Scenic Hudson Staff meet with NYSDEC officials on December 19, 2019 to conduct a pre-application meeting review of preliminary recommendations. This meeting provided additional information and guidance for the RPC and Town regarding the proposed projects and associated regulatory issues. A summary of the meeting prepared by NYSDEC is found in **Appendix D. NYSDEC Pre-Application Meeting Summary**.

SECTION 2: REVIEW OF PAST PLANS

A review of the following reports relevant to each park and preserve has been completed to identify applicable recommendations and information that will assist in the development of goals and recommendations for the Riverfront Study.

- Town of Esopus Comprehensive Plan 2019.
- Town of Esopus Local Waterfront Revitalization Plan (LWRP)-1987 and the 2014 New York State Department of State (NYS DOS) Monitoring Report.
- Town of Esopus Scenic Resources Inventory Study-2016.
- Ulster County Main Streets: A Regional Approach: Port Ewen and Milton Case Studies-2011.
- John Burroughs-Black Creek Trail Plan-2017.
- Tidal Rondout Creek Watershed Management Plan (2015).
- Mid-Hudson Regional Economic Development Council Strategic Plan

Town of Esopus Comprehensive Plan 2019

The recently adopted Town of Esopus Comprehensive Plan 2019, has already started to result in positive momentum for the Town. Specifically, the 2019 Comprehensive Plan played an instrumental role in securing state funding to update the Town's Local Waterfront Revitalization Program (LWRP) and to prepare this Access and Connections Study from funding secured through the NYSDEC Hudson River Estuary Program. The 2019 Comprehensive Plan evaluated and provided recommendations on numerous key issues, including the Waterfront, Parks and Recreation, Natural Resources and the Environment; and Economic Development and Tourism, among others.



Public outreach and coordination conducted during the 2019 Comprehensive Plan planning process revealed the following three priorities related to the Town's waterfront:

1. The Town should pursue opportunities to increase public waterfront access;
2. There should be a focus on waterfront development in the Hamlets of Connelly, Sleightsburgh and Port Ewen; and
3. Waterfront commercial, entertainment and tourism are among the top economic development priorities.

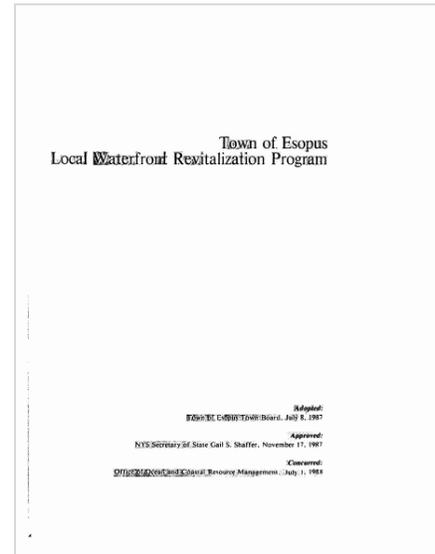
Specific 2019 Plan Goals and Recommendations applicable to the Town's waterfront resources include:

- *Economic Development Goal 3: Promote the Town of Esopus as a destination for outdoor recreation, agritourism, history, and the arts, while maintaining the community's existing character and quality of life desired by residents.*
 - ED-16: Prepare a tourism action plan and establish an entity that convenes regularly and considers priority areas for Ecotourism, Agritourism (including seasonal), Heritage Tourism, Waterfront and Recreation.
 - ED-23: Ensure that up-to-date information on local attractions, including trails, natural areas, and historic sites open to the public, are included in printed materials and on the Ulster County Tourism website.
 - ED-29: Forge partnerships with the Hudson River Maritime Museum, Kingston Waterfront Coalition, Scenic Hudson, and John Burroughs Association to maximize opportunities to promote Port Ewen, Sleightsburgh, and Connelly for maritime heritage, and John Burroughs Nature Sanctuary/John Burroughs Black Creek Trail for ecotourism.
 - ED-32: Complete the John Burroughs Black Creek Trail and continue to work with partners to ensure that the trail connects to the Empire State Trail to the south, Port Ewen to the north and contributes to the Town's economic vitality.
- *Economic Development Goal 4: Encourage the preservation and diversification of agricultural activities.*
 - ED-38: Formally establish and market an Agritourism Corridor between West Park and Ulster Park that focuses on the area's farms, wineries, and related outdoor attractions and integrate marketing with the corridors eco/recreational amenities.
- *The Waterfront: Revitalization, Recreation and Preservation Goal 1: Enhance the Town's waterfront as a recreation, education and commercial/entertainment destination for residents and visitors while balancing these improvements with the long-range protection of the Town's waterfront ecology and environment.*
 - W-1: Encourage compatible commercial, tourism, education/interpretive, and residential development in key waterfront locations with a focus on the Hamlets of Connelly, Sleightsburgh, Port Ewen and West Park.
 - W-2: Identify and support opportunities to integrate improvements in the Town of Esopus with existing tourism and educational resources on the Rondout Creek and Hudson River, including, but not limited to, the Hudson River Maritime Museum.
 - W-3: Enhance Freer Beach Park as the Town's primary destination for waterfront recreation. An initial concept plan for Freer Park prepared as part of the 2019 Plan has been replaced by improvements proposed in the Riverfront Plan.
 - W-4: Improve Sleightsburgh Park to enhance safety and security and provide expanded boat launching and recreational opportunities.
 - Recommendations W-4A through W-4E detailed specific improvements for Sleightsburgh Park and included suggestions to enlarge and/or alter the parking

lot circulation to improve safety efficiency of the parking lot; upgrade and expand boat launching facilities; improve the safety of the one-lane access road; consider opening and properly maintaining key trails; and implement measures to improve the Park's security and negative impacts on surrounding neighborhoods.

- W-5: Identify opportunities for new and improved public access to the Hudson River waterfront in the Hamlets of Ulster Park, Esopus and West Park and a car-top boat launch facility at Black Creek Preserve and Lighthouse Park.
- W-6: Evaluate potential opportunities and implement feasible options to enhance public access on the Rondout Creek in Sleightsburgh and establish new access opportunities in Connelly.
- W-8: Evaluate the feasibility of repurposing the Town's water treatment plant property into a new riverfront park if the Town decides to connect into the City of Kingston water supply.
- *Parks and Recreation Goal 1: Ensure adequate Town parks and recreation opportunities are available to residents and visitors throughout the Town of Esopus. These facilities should be well maintained and provide a wide variety of recreational opportunities to all ages and skill levels.*
 - PR-1: Consider regular evaluations of all Town parks and recreational facilities to ensure proper maintenance, adequacy of amenities meeting current and future community needs, and ensuring each park is accessible and provides recreational opportunities for people with disabilities.
 - PR-2: Encourage siting compatible facilities and uses within Town parks, to complement existing features and create a greater attraction to park locations.
 - PR-3: Identify and support opportunities to integrate improvements in Town parks with existing tourism and educational resources.
 - PR-5: Seek to make direct connections from the Hamlet of Port Ewen to the Empire State Trail in the City of Kingston via US Rt. 9W, and construct new pedestrian and bicycle infrastructure to ensure safe and efficient connections by all ability and skill levels.
 - PR-6: Collaborate with NYSDEC, Scenic Hudson, the John Burroughs Association and additional relevant stakeholders to complete the Implementation of the John Burroughs Black Creek Trail Plan and continue to work with partners to ensure that the trail connects to other park/preserve lands, roads and trails, including the Sojourner Truth Trail, the Empire State Trail to the south, and Port Ewen and the Empire State Trail in Kingston to the north in order to contribute to the Town's economic vitality through tourism.
- *Natural Resources and the Environment Goal 2: Conserve and promote sustainable aquatic and inland water natural resources.*
 - NR-4: Use Scenic Hudson's "Protecting the Pathways" interactive map to assess those habitats and shorelines under the threat of inundation and erosion by sea level rise (SLR), wave action and storm surge and to assess the possible zones for tidal wetland preservation and migration in the face of SLR in the Hudson River.

- *Natural Resources and the Environment Goal 3: Conserve and promote natural habitat connections across the landscape to help maintain healthy populations of native plants and animals, and their ability to move across the landscape as needed.*
 - NR-9: Preserve connections between natural habitats on adjacent properties.
 - NR-10: Consider restoring and maintaining appropriate buffer zones of natural vegetation along streams, shores of water bodies and wetlands, and at the perimeter of other sensitive habitats.
- *Pedestrian and Bicycle Safety Goal 1: Provide an efficient, safe and connective transportation system that takes into account not only automobiles but also pedestrians and bicyclists of all ages and abilities, which is coordinated with existing and future growth needs. This system should also be economical, responsive to existing adjacent land uses and coordinated with existing and future growth needs.*
 - PS-7: Encourage NYSDOT to plan for and install sidewalks and/or a separated pedestrian trail/bicycle lane along the US Rt. 9W arterial connecting Port Ewen and the rest of the Town of Esopus to Kingston and the Greenline Trail/future Empire Trail.
 - PS-8: Encourage NYSDOT to plan for and establish a formal State Bike Route along US Rt. 9W that would connect the Town’s numerous hamlets, parks and recreational amenities and other attractions with the Hudson Valley Rail Trail, the Walkway Over the Hudson State Historic Park, the Empire State Trail and potential future bike loop of the John Burroughs Black Creek Trail.
 - PS-9: Work with the Town of Lloyd, Ulster County, Scenic Hudson, the John Burroughs Association, and other John Burroughs Black Creek Trail partners to identify, establish, sign and promote bicycle connections along Floyd Ackert Road and Swartekill Road with the goal of creating a bicycle loop connecting the Empire State Trail/Hudson Valley Rail Trail with the John Burroughs Nature Sanctuary/Slabsides and other John Burroughs Black Creek Trail destinations as well as the Walkway Over the Hudson State Historic Park.
 - PS-10: Consider constructing designated pedestrian connections to Freer Beach Park from Minturn and Tilden Streets.



Town of Esopus Local Waterfront Revitalization Program (1987)

The Town of Esopus Local Waterfront Revitalization Program (LWRP) was adopted in 1987. The LWRP is a plan for the preservation of a 14 mile stretch of coastal waterfront in the Town along the Hudson River and a portion of the Rondout Creek. For this designated area, the plan outlined and described desired land and water uses, geology, natural habitats, wetlands, air and water quality, and scenic resources. It is

important to note that LWRP is over 20-years old and is scheduled to be updated beginning the in 2020. Despite the age of the LWRP, the document remains key in setting long-term development and preservation policies for the Town's waterfront.

The LWRP outlines 44 policies, although not all are relevant to this Riverfront Study. Relevant policies are described below and signify what is considered (at the time of the LWRP adoption) most important to improve upon and protect in order to achieve the goals of the State's program.

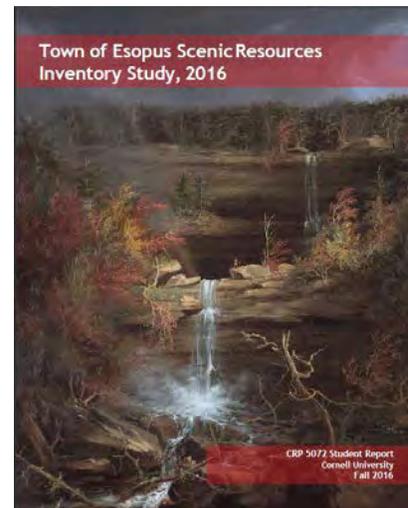
- Restore, revitalize and redevelop deteriorated and underutilized waterfront property, particularly in Connelly and Sleightsburgh.
- Facilitate the creation of, and siting for, water dependent uses and facilities on or adjacent to coastal waters.
- Strengthen the economic base with small harbor areas where unique maritime activities and businesses will locate, and encourage other forms of associated development.
- Protect natural aquatic resources including fish and wildlife, from human activity and hazardous waste.

The 2014 NYSDOS Monitoring Report Update describes improvements which the Town has undertaken to date (2014) related to the described 44 policies of the original LWRP. The improvements the Town had made up and until that point include:

- Improved public access to the Hudson River and Rondout Creek waterfront.
- Constructed a boat launch and fishing platform and associated site amenities at Sleightsburgh Park.
- Improved public walking trails including the Port Ewen Greenway Riverside Trails, trails at Sleightsburgh Park and Esopus Meadow Preserve.
- Updated zoning districts within waterfront area; designated riverfront residential districts RF-1 and RF-2 in 1987. RF-1 was established to preserve the unique character of the area located between the Hudson River shoreline and US Rt. 9W in the central area of the Town's waterfront.
- Updated Zoning Law: Completed a zoning study in 1994 which included the expansion of commercial districts and adopted an updated zoning law in 1995.
- Creating a stormwater law entitled "Stormwater Management and Erosion and Sediment Control" in 2007.
- The DOS review also identified the need for an updated LWRP.

Town of Esopus Scenic Resources Inventory (Draft 2016)

The scenic resources of the Town of Esopus are part of a distinct cultural heritage that is nationally significant. To help understand and plan for the protection and enhancement of the Town's various scenic resources, Land Use and Environmental Planning students at Cornell University prepared this document. The analysis identified 57 properties considered important to protecting the local and regional



scenic resources. Scenic resources may be defined as landscapes and physical spaces recognized for their distinctive and/or visually striking qualities. The benefits of scenic resources include: higher property values, increased tourist revenues, and a sense of pride for the beauty that is part of a community. The inventory listed plans and protections that fortify the need to keep these scenic resources, and the tools by which to do so.

The majority of those properties identified as a high priority are located in the eastern portion of the Town of Esopus and were recognized due to their views of the Hudson River and the Hudson Valley. Many of these properties are located adjacent to the properties examined in the Riverfront Study and benefit from these locations.

The Scenic Resources Inventory noted specific tools for conservation of aesthetically pleasing locations which included the following:

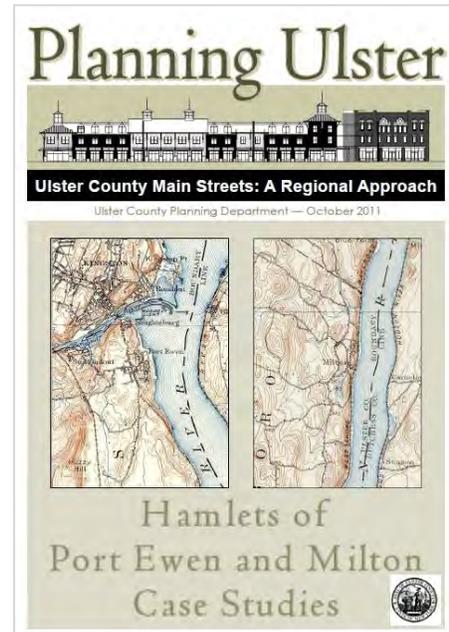
- Create growth centers in hamlet areas and development regulations related to those. Growth Centers are located in areas where development has historically been established and sufficient infrastructure exists.
- Encourage the utilization of Cluster Development patterns, especially in rural or scenic areas.
- Codify scenic overlay districts to achieve preservation of viewsheds.
- Establish a Town conservation easement program, as well as a purchase or transfer of development rights program, allowing scenic areas to be preserved, but not at a loss for the property owner.

Ulster County Main Streets: A Regional Approach: Port Ewen and Milton Case Studies

The Port Ewen and Milton Case Studies, prepared by the Ulster County Planning Department, is a report that includes two county case studies for the hamlets of Milton (Town of Marlborough) and Port Ewen, and presents a comprehensive approach to promoting main street revitalization and in part, discusses and provides recommendations for making waterfront connections.

Relevant recommendations include:

- Support of more contextual site redevelopment.
- Improve existing shared parking, cross-connection access, and possible capital investments in better access from Broadway to waterfront sites.
- Access to the waterfront and improvement of its amenities should be a high priority, particularly on the Rondout Creek due to the deep-water harbor.



- Coordinating events at public institutions and parks to involve coordination with community and nonprofit organizations such as, the Save Esopus Lighthouse Commission, and Scenic Hudson, among others.
- Trail connection linking waterfront Rondout, Broadway, and the Hudson River.

John Burroughs-Black Creek Trail Plan (2017)

The John Burroughs Black Creek Trail (JBBCT) Plan studies and lays out an 11-mile multi-modal trail project which connects the 1,400 acres of existing conserved land along the Black Creek corridor. This effort was led by Scenic Hudson and John Burroughs Association in partnership with a steering committee made up of representatives of the Towns of Esopus and Lloyd, regional non-profits, state agencies, and local businesses.



The Black Creek corridor offers a wide variety of topography and unique habitats within a relatively urbanized region, supporting a diverse range of plant and animal life. These features composed the beautiful landscape that inspired one of America’s great nature writers, John Burroughs. Today, the low level of development in the corridor allows for a nearly continuous forest from Illinois Mountain in the Town of Lloyd to the Hudson River in the Town of Esopus. This landscape is projected to retain diversity as it adapts to climate change.

The JBBCT seeks to interconnect this landscape, improving accessibility while highlighting the life and legacy of John Burroughs. As this trail is developed, it is important to strike a balance between: 1) creating a regional recreation destination, 2) protecting the sensitive local ecology, and 3) promoting economic development within the Towns of Esopus and Lloyd. Key elements of the plan include determining access and connection points for the expansion of hiking, biking, and canoe and kayaking opportunities. Other major elements include a cohesive wayfinding and branding for the trail, thereby establishing a recognizable multi-town destination.

The revitalization of properties along the way, identified as connections, can easily be made to these sites off the trail. This effort would work to support economic growth, putting property at its highest and best use and back on tax rolls. Some identified redevelopment proposals include the Saint Cabrini Home, Christian Brothers Monastery, Colonel Payne Estate, and Aberdeen on the Hudson. The Plan describes these as key re-development sites, and that they would be instrumental in the creation of a boutique hotel cluster. The Plan is concluded by an aggressive implementation timeline for development of the trail, which describes major milestones and possible funding sources.

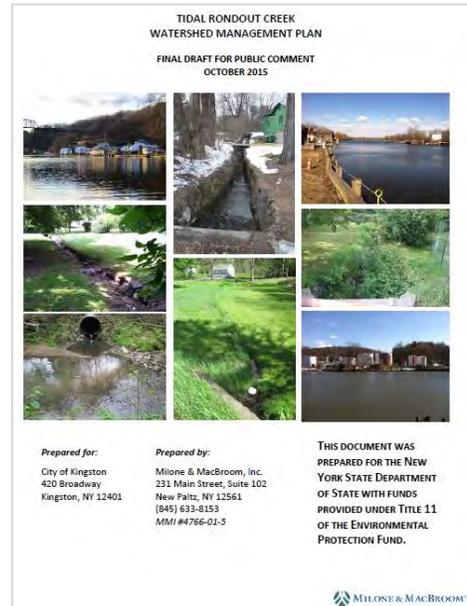
This Planning effort is instrumental in determining needed improvements at the Black Creek Preserve and has already been effective in acquiring grant-funding support from the Environmental Protection Fund. Additional recommendations from this report and will continue to be critical to future funding applications being sought.

Tidal Rondout Creek Watershed Management Plan (2015)

The Tidal Rondout Creek Watershed Management Plan describes management practices and outlines goals and strategies for the management of the tidal Rondout Creek. The 11-square-mile watershed of the tidal section of Rondout Creek consists of portions of the city of Kingston, as well as the Towns of Ulster and Esopus. Land use actions within these three communities may directly affect water quality in the watershed.

Major recommendations described in the Watershed Plan include:

- Restore tributary streams and sub-watersheds to improve water quality through improved stormwater management techniques and better drainage.
- Create a vibrant waterfront by improving water quality and encouraging appropriate water related or commercial development.



This Plan mainly deals with drainage and run off, and the infrastructure related to water quality assurance. The Plan also touches on development and growth and encourages the realistic use of waterfront areas.

Mid- Hudson Regional Economic Development Council Strategic Plan/Progress Reports

The Mid-Hudson Regional Economic Development Council Strategic Plan identified many regional goals and objectives for all communities in the mid-Hudson Valley region to collectively strive for. The councils serve as the central hub for identifying, outlining and supporting community priorities and seeking grant funding through the State’s Consolidated Funding Application (CFA) process. The Mid-Hudson objectives and goals have been tailored specifically for this region of the State and reflect the areas strengths and opportunities in support of key projects which are perceived to make a regional impact. Priorities in this region are related to job growth, revitalization, and growth of





business all in order to compete and retain residents from relocating to larger urban areas to the north, such as the Albany area, or the south, the New York metropolitan area.

The major relevant goals for the region are:

- To leverage the region's outstanding natural resources, tourism industry and agriculture as a methodology to protect agriculture and the environment as these are important to tourism and quality of life attributes.
- To foster housing investment to attract and create jobs.

All of these goals will make the region more attractive for recent graduates and young professionals to stay in the region. This in turn will create opportunities for entrepreneurship and small business to help promote investment and create job opportunities. Linking the Town of Esopus Comprehensive Plan 2019 to these goals will increase the Town's opportunity to access State funding assistance.

SECTION 3: EXISTING CONDITIONS

This Existing Conditions summary provides an overview of the five waterfront parks and preserves subject to the Town’s Riverfront Access and Connections Study. (Riverfront Study). The summary of existing conditions includes an overview of each site’s recreational amenities, deficiencies, and opportunities, along with a review of adjacent land influencing characteristics and potential future connections. Data collected during the three sites visits discussed previously are also included in the Existing Conditions summary.

Sleightsburgh Park

Location

Refer to the *Sleightsburgh Park Existing Conditions Map* and the *Sleightsburgh and Freer Park Vicinity Map* for additional reference during the following assessment.

The Town of Esopus’ Sleightsburgh Park, also known as the Sleightsburgh Spit, is a 79-acre park located at the confluence of the Rondout Creek and the Hudson River. Sleightsburgh Park is located within in the northeast corner of the Town, known as the Hamlet of Sleightsburgh. The Park has been permanently protected since 1996 through a conservation easement held by Scenic Hudson. The Town’s 1987 Local Waterfront Revitalization Program identified the property as an ideal location for a public park and for creating public access to the Rondout Creek and Hudson River.

Owner:	Town of Esopus
SBL:	56.44-1-3
Area:	79.00 Acres
Zoning:	Waterfront Recreation District



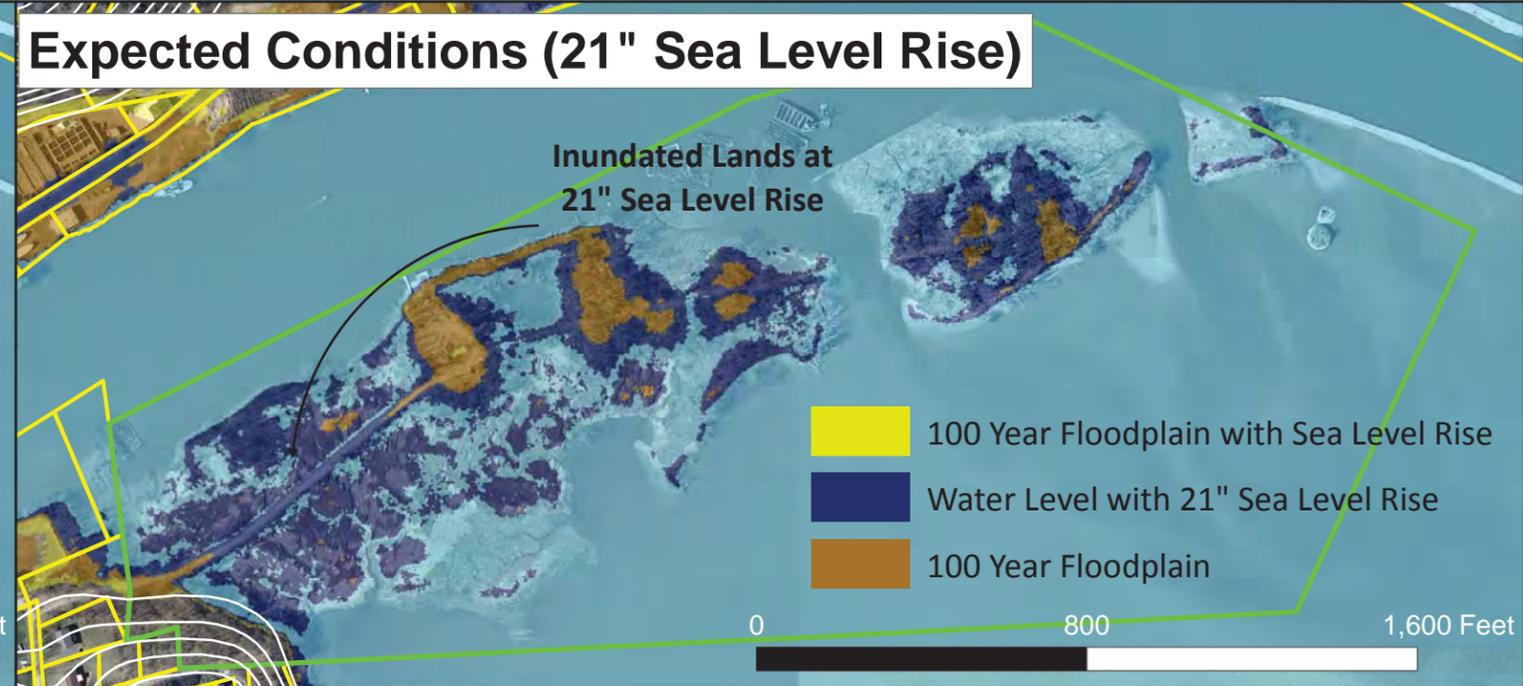
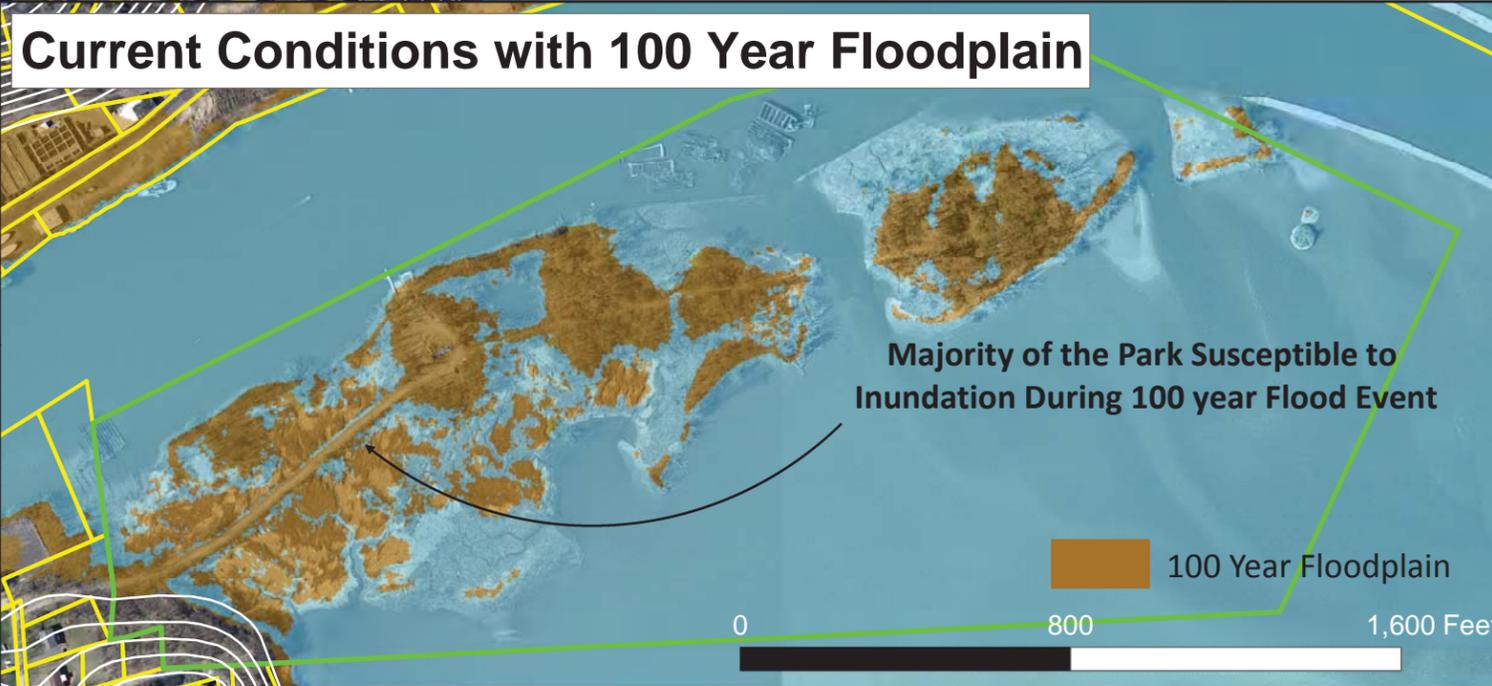
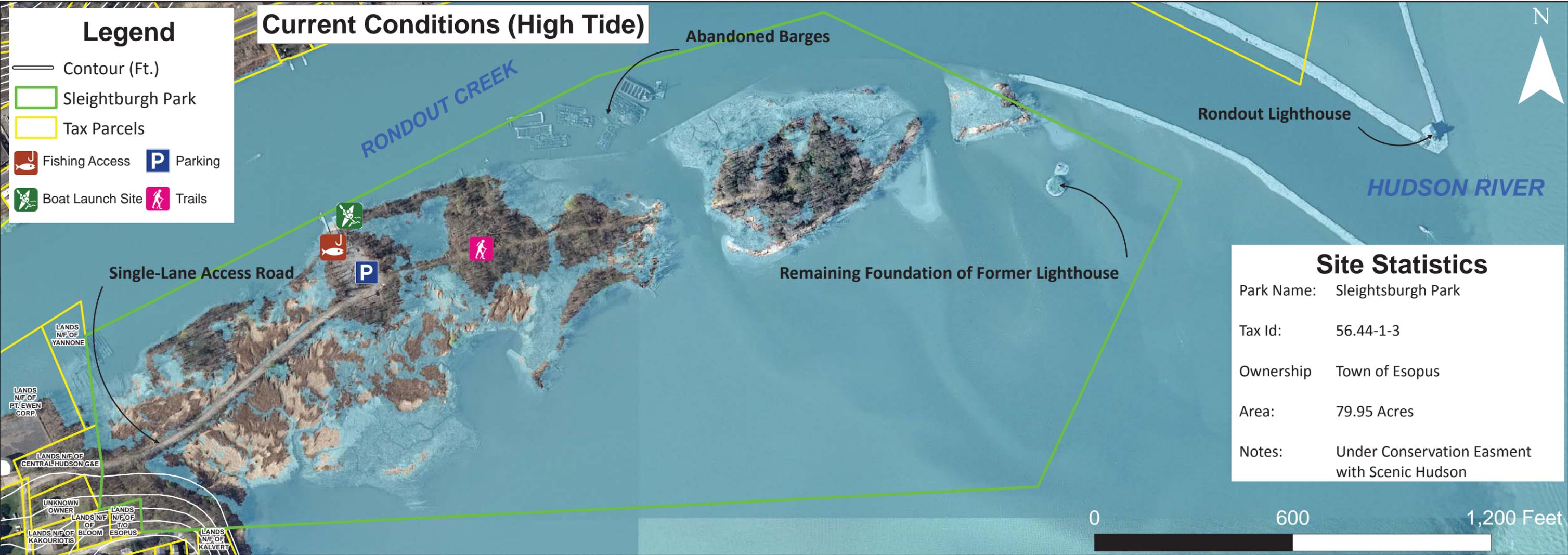
Figure 1. Sleightsburgh Park

The Kingston Lighthouse is located adjacent to Sleightsburgh Park and across the Rondout on the Hudson River. This is a historic lighthouse cautioning passing ships of the shallows in the area and inlet to the Rondout Creek. The Parks is located along the Hudson River where widths range between three quarters to approximately one mile to the opposite shoreline in the Dutchess County. The Rondout Creek at this location is around 500 feet wide.

Sleightsburgh Park consists generally of low laying tidal flats, features a peninsula and two islands immediately to the east of the mainland portion. The boat ramp, fishing platform and parking lot are the most intensely used areas of the Park.



Page Intentionally Left Blank





Sleightsburgh/ Freer Beach Parks Vicinity

Esopus Riverfront - Access & Connections Study

Data obtained from NYSGIS Clearinghouse and Scenic Hudson. April 2019. Accuracy not guaranteed.

This Project has been funded in part by a grant from the New York State Environmental Protection Fund through the Hudson River Estuary Program of the New York State Department of Environmental Conservation.

Amenities

Access and Parking

The Park is accessible via a one-lane 1,100-foot gravel road that is bordered by New York State Department of Environmental Conservation (NYSDEC) jurisdictional wetlands. The access road can become congested at peak times with little room to allow two oncoming vehicles to pass each other. Widening the access road would involve direct impacts to wetlands and require regulatory approvals that may be difficult to obtain, in addition to the associated costs. As a result, expanding the road is not a feasible option being considered. There are alternatives to improve the safety of the access road and are discussed in more detail below. In addition to its limited width, the Park's access road is also subject to flooding and the gravel surface, which can become rutted, must be routinely improved. The road is not plowed during the winter.



Access Drive to Sleightsburgh Park

To reach the Park's access drive, visitors must navigate narrow residential streets through the Hamlet of Sleightsburgh. While vehicles, especially those towing boats, may find it difficult to drive along these streets, it also presents a safety concern for local residents with complaints of speeding vehicles raised during the comprehensive planning process.

North Broadway provides access into the Hamlet of Sleightsburgh, which begins as an unusually wide road (ranging from 35 to 40 feet between pavement edges) and does not have a centerline, marked shoulders or sidewalks. These conditions, combined with the roads downhill change in elevation contribute to higher vehicle speeds. To compound the concern, North Broadway quickly narrows to between 20 and 24 feet just before Third Avenue.



N. Broadway Leading into Sleightsburgh

It is recommended that the Town look into options for calming traffic into and out of the Hamlet of Sleightsburgh. Potential options include a center line, marking of shoulders and adding street trees to help create a narrowing effect for drivers that tends to calm traffic speeds. Additional and appropriate signage alerting drivers of the narrowing street and speed limit is also recommended, including speed limit signs painted onto the driving surface and other markings to assist in calming traffic. In addition, a seasonal radar/speed indicator sign could be positioned on North Broadway at the beginning and end of the school year and fishing season.

An additional concern recently identified is the limited sight distance at the intersections of N. Broadway and 1st and 3rd Avenues due to an overgrowth of vegetation. It is recommended that vegetation at key intersections in the Hamlet of Sleightsburgh leading to the Park (and throughout the Town) be maintained to preserve adequate sight distances.

The Park's parking lot is able to accommodate about 20 vehicles. There are no marked parking spaces, nor are there any designated ADA compliant parking spaces. The parking lot can become congested, especially on weekends and peak fishing times. ADA compliant parking spaces should be provided, and, at a minimum, parking spaces for vehicles with boat trailers should be marked to improve the overall efficiency of the parking lot. The parking lot is composed of gravel/crushed stone that is fairly stable for individuals with difficulty walking. However, there is no formal access route or an ADA accessible route to the boat launch or fishing pier.



Parking Lot at Sleightsburgh Park

Park Access and Neighborhood Concerns

The Park is officially open from dawn to dusk between April 1st and October 30. A locking gate currently restricts access to the Park between dusk and dawn and during the off-season months. Town employees unlock the gate in the morning and relock it in the evening. Recently, there have been complaints by residents in the Hamlet of Sleightsburgh about loitering in the Park after hours, overcrowding on weekends and holidays, vandalism, oversized boats and inappropriate recreational vehicular traffic (quads and dirt bikes).

These complaints, along with the legal obligations outlined in the 1996 Conservation Easement when the Park was deeded to the Town, have factored into recent decisions to prioritize safety considerations on Park usage and hours of operation. In 2019, the Town began locking the gate at dusk and unlocking the gate again in the early dawn hours. This has presented issues with hunters and anglers that would like to access the Park before dawn.

In the Spring of 2020, the Town sought legal review of the Conservation Easement insofar as the Town wishes to limit its liability to address known risks associated with the Park, including reasonable maintenance of the boat launch and access to the same, maintaining the parking area and the walking trails, limiting the hours of access year-round (dawn to dusk), securing the Park as best as possible after hours, providing adequate warnings/signage to those utilizing the Park, and taking steps to curb illegal activity. Cameras were also recently installed to discourage vandalism, but not yet operational due to a

dependency on the completion of telecommunications infrastructure. The Town was informed by Spectrum that service to the video cameras will require a build out and extension of infrastructure (free of charge to the Town) that entails a period of up to 180-days for activation to commence. The infrastructure should be completed by November 2020.

During the summer of 2020, the WAB formed a sub-committee to help evaluate potential solutions and ensure both Sleightsburgh residents and angler/boating/kayaking stakeholders were identified. Two facilitation sessions were held in August with each group of stakeholders to ensure all issues were identified, to identify their vision of an ideal solution and to identify their representatives for mediation. Professional mediators were provided by the non-profit Ulster County Dispute Resolution Center. The first mediation session did not result in an agreement. However, there was some indication that there might be opportunities for a compromised solution. Although there were many solutions the stakeholders agreed upon, the second mediation session did not yield a resolution between the groups regarding hours of access.

The WAB sub-committee provided the results of the mediation sessions to the Town Board in September 2020 for consideration. The Town Board is currently evaluating all options presented to facilitate safe access and usage while addressing neighborhood concerns. A summary of the results are located in **Appendix E. Sleightsburgh Park Mediation Summary.**

According to Chapter 98, "Park Rules and Regulations" (§ 98-4 Hours) of the Town of Esopus Town Code, Sleightsburgh Park is intended to be available out of season to Town residents only. Residents will be able to access the Park through the use of a key provided by the Town, requiring a deposit and proper identification. Therefore, § 98-4 should be revised accordingly once the Town Board determines the preferred process for allowing off-season access.

Boating and Water Access

The main recreational attraction at Sleightsburgh Park is the boat launch. The launch is open to both Town residents and non-residents free of charge. This is one of only a few motorized boat launches in the region, with the next closest one at Kingston Point Beach, approximately three miles by vehicle to north in the City of Kingston. However, the water depth at that Kingston location is known to restrict watercraft and lacks designated trailered parking. The next closest launch is Robert Post Park in the Town of Ulster, approximately 5 driving miles to the north.



Boat Launch at Sleightsburgh Park

The boat launch at Sleightsburgh Park consists of a concrete ramp and a 40-foot dock connected to the shore by a 20-foot gangway. The floating dock is not ADA accessible due to a six-inch concrete step, along with a lack of toe guards and hand rails, where appropriate. The gangway may also exceed the maximum slope leading down to the dock, as the angle of the gangway varies with the tide.

The dock can become congested with people launching and retrieving their boats, with limited room to temporarily dock boats while waiting to come ashore or to park vehicles after launching. Room for docking boats is further constricted by a kayak launch that is attached to the western side of the dock. Extending the dock to the west would create additional space for temporary docking and provide a more suitable location for the kayak launch. Boats up to 23 feet are allowed to launch at Sleightsburgh Park. Swimming is not permitted at the Park and is not being considered as an option in the future.

Sleightsburgh Park provides a unique location to launch watercraft with the ability to explore the Rondout Creek and the Hudson River. The launch is heavily used by anglers, pleasure boaters, canoers and kayakers. The Park is also a destination on the Hudson Valley Greenway Water Trail, a water trail for canoers and kayakers stretching from Pier 96 in New York City to Washington County. This designation increases the popularity of the park for paddlers and is a benefit to the Town. Opportunities to make the most of the trail designation for the benefit of the Town should continuously be evaluated.

Another benefit of Sleightsburgh Park is its close proximity to the foundation of the old Rondout Lighthouse and the existing lighthouse. The foundation is located just south of the Creek/River confluence while the replacement Rondout Lighthouse is located on the northern side of the confluence. Boaters can enjoy views of both sites and guided tours of the Rondout Lighthouse are provided by the Hudson River Maritime Museum.

Fishing, Hunting and Bird Watching

The Park is a very popular fishing location and the boat launch sees some of its heaviest use in the early spring during the striped bass spawn run. The striped bass season (striper season) can begin as early as late March and ending as late mid-June. The striped bass spawn run usually peaks in May.

In addition to providing a location for anglers to launch their boats, there are several locations along the Park's shoreline to fish in both the Rondout Creek and Hudson River. To the east of the boat launch is an ADA accessible 30-foot wide concrete fishing platform. The platform features railings for safety, two sitting benches and picnic tables. No ADA accessible picnic tables are provided at the Park.



Fishing Platform at Sleightsburgh Park

The Park is also a popular location for duck hunting during the fall and early winter seasons and is known for as a prime location for bird watching. With the upland areas of Sleightsburgh Park being limited, the Town has indicated that it would like to clarify the types of hunting that should be permitted to ensure the safety of all Park users.

Water Depth

The Rondout Creek off Sleightsburgh Park is sufficiently deep to support access by larger watercraft and also contributes to the popularity of fishing at the Park. According to the National Oceanic and Atmospheric Administration's (NOAA) Wappinger Creek to Hudson nautical chart (NOAA Nautical Chart), the water depth at the mouth of the Rondout is approximately 13 feet. From this location west to the Wurts Street Bridge, the depth varies between 11 feet and 15 feet, reducing to around 10 feet at the CSX railroad bridge. The southern shore of the Park along the Hudson River is much shallower, ranging from one to two feet in some locations. At low tide, water access can be restricted, particularly on the Park's southern side.

Hiking Trails

Sleightsburgh Park includes limited (less than a mile) hiking trails, with the most utilized trail along the northern shoreline of the Rondout Creek. This trail provides access for anglers, duck hunters and birders. In addition, this trail offers views of numerous partially submerged barges, remnants from the days of the Delaware & Hudson Canal.

Central Hudson Gas and Electric (Central Hudson) owns a right-of-way (ROW) through the center of the Park that provides access to their underground natural gas line. The ROW, which begins at Everson Street and includes the Park's access road, provides access to the eastern end of the peninsula and links up with other, currently unmaintained trails.



Trail Along Northern Shoreline

From the tip of the peninsula along the ROW, two islands can be seen that make up the rest of the rest of the Town's landholdings. While the islands may sometimes be accessible during low tide, the Town strictly prohibits access due to dangerous currents in this area and the possibility of being stranded on the island when the water rises.

While the Town has not been maintaining the hiking trails for the last several years, Central Hudson occasionally clears vegetation from the ROW. The Town's Comprehensive Plan 2019 recommended that the Park trails be properly maintained and possibly expanded upon.

Structures

With the exception of the fishing platform and boat ramp, there are no permanent structures at Sleightsburgh Park, a restriction set-forth in the Conservation Easement with Scenic Hudson. Absent the restriction in the easement, the Park is highly susceptible to flooding and permanent structures are not advisable.

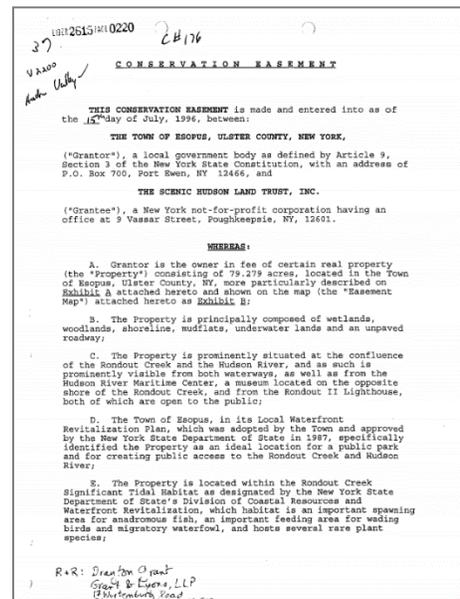
The site does have a temporary restroom (porta potty) located at the southeast corner of the parking lot. Beginning in 2020, the Town began providing an ADA accessible porta potty.

Utilities

With the exception of recently installed security cameras as noted above, there are no utilities that serve Sleightsburgh Park. This issue is in the process of being resolved. As previously stated, Central Hudson does maintain an underground natural gas line through the center of the Park.

Easements, Restrictions, and Permitting

As previously discussed, Sleightsburgh Park is subject to a Conservation Easement held by Scenic Hudson since 1996. The easement specifies that the Park shall be open to the general public from dawn to dusk and that no member of the general public shall be excluded. The Town does reserve the right to prohibit access when weather or other conditions dictate. The easement also allows the Town to collect user fees for the use of the boat launch by non-town residents, provided these fees are reasonable, non-prohibitive and commensurate with other fees for similar uses in the region. The Town currently does not charge fees to non-town residents.



Sleightsburgh Park Conservation Easement

The easement sets forth allowed uses and restrictions for future improvements. Permitted uses include boat launching, fishing, hunting, nature study, picnicking, and other forms of passive recreation. When the Park was established, the easement allowed for the construction of the boat launch and fishing pier, along with minor improvements to the access road, the establishment of a parking lot, the installation of benches and signs and the creation of a nature trail. Generally, the cutting or removal of trees is prohibited, except as follows: the minimum necessary to carry out improvements permitted in the easement; to remove trees and limbs which are fallen, dead, diseased or dangerous; to selectively prune, cut and remove individual trees for landscaping or ecological purposes; and for such other reasons Scenic Hudson may approve in advance.



The easement highlights the importance of a state-listed rare plant known as *Carex frankii*, known to exist at Sleightsburgh Park, and also states that no action shall be taken or permitted that would negatively impact the species. This rare plant is discussed in more detail below under ***Natural Resources and Ecological Conditions***. Overall, any further improvements, except ongoing maintenance and minor improvements for public health and safety reasons, shall require review by Scenic Hudson for conformance with the easement and non-conforming improvements may also require a conservation easement amendment.

The existing boat launch, floating docks, fishing pier and past improvements to the access road received NYSDEC and US Army Corps of Engineers (ACOE) approvals in 1994. The easement specifically prohibits widening of the access road or enlarging the parking lot along with any other improvements not specifically permitted within the easement without the necessary regulatory permits and written permission by Scenic Hudson. The Town of Esopus will coordinate with Scenic Hudson on any proposed improvements to ensure full compliance with the conservation easement.

As stated above under “*Hiking*,” Central Hudson Gas & Electric owns a ROW through the center of the Park that provides access to their underground natural gas line. The ROW, which begins at Everson Street and includes the Park’s access road, provides access to the eastern end of the peninsula. Central Hudson provides regular maintenance of the ROW, including mowing, to preserve their access to the natural gas line for monitoring and repair.

Natural Resources and Ecological Conditions

Sleightsburgh Park is located within the designated NYSDOS Significant Coastal Fish & Wildlife Habitat (SCFWH) of the Rondout Creek. To be designated a SCFWH, NYSDEC evaluates the significant coastal fish and wildlife habitat areas, and following a recommendation by NYSDEC, the Department of State designates and maps the specific areas. A technical memorandum, developed by NYSDEC describes the rating system used to identify and rate SCFWH.

This Rondout Creek SCFWH hosts many unique plant and animal species and serves as potential habitat for rare animals including Atlantic Sturgeon, Shortnose Sturgeon, bats listed as threatened or endangered, significant waterfowl winter concentrations, and significant Anadromous Fish concentrations. The park is also home to numerous other plant and animal species, is a popular duck hunting location and provides healthy habitat for a variety of amphibians.

As mentioned above, the state-listed, Endangered plant known as *Carex frankii* (also known as Frank’s sedge), has been documented at Sleightsburgh Park among other rare or endangered species. A NYSDEC permit was granted for the original improvements outlined in the conservation easement which required the preparation of a plan to manage, monitor and protect the population of this perennial sedge. The conditions of the NYSDEC Permit were made a part of the conservation easement and required the Town to partner with Scenic Hudson to monitor and manage *Carex frankii*.

The management plan was completed in November 1996 by Scenic Hudson and provided to the Town of Esopus. As per the conservation easement, Scenic Hudson surveyed the *Carex frankii* species population in 2012 and prepared a package including a monitoring plan in 2013 to further guide the Town in the development of an annual monitoring program. The Town of Esopus Environmental Board has been and will continue to be responsible for conducting annual surveys and submitting their results to Scenic Hudson. Future management and development projects at Sleightsburgh Park must be designed to avoid impacts to *Carex frankii* in accordance with the conservation easement.



Carex frankii

The entirety of the property, with the exception of the access road, parking lot, boat ramp and fishing platform are wetlands subject to the jurisdiction of NYSDEC. Most activities in these wetlands or the 100-foot adjacent areas would require permits.

This area of the Hudson River has a NYSDEC Water Classification of A. Classifications of A, AA, A-S, and AA-S indicate a best usage for source drinking water, swimming and other recreation, and fishing. The Rondout Creek has a C Classification, which is best used for fishing and are suitable for fish, shellfish, and wildlife propagation and survival as well as primary and secondary contact recreation.

It should be noted that the Kingston Sewage Outfall is located across the Rondout Creek from the Park. During periods of intense rain events in the past, advisories have been issued for the Rondout Creek in the area of the Park. There are also fish consumption guidelines established for this portion of the Hudson and the tidal Rondout.

Sea Level Rise

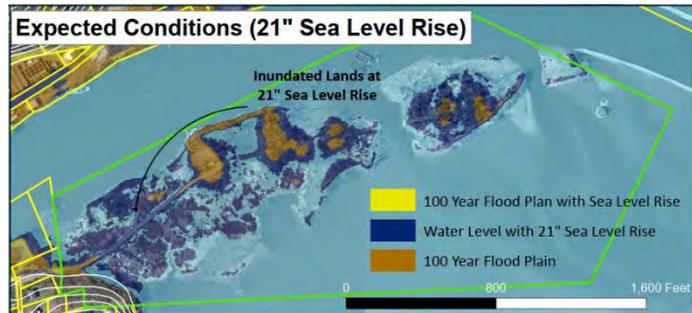
Over the past 100-years, the Hudson River has risen approximately one foot. Factors contributing to sea level rise include higher water temperatures which causes thermal expansion, melting ice caps, glaciers and ice sheets, and the slow subsidence of the land surface in coastal regions of New York State. The effects of sea level rise are exacerbated by increases in extreme precipitation and strong



Scenic Hudson Sea Level Rise Mapper

storms associated with climate change.¹ In recent decades, the rate of sea level rise has accelerated, averaging approximately 4.5 millimeters per since 1991.² Sea levels are expected to continue rising in the coming decades.

Based on New York State data, sea levels are projected to rise between 11” and 21” over the next 30 years (NYSDEC Part 490 Projected Sea-Level Rise, Low-Medium Projection to High-Medium Projection).³ Utilizing NYS projections and with the assistance of data data from Scenic Hudson’s Sea Level Rise Mapper, the potential implications of a 21” rise is depicted on the Sleightsburgh Park Existing Conditions Map⁴. It should be noted that projected sea level rise figures are estimates, and the increase may happen at a faster or slower rate.



Project Sea Level Rise at Sleightsburgh Park
(From Existing Conditions Map)

Sleightsburgh Park already experiences flooding impacts during major storms due to the fact that a majority of the Park is within the 100-year floodplain. Specifically, the access road is subject to flooding during major storm events and projected sea level conditions are expected to exacerbate Park impacts. A rise of approximately 21 inches will result in the entirety of the access road being under water at normal water conditions. The existing parking lot and boat launch are projected to remain above water along with the northern shoreline and some upland areas to the east at normal water levels, although during a 100-year storm, the entire Park is projected to be inundated and inaccessible. Future improvements and associated investments at Sleightsburgh Park must take into consideration the potential impacts of sea level rise. The first step should be to consider options for improving resiliency. Specifically, the Town, in partnership with NYSDEC and other stakeholders should begin evaluating options for and the feasibility of protecting Sleightsburgh Park from the negative impacts of the impending sea level rise. The Town of Esopus’ Local Waterfront Revitalization Program update is a logical place to begin this evaluation.

Invasive Species

According to data from NYSDEC, the following invasive species have been identified at Sleightsburgh Park and in proximity to the boat launch: Eurasian Watermilfoil, Water Chestnut, Zebra Mussel, Quagga Mussel, and Asian Clam. Although the Water Chestnut is identified as having a presence here, it is a minor problem at Sleightsburgh Park as compared to other parks along the Hudson, particularly Freer Park,

¹ Riverkeeper, <http://www.riverkeeper.org/news-events/news/policy-news-news-events/sea-level-rise/>. Accessed April 2020

² Scenic Hudson, <https://www.scenicudson.org/our-work/climate/sea-level-rise/>. Accessed April 2020

³ <https://www.dec.ny.gov/regulations/103877.html>. Accessed April 2020

⁴ Scenic Hudson, www.scenicudson.maps.arcgis.com/apps/MapJournal/index.html?appid=3a3d0dc3884c4637ad0a51f4aa912189. Accessed August 2019.

Esopus Meadows Preserve, and Lighthouse Park. This is due to the deeper water found in the Rondout. The water off the Park's southern shoreline is shallow and more susceptible to Water Chestnut.

Scenic Resources

Sleightsburgh Park is within the Estates District Scenic Area of Statewide Significance (SASS). Per the NYSDOS, this area constitutes a landscape of national and international significance which evolved through the development of a rich cultural heritage in an outstanding natural setting. The majority of Park is undeveloped. The boat launch and parking lot, the only developed areas of the park, are visible from the Rondout Creek, with limited views from the City of Kingston shoreline.

Cultural and Historic Resources

The Rondout Creek was a major deepwater port in the 19th and early 20th centuries. Due to the high volume of shipping, it was necessary to construct a lighthouse to mark the location of the Creek and the shallow areas around it. The first lighthouse was constructed out of wood in 1837. This lighthouse was damaged by a storm and replaced with a stone structure in 1867. The foundation of this lighthouse can still be seen at the southern side of the confluence.

The current lighthouse, referred to as the Kingston/Rondout 2 Lighthouse, was constructed in 1915 on the northern side of the confluence and is accessible via boat. This lighthouse was placed on the National Register of Historic Places in 1979. The City of Kingston owns the lighthouse and it is operated by the Hudson River Maritime Museum, with guided tours of the interior of the lighthouse available seasonally.

Additionally, Sleightsburgh Park is located across the river from the Sixteen Mile District, a national historic district located near Clermont and Rhinebeck in Columbia County. The area was listed on the National Register of Historic Places in 1978 and in 1990, it was consolidated, along with the Clermont Estates Historic District, into the Hudson River National Historic Landmark District. This District, which now stretches from Clermont to Hyde Park, was formally established to acknowledge that the historic resources in the heart of the Hudson Valley are of the highest national significance, on par with other National Historic Landmark Districts such as Nantucket Island, the Garden District in New Orleans, and San Francisco's Presidio.

To the northwest of Sleightsburgh Park and across the Rondout Creek lies the Rondout-West Strand Historic District in the City of Kingston. The district was added to the register in 1974 and remains an active waterfront as a recreational attraction with many small shops and restaurants.

Based on a review of the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) Cultural Resource Information System (CRIS), there are no historic or cultural resources at Sleightsburgh Park that are eligible or listed on the National Register of Historic Places (National Register).⁵

Surrounding Lands and Connections

Area Density and Land Use

Sleightsburgh Park is adjacent to medium and higher density residential neighborhoods in the Hamlet of Sleightsburgh and Port Ewen. Located directly west of the Park is a former fuel storage and distribution business known locally as the Kosco Terminal. The oil terminal use has been discontinued and the fuel storage tanks were removed. A new company specializing in the construction of fueling facilities and related services now operates from this location. There is no petroleum storage associated with this new business.

Across the Rondout Creek from Sleightsburgh Park, a renaissance of long-standing industrial lands has taken place. The shoreline now includes museums, restaurants, and other commercial uses. As previously stated, the City of Kingston Sewer Plant is also located in this area and is directly across the Rondout Creek from Sleightsburgh Park.

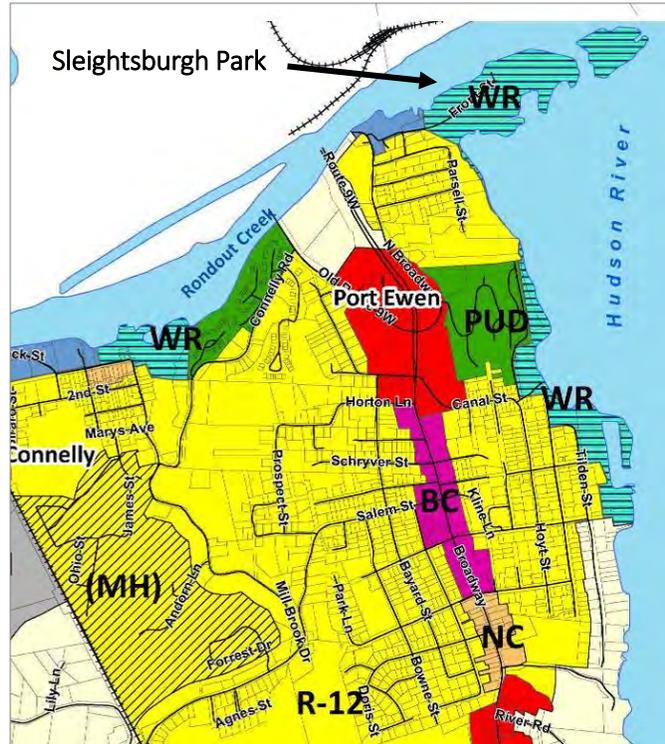


Figure 2. Sleightsburgh Park Area Zoning

Adjacent Zoning

Sleightsburgh Park abuts two zoning districts, Residential (R-12) and Waterfront (W). R-12 allows single and two-family residential development at densities of up to one unit for every 12,500 SF with central water and sewer.

The Waterfront District, found along the Rondout Creek, in the area of the former Kosco Oil Terminal allows for water-dependent commercial activities, including boatyards, marinas and uses that are

⁵ OPRHP CRIS. Accessed April 2020.

dependent on transportation of goods by water. Nonwater-dependent uses are precluded from this District except for accessory uses.

The former Kosco site and the terminus of N. Broadway at the Rondout Creek may be an ideal location for a new boat launch. A new boat launch could supplement the existing launch at Sleightsburgh Park or serve as a future replacement location. Providing a boat launch in this location would reduce neighborhood impacts associated with park user traffic on narrow Sleightsburgh streets. In addition, as sea levels rise, the access road into Sleightsburgh Park will be subject to increased flooding which would directly impacting vehicle access and user enjoyment.

Based on a review of relevant zoning regulations, it appears the adjacent zoning district is sufficient to prohibit incompatible uses that might negatively impact the Park.

Tourism Resources

Across the Rondout Creek, the City of Kingston has and continues to undergo a major revitalization in the City's waterfront area. Visible from Sleightsburgh's boat launch is the Hudson River Maritime Museum along with areas occupied by restaurants and other attractions. The idea of providing a ferry between Sleightsburgh Park and the City of Kingston was previously considered to take advantage of the revitalization across the Creek. With Sleightsburgh Park's access limitations, congestion of vehicles and Park users, susceptibility of flooding, and sensitive environmental resources, making a ferry connection with the City of Kingston is not currently under consideration. It should be noted however, that the existing conservation easement did include a provision to establish a ferry connection at Sleightsburgh Park.

There are no dining options in the Hamlet of Sleightsburgh, although there are numerous restaurants in Port Ewen, along with additional options further to the south including family restaurants, a winery and vineyard. The Hudson House New York is a future distillery, boutique hotel and restaurant planned for an 1850's property in West Park. Options for overnight stays are limited in Esopus, and currently include the Vacation House Bed and Breakfast (771 Broadway, Ulster Park) and various short-term rentals. The increasing popularity of short-term rentals are expanding hospitality options for the Town. There are also lodging and dining opportunities in the City of Kingston and across the River in Rhinecliff. The need for additional lodging opportunities has been previously identified and recommended in the Comprehensive Plan, particularly for the southern portion of the Town, including West Park, to support the local tourism and recreation industries.

Area Transportation

Amtrak passenger service is accessible in Rhinecliff and Poughkeepsie, linking the region to other major northeastern cities. Additional passenger service is available on Metro North Railroad from Poughkeepsie linking the region with New York City, Long Island, and New Jersey. Public transportation is available via Ulster County Area Transit, with the closet stop located in Port Ewen. The bus runs once every hour except



during a brief morning and afternoon service break periods. As previously noted, access to the Park is provided through narrow streets of Sleightsburgh, including N. Broadway, 1st Avenue and Everson Street. Safety concerns related to N. Broadway and the Hamlet's narrow streets are described in more detail above under ***Access and Parking***.

Possible Linkages

The Park is located in close proximity to the City of Kingston, particularly the City's waterfront and the State Empire Trail. The trail is in close proximity to the US Rt. 9W arterial on the Kingston side of the Rondout Creek. As recommended in the Town of Esopus Comprehensive Plan 2019, a pedestrian and bicycle connection via the US Rt. 9W bridge from Port Ewen to the Empire Trail at Garraghan Drive would link the Town into the state-wide trail. This linkage would provide opportunities for Esopus residents and visitors to access the Empire State Trail, and equally as important, provide opportunities for other users of the trail to access the Town of Esopus and its many parks and preserves.

George Freer Memorial Beach Park

Location

In addition to the photographs and Figures referenced herein, refer to the *Freer Park Existing Conditions Map* and the *Sleightsburgh and Freer Park Vicinity Map* for additional information during the following assessment.

The Town of Esopus' George Freer Memorial Beach Park (Freer Park) is located approximately ½ mile south of Sleightsburgh Park in the Hamlet of Port Ewen. Freer Park is the Town's primary waterfront Park and is open from dawn to dusk and closed during the winter months. Vehicles are prohibited during the winter, except for Town staff who access to the sewer pump station. Pedestrians are permitted during winter months.

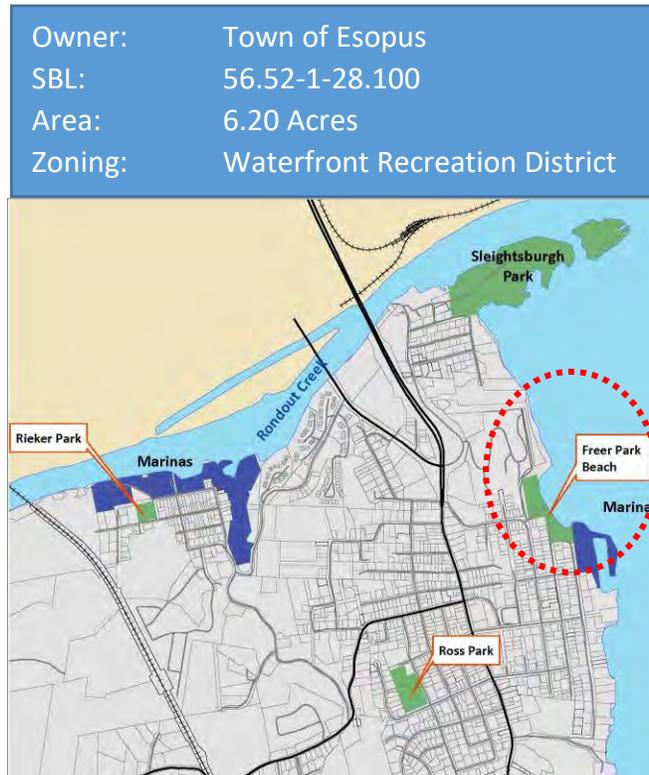


Figure 3. Freer Park Location

The property is bounded on the east by the Hudson River with the exception of approximately 260-foot border shared with the Hidden Harbor Yacht Club at the southeastern portion of the property. The Park is bordered to the west by J Road and to the north by a 1.3-acre vacant parcel owned and preserved by Riverview Waterfront LLC., and consisting primarily of wetlands.

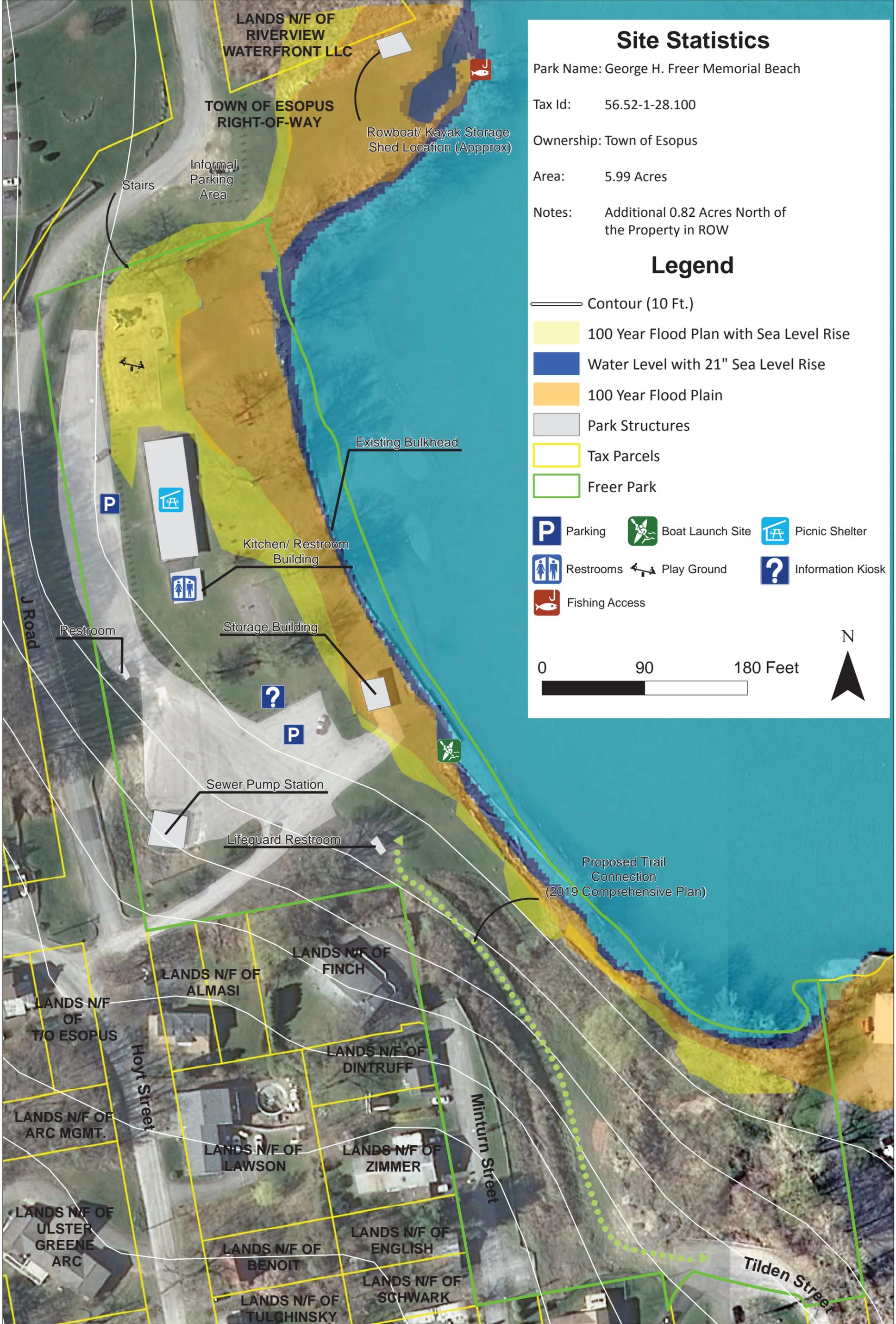


Entrance to Freer Park

Amenities

Access and Parking

Freer Park is accessible via Canal Street from US Rt. 9W along with J Road from the Riverview Condominiums to the north. Canal Street also connects with Hoyt Street at the Park entrance, providing access for the surrounding neighborhoods. Additional neighborhood access is provided via Tilden Street, leading to a maintained grass path at the southern portion of the Park.

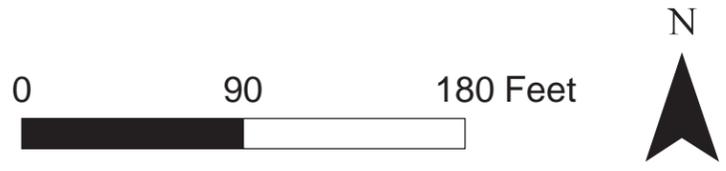


Site Statistics

Park Name: George H. Freer Memorial Beach
 Tax Id: 56.52-1-28.100
 Ownership: Town of Esopus
 Area: 5.99 Acres
 Notes: Additional 0.82 Acres North of the Property in ROW

Legend

- Contour (10 Ft.)
- 100 Year Flood Plan with Sea Level Rise
- Water Level with 21" Sea Level Rise
- 100 Year Flood Plain
- Park Structures
- Tax Parcels
- Freer Park
- Parking
- Boat Launch Site
- Picnic Shelter
- Restrooms
- Play Ground
- Information Kiosk
- Fishing Access



While the Park is easily accessible, the access drive is located at the intersection of J Road with Canal and Hoyt Streets, creating an awkward and somewhat confusing intersection to visitors not familiar with the area.

The access road leading into the Park is approximately 19 feet wide, although a gate and associated bollard narrows the entrance to around 15 feet. As a result, the entrance drive at the gate essentially prohibits two-way traffic. The narrow entrance combined with the awkward intersection can result in congestion. Enlarging the entrance with a longer gate is recommended. The Park entrance is also cluttered with numerous distracting signs which should be consolidated and unnecessary signage removed. Trees along the entrance drive, if not properly maintained, can damage car-top boats and vehicles. Proper on-going trimming of these trees is necessary.

Freer Park's parking lot is approximately 0.65 acres in size (paved surface) and can accommodate approximately 30 to 40 vehicles. There are no marked parking stalls nor any designated ADA compliant parking spaces. In addition, there is no signage indicating internal circulation routes throughout the vast parking lot. As a result, vehicles are known to be parked along the southern side of the access drive and in other areas that can create hazardous conditions for other drivers and park users. This also results in parking inefficiencies and the loss of parking spaces.

With such a large parking lot, visitors with mobility issues are generally able to park close to their destination, whether it be the playground, pavilion or shoreline. There are no ADA accessible paths to the shoreline or the existing informal launch at the southern end of the park. Future ADA accessible paths to the shoreline should be considered where feasible.

The southern portion of the parking lot has sections in very poor condition, including pot holes and crumbling asphalt with evidence of previous patching. These areas are located adjacent to the access drive and around the sewer pump station. The access drive and the southern portion of the parking lot both slope down to the Hudson River and is resulting in shoreline erosion discussed in more detail below. The parking area to the north becomes narrow, further constricted by a restroom building located along the western edge of the pavement. The northern parking area provides access to the pavilion and playground.



Parking Lot Viewed from J Road



Poor sections of the parking lot – Sewer pump station in the background

Supplementing the primary parking lot is a small informal grass/dirt parking area located along J Road. The informal parking area is not currently maintained and becomes muddy and rutted. There are wooden bollards along the eastern border of this parking area that are routinely removed by park visitors allowing vehicles to drive down to the shoreline. Unofficial vehicles in this area are prohibited. Access to the shoreline is necessary to launch, retrieve and refuel “Chester,” the Town’s water chestnut harvesting machine (Chester). The parking area needs to be improved and properly graded and new locking bollards installed to prohibit unauthorized vehicles.



Informal Parking Area along J Road

Stormwater from the parking lot is handled through a combination of storm drains and overland flow towards the river. At the base of the access drive and southern parking lot, stormwater is allowed to flow over a small grassed area before pooling along the back edge of the bulkhead, and eventually entering the river. In other areas, uncontrolled stormwater from the parking lot has resulted in natural drainage channels through the lawn, which also results in stormwater pooling behind the bulkhead. Combined, this uncontrolled stormwater drainage is contributing to shoreline erosion and structural impacts to the bulkhead.



Examples of Shoreline Erosion at Freer Park

The stormwater captured by storm drains in the parking lot appear to empty into the Hudson River along the Park’s shoreline through a series of outflows. The type of stormwater system is currently unknown, including whether or not they include pre-treatment of sediments and if additional upland stormwater is discharged into the River besides what is collected at the Park. The drains may be resulting in increased siltation of the small bay in front of the Park, which is evident during low tide. This siltation is likely in



Shallow Conditions at Freer Park at Low Tide

addition to the natural siltation that occurs in the bay due to currents and tides.

Further inspection of the stormwater drains including a comprehensive stormwater analysis at the Park is recommended to determine if improvements can be made to reduce the amount of siltation into the River which is impacting navigability for small water craft that routinely launch at the Park. A reduction in unnecessary impervious surfaces should also be evaluated. In addition to the concerns caused by stormwater outflows, the Park's overland stormwater flow is degrading the shoreline and eroding the bulkhead in certain areas. A more detailed discussion of this issue is provided below.

Boating

Except during periods of low tide, Freer Park provides relatively easy access for small, non-motorized watercraft. While motor boats are not permitted at Freer Park, people are able to launch canoes, kayaks, small sail boats, windsurfing boards, and paddle boards, among others, at two unofficial hand carry launches, one at the northern end and one at the southern end of the Park.



Northern Launch Site



View Towards Northern Launch Site from J Road Parking Area



Southern Launch Site

The southern location is an unimproved launch just to the south of the bulkhead. Launching in this area can be limited during low tide where navigable water is sometimes located several feet from the shoreline. Hand launching can be further complicated by the soft riverbed, making it difficult to walk on. Despite these impediments, this location is very appealing for hand launching boats because it is located a short distance from the parking lot.

The feasibility of installing a floating dock in this location was evaluated during this Riverfront Study in hopes it would improve accessibility. However, it was determined that the dock would need to be a minimum of 80 feet in length to ensure access to navigable water during low tides. An 80-foot dock would be out of character with the Park, cost-prohibitive, and result in major ongoing maintenance requirements and associated costs. As a result, a floating dock in this location is not feasible.

The northern launch is less affected by the low tide, although there is no parking area directly adjacent to the shoreline. The unofficial parking lot along J Road is the nearest parking area, located over 200 feet

from the shoreline. The area between the parking area and the shoreline is maintained lawn that slopes down to the shoreline. The shoreline and river bed at this location is primarily comprised of weathered bricks and rocks making for a relatively stable walking surface with a gentle slope for launching and retrieving boats. The northern launch site is also a very popular location for fishing which can result in potential user conflicts. In addition, the northern site is used to launch, retrieve and refuel Chester (as previously discussed).

These competing uses and lack of direct parking access complicates options for establishing a formal launch at the northern site. Constructing a parking lot in this area would require a new access road, all of which would occur within the 100-year floodplain and increase the already large amount of impervious surface at the Park. Available space at the shoreline is also limited and would be difficult to install a floating dock and gangway system while also providing space for fishing and to launch, retrieve and refuel Chester.

One future option could be to establish a trail with a stable walking surface leading to the shoreline to enhance accessibility for launching boats and fishing. Signage could be installed to inform Park users of the competing recreational interests and the need to be respectful of all users. Installing locking bollards to restrict unofficial vehicle access, as previously stated will be necessary to ensure this area remains in good condition.

The waters off of Freer Park are shallow as siltation is common in the natural harbor area and may be exacerbated by the stormwater outflows. According to the NOAA Nautical Chart, the water depth ranges from between two to 15 feet for approximately 2,000 feet into the River where the depths eventually increase to approximately 55 feet within the main shipping channel. As noted above, typical low-tide conditions present challenges for launching boats and coming ashore at Freer Park.



Submerged wall offshore of Freer Park
(Looking northwest towards Riverview Condominiums during a blow-out tide)

Based on photographs, discussions with local residents and the nautical chart (referenced above) a series of submerged rock walls exists within the bay in an “L” pattern. These structures are likely remnants of previous breakwaters or causeways used by brickyards located in Port Ewen and Sleightsburgh up until the 1930s. There are also one or more submerged barges offshore along with the potential for additional submerged objects in the area. The shallow waters and the submerged objects have and will continue to limit the size of boats that can be launched from Freer Park or moored offshore.

During very low tides and blowout tides (which can occur during periods of sustained offshore winds) the submerged objects are visible as depicted in the photograph to the left. Due to the location of these submerged objects and the potential for damage to watercraft, marking these areas with buoys should be considered.

Fishing

Fishing is very popular at Freer Park with the northern point of the Park the primary area where anglers setup. According to Chapter 98, "Park Rules and Regulations," fishing is permitted only in designated areas of Town parks. While there are no designated fishing locations at Freer Park, the northern and southern locations of the park are generally the most popular areas to fish. It is recommended that Chapter 98 related to fishing locations be revised accordingly, or designated locations at Freer Park for fishing should be formally established.



Fishing at the Northern Point

Structures

There are six buildings at Freer Park:

- Pavilion (center of park).
- Boat storage building (northern point).
- Combined restroom and kitchen facility (south of the pavilion).
- Small restroom (western side of parking lot).
- Sewer pump station (southwestern corner of parking lot).
- Vacant life guard building (southern portion of park).
- Maintenance storage building (along shoreline at end of access driveway).



Pavilion at Freer Park

Pavilion. Freer Park's pavilion is approximately 3,200 square feet in area, is ADA accessible and was constructed in 1988. The pavilion is very popular for parties and other events and can be reserved between May 1st and Columbus Day. Based on available data the pavilion is located outside of the existing 100-year flood plain and would remain outside of any future flood plain should an increase in sea level up to 21" occur.

Pavilion Restroom/ Kitchen. The pavilion has an attached restroom and kitchen available for visitors that rent the pavilion. The restroom is/is not ADA accessible (*clarify if improvements were made*) and is only available to those that rent the pavilion. The kitchen includes sinks, cooking appliances, and a refrigerator.

Public Restrooms. There is a small restroom building located in and along the western edge of the parking lot that is available to all Park visitors. Separate male/female restrooms are provided, although they are not ADA accessible. Due to the buildings location, park users are required to walk across the parking lot to use the restroom, resulting in a potentially unsafe situation. It is therefore recommended that this building be removed and a new restroom be located near the pavilion. Alternatively, the existing restroom by the pavilion could be expanded to ensure sufficient access during events at the pavilion.

Boat Storage Building. This approximate 192 square foot wooden building was donated and constructed at the northern point of the Park by Lowe's Home Improvement Warehouse in 2018. Originally, the building was intended to be used for the storage of the Town's row boat to access Chester and by the Hudson River Maritime Museum (HRMM) for sailing classes and storage of their sailboats. The HRMM chose not to utilize Freer Park due to insurance costs. The Town then decided to rent the building out for the storage of kayaks during the warm weather months for a reasonable fee.



Boat Storage Building

The building can currently store up to eight kayaks on a first come first serve basis. The rental program has been very popular and the Town may utilize a lottery system if more rental requests are received than space available. The Town still stores their row boat in the building for accessing Chester. The internal configuration of the building is inefficient, and if reconfigured, could store additional kayaks and provide adequate room for the row boat. It has been previously recommended by the WAB that the internal storage shelves be modified.



Storage/Maintenance Building

Storage/Maintenance Building. A 700 +/- square foot concrete storage building is located in the southern portion of the park and adjacent to the hand carry launch discussed above. The building is about 30 feet from the shoreline at its closest point and currently used for storage, although the exact purpose of the building is unknown. Clarification from the Parks and Recreation Commission is needed regarding the current use of the building and if there is additional space for future uses, such as kayak storage.

Sewer Pump Station Building. A sewer pump station building is located at the southwestern corner of the Park. The building is surrounded by a chain-link fence and access is restricted to Town employees.

Vacant Lifeguard Building. Similar in design to the small restroom building in the parking lot, there is an approximate 100 square foot building located at the southern and elevated portion of the Park. This building served as changing room/bathroom when Freer Park was open to swimming. Swimming has not been allowed at the Park for several years. The building is no longer used and is recommended to be removed.

Bulkhead. The Park features an approximate 380 linear foot long concrete bulkhead that protects the Park's shoreline, open lawn and amenities. The northern section of the bulkhead consists of individual concrete blocks, topped in some locations with asphalt, while the southern portion appears to be poured

concrete. After a short break in the wall, which is used as an unofficial hand launch area, the bulkhead continues south, although only the top portion is visible.

Natural shoreline vegetation is beginning to become reestablished along the southern shoreline behind the old bulkhead and NYSDEC has recommended that no vegetation trimming or clearing occur in this area. There are no plans to remove or replace this section of the bulkhead.

The northern section of the bulkhead is seeing more deterioration, including missing blocks and several areas of patching. This deterioration is a result of the poor stormwater drainage at the Park, wave action and water topping and pooling behind the wall. A structural evaluation of the bulkhead is necessary and the Town of Esopus was recently awarded a grant from the NYSDEC Hudson River Estuary Program to assist in funding the evaluation. The grant funding will also assist the Town in conducting property boundary and topographic surveys of Freer and Lighthouse Parks, which will be necessary for future park improvements and scheduled for the summer of 2020.

Irrespective of the structural integrity of the bulkhead, NYSDEC strongly recommends that it be removed and replaced with a natural shoreline. While creating a natural shoreline will improve the Park's shoreline habitat conditions, NYSDEC has stated that the existing bulkhead is not functioning as a wall. NYSDEC defines a wall as a structure that prevents the daily flow of water from topping the structure. NYSDEC indicated their position on the wall during the February 11, 2020 pre-application meeting and in

a follow-up summary of their applicable jurisdictions provided via email on January 10, 2020 (see **Appendix D. NYSDEC Pre-Application Meeting Summary**) If the current bulkhead does not meet their definition of a wall, NYSDEC is of the opinion that regulatory approvals associated with replacement may not be possible. NYSDEC is less concerned if the bulkhead was relocated further inland and above the mean high-water mark. Specifics about permitting requirements and NYSDEC concerns are detailed below in **Project Recommendations**.



Southern Shoreline



Freer Park Bulkhead Looking South



Northern Bulkhead- Patching and Missing Block

The RPC has discussed the pros and cons of removing the wall vs. repairing or replacing it. If removed, there are concerns that the existing trees near the shoreline could be impacted, open space and lawn area could be lost, and the southern storage building (located less than 30 feet of the current shoreline) could be at greater risk of flooding damage or may need to be removed altogether. The Park may also be subject to increased flooding and related damage if the wall is removed. If the Town pursues removing the wall, the potential impacts of a natural shoreline must be investigated in combination with a stormwater analysis and associated plan as the existing stormwater outflows will need to be removed or relocated and the overall drainage pattern for the Park will be modified as a result.

An alternative proposed by a majority of the Riverfront Committee is to keep the bulkhead in place, make necessary repairs and plant native vegetation that would assist in stabilizing the shoreline while at the same time improve shoreline habitat. The structural analysis of the bulkhead scheduled to be completed in 2020 is necessary to get a better understanding of the current conditions and anticipated lifespan. If it is determined that the wall is structurally safe and can be repaired, a long-term repair and maintenance plan will need to be developed.

Utilities

Freer Park is served by central water and sewer, with easy access to adjacent telecommunication infrastructure if needed in the future.

Additional Amenities

Playground. There is a children's playground located at the north end of the Park featuring typical playground equipment. The playground is surfaced by wood chips and is not ADA accessible, nor is the playground equipment.

Sports Equipment. The Park includes a volleyball net, horseshoe pits, and small cement basketball court with two basketball hoops. The backboards should be regularly painted as they are currently in a deteriorated state. The court surface should also be resurfaced and monitored to ensure a safe surface for playing.

Other Features. There are many grills, numerous picnic tables, benches, and garbage cans. The Park features many deciduous trees providing natural shade as well as some low shrubbery, primarily in the southern portion of the Park. Recently, a few trees were damaged by storms and the Town had to remove them. A long-term tree management and replacement plan is recommended to ensure sufficient shade is provided at the park and to contribute to shoreline stability. There is also an informational kiosk adjacent to the southern parking lot which is in poor condition and should either be refurbished or replaced entirely.

Water Trail. Just like Sleightsburgh Park, Freer Park is a designated stop along the Hudson Valley Greenway Water Trail, a water trail for canoers and kayakers stretching from Pier 96 in New York City to Washington County.

Easements, Restrictions, and Permitting

There is no available boundary survey for Freer Park and the exact location of property lines for the northern portion of the Park are unknown and appears to be within the right-of-way of J Road. A boundary and topographic survey for Freer Park is scheduled for the summer of 2020 and is being partially funded by a NYSDEC Estuary Grant.

An underground natural gas line runs through the Park, entering at Tilden Street and leaving the property at the J Road right of way. The existence of the buried line may limit future improvements at this site. The location of the gas line will be identified during the boundary survey.

In this location of the Hudson River, the title to the beds of the Hudson are generally held in trust for the people of the State of New York under the jurisdiction of the NYS Office of General Services (OGS). As such, it is anticipated that a license, easement, or permit will be required from OGS for any project that disturbs the riverbed, including a replacement of the bulkhead.

In addition to OGS involvement, and at a minimum, permits and approvals from NYSDEC and USACOE will be necessary for any disturbance to the bed and banks of the Hudson River or for projects that disturb wetlands or are within 100-feet of wetlands. Repairs to or a full replacement of the bulkhead will require regulatory approvals.

Natural Resources and Ecological Conditions

The NYSDEC Natural Heritage Program identifies the location of Freer Park as being in the vicinity of rare animals including Atlantic Sturgeon, Shortnose Sturgeon, bats listed as threatened or endangered, significant waterfowl winter concentrations, and significant Anadromous Fish concentrations. The waters off the shore of both Lighthouse Park and Esopus Meadows Preserve are a NYSDOS designated Significant Coastal Fish and Wildlife Habitat (SCFWH). The fish and wildlife habitat is an approximate 380-acre shoal of freshwater shallows (less than 10-feet deep at mean low water), and intertidal mudflats with extensive submerged aquatic vegetation beds, dominated by water celery.

At this location the River is classified at an A rating. The classifications A, AA, A-S and AA-S indicate a best usage for a source of drinking water, swimming and other recreation, and fishing.

The water at this site is directly affected by stormwater discharge as multiple drainage pipes enter the River at this location. As can be assumed this causes increased siltation, turbidity, and may subject the adjacent waters to minor thermal pollution.

Invasive Species

Water chestnuts, a prolific invasive species, has been spreading into the mid-Hudson Valley Region since the late 1980's and in recent years, their presence has increased exponentially. Concerned about losing key shoreline access points and navigability, the Town of Esopus began working with volunteers to clear pathways for recreational boaters at this location. Clearing is done using a mechanical harvesting machine to remove the water chestnuts from shoreline of Freer Park to ensure boaters can reach open waters and not become ensnared in the plants. The harvesting machine, named "Chester," is shared between Freer and Lighthouse Parks.

The Town has made significant progress in managing this invasive species at Freer Park. With significant yearly maintenance and cutting with a team of volunteers, Freer Park is predominantly free of water chestnuts. However, the location and concentration of growth can change from year to year and Freer Park remains a primary focus for the volunteers to keep the water chestnut at bay.

The shorelines of Esopus Meadows and Lighthouse Park are more challenging to keep free of water chestnuts, due to the size of the growth area. The current focus for managing water chestnuts in and around Lighthouse Park and Esopus Meadows Preserve, includes opening paths for kayaks, and other small hand launched crafts at the following locations:

- Lighthouse Park: Clear and maintain a path from the shoreline out to the River.
- Esopus Meadows Preserve:
 - Clear and maintain the shoreline in front of the pavilion in support of Hudson River Sloop Clearwater's educational programs at Esopus Meadows Preserve.
 - Clear and maintain wide path from the River to the Greenway Water Trail Site at Esopus Meadows Point.
- Unofficial Fishing Access Point on River Road (north of Lighthouse Park):
 - Path from shoreline to River to enhance fishing access.
 - Path for kayakers from shoreline to Lighthouse Park shoreline

The Town of Esopus is not the only Hudson River community dealing with water chestnuts and the impacts they have on waterfront access and community infrastructure. The Village of Saugerties recently purchased their own harvesting machine to address their infestation. Purchasing and properly maintaining these machines are expensive and there may be future opportunities for two or more communities to share costs and volunteer hours.

Scenic Resources

Freer Park is located within the Estates District SASS, which is of statewide significance due to the combined scenic values of its natural character and its uniqueness, public accessibility, and public recognition. The collection of large estates with their specially and distinctly designed landscapes, the many untouched natural features, and the significant public historic sites and architectural treasures make this a visually unique feature in the Hudson River coastal area.



View from Freer Park
(Rondout Lighthouse in the Distance)

The Park provides sweeping views of the Hudson River and the eastern shoreline, along with the Rondout Lighthouse to the north. Views from the Park to the Hudson River are important and any future improvement will need to ensure views are not interrupted. All buildings are recommended to be low-profile and of similar earth tone colors.

Sea Level Rise

Based on available NYS sea level rise data, as discussed above for Sleightsburgh, potential impacts were modeled at Freer Park for 21 inches. Water levels are projected to encroach only slightly into the Park, with the most impacts to be seen in the north portion of the Park. However, future flooding is likely to be exacerbated by the projected sea level rise, as depicted on the map.

The existing 100-year floodplain covers a large portion of the Park and there is sufficient evidence of the extent of flooding that is possible at Freer Park based on past storms. Factoring potential sea level rise, flooding is expected to cover the playground and will likely threaten the pavilion and portions of the parking lot. The northern boat storage building and the southern storage buildings are already in the 100-year floodplain and the damaging impacts of future storms on these buildings as the result of sea level will be increased.

The sea level projection data does not take into account existing bulkheads or other structures which may limit inundation of waters. The current bulkhead at Freer Park is likely diminishing the impacts of storms and large waves. The precise benefit of the existing bulkhead should be evaluated when the structural integrity of the bulkhead is evaluated. If it can be shown that the wall is protecting the Park's shoreline, buildings and infrastructure, it will help justify the need for preserving, replacing and possibly raising the height.

Cultural and Historic Resources

Based on a review of OPRHP CRIS, no cultural or historic resources have been identified at Freer Park. Across the river the nationally and State historically registered Sixteen Mile District runs along the coast and discussed in the Sleightsburgh Park section.

Surrounding Lands and Connections

Adjacent Land Use

Freer Park is located in the eastern portion of the Hamlet of Port Ewen, with medium-density residential density to the immediate south and west. The Park borders Riverview on the Hudson, a high-density condominium development to the northwest which is visible from the Park. Immediately to the north of the Park and between J Road and the Hudson River is a small linear parcel owned by Riverview Waterfront, LLC that preserves open space and associated shoreline wetlands. Public access to this property is prohibited. The private Hidden Harbor Yacht Club is located immediately to the south of and is partially visible from Freer Park. All adjoining uses are generally compatible with and are not resulting in adverse impacts on Freer Park.

Adjacent Zoning

Freer Park is zoned Waterfront Recreation (WR), as is the Hidden Harbor Yacht Club to the south. WR zoning is intended for areas that are suitable for water-dependent recreational uses, such as parks, boat launches and marinas, but due to their sensitive environmental resources, cannot support more intensive types of uses.

The Riverview condominiums to the north were developed as a Planned Unit Development (PUD). The residential neighborhoods to the west and south are zoned R-12, the highest density zoning in the Town. R-12 is a predominantly residential zoning district. All adjoining zoning districts are compatible with Freer Park.

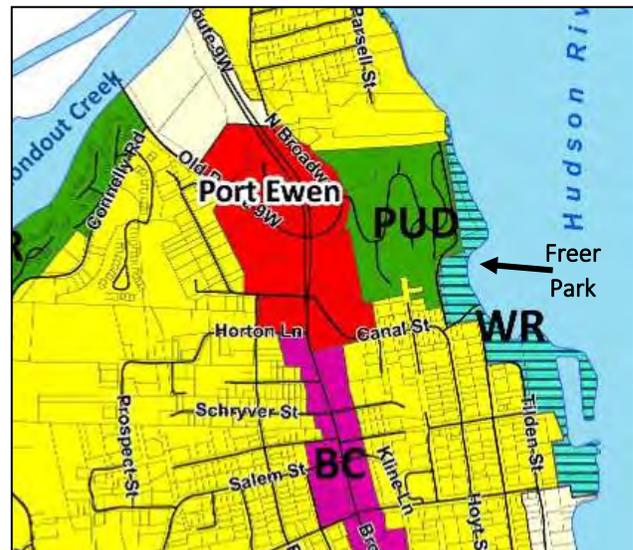


Figure 4. Freer Park Adjacent Zoning

Freer Park is also located within the Waterfront Revitalization Area (WRA) Boundary of the Town’s current LWRP. Projects proposed within the WRA require consistency review by the Waterfront Advisory Board in accordance with the LWRP. It is anticipated that all proposed improvements at the Park will be consistent with the LWRP.

Tourism Resources

Nearby Attractions. Freer Park in itself is an attraction for Town residents and visitors as it offers great view of the Hudson River and surrounding environs and also provides access to the Hudson River for small watercraft, including kayaks and canoes. Boaters are able to launch at Freer Park and paddle to Sleightsburgh Park, the Rondout Creek, and the City of Kingston, among other destinations to the north, including viewing the Rondout Lighthouse. To the south, paddlers can reach view Esopus Meadows Lighthouse, Lighthouse Park, Esopus Meadows and Black Creek Preserves, as well as Norrie Point Environmental Center State Park across the river in Staatsburg.

Future improvements at Freer Park should seek opportunities to enhance the attractiveness of the Park, not only for residents, but also visitors. Paddling, and more specifically, kayaking is very popular on the Hudson River. Freer Park is uniquely positioned to become a major launching point for kayaking, including tours and for staging races. The renting of kayak storage space at Freer Park has proven to be popular and could be expanded with increased demand. While docks may not be feasible at Freer Park due to low water levels, improvements to the southern hand launch should be considered to enhance the attractiveness of the park for kayaking enthusiasts and increase the feasibility of hosting future kayaking events.

Lodging and Dining.

Due to their close proximity, refer to the Sleightsburgh discussion for lodging and dining options in the vicinity of Freer Park.

Area Transportation.

Due to their close proximity, refer to the Sleightsburgh discussion for surrounding transportation options, including Amtrak and Ulster County Area Transit.

Pedestrian and Bike Connections.

With Freer Park located within and adjacent to walkable neighborhoods, pedestrians and bicyclist have suitable options to access the Park from the north, west and south. Pedestrians and bicyclists who live at the Riverview condominiums to the north can easily access Freer Park. Riverview is a private residential development and through access by non-residents is prohibited. In addition, the Park is accessible to pedestrians and bicyclists from the numerous neighborhoods to the south and to the west across US Rte. 9W. With the Park at a much lower elevation than the majority of Port Ewen, Canal and East Main Streets are very steep leading down to the River, which can hinder access for some individuals.

In addition to the Park's driveway at the intersection of J Road, Hoyt and Canal Streets, there is an unofficial grassed path that enters the Park at the northern end of Tilden Street. The 2019 Comprehensive Plan recommended that this unofficial access point become official with regular mowing to ensure it remains accessible. There are no plans to improve the walking surface at this point and is recommended

to remain a grassed surface. The Park could also be reached on foot from the northern end of Minturn Street. This is not an official access point and requires pedestrians to navigate a very steep hillside to reach the Park. Stairs would be required to provide safe access from this location and is not currently being considered as a future official access point.

There is a seasonal path at the eastern end of Hamilton Court that includes an asphalt path leading down the hill to Herriman Street, providing connections to the Park via Hoyt Street. This pathway was identified for improvements in the 2019 Comprehensive Plan as the railings are in poor condition.

An old set of wooden stairs are located at the northwestern corner of J Road, leading into the Park near the playground. These stairs can be difficult to see, are starting to become overgrown and deteriorate. In addition, there are no railings to hold onto while using the stairs. As a result, these stairs are considered a safety hazard and should either be removed altogether, replaced by a walking path or repaired with a railing installed. The surrounding lawn area is well-maintained and is sufficient for most pedestrians entering the Park.

Freer Park lacks bike racks, and at least one bike rack should be installed. A bike rack at the northern and southern portions of the Park would be ideal.

Possible Linkages

The Empire State Trail in Kingston, while not directly connected to Freer Park, may provide opportunities for bicyclists and pedestrians to access Freer Park. While Freer Park by itself may not be a sufficient enough reason to travel into Port Ewen from the trail, if kayak rentals and other events are held at the Park, the benefits of connecting into the trail may become more tangible. Increased wayfinding signage for Freer Park should also be considered to ensure visitors are able to locate the Park.

With improvements to the hand carry launches, the parking lot and other improvements noted above, Freer Park could become a recognized location to launch kayaks and other small non-motorized watercraft to visit numerous nearby destinations previously discussed. The Park is already a designated stop on the Hudson River Greenway Water Trail and with targeted improvements, the popularity of this designation can be increased and result in positive benefits for the Town.

Lighthouse Park and Esopus Meadows Preserve

As these parks are contiguous, Lighthouse Park and Esopus Meadows Preserve will be examined together. Items specific to each site, however, will be discussed separately.

To supplement the following assessment, refer to the *Lighthouse Park and Esopus Meadows Preserve Existing Conditions Maps* and the *Vicinity Map*.

Location

Esopus Meadows Preserve (Esopus Meadows) and Lighthouse Park combine to create approximately 96-acres of protected lands along the Hudson River. The properties are located about 1.5 miles northeast of the Hamlet of Ulster Park, about three miles southeast of Port Ewen, approximately five miles south of the City of Kingston, and approximately 13 miles northeast of the Village of New Paltz. Vehicle access is provided via River Road (County Rt. 24).

Lighthouse Park and Esopus Meadows have been protected lands since 1990. Both sites were originally conserved by Scenic Hudson and in 1998, Lighthouse Park was donated to the Town of Esopus. Improvements and uses at Lighthouse Park are guided by a conservation easement between the Town and Scenic Hudson, and discussed in more detail below.

Lighthouse Park is zoned Residential District (R-40). R-40 is a low-density residential zoning district. Both Sleightsburgh and Freer Parks are zoned Waterfront Recreation (WR), a recreation-based zoning district established for properties along the Rondout Creek and Hudson River which are suitable for water-dependent recreation uses, such as parks, boat launches and marinas, but due to their sensitive environmental resources, are unable to support more intensive types of uses. While the conservation easement between the Town of Esopus and Scenic Hudson for Lighthouse Park (discussed below) currently protects the park from incompatible

Site Name:	Lighthouse Park
Owner:	Town of Esopus
SBL:	64.3-2-11
Area:	0.68 Acres
Zoning	R-40 Residential
Site Name:	Esopus Meadows Preserve
Owner:	Scenic Hudson
SBL:	64.3-3-12.100, 64.3-3-13, 64.3-13-14, 64.3-3-8.100
Area:	94.89 Acres
Zoning	R-40 Residential, RF-1 Riverfront

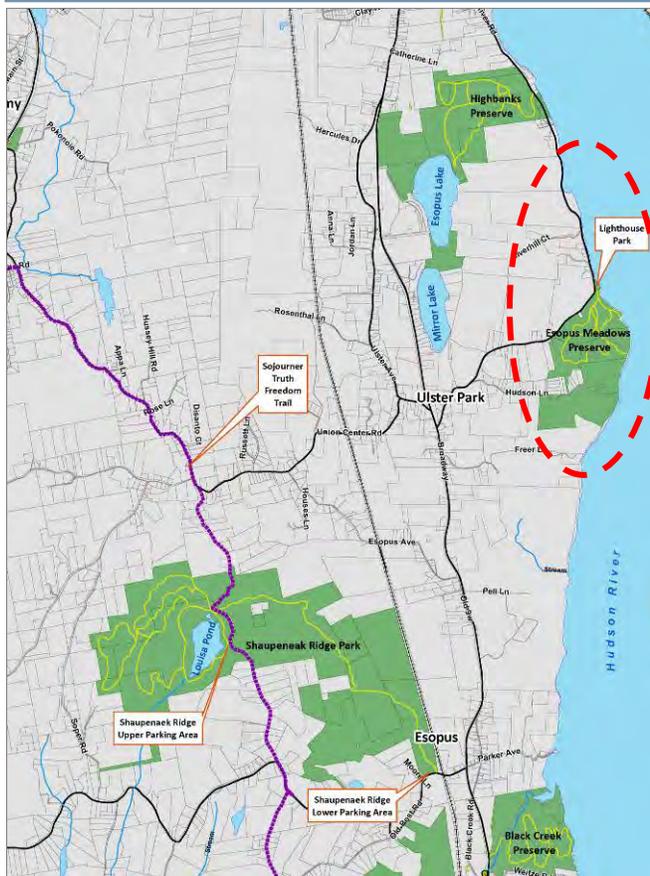


Figure 5. Lighthouse Park and Esopus Meadows Preserve Location



Page Intentionally Left Blank



Site Statistics

Park Name: Lighthouse Park
 Tax Id: 64.3-2-11
 Ownership: Town of Esopus
 Area: 0.68 Acres
 Notes: Under Conservation Easement with Scenic Hudson

Legend

- Contour (Ft.)
- Lighthouse Park
- 100 Year Floodplain with Sea Level Rise
- Water Level with 21" Sea Level Rise
- 100 Year Floodplain
- Tax Parcels
- Parking
- Picnic Area
- Information Kiosk
- Boat Launch Site
- Fishing Access

LANDS
N/F OF
ULSTER COUNTY

River Road

Rowboat Storage Building

Existing Trail Connection

ESOPUS MEADOWS
LANDS
N/F OF
SCENIC HUDSON
LAND TRUST

LANDS
N/F OF
LIGHTHOUSE
BLUFF LLC

0 62.5 125 Feet



Lighthouse Park Existing Conditions Esopus Riverfront - Access & Connections Study

Data obtained from NYSGIS Clearinghouse and Scenic Hudson. May 2020. Accuracy not guaranteed.

This Project has been funded in part by a grant from the New York State Environmental Protection Fund through the Hudson River Estuary Program of the New York State Department of Environmental Conservation.

development, it is recommended for Lighthouse Park to be rezoned to WR, consistent with the Town's other two waterfront parks.

Esopus Meadows Preserve is zoned Riverfront Estate District-1 (RF-1), a zoning district established to preserve the unique character of the area located between the Hudson River shoreline and Rt. 9W in the central area of the Town's waterfront, which consists of large undeveloped tracts and private and institutional estates. Parks are a permitted use. With Esopus Meadows Preserve being privately owned by Scenic Hudson, and the zoning district being compatible with the existing use, rezoning of either Esopus Meadows Preserve or Black Creek Preserve (also RF-1) is not currently recommended.

Amenities

Access and Parking

Access to each park is provided by River Road, a State designated Scenic Road since 1992. Lighthouse Park features a paved parking lot with space for approximately 8-10 vehicles. Individual parking spaces are unmarked and there are no designated ADA accessible spaces. The lot can become congested with limited room to back up or turn around. There is a large pothole at the entrance that needs to be repaired. The entrance itself is narrow and should be enlarged to improve ingress/egress.



Lighthouse Park Parking Lot

Esopus Meadows features a gravel parking lot which provides approximately 18 spaces and includes two ADA compliant parking spaces on a semi-permeable surface. The Esopus Meadows parking lot is in good shape with only minor improvements necessary to ensure the semi-permeable ADA compliant spaces remain in good condition. Parking at Esopus Meadows can also become congested which results in users parking on the grass and along River Road, a safety concern.



ADA Accessible Path from Esopus Meadows Preserve to Lighthouse Park

Hiking Trails

Lighthouse Park and Esopus Meadows are connected by a short path and pedestrian bridge over a drainage swale. From Lighthouse Park, the bridge leads to an ADA accessible cinder/crushed stone path at Esopus Meadows and ultimately connects to the Preserve's parking lot and trail system. From Esopus Meadows, the bridge leads to a maintained lawn in Lighthouse Park, which is not considered ADA accessible.

There are no ADA accessible trails or connections leading from the parking lot at Lighthouse Park to the shoreline or to Esopus Meadows. The creation of an ADA accessible path from the parking lot of Lighthouse Park to the shoreline and to Esopus Meadows is recommended.

Esopus Meadows offers approximately two miles of hiking trails divided into the Blue, Red, Yellow and White Trails, with interpretive signage located at the main trailhead and at key points along the system. The trails provide access to and scenic views of the Hudson River, and to Esopus Point, which includes a small pavilion, a composting toilet, interpretive signage and easy canoe/kayak access along the gently-sloped shoreline at Esopus Meadows Point. This location is also accessible through an internal unpaved restricted access service road that provides vehicular access for maintenance and emergency purposes. The shoreline trail accessing Esopus Point is a designated Greenway Trail and the Red Trail features a phenology walk with informational panels about native plant species through the seasons.

There is the potential to expand the Esopus Meadows Preserve trail network onto contiguous property owned by Scenic Hudson. A partnership between the Town, Scenic Hudson and other stakeholders could be formed to construct the trails and related amenities such as benches and trail signage.



Shoreline Erosion – Lighthouse Park



Lighthouse Park Shoreline Looking East to Esopus Lighthouse



Lighthouse Park Shoreline Looking North

Boating

Lighthouse Park is a popular location for launching canoes, kayaks and other small non-motorized watercraft and is a good location to view and access the Esopus Lighthouse. However, there is no designated hand launching site at the Park. River access is hindered by an eroding shoreline, large logs/driftwood along with several large rocks within the intertidal zone that were part of a previous art installation. Together, the erosion, driftwood and large rocks present obstacles for carrying boats and limits shoreline access for all potential users, especially those with mobility impairments. As with other locations, low tide can severely restrict launching and retrieving canoes, kayaks and other small watercraft, regardless shoreline improvements. However, removing the current obstacles along the Lighthouse Park shoreline will improve access.



Esopus Meadows Point River Access Site

Establishing a designated launch site at Lighthouse Park is desirable due to its location near the Esopus Lighthouse and would serve as the only land-to-water access in this stretch of the River while providing a second water-to-land access point.

A new access point at Lighthouse Park would also offer a rest stop between Black Creek Preserve to the south and Freer Beach and Sleightsburgh Parks to the North. As a launching spot, paddlers could park at either Lighthouse Park or Esopus Meadows.

Esopus Meadows is a recognized site on the Hudson River Greenway Water Trail, with Esopus Meadows Point serving as the designated water trail access point. This location includes a gently sloping ramp to the shoreline where paddlers can come ashore to visit the site. Esopus Meadows Point is located too far from the parking lot to make it an ideal location for launching watercraft. It is primarily a resting stop for paddles on the river.

Water Depth

The waters off both parks are relatively shallow being located at a gentle turn in the Hudson River, conditions which have historically promoted siltation. In fact, this portion of the River has been commonly referred to as Esopus Meadows due to these extremely shallow conditions. As previously noted, low tide conditions significantly impact shoreline access for boaters.

Based on NOAA data, water depths along the shorelines of each park vary between one and three feet, gradually increasing to about 12 feet until about a half mile out at which point there is a dramatic drop-off. At this point, water depths increase to around 50 feet within the River's main shipping channel. The relatively shallow waters off the shores of both Lighthouse and Esopus Meadows Preserve does not

preclude access by canoes, kayaks and other small watercraft, although low tide may require boaters to wade out relatively short distances to reach navigable waters. Water depths at the extreme southern portion of Esopus Meadow Preserve are slightly deeper.

Fishing

Fishing is permitted at both Lighthouse Park and Esopus Meadows Preserve. Access to the River for fishing is easier and more attractive at Lighthouse Park due to its open shoreline and relatively flat intertidal zone. Evidence of fish cleaning on the picnic tables at Lighthouse Park have been found which can diminish the enjoyment of other park users. The Town would like to continue encouraging fishing at this location, although signage may be necessary to prohibit fish cleaning on picnic tables. There are no designated fishing locations at either location.



Amenities at Lighthouse Park

Lighthouse Park Structures

A small maintenance storage building is located at Lighthouse Park along the southern property boundary with Esopus Meadows Preserve. The building currently stores a row boat used to access Chester. In addition to a couple of picnic tables, there are several memorial benches permanently affixed at various locations throughout the Park. There is also a hitching post for horses. During the summer of 2019, no portable toilets were present at the Park, although they have been located here in previous years. With no shelter at Lighthouse Park, park users have no shelter from the elements, with the exception of the pavilion at Esopus Meadows Preserve (discussed below). The Esopus Meadows Preserve is not always available to the public when it is being used for educational events. In addition, the existence of the pavilion in the adjacent park is not always known by park visitors.



Esopus Meadows Preserve's Pavilion and Accessible Restroom

Esopus Meadows Preserve Structures

In 2015, Scenic Hudson constructed a 25' X 32' multipurpose outdoor pavilion with NYS Environmental Protection Funds and Scenic Hudson funding. The pavilion is structurally reinforced to make it flood resilient. Water is able to freely flow through the structure and piers were driven over 45 feet into the ground to ensure it would withstand hurricane force winds. The pavilion was designed to the newest ADA standards, ensuring people of all ages and abilities have the opportunity to use the facility. An accessible

storage room is adjacent to the pavilion. An enclosure fences off an area south of the pavilion where accessible bathrooms are provided during the summer months. A trailhead kiosk is located at the entrance to the blue trail and adjacent to the parking lot.

A second day use area serves the water trail site and is accessible via the Preserve's White Trail or by water from the Hudson River. The site features a small picnic pavilion, picnic tables, interpretive panels and a solar-powered compost toilet. The pavilion offers fantastic views of the Hudson River and the Esopus Lighthouse.



Esopus Meadows Point

Utilities

While there are no utilities on-site, both parks are located adjacent to electrical and telecommunication infrastructure should access to them become required in the future. There is also no central sewer or public water in this location. Adjacent residents rely on on-site wastewater treatment systems (septic systems) and wells. Electricity is supplied to Esopus Meadows Preserve via an overhead powerline, which is connected to a breaker box and GFCI outlet.

Easements and Restrictions and Permitting

Easements and Restrictions

Lighthouse Park is owned and maintained by the Town of Esopus and protected through a conservation easement with Scenic Hudson. Similar to the Town's easement with Scenic Hudson for Sleightsburgh Park, the easement outlines permitted and prohibited uses and other requirements. Specifically, the easement states that the property shall be used solely as a public park for recreational purposes including picnicking, fishing, birdwatching, nature study, viewing the Hudson River, and other forms of passive recreation. In addition, the property shall be open to the general public, and no members of the public shall be excluded from use of the Park without just cause. The easement does allow the Town to limit use of the Park to daylight hours and to prevent use during inclement weather or dangerous conditions. In addition, the easement prohibits new improvements, structures and cutting or clearing of trees without written consent by Scenic Hudson. This limitation also pertains to any expansion of the parking lot, which is currently being considered by the project committee. Outdoor lighting is prohibited and all structures shall be non-reflective and of earth tone color that does not stand out in the landscape. All of these prohibitions do not apply to any improvements necessary or appropriate to promote public safety.

Scenic Hudson holds an additional easement over a portion of the site for the perpetual right to maintain the raised septic absorption field previously used by the former Esopus Meadows Nature Center building that was located in the area of the current Esopus Meadows pavilion. The absorption field is no longer in

use and may need to be removed to allow for an expansion of the parking lot. Coordination with and sign-off from Scenic Hudson will be required if the Town decides to remove the absorption field.

Esopus Meadows Preserve is owned, maintained, and protected by Scenic Hudson. An underground gas line and associated right-of-way owned by Central Hudson runs along the western border of Esopus Meadows Preserve and is not negatively impacting recreational opportunities.

Natural Resources and Ecological Conditions

As noted above in the Lighthouse Park existing conditions discussion, the freshwater shallows off the shoreline of Lighthouse and Esopus Meadows Preserve is a NYSDOS designated SCFWH. The Esopus Meadows' name originates from this off-shore area, once used by local farmers to graze their cattle on the water celery.

The shallows provide feeding, breeding, and nursery habitats for many fish species including Striped Bass and American Shad. A sizable population of shortnose and American sturgeon winter in the adjacent channels of the Meadows and can be found in the area year-round. A significant concentration of waterfowl also occurs in the Esopus Meadows area during spring and fall migrations, attracted by the many valuable feeding areas. The Klyne Esopus Kill, which winds its way through the western portion of the preserve, eventually flows into these shallows.



Navigable channels cut through water chestnut along Lighthouse Park and Esopus Meadows Preserve

Not surprisingly, the NYSDEC Natural Heritage Program identifies the area surrounding Lighthouse Park and Esopus Meadows Preserve as being in the vicinity of rare animals including Atlantic Sturgeon, Shortnose Sturgeon, bats listed as threatened or endangered, significant waterfowl winter concentrations, and significant Anadromous Fish concentrations. The southern portion of Esopus Meadows Preserve is known for many bird species and the American Bald Eagle can regularly be seen while visiting the preserve.

This area of the Hudson River has a NYSDEC Water Classification of A. Classifications of A, AA, A-S, and AA-S indicate a best usage for source drinking water, swimming and other recreation, and fishing.

Invasive Species

As discussed above for Freer Park, the Town of Esopus and volunteers have been actively working to mitigate the impacts of water chestnut on the navigability and attractiveness of the Hudson River. Water chestnuts are now more prevalent at Lighthouse Park than Freer Park and volunteers focus on clearing navigable channels for canoes, kayaks and other small boats to provide access to the River's main channel.

Scenic Resources

Lighthouse Park and Esopus Meadows Preserve provides views of the Estates District SASS across the River and are located within the Esopus-Lloyd SASS. The Estates District SASS is described above under **Freer Park**.

Lighthouse Park and Esopus Meadows play an important role in the character of the Esopus-Lloyd SASS. This significant landscape is determined by the very nature of its aesthetic values and landscape character, unique to the Mid-Hudson Valley and its widely public spaces allow for extensive recognition.



Esopus Meadows Lighthouse

The historic grand homes and religious institutions within the Esopus-Lloyd SASS also contribute to this designation and embody the Mid-Hudson Region's unique historic landscape, on both sides of the Hudson River.

The historical Esopus Meadows Lighthouse is the only wooden lighthouse on left on the Hudson River, a rare maritime feature, visible from the shorelines of Lighthouse Park and Esopus Meadows and the River itself.

River Road was designated as a New York State Scenic Road by NYSDEC in 1992. The designation was originally given to River Road as it winds its way through orchards, open fields, forests, and eventual along the Hudson River where significant views are provided. Later on, this program came under the authority of the NYSDOT's Scenic Byway program. The actual designation cannot be confirmed at this time as it is not listed on the NYSDOT website. Additional research is necessary to clarify River Road's existing standing and potential grant opportunities that may be associated with such a designation. By participating in the Scenic Byway Program, local governments have access to certain federal funding programs. Funding may be used for tourism development, interpretation, resource management marketing, and physical projects to include bikeways, scenic pull-offs, and visitor centers.

Sea Level Rise

At Lighthouse Park, the long term projection of a 21-inch rise in seal levels indicates that the majority of the Park would be flooded during a 100-year storm. As a result, improvements at the Park will need to take sea level rise into account and ensure improvements are sufficiently flood resilient. Due to steeper shorelines, most of Esopus Meadows Preserve is not anticipated to be negatively impacted by sea level rise although certain sections of trail along the shoreline may be negatively impacted along with the shoreline of Esopus Meadows Point.

Cultural and Historic Resources

Based on information provided by NYSOPRHP CRIS, no cultural or historic resources were identified on either Lighthouse Park or Esopus Meadows Preserve. The Esopus Meadows Lighthouse, visible from both locations has been listed on the National Register of Historic Places since 1979. In addition, portions of the 32-square mile Hudson River National Historic Landmark District are visible from Lighthouse Park and Esopus Meadows Preserve. This District, which stretches from Clermont to Hyde Park is discussed in the Sleightsburgh Park section above.

Surrounding Lands and Connections

Adjacent Land Use

Lighthouse Park and Esopus Meadows Preserve are located in a relatively low-density part of Town. To the north, Lighthouse Park is bordered to the north by a narrow vacant shoreline parcel owned by Ulster of County. This parcel is contiguous to Lighthouse Park and park users sometimes use the property to fish or view the river.

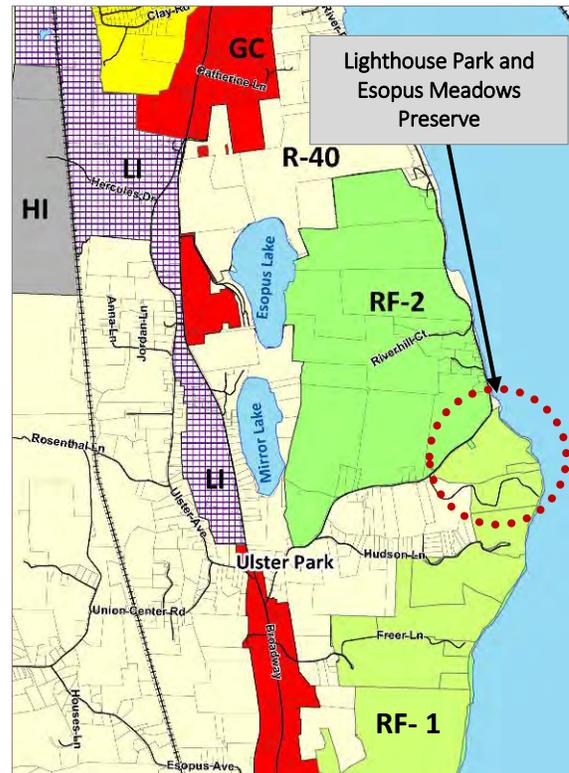


Figure 6. Lighthouse Park and Esopus Meadows Preserve Area Zoning

River Road serves as the western border for Esopus Meadows Preserve and Lighthouse Park and is dotted by low-density single-family residential land uses along the river and on the upland side to the north, with agricultural and residential uses to the south. Highbanks Preserve, a Scenic Hudson preserve is located one-mile north and accessible via River Road.

Bordering Esopus Meadows to the south and west is low-density residential development accessibly via Hudson Lane. The Preserve is also contiguous to additional protected lands owned by Scenic Hudson, although not officially part of Esopus Meadows Preserve. There is the possibility of increasing the overall trail mileage at Esopus Meadows by extending south to this additional Scenic Hudson property. Such an extension may also present new opportunities for future trail connections outside of the Preserve.

The existing surrounding uses do not appear to be negatively impacting either recreational area, and all uses seem to be positively contributing to the rural character of River Road corridor.

Adjacent Zoning

Both properties abut Riverfront Districts RF-1 and RF-2 and the R-40 Districts. The R-40 District, which abuts Esopus Meadows Preserve to the south and southwest, allows for approximately one single family dwelling per acre. The southern boundary of Esopus Meadows abuts the RF-1 District, which permits low-density development at approximately one single family dwelling for every five acres. Across River Road from both Lighthouse and Esopus Meadows, lands zoned RF-2 allows development at a density of approximately one single family dwelling for every 2.5 acres. The surrounding zoning districts are currently adequate to keep adjacent and nearby property at relatively low densities with limited opportunities for incompatible development.

Tourism Resources and Nearby Attractions

Lighthouse Park and Esopus Meadows Preserve are located in one of the most dynamic recreational, historical and cultural areas of the Town. As described in the Town’s Comprehensive Plan 2019, Esopus Meadows and Lighthouse Park serve as the northern tip of the recommended Eco/Agritourism District, an area encompassing working farms and associated agricultural landscapes, a winery, future distillery, parks, preserves, and cultural facilities with numerous locations offering scenic views. Esopus Meadows and Lighthouse Park complement and enhance this eco/agritourism district.

In addition to High Banks Preserve, Lighthouse Park and Esopus Meadows are in relatively close proximity to other Scenic Hudson preserves: Shaupeneak Ridge (3.6 miles to the lower trail head) and Black Creek Preserve (4 miles to the parking lot off of US Route 9W). In addition, John Burroughs Nature Sanctuary is located approximately 7 miles south from Lighthouse and Esopus Meadows.



Figure 7. Future Land Use Map – Comprehensive Plan 2019

Tourist attractions and destinations to the south of Lighthouse and Esopus Meadows includes Maynard Farms, El Paso Winery, the Klyne Esopus Museum, Apple Bin Farm Market, the Vacation House Bed & Breakfast (the Inn at 771 Broadway), and the Headless Horseman Hayrides and Haunted Houses.

There are limited lodging options in the immediate vicinity of the Lighthouse and Esopus Meadows. In addition to the Vacation House Bed and Breakfast 1.7 miles to the south, the Lake Motel is located 2 miles to the north. The increased popularity of short-term rentals is beginning to supplement hospitality options in Esopus, a definite need if the Town would like to take advantage of the numerous attractions it has to offer. Nearby dining options include La Roma Restaurant (3.3 miles) and La Mirage Banquet Facility (3.7



miles) to the north, near Port Ewen. Molly Rose Pub is located 3 miles to the south in the Hamlet of Esopus to the south and Stonehedge Restaurant, 5.6 miles to the south in West Park.

Once on the water, Esopus Meadows Lighthouse is an approximately ½ mile paddle east of Lighthouse Park. Further to the south on the eastern shore of the River is Mills-Norrie State Park. Mills-Norrie State Park is actually made up of two parks: the Margaret Lewis Norrie and Ogden & Ruth Livingston Mills State Parks. Park activities includes camping, picnicking, golf, hiking, geocaching, wintertime sledding and cross-country skiing. Esopus Island, which is part of the Mills-Norrie State Park, offers camping. The Norrie Point Environmental Center, a kayak tour business and a yacht club are located at the southern portion of the State Park.

Refer to the Lighthouse Park/Esopus Meadows Preserve Vicinity Map for further reference.

Area Transportation.

Due to their close proximity, refer to the Sleightsburgh discussion and for surrounding transportation options. The nearest public transit stop (Ulster County Area Transit) located several miles north in Port Ewen.

Pedestrian and Bike Connections.

River Road, while a designated scenic road, is very narrow with limited to no shoulders and poor site distances, presenting challenges for bicyclists and pedestrians. The Town of Esopus Comprehensive Plan 2019 did recognize the need to enhance River Road to facilitate bicycle and pedestrian travel. Based on an initial evaluation of the road, additional signage should be considered to better alert drivers that pedestrians and bicyclists may be using the road. Due to the road's narrow right-of-way, and with the Hudson River restricting the road to the east, there are essentially no opportunities to widen the road shoulders or create a separated bike lane and/or sidewalk/pedestrian trail.

Establishing off-road connections may be more practical, although it will take time and coordination to evaluate feasibility and property owner interest. Specifically, and as previously discussed, Central Hudson's natural gas line ROW could serve as hiking/biking trails. Coordination with Central Hudson on their policy of establishing trails on these ROW is ongoing. Initial discussions clarified that not only would approval from Central Hudson be required, but that all owners of property the ROW cuts through would need to approve any recreation use. The general public is prohibited from accessing the Central Hudson ROW and is considered trespassing without permission.

A portion of the ROW crosses River Road approximately ½ mile south of Lighthouse Park and Esopus Meadows Preserve. This ROW continues south through private lands and eventually to Black Creek Preserve. To the north, the ROW travels through High Banks Preserve near Esopus Lake and continues north eventually connecting with Hiltebrant and Dick Williams Lanes. The ROW continues further north along the Hudson River through Port Ewen and into Sleightsburgh Park.



A material connection through the ROW to Black Creek Preserve, the northern terminus of the John Burroughs Black Creek Trail, would create an exceptional recreational corridor that ultimately connects two portions of the Empire State Trail from the Walkway Over the Hudson State Historic Park to Kingston's Greenline and numerous other destinations in between. This trail would have the potential to provide safe recreation routes and establish non-motorized access to cultural, historic sites, agri-tourism, hospitality, and dining opportunities, an unmatched recreational corridor within the Town of Esopus.

Black Creek Preserve

Location

Refer to the *Black Creek Preserve Existing Conditions Map* and the *Black Creek Preserve Vicinity Map* for additional reference during the following assessment.

Scenic Hudson’s Black Creek Preserve is approximately 130 acres in size and is located less than one mile south of the Hamlet of Esopus, approximately six-miles south of the Hamlet of Port Ewen, eight miles south of the City of Kingston and 12 miles northeast of the Village of New Paltz. Vehicle access to the preserve is provided via US Rt. 9W.

Black Creek Preserve has been protected by Scenic Hudson and open to the public since 1999. An 11.8 acre parcel in the northeast portion of the preserve (formerly known as Winding Brook Acres) will be improved to expand public recreational use and access to the Hudson River. Altogether, the preserve provides protection to the confluence of Black Creek and the Hudson River and important marsh habitats within its sheltered cove.

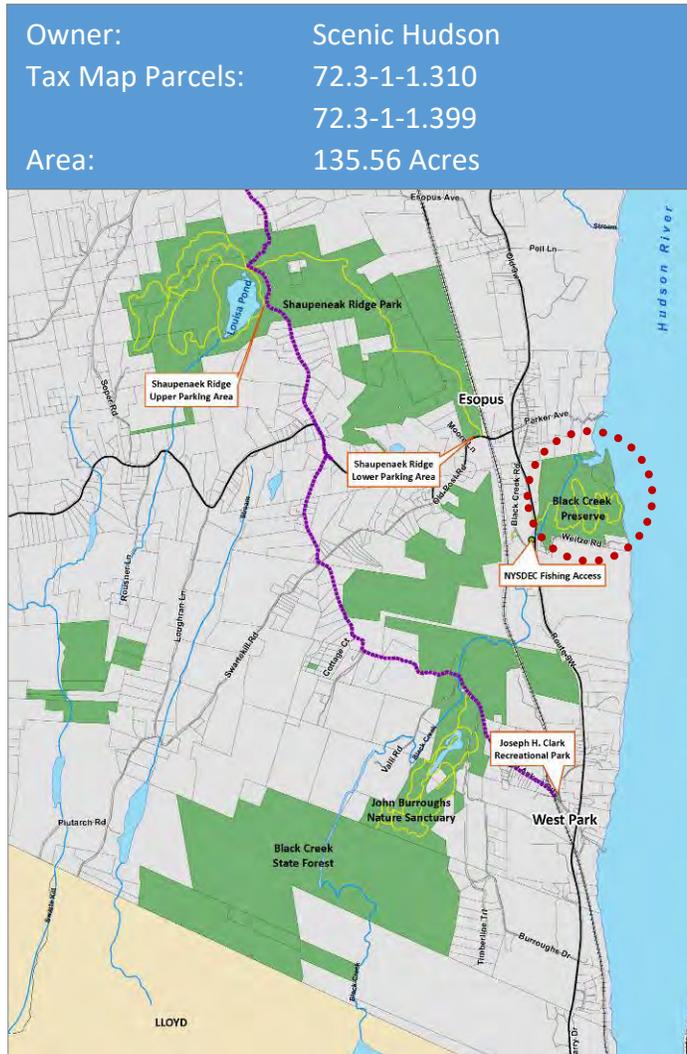


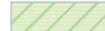
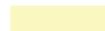
Figure 8. Black Creek Preserve Location



Confluence of the Black River and the Hudson River

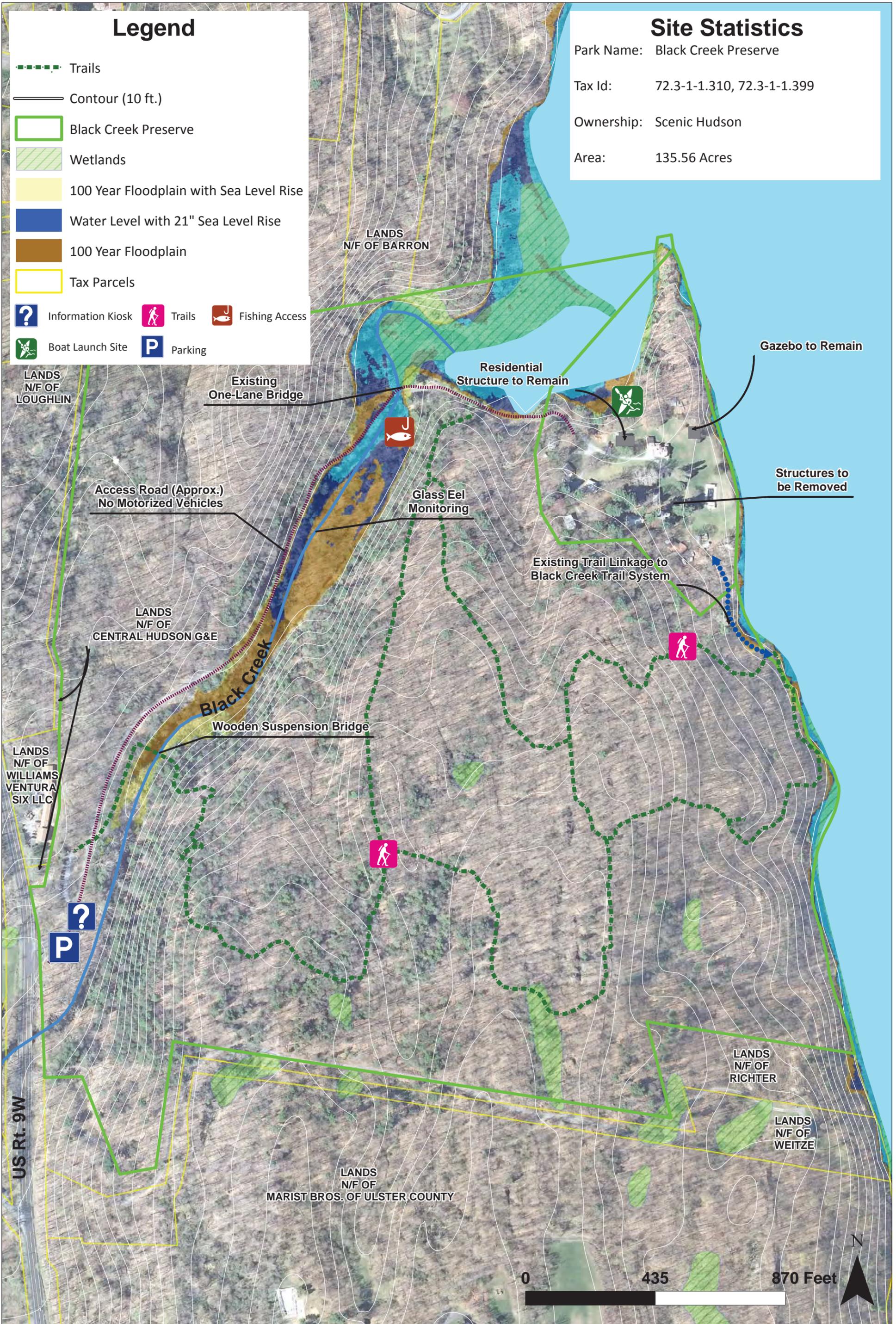
The preserve is located along a portion of the Hudson River where widths range between 1/2 to 3/4 miles to the opposite shoreline of Hyde Park in Dutchess County. Visible from the shoreline of the preserve, the rocky Esopus Island runs north/south for approximately 3/4 miles in the center of the Hudson River. Although uninhabited, it is managed as a primitive camping site as a part of Margaret Lewis Norrie State Park.

Legend

-  Trails
-  Contour (10 ft.)
-  Black Creek Preserve
-  Wetlands
-  100 Year Floodplain with Sea Level Rise
-  Water Level with 21" Sea Level Rise
-  100 Year Floodplain
-  Tax Parcels
-  Information Kiosk
-  Trails
-  Fishing Access
-  Boat Launch Site
-  Parking

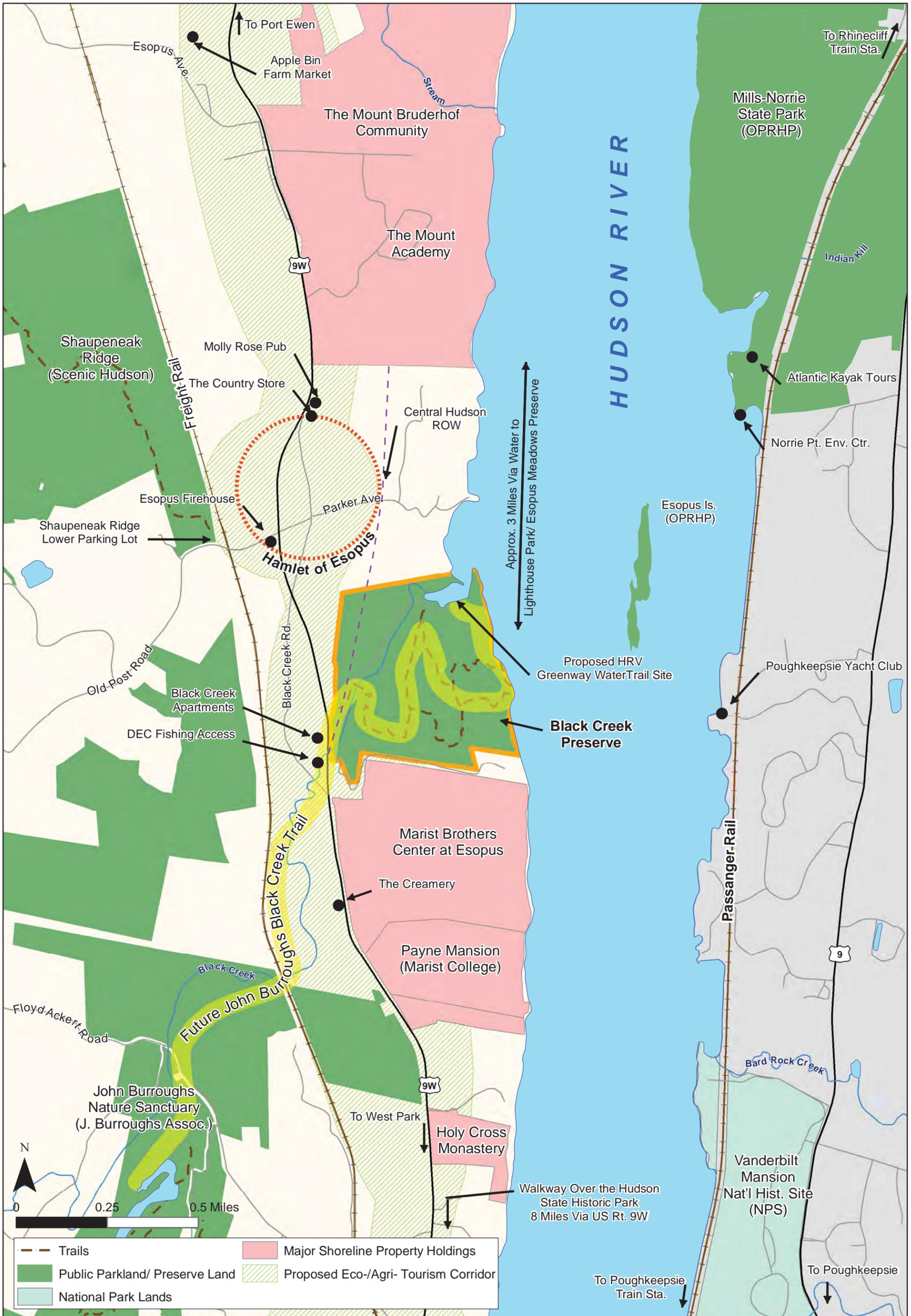
Site Statistics

Park Name: Black Creek Preserve
 Tax Id: 72.3-1-1.310, 72.3-1-1.399
 Ownership: Scenic Hudson
 Area: 135.56 Acres



Data obtained from NYSGIS Clearinghouse and Scenic Hudson. April 2019. Accuracy not guaranteed.

This Project has been funded in part by a grant from the New York State Environmental Protection Fund through the Hudson River Estuary Program of the New York State Department of Environmental Conservation.



Black Creek Preserve Vicinity Esopus Riverfront Access & Connections Study



Data obtained from NYSGIS Clearinghouse April 2020. Accuracy not guaranteed.

This Project has been funded in part by a grant from the New York State Environmental Protection Fund through the Hudson River Estuary Program of the State Department of Environmental Conservation.

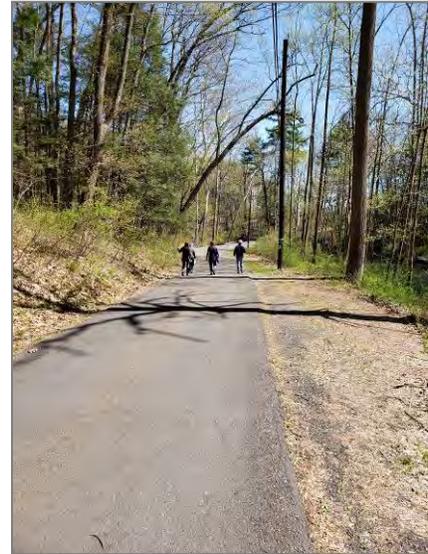
Amenities

Access and Parking

Black Creek Preserve is accessed from US Rte. 9W via a narrow paved road. A gravel parking area at the main entrance holds 10-12 vehicles. During peak use hours, the parking lot can become congested with limited room for backing up and turning around. It does not include designated ADA/accessible parking spaces. Scenic Hudson is in the process of developing improvement plans to expand the capacity of the parking lot and designate new parking spaces compliant with ADA guidelines.

A kiosk at the parking lot provides information about the trails and recreational amenities as well as details of Black Creek's unique ecology found within the preserve.

Beyond the parking lot, a paved road extends to the 12 acre riverfront parcel at the mouth of the Black Creek but terminates at an open field. A gate restricts motorized vehicles from continuing down past the main parking lot except for maintenance and emergency vehicles. The road is 0.66 miles in length but will be a key feature to Black Creek Preserve, serving as an opportunity to provide an accessible paved route along Black Creek and alternative connections to hiking trails. The road's one-lane bridge spans the creek providing scenic views of the ravine and respite from a hot sunny day. Although currently closed to the public, the road is used annually for Scenic Hudson's citizen science eel monitoring and also provides access to one of NYSDEC's fish population studies sites within Black Creek. Fishermen frequent the creek during various times of the year.



Winding Brook Road

Hiking Trails

Black Creek Preserve has over two miles of unpaved, family-friendly hiking trails that includes a wooden suspension bridge over the Black Creek before a trek up the top of the hemlock ravine and into the hardwood uplands. Allowed use of the preserve's trails include hiking and cross-country skiing. Interpretive kiosks and arboretum signs are provided along trails throughout the preserve to inform visitors of the area's ecology and site specific plants and animal species.



ADA Accessible Trailhead Kiosk at Black Creek Preserve

Boating

At the riverfront parcel, there is a former boat ramp and an associated breakwall or bulkhead along the southern shore of the sheltered cove within the mouth of the Black Creek. This boat launch was previously associated with the former rental cottages of Winding Brook Acres. The boat ramp may be able to serve canoers and kayakers, already on the Hudson River, as a formal Hudson River Greenway Water Trail site with an opportunity to come ashore and enjoy the trails within the preserve.



Existing Boat Ramp and Bulkhead at Black Creek Preserve

The bulkhead was recently assessed by a structural marine engineer who determined that a majority of it can be repaired in-kind and that even minor widening of the boat ramp slip would likely result in multiple permits from NYSDEC and Army Corps of Engineers. It should be noted that tidal water levels in this area can become very shallow, sometimes restricting navigable access to the shoreline during the lowest tides.

The existing boat ramp is most suitable for hand launching canoes and kayaks to the Hudson River, because of its gradient, proximity to open lawn areas, and sheltered location from currents and commercial shipping traffic. The steep terrain that is pervasive along most of the preserve's river shoreline and heavy vegetation restrict other possible locations. However, its distance is more than a half mile from the main parking lot and because public vehicle traffic will remain prohibited on the road, the preserve in itself is not an ideal location for most to launch canoes/kayaks. Additionally, there are no designated locations for launching watercraft into Black Creek within the preserve. The creek bed is generally difficult to navigate because of shallow conditions and fallen trees, while steep banks prevent easy access to the water.

Per the NOAA Nautical Chart, the Hudson River ranges between 35 to 55 feet deep along the preserve. However, as previously stated, due to the steep shoreline and limited access, Black Creek Preserve is not expected to be a popular launching spot for canoes and kayaks. Conversely, the confluence of the Black Creek with the Hudson River can become shallow at low tide, with a deep mud bottom that further restricts boat access.

Fishing

Fishing is allowed at the preserve and is popular along the Black Creek. There are no designated fishing locations, picnic tables or benches along the Creek or the River, although the bridge on Winding Brook Road is a popular location where the water is deeper. Fishing along the Hudson River is difficult due to

the steep shoreline and change in elevation to the water's surface. As discussed in more detail below, the Black Creek is an important spawning ground for herring and key resource for many other aquatic species.

Structures

Several small cabins, a residential dwelling, a garage and additional structures were present on the former Winding Brook Acres property. With the exception of a historic dwelling and a gazebo, all other structures were removed in 2019. A concrete pad remains where a boat house was once located adjacent to the boat ramp and bulkhead at the shoreline.

Utilities

Municipal sewer and water are not provided to the preserve. An overhead electric utility line owned by Central Hudson Gas & Electric runs out to the remaining house. The remaining dwelling is served by an on-site well and septic system and may be repurposed as living quarters for future stewards/caretakers.



Remaining House at Black Creek Preserve

Easements and Restrictions

Black Creek Preserve is owned, maintained and permanently protected by Scenic Hudson. Oftentimes the title to the beds of the Hudson River are held in trust for the people of the State of New York under the jurisdiction of OGS. Approval from OGS may be necessary if projects are proposed that would involve disturbing the bed and/banks of the Hudson River, among other regulatory approvals.

Natural Resources and Ecological Conditions

The majority of Black Creek Preserve tree canopy consists of a maple/beech/birch ecotype, referred to by the NYSDEC as a "Stepping Stone" forest, contributing to approximately 1,174 acres of contiguous forest lands. Numerous vernal pools and streams exist within the preserve and freshwater forested/shrub wetlands are found at the mouth of Black Creek.

The habitat associated with the Black Creek is a NYSDOS designated SCFWH. The 41-acre designated area is predominantly forested with vernal pools, adjoined by freshwater tidal wetland and swamp with submerged aquatic



The Black Creek

vegetation beds in the eastern portion of the habitat where the mouth of the creek meets the Hudson River.

Black Creek winds its way through a rocky ravine with shady steep slopes and that create a cool, moist environment where Eastern Hemlock (*Tsuga canadensis*) dominates the forest canopy. Unfortunately, this ecotype is threatened by a small tree pest known as the hemlock woolly adelgid that is capable of decimating native hemlock stands throughout the region and particularly the Black Creek corridor through Esopus. Heavy populations of deer have also contributed to poor forest regeneration throughout the property.

The tidal wetlands at the mouth of the creek consist of habitats ranging from hardwood and shrub swamps to marshy mud flats and gravel banks, all of which are beneficial for fish and waterfowl. These critical habitats are vulnerable to extreme storm events and sea level rise. Continued protection of these areas may include educational material to limit disturbance by small craft users.

A rocky peninsula in the north east portion of the property is responsible for protecting the cove at the mouth of Black Creek. The forest canopy is characterized as the Appalachian Oak-Hickory forest and consists primarily of oak with an understory of ericaceous shrubs and moss species. A cluster of White Atlantic Cedar are found to be naturally growing at the very tip of the peninsula, a rare occurrence along the Hudson River shoreline.



Peninsula at Black Creek Preserve

According to the NYSDEC Natural Heritage Program, Black Creek Preserve is located within the vicinity of rare animals including Atlantic Sturgeon, Shortnose Sturgeon, bats listed as threatened or endangered, significant waterfowl winter concentrations, and significant Anadromous Fish concentrations.

NYSDEC Hudson Valley Resource Mapper indicates that many fish use the Black Creek as a fish run, including documented species of Alewife, American Eel, and Blueback Herring. American Eel are also present in the Creek and Map Turtles are found along the banks at the Hudson/Black Creek confluence.

Since in 2013, NYSDEC has been surveying river herring in Black Creek at the Preserve using an instream fish counting device. The purpose of these surveys is to gain a better understanding of the river herring use of tributaries during spawning runs. NYSDEC, in partnership with the Hudson River Estuary Program and National Estuarine Research Reserve, also supports a citizen science juvenile eel monitoring program to observe the number of juvenile eels in tributaries of the Hudson River, including the Black Creek.

At Black Creek Preserve, the Hudson River has a NYSDEC Water Classification of A, which means this portion of the River is suitable as a water supply source for drinking, culinary or food processing purposes; primary and secondary contact recreation and fishing. The Black Creek has a Water Classification of C, indicating the Creek is best suited for fishing, and appropriate for fish, shellfish and wildlife propagation and survival and is also suitable for primary and secondary contact recreation.



Solar Panels for herring counter

Scenic Resources

Views of the Hudson River and its confluence with Black Creek are provided from the northern section of the Preserve. The removal of structures discussed above significantly improved on- and off-shore views of the property. These views are recommended to be maintained and no new structures are proposed that would be visible from the River.

A majority of the preserve is located within the Esopus-Lloyd SASS previously discussed in more detail in the Lighthouse Park/Esopus Meadows section. A smaller area of Black Creek Preserve is located on the edge of the Estates District SASS, and discussed in the Freer Park section above.



View Looking Northeast from Black Creek Preserve

Sea Level Rise

It is estimated that the Hudson River will rise by approximately 21" within the next 30 years based on New York State data (previously discussed). The high tide water level will increase, although the impact will be negligible along the River's steep shoreline at the preserve. Sea level rise and the associated increased 100-year floodplain will be more noticeable within the sheltered bay and at the existing boat ramp. Increased sea levels may actually improve water access to Black Creek Preserve. Negative impacts to trails are not expected, however future storm and flooding events are likely to threaten the existing vehicle bridge on the roadway as sea levels rise and storm intensities increase. Major modifications or full replacement may be required in decades to come.

such as corporate offices, inns and conference centers. These lands encompass the Marist Brothers Center at Esopus, Marist College, the Mount Academy and Mount Bruderhof Community.

The Hamlet of Esopus includes R-12, NC-Neighborhood Commercial, and GC-General Commercial. Due to the fact that the Hamlet of Esopus is not served by municipal water/sewer, R-12 requires a minimum lot size of 40,000 SF. Both single- and two-family homes are permitted and multifamily housing is permitted under certain conditions.

The NC – Neighborhood Commercial District is intended to promote businesses that provide goods and services for residents of the surrounding neighborhood. Development is subject to standards to ensure the surrounding residential areas will not be adversely affected.

The GC – General Commercial District allows a wide range of business uses on the Town's major highways, primarily US Rt. 9W, which serve not only Town residents but also significant through traffic and visitors.

The surrounding and nearby zoning districts and associated regulations are currently compatible with Black Creek Preserve and are adequately protecting the borders of the property. In addition, the Hamlet of Esopus with small-scale commercial uses provides amenities used by visitors to Black Creek and other nearby recreational and cultural resources. The commercial zoning provides opportunities for future investment and new businesses that could take advantage of the surrounding resources, including the Eco/Agritourism District recommended in the 2019 Comprehensive Plan.

Tourism Resources

Ecotourism. As described in the *Town of Esopus Comprehensive Plan 2019*, Black Creek Preserve is located within the recommended Eco/Agritourism District, a rural region of the Town dotted with working farms, parks, preserves, wineries, entertainment and cultural attractions, along with lodging and dining opportunities, and several locations offering scenic views. Black Creek Preserve is a major feature of this corridor. As the recreational amenities are increased, the Preserve will continue to support and compliment future growth in this corridor.

Nearby Recreational Lands. Though not currently connected to other recreational lands, the Preserve is located approximately one-mile south of Shaupeneak Ridge Park's lower parking lot along Old Post Road. The John Burroughs Nature Sanctuary and Slabsides are located approximately three miles to the southwest via US Rt. 9W, Floyd Ackert Road and John Burroughs Road. Scenic Hudson and the John Burroughs Association are currently advancing implementation phases of the John Burroughs Black Creek Trail (JBBCT) project, discussed in more detail below under **Area Connections** and depicted on the **Black Creek Preserve Vicinity Map**. The Black Creek State Forest is located contiguous to and south of the John Burroughs Nature Sanctuary and will be integrated as a segment of the JBBCT.

Esopus Island is located directly east of Black Creek Preserve within the River as part of the Margaret Lewis Norrie State Park, which includes the Norrie Point Environmental Center, a marina and a kayak tour and rental business.

Lodging and Dining. There are limited lodging opportunities within the Town of Esopus and in the immediate vicinity of the Preserve as previously discussed. Dining options are available to the north and south of the Black Creek Preserve, with the closest being Molly's Pub and the Country Store in the Hamlet of Esopus. About a mile and a half south of the preserve and directly located on US Rte. 9W within the Hamlet of West Park, are dining options at End Cut and Stonehedge Restaurant. There are additional dining options to the north in Port Ewen, including La Roma, La Mirage Restaurant and Catering, the Port Ewen Diner, and Mario's Pizza, among a few others.

Area Connections

With the exception of the Hudson River, there are no existing off-road pedestrian/bicycle linkages to nearby recreational, commercial, or entertainment, opportunities. The only access to and from Black Creek Preserve is via US Rt. 9W, which is a primary transportation corridor with limited amenities for pedestrians and bicyclists until it enters Port Ewen.

The Hudson River provides the only direct non-motorized connection to other recreational areas in the Town of Esopus and nearby communities. For example, Lighthouse Park and Esopus Meadows Preserve are located approximately three miles to the north and Freer Park and Sleightsburgh Park located approximately six miles and seven miles to the north respectively. Norrie State Park is located less than a mile across the River with Esopus Island approximately midway. The next southern water trail site on the western river bank is located at Bob Shepard Highland Landing Park, approximately 8 miles away. Currently, connections to the Walkway over the Hudson State Historic Park are only by vehicle. Scenic Hudson will seek to add Black Creek Preserve as a designated stop along the Greenway Water Trail for a total count of five stops along, or within reach of, the Esopus shoreline.

As mentioned earlier, the John Burroughs Black Creek Trail will be an 11-mile hike-bike-paddle trail that will also showcase the legacy of nature essayist John Burroughs, whose historic cabin, Slabsides, is a central feature of the trail (See the John Burroughs Black Creek Trail Concept Plan concept below). When complete, the trail will be a regional and state-wide resource that will connect and increase access to more than 1,400 acres of conserved land in the Black Creek Corridor as well as intersect the Empire State Trail. The trail will form linkages to Poughkeepsie and recreational areas including the Walkway over the Hudson State Historic Park, Fannie Reese State Park, Illinois Mountain, Chodikee Lake, Black Creek State Forest, and John Burroughs Nature Sanctuary and finally end at the Hudson River at Black Creek Preserve. With connections to the south and the Empire State Trail, the JBBCT will serve as a unique recreational trail into the Town of Esopus, providing access to numerous other recreational, cultural, entertainment and dining options. This effort is supported by the Towns of Esopus and Lloyd in partnership with Scenic

Hudson and the John Burroughs Association. Next immediate steps include the fabrication and installation of an integrated signage and wayfinding system for the trail.

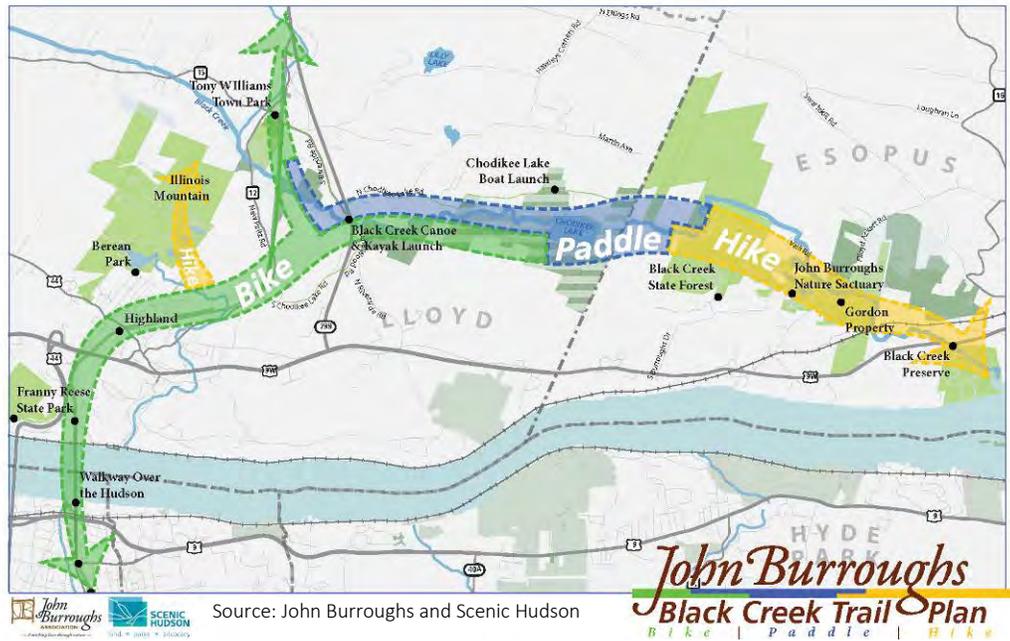


Figure 10. John Burroughs Black Creek Trail Concept Plan

Area Transportation

Black Creek Preserve is located between the Hudson River and US Rt. 9W and is well connected to a significant traffic volume through the region. At this location, the Average Annual Daily Traffic (AADT) counts adjacent to the Preserve are 10,717 cars, based on a NYSDOT traffic count dated June 9, 2015. This amount of traffic provides opportunities for the Town to attract travelers to a variety of destinations and attractions and boost the local tourism economy. Conversely, this significant traffic volume and higher speed limits also presents challenges to the Town, particularly related to pedestrians and bicyclists.

During the public outreach phase for the Town of Esopus Comprehensive Plan 2019, US Rt. 9W was considered unappealing and generally unsafe for pedestrians and bicyclists. The road shoulder of US Rt. 9W within the Town of Esopus varies, but is approximately 7 feet in most locations. The shoulder begins to narrow the further north one travels, with narrowest area located in Port Ewen where sidewalks are provided.

While road shoulders between four and six feet are considered generally acceptable for bicyclists, the vehicle speed limit of US Rt. 9W has been cited as a major deterrence for bicyclists as well as pedestrians. A combination of pot holes, poor road surfaces and debris along the shoulders contribute to a relatively unsafe bicycling environment. Sharrows and other appropriate signage should be considered, along with designated bike lanes where feasible and more routine cleaning and repairing of the road shoulders. Opportunities to enhance and enlarge narrow sections along US Rt. 9W in Esopus, particularly in the



vicinity of the Town's various recreational resources and other amenities, should be pursued to facilitate more bicycle travel. Improving the safety of US Rt. 9W for bicyclists and pedestrians is also a recommendation in the Town of Esopus Comprehensive Plan 2019.

Possible Linkages

Pedestrian and Bicycle Connections: As previously discussed, Black Creek Preserve will be linked to several recreational areas and other destinations through the JBBCT. Additional future connections could be made to Scenic Hudson's Shaupeneak Ridge Park and the Hamlet of Esopus. Shaupeneak Ridge's lower parking lot is located within one-half a mile north of the Preserve via US Rt. 9W and Old Post Road. A potential pedestrian and bicycle connection between these resources should be explored.

A non-motorized connection between the Preserve, the Hamlet of Esopus and Shaupeneak Ridge Park would likely be an on-road connection as all adjoining properties and nearby properties are privately owned. However, the Central Hudson natural gas line and ROW could provide an off-road connection from the Preserve to Parker Avenue which would negate the need to travel on US Rt. 9W (discussed more above). This would be an ideal alternative to US Rt. 9W as the shoulders between the Preserve and Old Post Road narrow down to less than 6 feet in certain areas, especially along the northbound lane.

In addition to on road issues with US Rt. 9W, there are essentially no shoulders along Parker Avenue and Old Post Road, requiring bicyclists and pedestrians to walk within the travel lane. This issue will need to be addressed in more detail in the future for this connection to be safe and practical.

Regarding the Central Hudson right-of-way, there have been numerous cases where trail corridors have been co-located along utility corridors. The ROW extends over private property before reaching Parker Avenue. The feasibility utilizing this ROW will need to be further explored through discussions with involved property owners to assess initial feasibility as discussed in the Lighthouse Park/Esopus Meadows section above.

SECTION 4: PROJECT RECOMMENDATIONS

Based upon research, site visits, public input and Riverfront Committee work, a series of recommendations were developed for Sleightsburgh, Freer and Lighthouse Parks along with Black Creek Preserve. There are no major recommendations being proposed for Esopus Meadows Preserve. Detailed concept plans and order of magnitude cost estimates were prepared for Freer and Lighthouse Parks. Scenic Hudson has prepared a detailed concept plan for proposed improvements. A preliminary concept plan of proposed improvements at Sleightsburgh Park is provided. Regulatory and permitting needs are included within each discussion. Cost estimates are located in **Appendix C. Project Cost Estimates**.

Sleightsburgh Park

Refer to the **Sleightsburgh Park Concept Design** on and for the following project description.

Recommendations

Parking Lot Improvements

SP-1: Between four and five angled boat trailer parking spaces (approximately 10 ft. by 40 ft.) are proposed along the western side of the parking lot. The spaces should be marked with concrete curb stops and/or painted lines with associated signage. Painted lines will require regular maintenance due to the gravel surface. An alternative material for designating parking spaces are marking whiskers (see image to right). Scenic Hudson has utilized marking whiskers and have found they get flattened and faded after about 2-3 years. A combination of paint and marking whiskers could be considered.



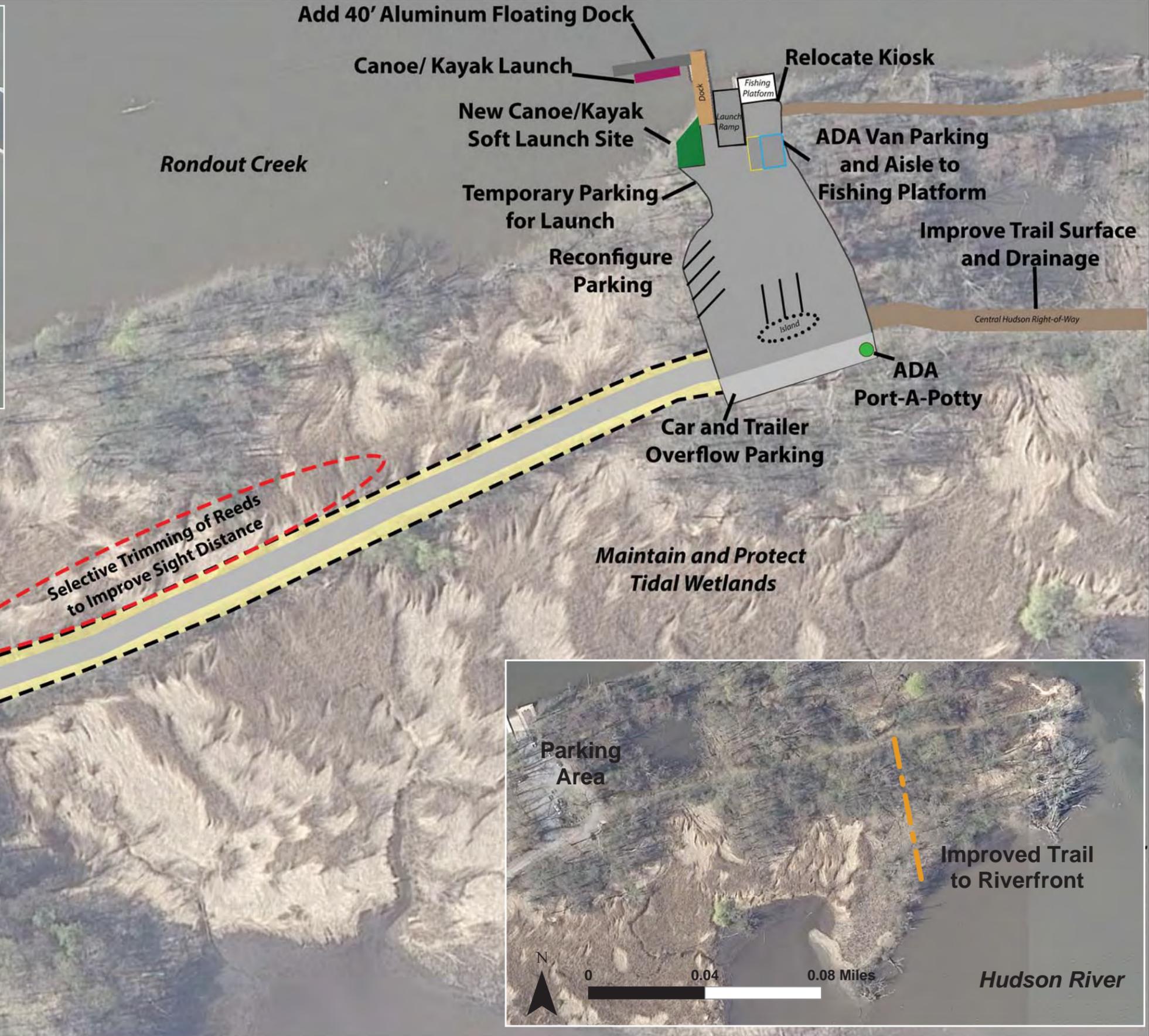
Sleightsburgh Park Lot – Angled Parking Spaces Proposed to the Left

Long-term monitoring of the circulation pattern is recommended to determine if additional spaces can be designated or if less spaces are required. With space limited, it is recommended that the Town test out the above recommendations to find an optimal parking space layout and internal circulation pattern. Once the optimal program has been identified, curb stops can be installed and the painted lines regularly maintained.



Parking Space Marking Whiskers (Mohonk Gateway Center)

SP-2: Designate four boat trailer parking spaces (approximately 10 ft. by 40 ft.) on the northern side of the existing center island. These spaces should also be marked



A Program of the New York State Department of Environmental Conservation
 This Project has been funded in part by a grant from the New York State Environmental Protection Fund through the Hudson River Estuary Program of the New York State Department of Environmental Conservation.

Sleightburgh Park Concept Design

Esopus Riverfront - Access & Connections Study

with concrete curb stops and/or painted lines with associated signage. Long-term monitoring of the circulation pattern is recommended to determine the center island can support four boat trailer parking spaces. If insufficient room is available for safe circulation, it is recommended that two trailer spaces be provided on the western side and two vehicle (non-trailer parking) spaces on the eastern side. Overflow trailer and non-trailer parking spaces will remain at the southern portion of the parking lot.

SP-3: To improve the internal circulation of the parking lot, one-way circulation is proposed and appropriate signage is recommended to be installed.

SP-4: To improve hand launching opportunities, a temporary canoe/kayak unloading space is proposed adjacent to the proposed canoe/kayak launch (See SP-9).

SP-5: One ADA van space is proposed for the area contiguous and immediately south of the fishing platform. This space will include an unobstructed ADA compliant path leading to the fishing platform. The gravel surface will need to be monitored to ensure it remains sufficiently compacted to meet ADA requirements.

SP-6: In an effort to better understand the popularity of Sleightsburgh Park, including the types of visitors (kayak, motorboat, fishing, etc.) and the most popular days and times of the season, visitor surveys are recommended. The resulting information will assist in guiding future parking lot and access improvements, among other issues. Surveys could be done by volunteers and/or could be combined with future boat inspection and cleaning operations.

New Dock and Canoe/Kayak Access

SP-7: The current gangway and dock are not ADA accessible for various reasons including the slope of the gangway and lack of toe guards on the gangway and dock. In addition, the concrete walk leading to the gangway has a 2- to 3-inch rise/step precluding ADA compliance. Additional evaluations and cost estimating are necessary to determine the feasibility of bringing the boat launch and dock into ADA compliance.



Example of a Soft Canoe/Kayak Hand Launch

SP-8: To help alleviate congestion at the boat launch, a new 40-foot aluminum floating dock is proposed to increase the amount of temporary docking space available to boaters. If the approach to the dock can be improved to ADA compliance, including the concrete step and gangway, the Town should consider the costs of upgrading the existing dock to ADA compliance and purchasing a new 40-foot ADA compliant dock.

SP-9: To the west of the boat ramp, establish a small soft launch for canoes/kayaks and other small watercraft. The launch is recommended to be surfaced with crushed stone and regularly maintained. Concrete pavers may provide a suitable alternative which may be more ADA accessible. In addition, and if feasible, an accessible route to the launch site will be provided. While potential parking space layouts are being considered (See SP-1), the feasibility of establishing an ADA parking space near the proposed soft launch should be evaluated.

Access Road Site Line Improvements

SP-10: In an effort to improve sight distances along the access drive, selective trimming of wetlands reeds on the northern side of the road is proposed to occur on an annual basis, or as needed

SP-11: A small pull-off along the southern side of the access road is proposed just east of the Central Hudson natural gas infrastructure to provide additional room for vehicles to pass. Central Hudson is scheduled to make repairs to the gas equipment in this location which may assist in establishing the pull-off area.



Access Drive Looking West from the Parking Lot

Trail Improvements

SP-12: The majority of the existing trails are overgrown as they have not been regularly maintained by the Town. It is recommended that an on-going trail maintenance schedule be established. Initially, vegetation along the edges of trails should be cut back followed by regular maintenance be for the trails. This would include regular inspections to clear downed trees and branches and address any hanging branches or leaning trees that pose a safety hazard. Where feasible, select trails closer to the parking lot could be widened to increase access. Areas with poison ivy should be regularly cutback for the safety of park users.

SP-13: The Central Hudson ROW east of the parking lot also doubles as an informal trail and provides access to the eastern point of the Park and the southern shoreline. However, there are low-lying sections of the ROW/trail that are regularly flooded as a result of the tides along with drainage channels crossing the ROW/trail. In consultation with Central Hudson during a site visit to Sleightsburgh Park on February 11, 2020, an initial determination was made that no ground disturbance above the gas line will likely be approved and addressing the wet areas and drainage channels will be problematic. Alternatives that would not involve ground disturbance or permanent structures were then considered.



Example of a Puncheon

One option includes the use of puncheons which are basically shot-span footbridges or a series of connected short-span footbridges. If approved by Central Hudson, puncheons could be a low-cost option to bridge wet areas. Puncheons could also be used to reach the southern shoreline. An existing trail connects the southern shoreline with the ROW and travels through wetlands making puncheons an ideal solution.

Unfortunately, puncheons are not ADA accessible and it would be preferable if ADA accessible trails are provided at Sleightsburgh Park. It is therefore recommended that the Town and Central Hudson continue to review possible drainage improvements along the ROW/trail. Establishing an ADA accessible trail to the Park's southern shoreline may be more problematic given the extent of wetlands. A raised boardwalk through the wetlands would be required and based on anticipated costs, long-term maintenance required, and anticipated sea level rise, a boardwalk is not currently considered practical.



Central Hudson Right-of-Way and Trail

Long-term Monitoring Programs

SP-14: To assist Town of Esopus employees responsible for maintaining Sleightsburgh Park, a volunteer program is recommended for trail maintenance efforts. This group would primarily consist of volunteers and should include a representation from the Town Board and community stakeholders. The primary roles of this group would be to assist Town-employees in trail upkeep and maintenance and lead new trail improvement projects, provide regular presence at the Park and coordinate and advise long-term planning and future decision making by the Town as it relates to the Park. If a volunteer group to help maintain Sleightsburgh Park is preferred, the Town will first need to address potential liability issues and coordinate with their insurance carrier to confirm the process and steps required.

SP-15: The Esopus Environmental Board will continue to monitor the population of *Carex frankii* within the Park in accordance with 1996 management plan approved by NYSDEC and the monitoring program prepared by Scenic Hudson in February 2013. This monitoring is likely to involve volunteers and assistance by NYSDEC and Scenic Hudson. A new population survey is recommended for 2022.

Amenities

SP-16: Relocate or construct a new kiosk near the fishing platform in a location that would not impede pedestrians and individuals with mobility limitations or impact the proposed ADA van parking space. If replaced, the kiosk should also be ADA accessible and provide park and other local information via QR

codes linked to recorded audio to assist visitors that are visually impaired. The QR codes can also provide additional information for all visitors to the park.

SP-17: Install a minimum of one ADA picnic table on the fishing platform.

SP-18: Install a small bike rack in the southern portion of the fishing platform, close to the parking lot and in an area that would not impede pedestrians and individuals with mobility limitations or impact the proposed ADA van parking space. If feasible, consider installing one bicycle repair station that provides a tire pump and associated tools that assist with basic repairs.

SP-19: Continue to provide an ADA portable restroom facilities in the parking lot.



Bicycle Repair Station

Proposed Rules and Regulatory Changes

SP-20: There is evidence of people cleaning fish at the Park and on the picnic tables provided. This result in an unsanitary and unpleasant condition for other Park users. Therefore, signage is recommended clearly stating that no fish cleaning on picnic tables and no disposal of fish parts in the Rondout Creek or elsewhere in the Park is allowed. It is also recommended that the Town reach out to NYSDEC to seek advice on the types of hunting that should continue to be allowed at the Park.

SP-21: Confirm a preferred approach for allowing and monitoring access to the Park after hours and out of season. To assist in identifying potential solutions, a moderated discussion between all stakeholders is recommended. This process will allow for the presentation of all relevant existing information, including current rules and regulations regarding Park use and access. The meeting will also provide opportunities for all stakeholders to discuss their concerns, needs and recommendations related to access. Possible stakeholders include, but would not be limited to the following: Hunters, anglers, boaters, residents of Sleightsburgh, Esopus Town Board, Highway Department, and Esopus Parks and Recreation Commission, Waterfront Advisory Board, stakeholders at City of Kingston, NYSDEC, and the Ulster County Sheriff's Office. A final list of attendees has yet to be confirmed.

SP-22: Review and consider necessary revisions to Town of Esopus Code Chapter 98, "Park Rules and Regulations" related to out of season park access and designated fishing locations. These reviews could take place during the LWRP Update scheduled to begin in during August 2020.

SP-23: A sign reading “Sleightsburgh Park Town of Esopus” has been located on the Park’s fishing pier for several years. The sign, which is made up of individual letters, requires ongoing maintenance and the replacement of letters due to weathering and damage by wave action. The sign is recommended to be removed and replaced with a new sign in a location that does not impede fishing or boating access or impact views from the Park.



Sleightsburgh Park Sign

SP-24: It is recommended that Sleightsburgh Park be formally designated as a “Carry In-Carry Out” park and signage indicating this requirement should be posted. Fines for littering should also be posted. In addition, all Town Parks should be regularly cleaned of garbage and other debris that may be illegally discarded.

Alternative Waterfront Access Recommendation

SP-25: As previously noted, access to Sleightsburgh Park is expected to be negatively impacted by an increase in sea levels. The sea level increase may also impact the boat launch and parking area. In addition, Sleightsburgh Park continues to see an increase in use which can result in congested conditions at the launch and negative impacts to Hamlet of Sleightsburgh neighborhoods related to increased traffic.

Therefore, the Town should consider a future alternative site for a boat launch and waterfront access. A potentially ideal location is the former Kosco Oil Terminal and the northern terminus of North Broadway. Substantial research on this potential location is necessary, including, but not limited to subsurface environmental conditions (based on the previous use as an oil terminal), and the location of the Town’s North Broadway right-of-way, among other issues to research and address. In addition, the Town should seek to reclaim ownership of the northern end of North Broadway which would assist in providing an alternative access location.

It is recommended that the Town begin researching existing conditions and the feasibility of establishing a new boat launch at this location in the Local Waterfront Revitalization Program update scheduled to begin August 2020. The LWRP should also evaluate additional alternative waterfront-dependent uses that would be compatible at this location, including waterfront dining options.

Neighborhood Traffic

SP-26: Implement traffic calming and other safety measures along North Broadway to mitigate current safety concerns related to speeding vehicles and increased traffic during the fishing/boating season. Recommendations include, but are not limited to painting a center and shoulder lines, road surface MPH signs and similar road surface traffic calming measures, radar/speed indicator sign, and proper maintenance of vegetation at intersections to ensure proper sight distances.



Pavement MPH Signs

SP-27: Alternative access via Front Street. To reduce the amount of park traffic traveling through the neighborhood streets of Sleightsburgh, the feasibility of accessing Sleightsburgh Park through the former Kosco Oil Terminal site over what used to be Front Street should be evaluated. This would require a partnership with and permission from the current owner of the property.

Sea Level Rise

SP-28: The Town of Esopus, in partnership with NYSDEC and other stakeholders should begin evaluating options for and the feasibility of protecting Sleightsburgh Park from projected sea level rise. This evaluation should begin during the Town of Esopus' LWRP update.

Sleightsburgh Park Access Stakeholder Mediation

SP-29: Evaluate and quickly take action on the recommendations resulting from the stakeholder mediation conducted by the WAB Sub-committee. A summary of the results the mediation process are found in Appendix E.

Regulatory Needs

Sleightsburgh Park contains portions of NYSDEC-regulated freshwater wetlands. In general, most activities in freshwater wetlands or within the 100-foot adjacent area require NYSDEC approvals. Approvals from the USACOE may also be necessary which will then require a Section 401 Water Quality Certification by NYSDEC. The Rondout Creek is class C waterbody at this location, and any disturbance to the bed or banks of the creek requires a Protection of Waters, Stream Disturbance permit. Additionally, the Rondout Creek is navigable, and therefore, any excavation or placement of fill below mean high water requires an Excavation/Placement of Fill in Navigable Waters permit. Certain State-listed species are known to be present at Sleightsburgh Park as discussed above. If these listed species are impacted, a separate permit will also be necessary. In addition, there are required timeframes for certain projects to avoid impacts.

Based on the pre-application meeting with NYSDEC, the following permits and approvals may be necessary:

- The addition of a new floating dock is expected to require a NYSDEC Protection of Waters Permit.
- The proposed trimming of the wetland reeds along the northern side the access road to improve site lines will require coordination with NYSDEC, and at a minimum, a letter of permission is required. However, NYSDEC did state that impacts to least bittern will need to be ruled out first and clarification of the process to trim the reeds must be provided.
- If the proposed pull-off will result in impacts to wetlands or is located within the 100-foot adjacent area, a NYSDEC permit will be necessary.
- The construction of a soft hand carry launch to the west of the boat launch may require NYSDEC approvals if it involves disturbance to the bed and banks of the Rondout Creek.
- The regular maintenance of trails will not require approvals, although there are recommended timeframes for any vegetation cutting, as discussed below.
- The use of puncheons to bridge wet areas within the Central Hudson ROW and to reach the southern shoreline may not require regulatory approvals. Approval from Central Hudson will be required prior to any work proposed within their ROW.
- NYSDEC coordination is necessary to obtain a jurisdictional determination for any trail work that involves wetlands, although the use of puncheons may not require a formal permit from NYSDEC.
- The preferred work window for activities that may disturb nesting birds would be outside of the nesting season, which is generally considered April 15th to August 15th. Therefore, any clearing of the wetland reeds and trail improvements should not be planned before August 15th.

George H. Freer Memorial Park

Refer to the Free Park Concept Plan CLA-01 for the following project description.

Recommendations

Shoreline Access Improvements

FP-1: Soft launch Improvement. The unofficial soft launch at the southern end of the park is in need of minor improvements to enhance access and formalize as a designated launching site. Minor grading and the placement of fresh gravel between the launch and the parking lot are necessary to provide a more stable surface to launch small, non-motorized trailered boats, along with hand launching of canoes, kayaks, small sailboats, paddleboards and similar small watercraft.



Existing Soft Launch to be Improved

While the launch itself will not be officially ADA accessible, a sidewalk originating at proposed ADA parking spaces will provide opportunities for people with mobility issues to access the launch. As currently proposed, additional crushed stone paths or similar compact surface, will provide access along and to the shoreline.

Launching motorized boats is currently, and will remain prohibited. Signage identifying the prohibition on motorized boats should be posted. Additional signage is recommended to alert boaters to the shallow conditions, the submerged rock wall and the impact that tides will have on access to and from the launch. The improved soft launch will require regular maintenance by the Town of Esopus and should be added to Freer Park's regular maintenance schedule.

FP-2: Bulkhead Improvements. Due to the current condition of the bulkhead, a structural evaluation is scheduled for the summer of 2020 to determine if the wall can be repaired and lifespan extended or if the Town should begin planning to replace it. In addition, the current height of the wall may need to be raised in advance of anticipated sea level rise.

NYSDEC has indicated that replacing the bulkhead in its current location may not meet permit issuance requirements. Specifically, NYSDEC is of the opinion that the current bulkhead does not meet the definition of a "wall" as previously discussed. As a result, and if the replacement is proposed in the same location (within the mean high-water mark), permit approval may not be possible.

- A** Widen Entrance Drive and Reduce Sign Clutter
- B** Stormwater and Parking Lot Improvements
- C** Relocate / Upgrade to ADA Bathroom
- D** Boardwalk with Interpretive Signage & Seating
- E** Canoe / Kayak Soft Launch
- F** Repair Bulkhead and Install Shoreline Plantings
- G** Seating Area With Shelter
- H** Rain Gardens & Green Infrastructure
- I** Stone Pathways With Benches
- J** Improve Upper Parking Area Surface
- K** New ADA Playground Surface
- L** Remove Wooden Stairs and Construct Path to Playground Area



FREER PARK

Town of Esopus
Ulster County
State of New York
07-01-2020

PREPARED FOR:

Town of Esopus
284 Broadway
Ulster Park, New York 12487
Phone: 845.339.1811



NYS Hudson River Estuary Program
NYSDEC Region 3
21 S Putt Corners Rd
New Paltz, NY 12561
Phone: 845.256.3016



CONSULTANT TEAM:

Laberge Group
4 Computer Drive West
Albany, New York, 12205
Phone: 518.458.7112



CLA Site Landscape Architecture,
Engineering & Planning, P.C.
55 Church Street
Saratoga Springs, New York 12866
Phone: 518.584.8661



1 TYPICAL BOARDWALK AND RAIN GARDENS
SCALE: N.T.S.

CONCEPT PLAN

CLA-01

Furthermore, NYSDEC strongly recommends that the bulkhead be removed and a natural shoreline be installed. Removal of the bulkhead has not been an option the Town or the RPC previously considered. There are concerns that if the wall is removed, parkland may be lost, trees near the shoreline may be negatively impacted, and existing structures and infrastructure along with the entire Park may be at greater risk of flooding and damage. The Riverfront Committee discussed this issue and considered NYSDEC’s positions. Currently, there is consensus that the existing wall remain and repaired (if feasible) to extend its useful life. To supplement these repairs, riprap could also be placed along the top of and slightly behind the wall and native plant species planted along the backside of the bulkhead to improve shoreline stability and habitat diversity.



Shoreline Erosion and Previous Bulkhead Repairs



Shifting Blocks and Erosion

Before a decision is made, the structural evaluation of the existing bulkhead is necessary to determine if the wall is structurally sound and if repairs are possible to extend its lifespan. The costs associated with needed repairs and long-term maintenance will also need to be taken into consideration. If it is determined that the bulkhead is not structurally safe and the best course of action is to remove it, coordination with NYSDEC will be necessary to determine if replacement is feasible from a permitting perspective. More importantly, the impacts that removing the wall and establishing a natural shoreline will have on the park’s open space, trees, buildings and infrastructure will need to be closely evaluated and taken into consideration before a final decision is made along with the associated costs.

FP-3: Native Shoreline Vegetation and Rain Gardens. The evaluation of the bulkhead discussed above and the resulting decision on whether to preserve, replace or remove the wall will have implications on the type and location of shoreline vegetation. If the bulkhead is not replaced, riprap could be installed on top and along the back edge of the wall along with native shoreline vegetation, including rain gardens at key intervals to assist with shoreline stabilization, provide habitat and serve as stormwater treatment for overland runoff from the Park’s lawn area and parking lot. It is recommended that plant species be selected by the Waterfront Advisory and/or Environmental Boards. If the bulkhead is permanently removed, an entirely new plan for constructing a natural shoreline will be necessary.

Parking lot improvements.

FP-4: To improve the efficiency of and circulation within the existing parking lot and to enhance accessibility, approximately 52 marked parking spaces will be provided, including four ADA accessible spaces (three ADA van spaces) and four trailer parking spaces.

FP-5: The existing asphalt pavement for the entire parking lot is proposed to be milled and resurfaced, with the southern portion of the parking lot in very poor condition and should be a priority for repairs.

FP-6: The existing unimproved dirt parking area along J Rd. to the north is proposed to be surfaced with either gravel (should remain pervious) to provide approximately 10 parking spaces, including one ADA van space. An accessible route to connect the parking lot to the existing boat storage building and the shoreline is also proposed. Locking bollards should also be installed to prohibit unofficial vehicle access to the shoreline.



Northern Parking Lot to Be Resurfaced

FP-7: An optional improvement to the parking lot is the construction of a small turnaround at the base of the access drive to improve overall traffic circulation. Three parking spaces, including one ADA space, could be provided on the outside of the turnaround. Under this concept, the driving lane will be 20 feet wide at its narrowest points around the turnaround and will have a 5-foot-wide paver apron with mountable curbs. The center will be grassed and planted with low-profile shrubs. An initial first step to begin evaluating the effectiveness of establishing a small turnaround is to set up temporary cones or other moveable objects to represent a center island. Trailers, etc. will need to be taken into consideration. Arrows and other traffic circulation techniques may also need to be utilized. A turnaround is planned to assist in visually breaking up the expanse of asphalt at the bottom of the Park driveway, to provide additional stormwater runoff protection and help with overall traffic flow through the parking lot.

FP-8: Park Entrance Improvements. The entrance to Freer Park at Canal St., and more specifically at the gate, is not wide enough to allow two vehicles to pass and can result in congestion at an already awkward intersection. Therefore, it is recommended that a longer gate be installed to widen the entrance. Trees along the entrance drive should be regularly trimmed to avoid damaging vehicles and trailers entering and existing the Park.

Stormwater Improvements

FP-9: Stormwater is currently captured through a series of drains within the parking lot that discharge into the River at shoreline. In addition, there is also a stormwater drain north of Freer Park and in front of the

Riverview development. Together, these stormwater discharge points may be contributing to the shallow conditions in the immediate area of the shoreline. Stormwater also flows to the shoreline overland which results in shoreline erosion and degradation of the bulkhead. A comprehensive stormwater evaluation is necessary to identify options for improving overall Park drainage, water quality and reduce or eliminate associated shoreline and bulkhead erosion.

FP-10: The use of native upland and shoreline plantings along with rain gardens between the parking lot and shoreline are proposed as a key first step in controlling both parking lot runoff and overland flow that has been undermining and damaging the bulkhead and causing shoreline erosion. In addition to the rain gardens and plantings along the shoreline, rain gardens are proposed between the parking lot and pavilion.

Park Buildings

FP-11: All buildings with the exception of the stone façade kitchen/restroom building, should be painted the same earth tone colors. The color of the new boat storage building should be considered as the desired color for all current and future park structures.



New Boat Storage Building

FP-12: The unused lifeguard building at the southern end of Park is recommended to be removed and replaced by a small shelter with benches to create a scenic sitting area. This seating area will be linked to the existing grass surfaced trail that leads to Tilden Street. Benches should be located along the trail to Tilden.

FP-13: The small restroom located in the parking lot is proposed to be removed for safety reasons. In addition, the restroom is not ADA accessible. Therefore, a new restroom should be constructed near the existing bathroom building associated with the pavilion. Alternatively, the existing restroom could be expanded to ensure there are adequate restroom facilities to serve by regular Park users and those renting the pavilion. The parking lot will need to be patched and nearby sections repaired after the restroom is removed.



Small Bathroom in Parking Lot to be Removed

FP-14: While the park closes at dusk, solar powered lighting is recommended within the pavilion for safety reasons. A timer could be set to ensure the lighting is not left on overnight.

FP-15: Wooden stairs located at the northwestern corner of the Park, between J Road and the playground are beginning to deteriorate, lack railings and can be difficult to see. They are proposed to be removed and the area regraded and seeded. It is further recommended to construct a path from the northern parking lot (to be resurfaced) down towards the playground.



Wooden Stairs

Internal Circulation and Amenities

FP-16: Internal Trails. To interconnect the two parking lots, pavilion, playground, shoreline, boat storage building, soft launch and boardwalk (if constructed), a series of stone dust or similarly surfaced trails (preferably ADA compliant) are proposed. All efforts will be made to ensure these trails meet ADA accessibility requirements. The existing grassed trail connecting the Park to Tilden Street should be maintained to ensure a safe walking surface. Benches are recommended to be installed along the trail to provide resting locations and to enjoy the scenic views from this elevated location.

FP-17: Construct A Shoreline Boardwalk or at-grade path. In an effort to enhance Freer Park's overall accessibility and provide visitors with opportunities to walk on a stable surface along the shoreline, an at-grade concrete/asphalt or elevated (2.5 ft. maximum) wood or composite (Trex® or similar product) boardwalk is proposed to be constructed along the backside of the bulkhead. The boardwalk/path is proposed to connect to the soft boat launch to the south and to a proposed path to the northern boat storage building along with a path to the existing pavilion. Opportunities to access the bulkhead, and at low tide, the river bed, will be provided at certain intervals along the boardwalk.



Example of Boardwalk, Interpretive Signage and Shoreline Plantings

The feasibility of the boardwalk will be dependent not only on cost and availability of grant funding, but also the status of the bulkhead. If removed, a boardwalk may not be feasible or would need to be located further from the shoreline. In addition, without the protection of a bulkhead, the boardwalk may need to be placed at grade and alternatively, may need to be a constructed out of different materials to better withstand flooding. An at-grade path as an alternative to the boardwalk may also be considered if the current design is cost-prohibitive and adequate grant funds are not secured.

As proposed, a boardwalk would be ADA accessible at 4 ft. in width along with toe guards. Due to the fact that the boardwalk is proposed to be over 200 ft. in length, at least one passing space of 4.9 ft. in width will be provided in accordance with ADA requirements. Hand rails will not be required provided the boardwalk surface to grade elevation does not exceed 30 inches, as currently proposed. If an at-grade

path is constructed instead, it would also be ADA accessible and may be wider as the costs will be less than a boardwalk.

Interpretive signage and seating areas is proposed along the boardwalk. The content of the interpretive signage is recommended to be developed by the Town of Esopus Waterfront Advisory and Environmental Boards.

FP-18A: Install bike racks – one near the playground/pavilion and one near the southern end of the Park to provide sufficient options for bicyclists. If feasible, consider installing one bicycle repair station that provides a tire pump and associated tools that assist with basic repairs.

FP-18B: Install a minimum of one ADA accessible picnic table within and one outside of the pavilion along with one and grill, all accessible via one or more ADA paths.

FP-19A: To provide more accessible opportunities for children at Freer Park, ADA accessible playground equipment is recommended. Coordination with the Resource Center for Accessible Living (RCAL) is recommended to identify appropriate ADA accessible equipment. The installation of an ADA accessible rubber surface is also proposed to replace the existing non-ADA compliant wood chip surface. The new surface could be installed in phases and in coordination with the installation of new ADA accessible playground equipment.



Example of ADA Accessible Playground Surface

FP-19B: Repaint, or if necessary, replace the basketball backboards and resurface the court surface. All recreational amenities at Freer Park must be regularly monitored to ensure they are kept in safe conditions.

FP-20: Repair or replace the existing kiosk. Similar to Sleightsburgh Park, where feasible, the kiosk should also be ADA accessible and provide park and other local information via QR codes linked to recorded audio to assist visitors that are visually impaired. The QR codes can also provide additional information for all visitors to the park.



Existing Freer Park Kiosk

Shoreline Vegetation

FP-21: Establish a long-term shoreline vegetation and tree replacement program. Adequate vegetation is required at Freer Park for shade and to aid in stabilizing the shoreline. Dead, dying or diseased trees were removed in the spring of 2019 and at least one tree came down during a storm. To ensure there are sufficient shade trees and vegetation to protect the shoreline from erosion, a long-term shoreline vegetation and tree replacement and maintenance program is proposed. Engaging an arborist to establish this plan is recommended. Alternatively, seeking out a cooperative agreement with a local college to provide these services could be considered.



Northern Shoreline Vegetation – Spring 2019

FP-22: Designate the southern shoreline area (south of the current unimproved hand launch site) off-limits to future shoreline improvements. Natural shoreline vegetation is beginning to be re-established and should not be disturbed – a recommendation from NYSDEC. With natural shoreline vegetation, this area of the Park is becoming important to the Park’s flood protection and should be allowed to grow untouched.



Southern Shoreline to be Preserved

Proposed Rules and Regulatory Changes

FP-23: Review and consider necessary revisions to Town of Esopus Code Chapter 98, “Park Rules and Regulations” related to out of season park access and designated fishing locations. These reviews could take place during the LWRP Update scheduled to begin in late 2020.

FP-24: Motor boats are not permitted to be launched at Freer Park and there is consensus among the RPC that Freer Park should be only allow for the launching of non-motorized/zero emission boats. Signage indicating this should be provided. No fish cleaning on picnic tables and no disposal of fish parts in the Hudson River or elsewhere in the Park is permitted and should be indicated in the park rules. Signage is also recommended that alerts boaters to the shallow conditions, the submerged rock wall and the impact that tides will have on access to and from the launch and docks. All park rules and important information should be installed at the pavilion and on the repaired or new kiosk.

Boat storage and rentals and Park Events

FP-25: Reconfigure the internal storage space at the northern boat storage building to provide more space for kayaks and the Chester rowboat.

FP-26: If there continues to be increased demand for storing boats, consider renovating the red storage building along the shoreline (southern portion of park) to allow for additional storage capacity.

FP-27: The Town could pursue formal agreements with area kayak rental and guide companies to conduct regular boat rentals and clinics at Freer Park. In addition, the Town could coordinate with other stakeholder to conduct regular events/festivals at Freer Park, including kayak races, etc.

Regulatory Needs

The Hudson River is a Class A waterbody in this location, and any disturbance to the bed or banks of the River requires a Protection of Waters, Stream Disturbance Permit. In addition, any excavation or placement of fill below the mean high-water mark requires an Excavation/Placement of Fill in Navigable Waters Permit. USACOE approvals may also be necessary and if the bed of the River is proposed to be disturbed, signoff from OGS may also be necessary. Therefore, replacing the bulkhead will require these regulatory approvals, although NYSDEC has indicated that approvals for replacing the bulkhead may not be possible if the bulkhead does not meet their definition of a wall, as previously discussed.

Prior to repairing the wall, coordination with NYSDEC and other agencies is advisable to obtain a jurisdictional determination, and provided work is not conducted below the MHWM or impacts the bed or banks, regulatory approvals may not be necessary. The MHWM is scheduled to be surveyed in 2020.

The proposed improvements to the soft launch are not anticipated to require regulatory approvals, provided work does not involve disturbance to the bed or banks or excavation below the MHWM. A request for a jurisdictional determination should be submitted to NYSDEC to confirm regulatory requirements.

Any proposed modifications to the Park's stormwater collection system and/or the outflow pipes along the shoreline are anticipated require regulatory approvals. The parking lot improvements may require approvals if within 100-feet of jurisdictional wetlands or will result in other disturbances noted above or modifies stormwater discharge.

The proposed boardwalk and stone dust trails may not need approvals if work is proposed more than 100-feet from jurisdictional wetlands and does not involve disturbances noted above. Likewise, shoreline plantings are not anticipated to require regulatory approvals.

All other work proposed projects are not anticipated to require regulatory approvals. However, it is strongly advisable for the Town to request jurisdictional determinations from NYSDEC prior to moving forward with projects that will result in ground or shoreline disturbance.

Freer Park is located in close proximity to Indian bat, northern long-eared bat, shortnose sturgeon, and least bittern. Impacts to these species or habitats may also require a permit, although NYSDEC stated that due to a lack of habitat for least bittern on-site and the distance to known habitats, the Department has determined that no impacts are anticipated at this time (See **Appendix D. NYSDEC Pre-Application Meeting Summary**). Any proposed removal of trees, three inches or larger at breast height, must take place from November 1st to March 31st to avoid impacts to both Indian bat and northern long eared bat. NYSDEC will review any proposed impacts to the shortnose sturgeon when an application has been submitted for review.

Proper mitigation measures and best management practices will be necessary for all proposed work. Refer to the NYSDEC Pre-Application Meeting Summary found in **Appendix D. NYSDEC Pre-Application Meeting Summary**, for additional regulatory information related to Freer Park, including certain permit approval criteria.

Lighthouse Park

Refer to the Lighthouse Park Concept Plan CLA-02 for the following project description.

Recommendations

Shoreline and Access Improvements

LP-1: To stabilize and repair the eroding shoreline, a combination of large boulders (to be relocated from the intertidal zone), coir (coconut fiber) logs or similar geo-textile material along with native shoreline vegetation plantings are proposed. An unspecified number of boulders that are located within the inter-tidal zone (placed there as part of a previous art installation) are proposed to be removed to increase access to the river and to assist in stabilizing the shoreline. These boulders were originally located on the shoreline and helped with stabilization. Once they were removed from the shoreline as part of the art installation, the shoreline conditions began to deteriorate. Coordination with NYSDEC will be required to confirm which ones and the total number of boulders that can be relocated out of the inter-tidal zone.



Example of Coir Logs

LP-2: A new crushed stone access ramp (soft launch) will be constructed at the southern portion of the shoreline to provide river access for small, non-motorized watercraft. As noted below, an accessible path will provide access to the shoreline, soft launch and to Esopus Meadows Preserve.



Soft Launch Example

(Existing launch at Esopus Meadows Point)

LP-3: The existing unimproved shoreline access path at the northern part of the park will be preserved and a gentler slope established to improve access. Surrounding vegetation will also be more regularly maintained.

Parking Lot and Internal Access Improvements

LP-4: The existing parking lot is proposed to be expanded by approximately 3,503 SF to create six additional parking spaces for a total of 15, including one ADA van space. The parking lot will either be asphalt pavement or gravel. If gravel, the ADA van space will be sufficiently compacted to ADA compliant standards. The enlarged parking lot will not only provide additional spaces for visitors to Lighthouse Park, but will also increase parking opportunities to visit



Area of Proposed Parking Lot Expansion

- A Shoreline Remediation
- B Canoe / Kayak Launch
- C Kiosk and Pavilion (Optional)
- D Parking Improvements
- E Reconfigured Picnic Area
- F Preserve and Enhance Existing Shoreline Trail
- G Green Infrastructure
- H Stone Pathway
- I Relocated Memorials
- J Selective Tree Thinning to Open Views to Esopus Meadows Pavilion



LIGHTHOUSE PARK

Town of Esopus
Ulster County
State of New York

October 18, 2019

PREPARED FOR:

Town of Esopus
284 Broadway
Ulster Park, New York 12487
Phone: 845.339.1811



NYS Hudson River Estuary Program
NYSDEC Region 3
21 S Putt Corners Rd
New Paltz, NY 12561
Phone: 845.256.3016



CONSULTANT TEAM:

Laberge Group
4 Computer Drive West
Albany, New York, 12205
Phone: 518.458.7112

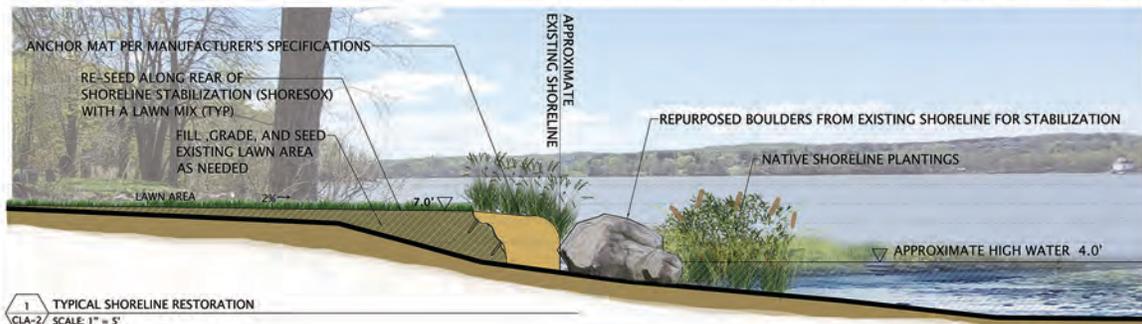


CLA Site Landscape Architecture,
Engineering & Planning, P.C.
58 Church Street
Saratoga Springs, New York 12866
Phone: 518.584.8661



CONCEPT PLAN

CLA-02



1 TYPICAL SHORELINE RESTORATION
SCALE: 1" = 5'

Esopus Meadows. The ADA accessible trail connecting the two Parks is a key improvement. The parking lot access point will be widened to improve ingress/egress safety and the existing pothole will be repaired.

The existing unused raised leach field may need to be removed to allow for the expansion of the parking lot. The location of the leach field will need determined by the property survey scheduled to be conducted in 2020. Coordination with Scenic Hudson will be required prior to any disturbance to the leach field along with a review of the site plan of the proposed improvements for conformance with the conservation easement.

LP-5: A stone dust path is proposed to be constructed from the parking lot to access the shoreline and the adjoining Esopus Meadows Preserve. The goal is to provide an ADA accessible path from the parking lot to areas by the shoreline that offer views of the River and to connect with an existing ADA accessible stone dust path in Esopus Meadows Preserve.



Existing ADA Accessible Path at Esopus Meadows Preserve

LP-6: *Rain garden/bioswales are proposed to be installed along the eastern side of the parking lot (between the parking lot and shoreline) to provide natural stormwater treatment.*

Amenities

LP-7: The existing informational kiosk is in poor shape and should be replaced. It is recommended that the Town coordinate with a local Boy Scout Troop to install a new kiosk as was done with the existing one. The new kiosk should be located in the same location. Similar to Freer and Sleightsburgh Parks, where feasible, the kiosks should also be ADA accessible and provide park and other local information via QR codes.



Rain Garden/Bio Swale Example

LP-8: A small bike rack is also recommended to provide a safe place for visitors to lock their bikes while enjoying Lighthouse Park and Esopus Meadows Preserve. If feasible, consider installing one bicycle repair station that provides a tire pump and associated tools that assist with basic repairs.

LP-9: A minimum of one ADA accessible picnic table should be provided and accessible from the ADA van parking space.

LP-10: One or two grills are recommended to be installed in an effort to discourage fire pits, which are prohibited. The grill(s) should be ADA accessible.



Existing Kiosk

LP-11: While visitors are able walk to the pavilion at the adjacent Esopus Meadows Preserve, it is not always available and visitors may not be aware that it is there. To provide shelter for park visitors, a small gazebo or pavilion is recommended for the southern end of the Park. The exact location of the shelter has yet to be determined. All steps should be taken so that its visibility form the River is insignificant and it should not block views of the River from River Road. Coordination with Scenic Hudson will be required to review conformance with the conservation easement.

LP-12: The existing trees and shrubs between Lighthouse Park and Esopus Meadows Preserve are proposed to be selectively thinned to open filtered views between the two recreational areas. This recommendation is also intended to establish some synergy between these parks and encourage visitors to freely travel between them. Close coordination with Scenic Hudson will be required to identify the appropriate vegetation to be removed. No vegetation shall be removed that would result in increased runoff and siltation into the river.

Proposed Rules/Signage/Future Planning

LP-13: Motor boats are not permitted to be launched at Lighthouse Park and signage indicating this should be provided. No fish cleaning on picnic tables and no disposal of fish parts in the Hudson River or elsewhere in the Park are permitted and should be indicated in the park rules.

LP-14: Lighthouse Park is a small and there may be occasions when boaters and anglers are in close proximity. As a result, signage is recommended that encourages all Park users to be cognizant of each other. In addition, it is recommended that signage indicate that no fishing be permitted near the proposed soft. The northern section of the Park could be designated for fishing.

LP-15: Review and consider necessary revisions to Town of Esopus Code Chapter 98, “Park Rules and Regulations” related to out of season park access and designated fishing locations. These reviews could begin during the LWRP Update scheduled to begin August 2020.

LP-16: River Road was previously designated as a Scenic Road, although the status of that designation is not able to be confirmed at this time and is currently being investigated. Looking ahead, the Town would benefit more from a Scenic Byway designation and should actively seek this designation.

LP-17: Conduct an initial feasibility study in partnership with Central Hudson Gas and Electric to determine the possibility of incorporating sections of their ROW into a trail connecting Lighthouse Park and Esopus Meadows Preserve with Black Creek Preserve to the south and to Highbanks Preserve and Port Ewen to the north. In addition to utilizing the ROW for improved Park connections, improvements to US Rte. 9W and other roads will be necessary to enhance bicycle and pedestrian safety. Sharrows and appropriate signage should be considered in select locations. Where there is adequate room, designated bike lanes should be installed. The shoulder of all roads should be properly maintained, by the repair of potholes and removal of debris that presents hazards to pedestrians and bicyclists.

LP-18: It is recommended that Lighthouse Park be formally designated as a “Carry In-Carry Out” park and signage indicating this requirement should be posted. Fines for littering should also be posted. Each Town Park should be regularly monitored and cleaned of garbage and other debris that may be illegally discarded.

LP-19: Lighthouse Park is currently zoned R-40, a low-density residential zoning district. Both Freer and Sleightsburgh Parks are zoned Waterfront Recreation (WR), a zoning district established for areas that are suitable for water-dependent recreation uses, such as parks, boat launches and marinas, but due to their sensitive environmental resources, cannot support more intensive types of uses. During the current Town-wide zoning update, the Town of Esopus should rezone Lighthouse Park to WR, consistent with the other Town parks.

LP-20: Continue the water chestnut harvesting program as needed along the Hudson River shorelines of all Town Parks, with a focus on the shorelines of Lighthouse Park and Esopus Meadows Preserve, including opening paths for kayaks and other small hand launched crafts as follows:

- Lighthouse Park: Clear and maintain a path from the shoreline out to the River.
- Esopus Meadows Preserve:
 - Clear and maintain the shoreline in front of the pavilion in support of Hudson River Sloop Clearwater’s educational programs at Esopus Meadows Preserve.
 - Clear and maintain a wide path from the River to the Greenway Water Trail Site at Esopus Meadows Point.
- Unofficial Fishing Access Point on River Road (north of Lighthouse Park).
 - Path from shoreline to River to enhance fishing access.
 - Path for kayakers from shoreline to Lighthouse Park shoreline.

Future Nearby Waterfront Access

LP-21: A preliminary feasibility evaluation to repurpose the Town’s water treatment plant site as a new waterfront park should be conducted during the LWRP Update. In addition, the Town should consider retaining the site if the treatment plant is relocated and utilizing it for recreational purposes or leasing for compatible uses. The Town’s water treatment plant is located on River Road, approximately 1.3 miles north of Lighthouse Park. The location of the treatment plant was identified in the 2019 Comprehensive Plan as a potential future waterfront access site if the plant is no longer needed. Due to anticipated sea level rise, the treatment plant may require upgrades or need to be relocated.

Regulatory Needs

The Hudson River is a Class A waterbody at this location and any disturbance to the bed or banks will require a NYSDEC Protection of Waters, Stream Disturbance permit. Any excavation or placement of fill below the MHWM will require a NYSDEC Excavation/Placement of Fill in Navigable Waters permit. USACOE approvals may also be necessary.



The proposed relocation of the boulders within the inter-tidal zone and below the MHWL is expected to require prior approvals from NYSDEC, especially if machinery is proposed to be used within the River. In addition, NYSDEC has previously expressed concern that the boulders (placed in the River as part of an art installation) have become habitat. Therefore, initial coordination with NYSDEC will be required for them to make a determination on habitat concerns.

The proposed shoreline stabilization improvements may require regulatory approvals if located below the MHWL, the location of which is scheduled to be surveyed in the summer of 2020. The proposed soft launch will likely be located within the MHWL and is anticipated to require regulatory approvals.

Proposed stone dust paths, provided they remain outside of the MHWL (as proposed) will not require regulatory approvals.

The proposed parking lot expansion is not expected to require regulatory approvals provided it does not result in discharge to the River. If the raised leach field needs to be removed as part of the expansion, signoff from Scenic Hudson will be required as they hold a second easement on it.

The Park is located in close proximity to Indiana bat, northern long-eared bat, shortnose sturgeon, and breeding bald eagles. Any proposed removal of trees, three-inches or larger at breast height (not currently proposed), shall be restricted from November 1st to March 31st to avoid impacts to both Indian bats and northern long-eared bats. NYSDEC determined that the project will not likely impact bald eagles and no further review on this issue is necessary at this time. However, information on eagle nest locations represents NYSDEC's current knowledge of these resources. New eagle nests could be documented with each breeding season and potential impacts would, at that point, need to be addressed. Therefore, NYSDEC must be kept in the loop prior to any cutting of trees indicated above. NYSDEC stated that a review of impacts to the shortnose sturgeon will occur when any future application is submitted for review.

All work at Lighthouse Park will require coordination with and signoff from Scenic Hudson as they continue to hold the conservation easement for the property.

Esopus Meadows Preserve

Recommendations

EMP-1: Hudson River Shoreline and Trail Restoration. The shoreline at Esopus Meadows Preserve has endured multiple hurricane and storm events that have wreaked havoc. Scenic Hudson stewardship staff routinely visits and address erosion issues by installing coir logs and/ or re-routing the Blue Trail upland from the shoreline. The footbridge at the gateway is in need of replacement and associated shoreline erosion requires restoration.

EMP-2: Expand Trail Network. A long term goal of Scenic Hudson is to expand the existing trail network south to adjacent Scenic Hudson owned parcels to increase the network. Scenic Hudson will also evaluate the possibility to extend foot access to Hudson Lane.

EMP-3: Improve park connectivity. Improve visual and physical connectivity between Lighthouse Park and Esopus Meadows Preserve so the two parks serve the public in a more integrated way. Remove thick vines and invasive trees from the property boundary to open up vistas from Lighthouse Park towards the pavilion and open up the connection footbridge. Possibly identify a second footpath to bridge the drainage channel if feasible.



Vegetation between Parks to be thinned

EMP-4: Improve the day-use of pavilion. Improve park integration by expanding use of the EMP pavilion for picnicking by providing picnic tables on and/ or adjacent to the pavilion. Picnic tables on the pavilion will make the pavilion more inviting (rather than feel off-limits) and useable when not in use by the Clearwater Tideline educational program. Any tables on the pavilion deck should be ADA accessible. Esopus Meadows is and will remain a 'carry in, carry out' Park.

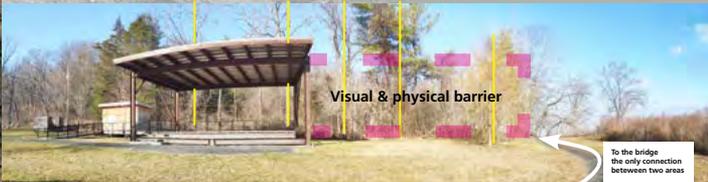
EMP-5: Evaluate formalization of fishing trails to the shoreline. Improve existing social fishing trails to the shoreline as designated and safe routes off the Blue Trail. As a nature preserve, potential impacts to natural resources and the resulting increased maintenance demands will need to be evaluated. 'No swimming' signs would be posted.

Regulatory Needs

The construction of new hiking trails may require approvals from NYSDEC and/or the US Army Corps of Engineers if wetlands and surface water resources subject to their jurisdiction are impacted. Trail construction projects, however, are generally able to avoid requiring permits through proper planning and design.



Recommended area for pruning and thinning trees, shrubs, vines



To the bridge
the only connection
between two areas

■ Picnic table type #1

■ Picnic table type #2



Picnic Table Options

Park Connectivity Improvements | Lighthouse Park and Esopus Meadows Preserve

Esopus, NY

Sep 30, 2020

Black Creek Preserve

Refer to the Black Creek Preserve Riverfront Access Improvements Concept Plan for the following project description.

Recommendations

Shoreline and Access Improvements

BCP-1: Bulkhead and boat ramp improvements. In-kind replacement of the western portion of bulkhead's sheet piling structure is recommended to stabilize the eroding condition and prevent sudden failure of the structure. This area has been used as a viewpoint with an excellent vantage of the mouth and of the creek and of the Hudson River towards the north.



Bulkhead Section to be Repaired

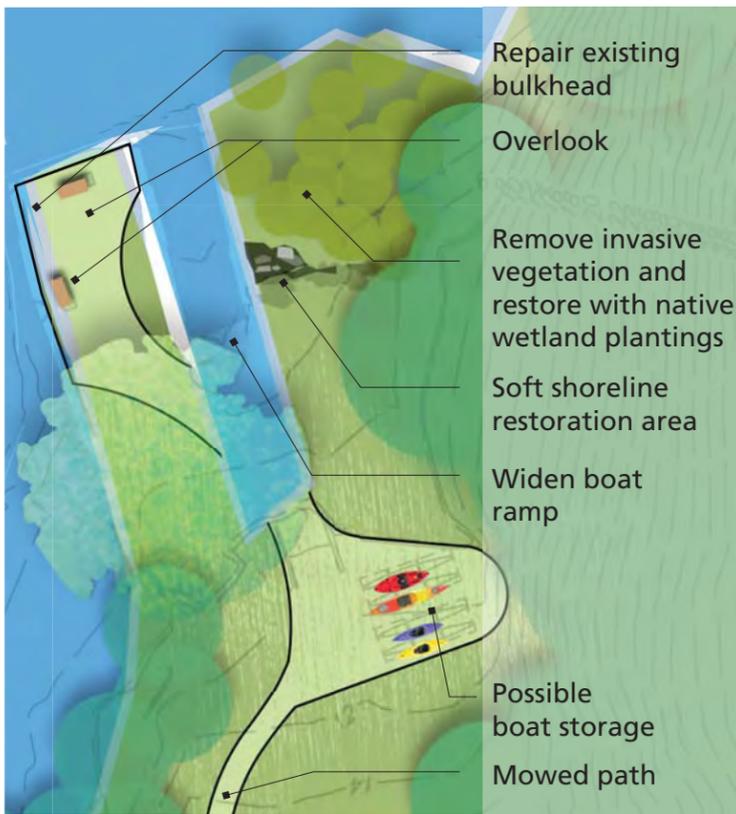
The eastern side of the bulkhead is lower in elevation and frequently overtopped by high tides. This structure is stable, but may need to be monitored for future undermining should

no improvements be made. Replacement of the portion of the bulkhead structure along the boat ramp would allow for an opportunity to widen the narrow boat ramp slip, decline the slope, and utilize natural materials for stabilization including boulders and rip rap that would reduce the forces of wave action.

It is unlikely that the eastern 'upland' zone can be reclaimed because it is frequently overtopped at the bulkhead edge during high tides. However, removal of invasives and new native plantings can establish a small pocket wetland that could provide beneficial habitat for wildlife while stabilizing the soil and altogether, creating a new opportunity for education about estuarine marsh habitats and their vulnerabilities to sea level rise.

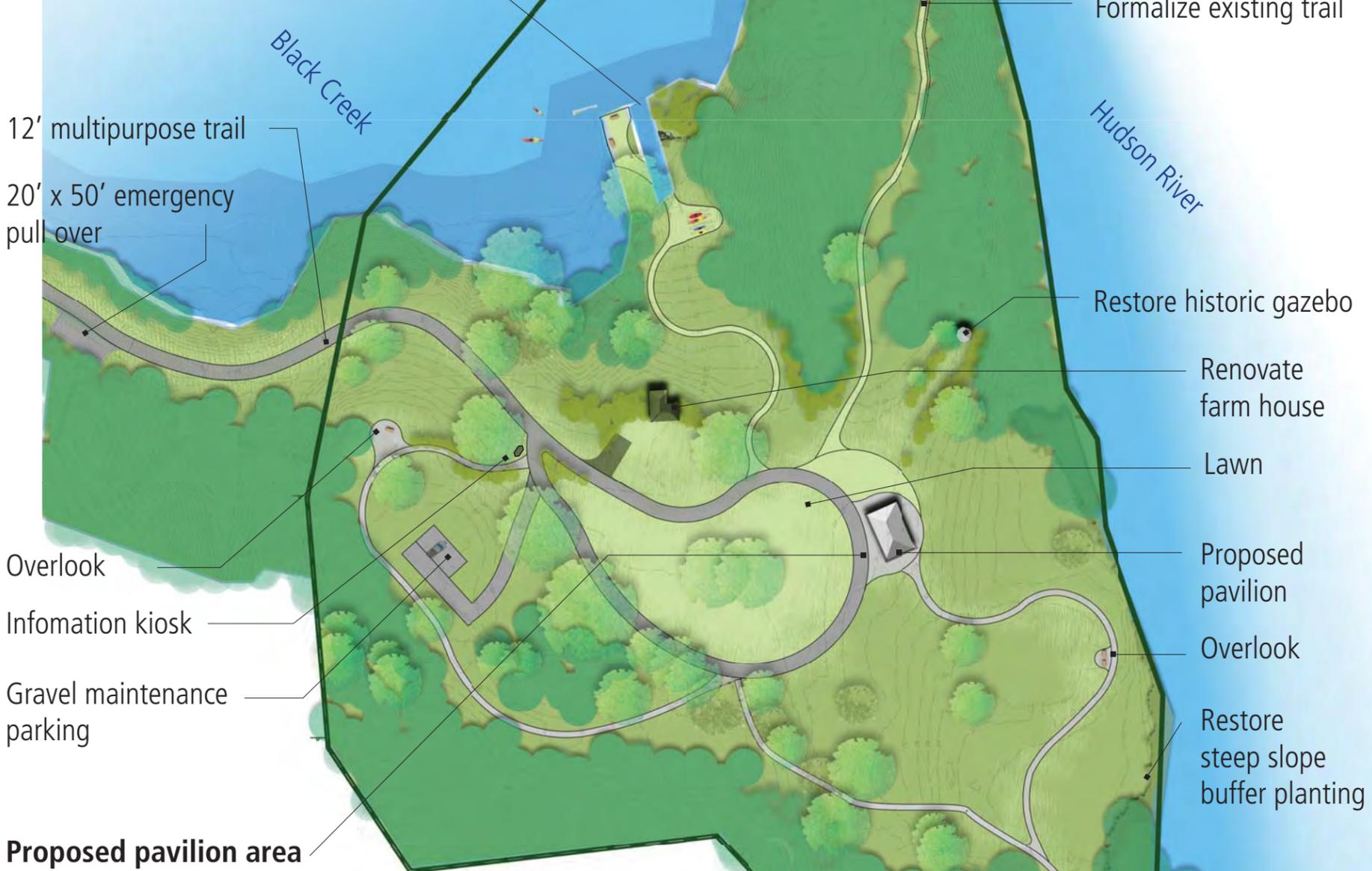
In review of this area, NYSDEC preferred that any soft shoreline improvements began from the edge of the original bulkhead and transitioned inland. NYSDEC would not consider gradient changes that would add material towards the water from the face of the bulkhead wall.

Preliminary estimated costs of the alternatives indicate that a full replacement of the bulkhead with a soft shoreline launch is cost prohibitive. Full abandonment of the bulkhead to the elements may create additional safety and liability costs and is not recommended.



- LEGEND**
- Existing deciduous tree
 - Existing evergreen tree
 - Multi-use trail
 - Stonedust trail
 - Mowed path
 - Wetland
 - Tree
 - Lawn
 - Shrub
 - Proposed shrub

Proposed Water Trail Site



Proposed pavilion area



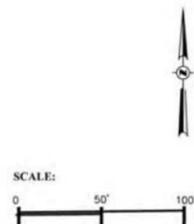
Pavilion Concept



Riverfront Access Improvements

Black Creek Preserve

Esopus, NY
February 20, 2020



BCP-2: Hudson River shoreline improvements. The shoreline of Black Creek Preserve is generally protected by natural rock outcrop formations and inclines at a slope that pushes the location of trails at elevations out of the tidal zone and flood plain.

An existing trail, but not yet formalized, connects the new riverfront area of the preserve to the existing trail system. As it approaches the junction with the blue trail, it comes very close to the shoreline and is likely to erode away in the near future with increased foot traffic. It is recommended that the vulnerable portion of this trail be re-located upland to allow for a vegetative buffer to the river's edge.



View from Open Lawn (April 2019)

Taller bluffs at the riverfront area elevate the open lawn areas to wide scenic vistas of the Hudson River, Esopus Island and Mills Norrie State Park. However, the lawn has been maintained up to the edge of the bluff edge and is subject to erosion where surface water flows are more concentrated. Reducing the expanse of short mow areas to taller managed meadows or allowing for shrubs to re-vegetate in low areas will allow for improved soil and bank stabilization while also providing a new habitat for both birds and pollinators. The development of a prescriptive mowing and management plan is recommended for the riverfront area.

BCP-3: Black Creek shoreline improvements. A trail currently begins at the informational kiosk and across the private road (Winding Brook Road) where it follows along the top of a steep bank of Black Creek until it reaches the pedestrian suspension bridge. This bank is constantly eroding due to bank scouring during extreme precipitation and flooding events impacting the volume and velocity of the creek waters. Many efforts have been made to reinforce the bank with new tree seedlings and pre-emptive cutting of dying trees to avoid the destruction created from dislocated tree roots. Continued foot traffic also wears away the bank surface, prohibiting the growth of vegetative root systems that can stabilize the soil in place. Ultimately, continued erosion could threaten the integrity of the park road. Therefore, it is recommended this portion of the trail be abandoned and re-stabilized with coir logs and shade tolerant riparian vegetation. A more direct trail to the suspension bridge will be built from the driveway.

Park Entrance and Parking Improvements

BCP-4: Park Entrance Improvement. The park entrance is wide and provides good sight distance in both directions for vehicles turning onto US Route 9W. Two driveway legs at this road edge often create confusion for traffic entering the park and it is recommended that the island creating the split is re-

constructed as asphalt pavement to meet NYDOT specifications for curb cuts. The outer edges of the entranceway should be cut to reduce the overall width to minimize the amount of pervious pavement.

BCP-5: Parking Lot Expansion: The current parking lot is relatively small with a capacity of 12-15 vehicles, none of which are ADA designated, and the dead-end parking lot configuration increases the difficulty of navigating a turn-around. School buses previously turned around at the end of the road, but this maneuver is no longer an option.



Black Creek Entrance on US Rte. 9W

It is recommended the parking lot be expanded to at least twice its size and that it is re-configured as a pull through loop back onto the park entrance road. The portion of the road that will accommodate two-way vehicular traffic will need to be widened to at least 14 feet.

A small stream that flows under the park road limits the area of expansion, but expanding over and beyond the stream would allow for significant expansion. In either alternative, the existing trailhead kiosk would be relocated for better access.

Internal Access Improvements

BCP-6: Multi-use trail conversion. Previous feasibility studies of the preserve's paved roadway indicated that public vehicular use would require widening improvements that would heavily impact the natural rock ledges and adjacent forest and dramatically impact the appearance and micro-climate of the creek corridor. It would also eliminate the potential use of the roadway for recreation. Re-purposing the road as a multi-use trail with new resting points will provide an entirely new recreational opportunity and experience of Black Creek that has been restricted from the public. Some road improvements, minor safety enhancements and added resting points can add a level of access to the river for individuals with limited mobility where none was available before.

BCP-7: Stormwater improvements. In coordination with the parking lot expansion, the entire system of stream culverts should be upgraded to accommodate more intense storm events and to incorporate green infrastructure practices to infiltrate runoff from increased areas of semi-permeable surfaces. This will require NYSDEC an ACOE review where culverts intersect with the flood and tidal zones of Black Creek. Scenic Hudson received a grant from the NYSDEC Hudson River Estuary Program to replace one major culvert to create a natural stream bottom and allow new migration opportunities for eels and herring into a sizeable tributary of Black Creek. Improvements are expected to commence in the fall of 2020.

BCP-8: Additional foot trails. At the new riverfront area of the preserve, the multi-use trail will end in a loop that accommodates both pedestrians and emergency/ maintenance vehicles. Smaller social trails can

be formalized and lead to viewpoints at the peninsula and the boat ramp. Currently, lawn areas are wide open providing little direction to where the connection trail is, but with increased meadow areas at the bluff edge, a wide mowed path can lead the visitors to the shoreline trail.

Park Buildings and Structures

BCP-9: Existing historic structures. The riverfront area features two historic structures including a small farm house circa early 1800's and an octagonal gazebo typical of the Victorian Era.

Improvements are needed to renovate the gazebo for public use, including painting and possibly re-roofing. It is recommended that some of the surrounding vegetation be removed or pruned below the railing height to restore river views

The historic significance of the farm house is unknown, but its small size and simple architecture help to identify where more modern additions were added to expand the functionality of the dwelling. Due to the limited capacity of the existing septic system connected to the house, the building could not be utilized as a seasonal bathroom. The building could be used for a writer in residency program in partnership with the John Burroughs Association and as a meaningful connection to the legacy of John Burroughs. The cost to renovate the building for continued residential use by a caretaker may outweigh its benefit to the preserve and should be evaluated more closely before any further decisions are made.

BCP-10: New pavilion. The installation of a new accessible pavilion overlooking the river and Black Creek confluence is highly recommended for the riverfront area. This structure would provide shelter from the elements and serve as a gathering place for families or kayak groups coming off the Hudson to spend extended time together within the picturesque setting.

Site Amenities and Signage

BCP-11: Existing Kiosk update. The existing trailhead kiosk provides park rules and information about the site's ecology and other nearby attractions. Scenic Hudson intends to update the information when the kiosk is re-located to a new trailhead location.

BCP-12: New Kiosk, wayfinding, and interpretive panels. As the preserve roadway will be open for recreational use, a new opportunity presents itself to inform visitors about the American Eel and other migratory fish in the creek along the way to the riverfront.

At the riverfront, a second informational kiosk will inform visitors of rules and facts about the riverfront, including points of interest across the river. As the northern terminus of the John Burroughs Black Creek Trail (JBBCT), additional trail blazes will be added to follow a route designated for the through-trail to the mouth of the Black Creek. These and any new interpretive signs will follow the signage style designed for the JBBCT for clear wayfinding and consistency.

BCP-13: Additional amenities. The planned improvements for the preserve include additional benches or other seating options, a bike rack at the riverfront area, removable bollards across the roadway, and an enclosure for a seasonal/ portable restroom and possibly a small boat rack for temporary storage.

Regulatory

Many of the regulatory requirements by NYSDEC and USACOE, previously discussed in the Freer Park section, would apply to any major changes or improvements at the boat ramp in Black Creek Preserve.

A full masterplan with detailed construction documents will need to be submitted to the Town of Esopus Planning Board for review and approval of a Special Use Permit and any property lot line adjustments (if included) before the Town's Building Department would be able to issue a building permit for construction.

The short EAF form that is generated automatically is likely to trigger some review by NYSDEC regarding the site's proximity to known eagle nesting sites and bat hibernaculum. Restrictions to construction may include limiting any tree removal to winter months and may require monitoring of ambient noise levels during certain periods of the construction related to eagle nesting seasons.



Page Intentionally Left Blank

SECTION 5: IMPLEMENTATION PLAN

To begin implementation of the projects outlined in this Plan, the Town of Esopus and Scenic Hudson will need to evaluate their internal budgets and a variety of funding sources and partnerships. While this has been a joint study, Scenic Hudson is not financially responsible for making the proposed improvements at Town-owned parks, just as the Town will not be financially responsible for Scenic Hudson parks. With this being said, the Town and Scenic Hudson anticipate continuing their mutually-beneficial relationship and working together to make these recommendations a reality in the coming years.

A 2020 Hudson River Estuary Grant was awarded to the Town of Esopus to conduct property and topographic surveys for Lighthouse and Freer Parks and to conduct a structural evaluation of the bulkhead at Freer Park. As of the date of this Final Draft Study, Laberge Group has completed the surveys of Freer and Lighthouse Parks. The bulkhead evaluation is scheduled to be completed by the end of the year (2020). It is important to understand the bulkhead conditions and to obtain key property details necessary for future construction designs and permitting applications. Prior to seeking regulatory approvals, additional evaluations and designs are necessary as previously discussed and construction drawings for certain projects will need to be prepared. These additional steps, particularly where construction drawings will be required, engineers, landscape architects and other professionals will be required.

While the Implementation Matrix outlines potential funding sources, they are not the only sources that may be available for the proposed improvements. The costs of certain projects and related expenses could be supplemented through private donations of money and materials along with volunteer work. To date, the Town of Esopus and local private and non-profit organizations have successfully partnered on past projects, including park gazebos and other park improvements. Therefore, the Town should continue to coordinate with local businesses and groups to find opportunities for partnerships and funding.

The availability of state and federal funds through a variety of grant programs is always in flux and continues to be a competitive environment, especially for park and recreation improvements. The economic impacts of COVID-19 have yet to be fully understood and the full impact is not likely to be known until 2021 or later. As a result, implementation of certain projects proposed in the Riverfront Study may need to be pushed out into 2021/2022 or further as New York State has not opened the Consolidated Funding Award program for the 2020 grant season (as of the date of this report). However, there are proposed projects the Town and Scenic Hudson may be able to begin implementing without grant funding and limited internal expenses, in addition to pursuing other public-private and non-profit partnerships and by enlisting volunteers.

As well as identifying adequate funding, whether grant-sourced or originating from the appropriate Town funds, it is strongly recommended that prior to allocating funding, the long-term maintenance requirements for each project should be considered. Not only the required staff hours, but the approximate investments needed to properly maintain new improvements should also be identified.



The Plan's Implementation Matrix also identifies recommended responsible parties and partners for implementation of each recommendation. The Town Board, as the Town's legislative body, will be involved in the implementation of all recommendations, especially where authorization of expenditures is required and when grants will be required for implementation. With this understanding, the Town Board has not been included in the Implementation Matrix.

Currently, the Esopus Highway Department is charged with maintaining all Town Parks and as a result, has been identified as the primary responsible party for the majority of recommendations. If the Town's Parks and Recreational Commission takes on more responsibility for park oversight and planning, the Implementation Matrix will need to be updated accordingly. The Waterfront Advisory Board (WAB), which is responsible for ensuring compliance with the LWRP, must also be involved in the proposed improvements.

With Scenic Hudson holding the conservation easements for both Sleightsburgh and Lighthouse Parks, they will be involved for most proposed improvements to ensure compliance with the easements. Written signoff may be required for certain activities.

The Resource Center for Accessible Living (RCAL) should be consulted when implementing proposed ADA accessibility improvements.

The Matrix also includes potentially-involved regulatory agencies, including NYSDEC and ACOE. For Sleightsburgh Park, Central Hudson Gas and Electric will be involved for any projects that may impact their right-of-way through the Park.

This Implementation Plan should be amended and updated annually by the Town of Esopus and Scenic Hudson as a better understanding of how local budgets are being impacted by COVID-19 and how Town and Scenic Hudson priorities change. Capital improvements and budgeting processes should incorporate desired projects on an annual basis.

Abbreviations:

ACOE: U.S. Army Corps of Engineers
BOA: NYS Department of State Brownfield Opportunities Areas Program
CHGE: Central Hudson Gas and Electric
CSC: NYSDEC Climate Smart Communities Grant Program
EEB: Esopus Environmental Board
Esopus: Esopus Town Funds
EHD: Esopus Highway Department
EPF-Parks: NYS Office of Parks, Recreation & Historic Preservation (OPRHP)
EPF-Trails: OPRHP

EPRC: Esopus Parks and Recreation Commission
Market NY: Empire State Development – Market New York Grant
GIGP: Environmental Facilities Corporation Green Innovation Grant Program
HRVG: Hudson River Valley Greenway
Invasives: NYSDEC Invasive Species Grant Program
NYSDEC: New York State Department of Environmental Conservation
NYSDOT: New York State Department of Transportation



Riverfront Access and Connections Study

PSAP: NYSDOT Pedestrian Safety Action Plan
funding

PTNY: Parks & Trails NY

PV: Public Volunteers

RCAL: Resource Center for Accessible Living

Scenic Byway: NYS Scenic Byways Program

SRTS: NYS Safe Routes to School Funding

SH: Scenic Hudson

WAB: Waterfront Advisory Board

WQIP: NYSDEC Water Quality Improvement
Project Program

ZTF: Town of Esopus Zoning Task Force

Key	Project Recommendation	Responsible Parties and Partners	Potential Funding Sources and Programs
Sleightsburgh Park			
Parking Lot Improvements			
SP-1	Designate between four to five boat trailer parking spaces (approx. 10 ft. by 40 ft.) on west side of parking lot. It is recommended that temporary lines be painted to identify the optimal parking layout and circulation pattern.	EHD, SH	Esopus
SP-2	Designate no more than four boat trailer parking spaces (approx. 10 ft. by 40 ft.) on the northern side of the center island or the alternative approach to allow two trailer and two non-trailer parking spaces. It is recommended that temporary lines be painted to identify the optimal parking layout and circulation pattern.	EHD, SH	Esopus
SP-3	Establish one-way internal circulation flow and install one-way signs.	EHD, SH	Esopus
SP-4	Establish a canoe/kayak unloading space (temporary parking) adjacent to the proposed canoe/kayak hand launching site (See SP-9).	EHD, SH	Esopus
SP-5	Establish one ADA van parking space contiguous and immediately south of the fishing platform. Compact the gravel surface to meet ADA requirements.	EHD, RCAL, SH	Esopus
SP-6	Conduct Park user surveys to better understand the popularity of the Park and assist with future decision making.	WAB, PV	LWRP, Estuary, HRVG
New Dock and Canoe/Kayak Access			
SP-7	Research feasibility of establishing a fully ADA accessible boat ramp and associated dock.	EHD, WAB, RCAL, SH, DEC, ACOE	LWRP, Estuary
SP-8	Install a 40-ft. aluminum floating dock on the west side of the existing dock to form an "L" shape. If the approach to the dock can be improved to ADA compliance, including the concrete step and gangway, the Town should consider the costs of upgrading the existing dock to ADA compliance and purchasing a new 40-foot ADA compliant dock.	EHD, WAB, RCAL, SH, DEC, ACOE	LWRP, Estuary, EPF Parks
SP-9	Establish a small soft launch for canoes/kayaks and other small watercraft to the west of the boat launch. The launch is recommended to be surfaced with crushed stone and regularly maintained. Concrete pavers may provide a suitable alternative which may be more ADA accessible. In addition, and if feasible, an accessible route to the launch site will be provided. The feasibility of establishing an ADA parking space near the proposed soft launch should be evaluated.	EHD, WAB, PV, SH, DEC, ACOE	LWRP, Estuary, EPF Parks
Access Road Sight Line Improvements			
SP-10	Selectively trim wetland reeds on the northern side of the access road on an annual basis or as needed to improve site distances.	EHD, WAB, PV, SH, DEC	Esopus
SP-11	Establish a small pull-off along the southern side of the access road just east of the Central Hudson natural gas infrastructure.	EHD, CHGE, DEC, ACOE, SH	Esopus
Trail Improvements			
SP-12	Cut back existing vegetation along the edges of existing trails and establish an on-going trail maintenance program.	EHD, WAB, PV, CHGE, SH, DEC	PTNY, Esopus, HRVG
SP-13	Install puncheons or similar alternatives to bridge low-lying and wet areas along the Central Hudson right-of-way and on other trails. The Town and Central Hudson	EHD, WAB, PV, CHGE, SH, DEC	PTNY, LWRP, Estuary, EPF-Parks, HRVG

Key	Project Recommendation	Responsible Parties and Partners	Potential Funding Sources and Programs
	should continue to review possible alternatives for providing ADA accessible trails at the Park.		
Long-term Monitoring Programs			
SP-14	Establish a volunteer trail maintenance team.	WAB, PV, CHGE, EHD, SH	Esopus, PTNY, HRVG
SP-15	The Esopus Environmental Board will continue to monitor the population of Carex frankii in accordance with the 1996 NYSDEC management plan and Scenic Hudson's revised 2013 monitoring plan.	EEB, WAB, PV, SH, DEC	Esopus
Amenities			
SP-16	Relocate the existing or construct a new ADA kiosk near the fishing platform, with QR codes to assist all visitors in accessing Park information.	EHD, WAB, PV	Esopus, LWRP, HRVG, Market NY
SP-17	Install a minimum of one ADA picnic table on the fishing platform.	EHD, RCAL	Esopus
SP-18	Install a small bike rack in the southern portion of the fishing platform. If feasible, considering installing one bicycle repair station that provides a tire pump and associated tools that assist with basic repairs.	EHD	Esopus
SP-19	Continue to provide an ADA portable restroom facilities in the parking lot.	EHD	Esopus
Proposed Rules and Regulatory Changes			
SP-20	Add signage prohibiting fish cleaning on picnic tables and disposal of fish parts in the Rondout Creek and elsewhere in the Park.	EHD, WAB, PV	Esopus
SP-21	Confirm a preferred approach for allowing and monitoring access to the Park after hours and out of season. The type of hunting permitted at the Park should also be re-evaluated to facilitate compatible recreational uses and this evaluation should take place during the LWRP Update scheduled to begin August 2020.	WAB, EHD, SH	Esopus, LWRP
SP-22	Review and consider necessary revisions to Town of Esopus Code Chapter 98, "Park Rules and Regulations" related to designated fishing locations and park access. These reviews could begin during the LWRP Update scheduled to begin August 2020.	WAB, WAB, SH	Esopus
SP-23	Replace the Park sign on the fishing pier with a new sign that will not be damaged by weathering and wave action.	EHD	Esopus
SP-24	Designate Sleightsburgh Park as a "Carry in-Carry-out" Park and install signage with fines for littering.	EHD	Esopus
Alternative Access Recommendations			
SP-25	Research existing conditions and feasibility of establishing a new boat launch at the terminus of N. Broadway and the former Kosco Oil Terminal site in the LWRP. The Town should also seek to reclaim ownership of the northern end of North Broadway to facilitate future access.	WAB, EHD	LWRP, Estuary, EPF-Parks, BOA, HRVG

Key	Project Recommendation	Responsible Parties and Partners	Potential Funding Sources and Programs
Neighborhood Traffic Improvements			
SP-26	Implement traffic calming and other safety measures along North Broadway to mitigate current safety concerns related to speeding vehicles and increased traffic during the fishing/boating season. Recommendations include, but are not limited to painting a centerline and shoulder lines, road surface MPH signs and similar road surface traffic calming measures, radar/speed indicator signs, and property maintenance of vegetation at intersections to ensure property sight distance.	EHD	SRTS, PSAP
SP-27	Alternative access via Front Street. To reduce the amount of park traffic traveling through the neighborhood streets of Sleightsburgh, the feasibility of accessing Sleightsburgh Park through the former Kosco Oil Terminal site over what used to be Front Street should be evaluated.	WAB, EHD, Private Landowner	LWRP, BOA, HRVG
Sea Level Rise			
SP-28	The Town of Esopus, in partnership with NYSDEC and other stakeholders should begin evaluating options for and the feasibility of protecting Sleightsburgh Park from projected sea level rise. This evaluation should begin during the Town of Esopus' LWRP update.	WAB, EEB, EPRC, NYSDEC, SH, ACOE, EHD	LWRP, Estuary, CSC, HRVG
Sleightsburgh Park Access Stakeholder Mediation			
SP-29	Evaluate and quickly take action on the recommendations resulting from the stakeholder mediation conducted by the WAB Sub-committee. A summary of the results the mediation process are found in Appendix E.	WAB	LWRP, Estuary
George H. Freer Memorial Park			
Shoreline Access Improvements			
FP-1	Formally establish a soft launch at the southern end of the Park.	EHD, WAB, DEC, ACOE	LWRP, Estuary, EPF-Parks, HRVG
FP-2	Evaluate the structural integrity of the bulkhead to determine: (1) Can it be repaired? (2) If not reparable, should it/can it be replaced? (3) If it needs to be replaced, is it feasible to remove the bulkhead and establish a natural shoreline.	WAB, EHD, DEC, ACOE	<i>Estuary (Grant awarded for work in 2020)</i>
FP-3	If the bulkhead is not removed, install riprap on top and along the back edge of the wall, along with native shoreline vegetation and rain gardens to assist with shoreline stabilization and preservation.	WAB, EHD, DEC, ACOE, PV	LWRP, Estuary, CSC, HRVG
Parking Lot Improvements			
FP-4	Mark all parking stall spaces. Approximately 52 are anticipated, including four ADA accessible spaces (includes three ADA van spaces) and four boat trailer parking spaces.	EHD, RCAL	Esopus
FP-5	Mill and resurface the sections of the parking lot in poor conditions. The southern section of the parking lot is the first priority.	EHD	Esopus
FP-6	Improve the dirt parking area in the northern section of the Park through grading and fresh gravel/crushed stone. Up to ten spaces, including one ADA van space should be provided. Install locking bollards to prohibit unofficial vehicle access to the shoreline.	EHD, RCAL	Esopus

Key	Project Recommendation	Responsible Parties and Partners	Potential Funding Sources and Programs
FP-7	Construct a small roundabout/turnaround at the base of the access drive to improve overall traffic circulation. Prior to constructing the turnaround, temporary cones and other moveable objects should be used to identify the optimal size and location and to ensure continued safe internal circulation and access.	EHD	Esopus
FP-8	Widen the Park entrance, reduce sign clutter and regularly maintain trees along the entrance drive.	EHD	Esopus
Stormwater Improvements			
FP-9	Conduct a comprehensive stormwater evaluation to identify options for improving overall Park drainage, water quality and reduce/eliminate associated shoreline and bulkhead erosions.	WAB, DEC	Estuary, LWRP, CSC, WQIP, GIGP, HRVG
FP-10	Install plantings, including rain gardens between the parking lot and shoreline as a first step in controlling both parking lot runoff and overland flow. Rain gardens are also recommended between the parking lot and pavilion.	EHD, WAB, PV	Estuary, LWRP, CSC, WQIP, GIGP, HRVG
Park Buildings			
FP-11	All buildings with the exception of the stone façade kitchen/restroom building, should be painted the same earth tone colors. The color of the new boat storage building should be considered as the desired color for all current and future park structures.	EHD, WAB	Esopus
FP-12	Remove the unused lifeguard restroom building at the southern end of the Park and establish a sheltered seating area linked to the existing grass surfaced path that leads to Tilden Street.	EHD	Esopus
FP-13	Remove the small restroom located in the parking lot. Construct a new restroom near the existing restroom/kitchen building associated with the pavilion or expand the existing building to accommodate additional Park visitors. The pavement will need to be patched and nearby sections repaired/replaced.	EHD	Esopus
FP-14	Install solar lighting in the pavilion, with an on/off timer.	EHD	Esopus
FP-15	Remove the wooden stairs in the northern section of the Park and regrade/reseed the area. A short trail is recommended to be constructed from the northern parking lot down towards the playground.	EHD	Esopus
Access and Internal Circulation			
FP-16	Construct stone dust or similarly surfaced trails (preferably ADA compliant) to connect the parking lots with shoreline, playground, pavilion, boat storage building, soft launch, and boardwalk (if constructed). The existing grassed trail connecting the Park to Tilden Street should be maintained to ensure a safe walking surface and benches installed along the trail to provide resting locations and to enjoy scenic views from this elevated location.	EDH, WAB, DEC	LWRP, Estuary, Parks, HRVG
FP-17	Construct a shoreline boardwalk along with interpretive signage. An alternative design, including an at-grade path may be considered in the bulkhead is removed and/or if the current boardwalk design is cost-prohibitive.	EHD, WAB, EEB, PV, DEC, ACOE	LWRP, Estuary, Parks, HRVG
FP-18A	Install bike racks – one near the playground/pavilion and one near the southern end of the Park to provided sufficient options for bicyclists. If feasible, considering	EHD, EPRC	Esopus

Key	Project Recommendation	Responsible Parties and Partners	Potential Funding Sources and Programs
	installing one bicycle repair station that provides a tire pump and associated tools that assist with basic repairs.		
FP-18B	Install a minimum of one ADA accessible picnic table within and one outside of the pavilion and one grill, all accessible via an ADA path.	EHD, EPRC	Esopus
FP-19A	Install ADA accessible playground equipment and surface and coordinate with RCAL for assistance.	EHD, EPRC, RCAL	LWRP, Parks, HRVG
FP-19B	Repaint or if necessary, replace the basketball backboards and resurface the court surface. All recreational amenities at Freer Park must be regularly monitored to ensure they are kept in safe conditions.	EHD, EPRC	Esopus
FP-20	Repair or replace the existing kiosk with a new ADA accessible kiosk containing QR codes.	EHD, WAB, PV	Esopus, LWRP, HRVG, Market NY
Shoreline Vegetation			
FP-21	Establish a long-term shoreline vegetation and tree replacement program.	WAB, EEB, PV	Estuary, LWRP, CSC
FP-22	Designated the southern shoreline area (south of the unimproved hand launch site) off-limits to future shoreline improvements. Natural shoreline vegetation is natural being reestablished and should not be disturbed as it is and will continue to serve as flood protection.	WAB, EPRC	Esopus
Proposed Rules and Regulatory Changes			
FP-23	Review and consider necessary revisions to Town of Esopus Code Chapter 98, "Park Rules and Regulations" related to park access. These reviews could begin during the LWRP Update scheduled to begin August 2020.	EHD, WAB	Esopus, LWRP
FP-24	Install signage indicating that only non-motorized/zero emission boats are allow to be launched at Freer Park. Additional signage recommended prohibiting fish cleaning on tables and the disposal of fish in the Hudson River or elsewhere in the Park. Additional signage is recommended to alert boaters of shallow conditions, the submerged rock wall and the impact that tides have on access. All Park rules should be posted at the pavilion and on the informational kiosk.	EHD, WAB	Esopus
Boat Storage and Rentals and Park Events			
FP-25	Reconfigure the internal storage space at the northern boat storage building to provide more space for the Chester rowboat.	WAB, EHD, PV	Esopus
FP-26	If there continues to be increased demand for storing boats, consider renovating the red storage building along the shoreline (southern portion of park) to allow for additional storage capacity.	WAB, EHD, PV	Esopus
FP-27	The Town could pursue formal agreements with area kayak rental and guide companies to conduct regular boat rentals and clinics at Freer Park. In addition, the Town could coordinate with other stakeholder to conduct regular events/festivals at Freer Park, including kayak races, etc.	WAB, PV	N/A

Key	Project Recommendation	Responsible Parties and Partners	Potential Funding Sources and Programs
Lighthouse Park			
Shoreline and Access Improvements			
LP-1	Stabilize and repair the eroding shoreline.	EHD, WAB, SH, DEC, ACOE	Estuary, LWRP, CSC, HRVG
LP-2	Construct a new soft launch to provide river access for small, non-motorized watercraft.	EHD, WAB, SH, DEC, ACOE	Estuary, LWRP, HRVG
LP-3	Enhance the northern shoreline access point by establishing a gentler slope to the shoreline, regularly maintain the path and cut back vegetation, including poison ivy.	EHD, WAB, SH	Esopus
LP-4	Expand and repair the existing parking lot and enlarge the entrance width. Establish a total of 15 spaces, including one ADA van space.	EDH, WAB, SH, RCAL	Esopus
LP-5	Construct a stone dust path between the parking lot, the soft launch access point and the adjoining Esopus Meadows Preserve.	EHD, WAB, SH, DEC, ACOE	Estuary, LWRP, HRVG
LP-6	Install rain gardens/bioswales between the parking lot and shoreline to provide natural stormwater treatment.	EHD, WAB, SH, PV	Estuary, LWRP, CSC, HRVG, GIGP
Amenities			
LP-7	Replace the existing informational kiosk in the same location with an ADA accessible kiosk that includes QR codes.	EDH, WBA, PV	Esopus, LWRP, HRVG, Market NY
LP-8	Install a new small bike rack near the informational kiosk. If feasible, considering installing one bicycle repair station that provides a tire pump and associated tools that assist with basic repairs.	EHD	Esopus
LP-9	Install a minimum of one ADA accessible picnic table which shall be accessible from the ADA van parking space.	EHD, RCAL	Esopus
LP-10	One or two grills are recommended to be installed in an effort to discourage fire pits, which are prohibited. The grill(s) should be ADA accessible.	EHD, RCAL	Esopus
LP-11	Consider constructing a small gazebo or pavilion for the southern end of the Park. A location should be chosen that ensures views of the River are not blocked and the structure would not be visible from the River.	EHD, WAB, PV, SH	Esopus
LP-12	Regularly thin the vegetation between Lighthouse Park and Esopus Meadows Preserve to provide filtered views between the two recreational areas. Close coordination with Scenic Hudson will be required. No vegetation shall be removed that would result in increased runoff and siltation.	EHD, WAB, EEB, PV, SH	Esopus
Proposed Rules/Signage/Future Planning			
LP-13	Install signage prohibiting launching of motor boats, fishing cleaning on tables and disposal of fish in the Hudson River or elsewhere in the Park.	EHD, WAB	Esopus
LP-14	Install signage alerting Park visitors that both fishing and boat launching are allowed. The northern shoreline access could be designated as a fishing site.	EHD, WAB	Esopus
LP-15	Review and consider necessary revisions to Town of Esopus Code Chapter 98, "Park Rules and Regulations" related to out of season park access and designated fishing locations. These reviews could begin during the LWRP Update scheduled to begin August 2020.	WAB, SH	Esopus, LWRP

Key	Project Recommendation	Responsible Parties and Partners	Potential Funding Sources and Programs
LP-16	Pursue Scenic Byway Designation for River Road.	WAB, PV, SH	Esopus, Scenic Byways
LP-17	Conduct a feasibility study on the use of Central Hudson ROW for trail connections.	CHGE, SH, EPRC, PV	LWRP, EPF-Parks, EPF-Trails, HRVG
LP-18	Designate Lighthouse Park as a “Carry In-Carry Out” Park.	EPRC	Esopus
LP-19	During the current Town-wide zoning update, the Town of Esopus should rezone Lighthouse Park from R-40 to WR, consistent with the other Town parks.	ZTF	Esopus, HRVG
LP-20	Continue the water chestnut harvesting program with the current primary focus being the shorelines of Lighthouse Park and Esopus Meadows and other locations as detailed above in the Study.	WAB, PV	Estuary, Invasives
Future Nearby Waterfront Access			
LP-21	During the LWRP, conduct a general feasibility study on repurposing the Town’s water treatment plant (located north of Lighthouse Park) as a possible future deep water access site or other compatible use. Retain the site if the treatment plant is no longer utilized.	WAB, EPRC	LWRP, Estuary, HRVG
Esopus Meadows Preserve			
EMP-1	Address erosion by installing coir logs and/or re-routing the Blue Trail upland from the shoreline. The footbridge at the gateway is in need of replacement and associated shoreline erosion requires restoration.	SH, EPRC, WAB	LWRP, Estuary, HRVG
EMP-2	A long term goal is to expand the existing trail network south to adjacent Scenic Hudson-parcels to increase the network and will include an evaluation of the possibility to extend foot access to Hudson Lane.	SH, EPRC, WAB	LWRP, Estuary, HRVG
EMP-3	Improve visual and physical connectivity between Lighthouse Park and Esopus Meadows Preserve so the two parks serve the public in a more integrated way. Remove thick vines and invasive trees from the property boundary to open up vistas from Lighthouse Park towards the pavilion and open up the connection footbridge. Possibly identify a second footpath to bridge the drainage channel if feasible	SH, EPRC, WAB	SH
EMP-4	Improve day-use of pavilion. Improve park integration by expanding use of the EMP pavilion for picnicking by providing picnic tables on and/ or adjacent to the pavilion. Picnic tables on the pavilion will make the pavilion more inviting (rather than feel off-limits) and useable when not in use by the Clearwater Tideline educational program. Any tables on the pavilion deck should be ADA accessible. Esopus Meadows is and will remain a ‘carry in, carry out’ Park.	SH	SH
EMP-5	Evaluate formalization of fishing trails to shoreline. Improve existing social fishing trails to shoreline as designated and safe routes off the Blue Trail. As a nature preserve, potential impacts to natural resources and resulting increased maintenance demands will need to be evaluated. ‘No swimming’ signs would be posted.	SH	SH

Key	Project Recommendation	Responsible Parties and Partners	Potential Funding Sources and Programs
Black Creek Preserve			
BCP-1	Replace (in-kind) the western portion of the bulkhead's sheet piling structure to stabilize the eroding condition and prevent sudden failure.	SH, NYSDEC, ACOE	LWRP, Estuary, HRVG
BCP-2	Improve the eroding conditions of the existing unofficial shoreline trail that connects with the Blue Trail.	SH	LWRP, Estuary, HRVG
BCP-3	Abandon a portion of the existing trail that connects the parking lot with the suspension bridge that is eroding and re-stabilize with coir logs and shade tolerant riparian vegetation. Construct a more direct trail to the suspension bridge to avoid the eroding sections.	SH	LWRP, Estuary, HRVG
Park Entrance and Parking Improvements			
BCP-4	Improve the entrance to BCP along US Rte. 9W by reconstructing the center island as asphalt pavement to meet NYSDOT specifications for curb cuts. Reduce the outer edges of the entranceway to reduce the overall width and minimize the amount of impervious pavement.	SH, NYSDOT	SH
BCP-5	Expand the existing parking lot to at least twice the existing size, include ADA spaces and improve overall internal circulation.	SH	SH
Internal Access Improvements			
BCP-6	Re-purpose the existing internal road as a multi-use trail with new resting points.	SH	LWRP, Estuary, HRVG
BCP-7	Upgrade the entire system of stream culverts to accommodate more intense storm events and to incorporate green infrastructure practices to infiltrate runoff from increased areas of semi-permeable surfaces.	SH, NYDEC, ACOE	Estuary, LWRP
BCP-8	Establish additional foot trails from the end of the multi-use trail to connect with the boat ramp, peninsula, bluff edge, existing trails and other amenities.	SH	LWRP, Estuary, HRVG
Park Buildings and Structures			
BCP-9	Make improvements to the gazebo, including painting and possibly re-roofing and remove or prune some existing vegetation below the railing height to restore river views. Consider repurposing the farm house for a writer in residency program in partnership with the John Burroughs Association.	SH	SH
BCP-10	Install a new accessible pavilion overlooking the confluence of the Hudson River and Black Creek.	SH	LWRP, Estuary, HRVG
Site Amenities and Signage			
BCP-11	Update the interpretive information on the existing trailhead kiosk when the kiosk is re-located to a new trailhead location.	SH	LWRP, Estuary, HRVG
BCP-12	Install a new kiosk, wayfinding, and interpretive panels along the roadway (proposed multi-use trail) to inform visitors about the American Eel and other migratory fish in the Black Creek.	SH	LWRP, Estuary, HRVG
BCP-13	Install new benches of other seating options, a bike rack at the riverfront area, removable bollards across the roadway, and an enclosure for a seasonal / portable restroom and possibly a small boat rack for temporary storage.	SH	LWRP, Estuary, HRVG



Riverfront Access and Connections Study
