

# **Town of Bethlehem Local Waterfront Revitalization Program**

Adopted:

Town of Bethlehem Town Board, March 24, 2021

Approved:

NYS Secretary of State, Rossana Rosado, August 17, 2021

Concurred:

U.S. Office of Coastal Management, February 23, 2022

This Local Waterfront Revitalization Program (LWRP) has been prepared and approved in accordance with provisions of the Waterfront Revitalization of Coastal Areas and Inland Waterways Act (Executive Law, Article 42) and its implementing Regulations (19 NYCRR 601). Federal concurrence on the incorporation of this Local Waterfront Revitalization Program into the New York State Coastal Management Program as a program change has been obtained in accordance with provisions of the U.S. Coastal Zone Management Act of 1972 (P.L. 92-583), as amended, and its implementing regulations (15 CFR 923). The preparation of this program was financially aided by a federal grant from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of Coastal Management, under the Coastal Zone Management Act of 1972, as amended. [Federal Grant No. NA-15-NOS-4190092] The New York State Coastal Management Program and the preparation of Local Waterfront Revitalization Programs are administered by the New York State Department of State, Office of Planning, Development & Community Infrastructure, 99 Washington Avenue, Suite 1010, Albany, New York 12231-0001.



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**Office for Coastal Management**  
Silver Spring Metro Center, Building 4  
1305 East-West Highway  
Silver Spring, Maryland 20910

February 23, 2022

Ms. Sarah Crowell  
New York Coastal Management Program  
New York State Department of  
State 99 Washington Ave., Suite  
1010 Albany, NY 12231

Dear Ms. Crowell,

Thank you for the December 15, 2021 request for approval of changes to the New York Coastal Management Program pursuant to the National Oceanic and Atmospheric Administration (NOAA) Coastal Zone Management Act (CZMA) regulations at 15 CFR part 923, subpart H with the incorporation of the Local Waterfront Revitalization Program (LWRP) for the Town of Bethlehem into the New York Coastal Management Program (NY CMP).<sup>1</sup>

NOAA's Office for Coastal Management approves the request subject to the qualifications below.

NOAA's regulations require that the state post this decision by the Office for Coastal Management for public notice.<sup>2</sup> The public notice should state that as of the date of this decision letter the enforceable policies identified in the attached Table of Approved Changes shall be applicable in reviewing federal actions pursuant to the federal consistency requirements of the CZMA and its implementing regulations found at 15 CFR part 930.<sup>3</sup> Please send a copy of the public notice to the Office for Coastal Management for our records to close out this file.

### **PUBLIC AND FEDERAL AGENCY COMMENTS**

The Office for Coastal Management did not receive any comments on this program change submission.

### **CHANGES APPROVED**

See the attached Table of Approved Changes to the New York Coastal Management Program.

<sup>1</sup> This program change request was submitted under NOAA's revised CZMA program change regulations at 15 CFR part 923, subpart H (84 Federal Register (FR) 38118 (Aug. 6, 2019)). The Office for Coastal Management's decision due date was January 14, 2022, subject to extension.

<sup>2</sup> 15 CFR § 923.81(e)(5), as described at 84 FR 38133 (Aug. 6, 2019).

<sup>3</sup> 15 CFR § 923.81(f), as described at 84 FR 38133 (Aug. 6, 2019)

## QUALIFICATIONS

As with previous approval of NY CMP LWRPs, the enforceable provisions of Section III are only the stated policies and sub-policies. The enforceable policies do not include the explanatory text that accompanies each policy. While the explanatory text may be advisory as to how activities can show consistency with the LWRP policies, the State may not use the explanatory text as a basis for issuing an objection under its CZMA authority. Please also note that for the review of federal actions pursuant to the CZMA, the requirements of the statute and implementing regulations at 15 CFR part 930 are controlling over any conflicting interpretation of the discussion of the CZMA federal consistency requirements within the Town of Bethlehem LWRP.

As a standard qualification applying to all program changes, states may not incorporate enforceable policies by reference. If an approved enforceable policy refers to another statute, regulation, policy, standard, guidance, or other such requirement or document, the referenced policy must be submitted to and approved by the Office for Coastal Management as an enforceable policy in order to be applied under the federal consistency review provisions of the CZMA. No referenced policy may be applied for CZMA federal consistency review purposes unless that policy has been separately reviewed and approved as an enforceable policy by the Office for Coastal Management.

Thank you for your cooperation in this review. Please contact Nelle D'Aversa at [nelle.daversa@noaa.gov](mailto:nelle.daversa@noaa.gov), if you have any questions. For future correspondence regarding these program changes, please refer to the file number assigned to this action, NY-2021-3.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joelle Gore', with a long horizontal flourish extending to the right.

Joelle Gore,  
Chief Stewardship Division

Attachment: Table of Approved Changes (NY-2021-3)

## TABLE OF APPROVED CHANGES TO THE NEW YORK COASTAL MANAGEMENT PROGRAM (NY-2021-03)

Please reference the Office for Coastal Management February 23, 2022, decision letter for clarifications, exceptions, and qualifications pertaining to this approval.

Legal citation	Title of policy, section, or other descriptor	Is the change new, revised, or deleted	Date effective in state	Enforceable policy	Enforceable mechanism citation
Not applicable	Town of Bethlehem, New York Local Waterfront Revitalization Program (LWRP)	New	August 17, 2021	Yes (Section III only)	Executive Law, Article 42

STATE OF NEW YORK  
DEPARTMENT OF STATE

ONE COMMERCE PLAZA  
99 WASHINGTON AVENUE  
ALBANY, NY 12231-0001  
WWW.DOS.NY.GOV

ANDREW M. CUOMO  
GOVERNOR

ROSSANA ROSADO  
SECRETARY OF STATE

August 17, 2021

Honorable David VanLuven  
Town of Bethlehem Supervisor  
445 Delaware Avenue  
Delmar, NY 12054

Dear Supervisor VanLuven:

I am pleased to inform you that I have approved the Town of Bethlehem Local Waterfront Revitalization Program (LWRP), pursuant to the Waterfront Revitalization of Coastal Areas and Inland Waterways Act.

Everyone who participated in the preparation of the LWRP is to be commended for developing such a comprehensive management program that promotes the balanced preservation, enhancement, and utilization of valuable waterfront resources along the Hudson River, Normans Kill, Volman Kill, and Binnen Kill. Congratulations on a job well done.

I am notifying all State agencies that I have approved the Town of Bethlehem LWRP and advising them that agency activities must now be undertaken in a manner consistent, to the maximum extent practicable, with the LWRP.

The approved Town of Bethlehem LWRP will be available on the website of the Department of State, at <https://dos.ny.gov/local-waterfront-revitalization-program>.

If you have any questions, please contact Barbara Kendall, the LWRP Processing Coordinator within the Office of Planning, Development & Community Infrastructure, at [barbara.kendall@dos.ny.gov](mailto:barbara.kendall@dos.ny.gov)

Sincerely,



Rossana Rosado  
Secretary of State

Enclosure: Approval Certificate

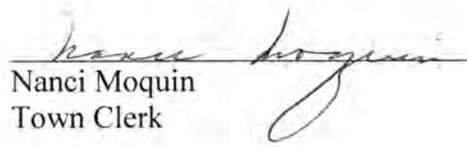
STATE OF NEW YORK )  
COUNTY OF ALBANY ) SS:  
TOWN OF BETHLEHEM)

I, Nanci Moquin, Town Clerk of the Town of Bethlehem, Albany County, New York DO HEREBY CERTIFY as follows:

The attached copy of Resolution # 2021-013 is a true and correct copy of the Local Waterfront Revitalization Program Resolution approved by the Town Board at the Town Board meeting held on March 24, 2021.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of said Town this 19th day of April, 2021.



  
Nanci Moquin  
Town Clerk

RESOLUTION NO. 2021-013

**TOWN BOARD  
TOWN OF BETHLEHEM**

**RESOLUTION**

**LOCAL WATERFRONT REVITALIZATION PROGRAM (LWRP)**

WHEREAS, in 2016 the Town secured funding from the NYS Department of State (DOS) Environmental Protection Fund Grant to complete a Local Waterfront Revitalization Program in cooperation with the New York State Department of State, pursuant to Article 42 of the Executive Law. The Program has been prepared by MJ Engineering and Land Surveying P.C. (MJ) in association with Place Alliance, with the assistance of a Local Waterfront Advisory Group and Staff from the Town Department of Economic Development and Planning, and NYSDOS (Program Team); and,

WHEREAS, the overall goal of the Program is to guide the future of Bethlehem's waterfront area by creating a balance between future development and the protection of the unique environment and heritage of the Hudson riverfront. The LWRP will serve as a guide for decision making when evaluating policies, programs, and projects within the riverfront areas. An appendix to the LWRP includes the Master Plan for the Henry Hudson Park completed in conjunction with the LWRP; and,

WHEREAS, a Draft Local Waterfront Revitalization Program and Local Waterfront Revitalization Program (LWRP) Consistency Review Law were prepared and circulated by the Department of State to potentially affected State, Federal, and Local agencies in accordance with the requirements of Executive Law, Article 42; and,

WHEREAS, the Town of Bethlehem Town Board, as lead agency, filed a Negative Declaration-Notice of Determination of Non-Significance on April 8, 2020 for preparation of the Local Waterfront Revitalization Program and LWRP Consistency Review Law pursuant to Article 8 of the Environmental Conservation Law (State Environmental Quality Review Act), and held public hearings on March 11, 2020 and March 10, 2021.

NOW, THEREFORE, BE IT RESOLVED, that the Local Waterfront Revitalization Program is hereby adopted, and that the Town of Bethlehem Supervisor is authorized to submit the LWRP to the New York State Secretary of State for approval, pursuant to the Waterfront Revitalization of Coastal Areas and Inland Waterways Act; and,

BE IT FURTHER RESOLVED, the Town Board is amending the Code of the Town of Bethlehem to add Chapter 80, Local Waterfront Revitalization Program (LWRP) Consistency Review Law and Waterfront Assessment Form, establishing the administration of the Local Waterfront Revitalization Program.

On a motion by Councilman Coffey, seconded by Councilwoman Cunningham, and by a vote of 5 for, 0 against and 0 absent, this RESOLUTION was adopted on March 24, 2021.

## **ACKNOWLEDGEMENTS**

The development of this LWRP was made possible through efforts of the following:

David VanLuven, Town Supervisor

Town of Bethlehem Waterfront Advisory Committee

Ann Morin

Charlotte Buchanan

Jeff Anzevino

Joan Gavrilik

Joann Dawson

John Clarkson

John Sherman

John Smolinsky

Lisa Evans\*

Maureen Cunningham

Nan Lanahan

Nava Tabak

Peter Thomas

Sam Messina

William Clancy

David VanLuven

MJ Engineering and Land Surveying, P.C., Project Consultant

MJ Project Manager: Jaclyn S. Hakes, AICP, Associate/Director of Planning Services

Town Planning Staff: Robert Leslie, AICP, Director of Economic Development & Planning  
Elizabeth Staubach, Economic Development Coordinator and Leslie Lombardo, Senior Planner

And technical assistance from New York State Department of State

The Town of Bethlehem Local Waterfront Revitalization Program was prepared with funding provided by the New York State Department of State under Title 11 of the Environmental Protection Fund

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## INTRODUCTION

Each coastal municipality in New York State can choose to prepare and adopt a Local Waterfront Revitalization Program (LWRP). After the LWRP is approved by the Secretary of State and the federal Office of Coastal Management concurs with its incorporation into the New York State Coastal Management Program (CMP), that LWRP becomes the portion of the NYS CMP that applies to the waterfront revitalization area described in the LWRP. At the local level, the LWRP is implemented by using local government powers including zoning and site plan review.

The Town of Bethlehem LWRP includes the description and map of the Bethlehem Waterfront Revitalization Area (WRA) in Section I, presents a detailed description and analysis of the existing conditions within the WRA in Section II, establishes 44 LWRP policy statements and explanations in Section III, proposes land and water uses and proposed projects in Section IV, and describes implementation tools and the local management structure for the implementation of the LWRP policies and goals in Section V. Section VI of the LWRP includes a comprehensive list of state and federal agencies that should review their actions for consistency with the LWRP policies and goals. Section VII describes local efforts to develop the LWRP and coordinate its review with organizations, municipalities and agencies that may conduct actions within the Bethlehem WRA that could impact or be impacted by the policies and goals of the approved LWRP.

The purpose of the Bethlehem LWRP is to guide future local actions within the Town's waterfront revitalization area by creating a balance between future development and the protection of the unique environment and heritage of the Hudson riverfront. The LWRP will serve as a guide for decision making when evaluating policies, programs, and projects within the riverfront areas.

The Bethlehem WRA, including 10 miles of shoreline along the Hudson River, is an asset that encompasses natural and agricultural, industrial, and commercial uses, recreational amenities, and low-density residential communities. The WRA stretches from the northern boundary with the City of Albany to the southern border with the Town of Coeymans. The western landward boundary of the Bethlehem WRA is the NYS Thruway. The LWRP seeks to balance sustainable economic growth with the preservation of the unique and diverse natural features within the Bethlehem WRA.

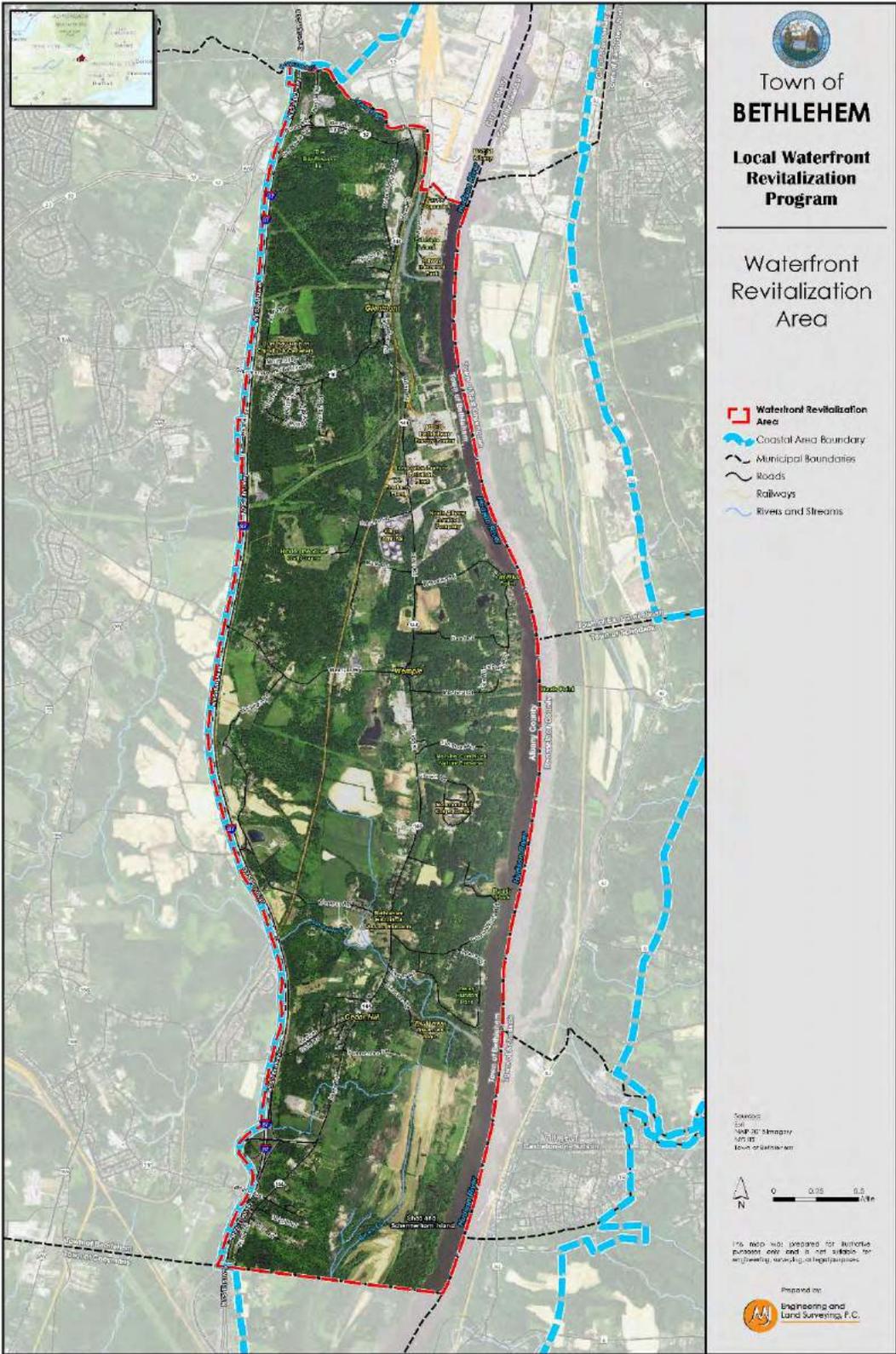
The LWRP reflects the Town's goal to protect local ecological resources and conserve agricultural lands, strengthen its physical connection to the waterfront, enhance public recreational opportunities, and build resiliency for community assets while balancing sustainable economic growth. Through partnerships with property owners, business owners, and other stakeholders, the Town will realize its potential as a waterfront community.

## **SECTION I – TOWN OF BETHLEHEM WATERFRONT REVITALIZATION AREA BOUNDARY**

The western landward boundary of the waterfront revitalization area (WRA) within the Town of Bethlehem expands the landward portion of the New York State Coastal Management Area (coastal area) approved in 1982, to incorporate additional natural resources of federal and State importance located between the New York State Thruway and the western bank of Hudson River. The Bethlehem WRA encompasses approximately 6,365 acres that incorporate the entire Binnen Kill, a significant portion of Vloman Kill and adjacent FEMA-designated regulatory flood zone, some of the agricultural lands of the State-certified Albany County Agricultural District #3, numerous palustrine and riverine federal and State-regulated freshwater wetlands located throughout the WRA and along the western bank of Hudson River, and land uses that impact the coastal area and the achievement of coastal policies set forth by this LWRP. The waterside of the coastal area is unchanged by the WRA boundary. The boundary of the Waterfront Revitalization Area is depicted in the map below.

The Bethlehem WRA starts at the intersection of the New York State Thruway/Interstate 87 (I-87) with the town's northern boundary with the City of Albany;

- then, it follows the northern municipal boundary in a general western direction for approximately 293 feet before turning south and continuing along the western side of I-87 right of way;
- then, the WRA boundary continues southerly for approximately 659 feet before turning easterly and continuing to follow the western side of I-87 right of way;
- then, it continues easterly for approximately 201 feet before turning southerly and continuing along the western side of the I-87 right of way, including the Thruway Rest Area and the Exit 22 wester/southern ramp, for an additional 39,243 feet, to the intersection with the Bethlehem's southern boundary with the Town of Coeymans;
- then, the WRA boundary turns easterly and continues along the boundary with the Town of Coeymans, for approximately 7,035 feet, to a point of intersection with the Town of Schodack municipal boundary, where it turns northerly;
- then, it continues northerly along Bethlehem's boundary with the Town of Schodack, for approximately 20,627 feet, to a point of intersection with the Town of East Greenbush municipal boundary;
- then, continues northerly along Bethlehem's eastern boundary with the Town of East Greenbush for approximately 13,887 feet, to a point of intersection with City of Albany municipal boundary, where it turns westerly;
- then, the WRA boundary continues westerly along the Bethlehem northern boundary with the City of Albany to the point of beginning, the point of intersection with the western side of the I-87 right of way.



## SECTION II – INVENTORY AND ANALYSIS OF EXISTING CONDITIONS WITHIN THE WATERFRONT REVITALIZATION AREA

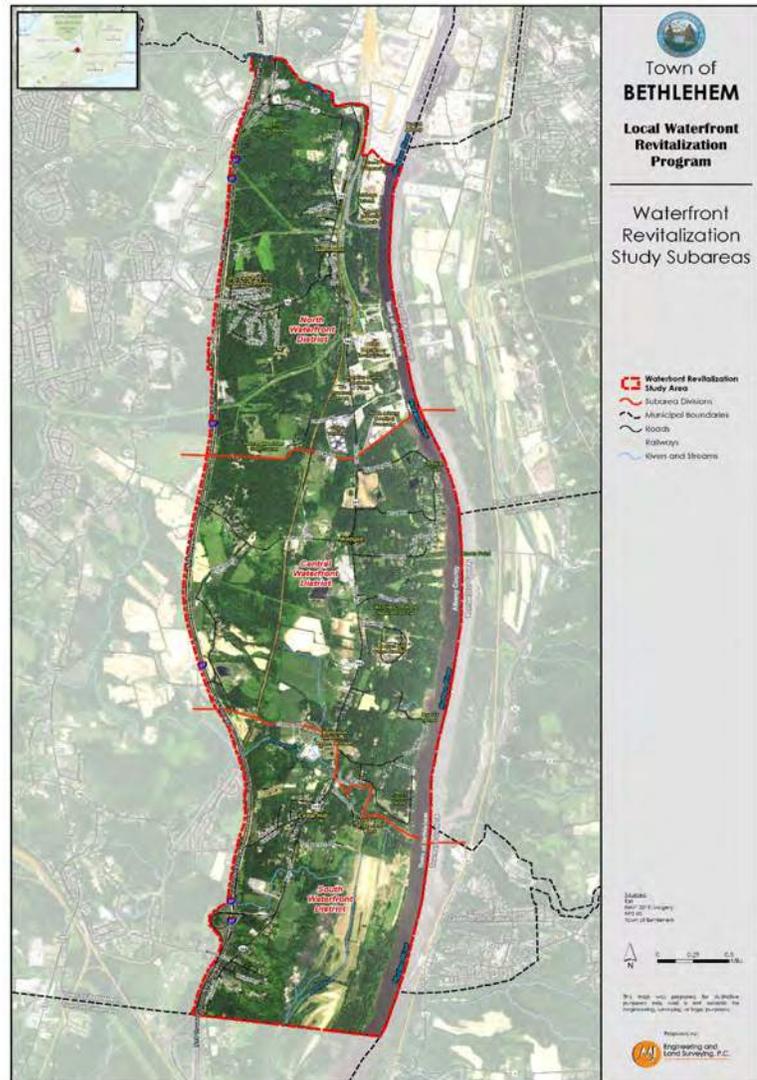
The inventory and analysis included in this section provide an understanding of current conditions within the Town of Bethlehem Waterfront Revitalization Area (WRA). It describes existing natural and built resources and conditions. In addition, it describes existing local and regional plans that relate to the WRA. This information allows for future knowledgeable decisions to be made. The three subareas indicated on the [Subareas of the Waterfront Revitalization Area Map](#) may be referenced in this section.

### EXISTING LAND USE AND ZONING DISTRICTS

The Town's WRA includes a variety of land uses including residential neighborhoods, significant natural, cultural, and agricultural resources, and several vibrant industrial waterfront businesses. The land located within the WRA may be broken into three (3) distinct regions.

The northern region has a significant industrial presence along the Hudson River located adjacent to the Port of Albany to the north. The industrial activity in the northern region contributes significantly to the Town's tax base. There is a mix of mostly low-density residential development and vacant lands located west of the industrial areas in the northern region.

The central region is comprised of a mix of land uses including residential, commercial, agriculture, vacant land and an educational institution. Along the waterfront within the central region the uses are low density residential, vacant, lands of the educational institution and conservation and park lands,



notably the Town owned Moh-He-Con-Nuck Nature Preserve. West of the waterfront area the land uses transition to mainly agricultural and vacant lands with commercial uses scattered within the area.

A large portion of the southern region contains protected natural resources of the tidal Hudson River and the Binnen Kill outlet. Henry Hudson Town Park provides waterfront recreational opportunities and hiking paths to residents and visitors. The southern region also contains low density residential areas, agricultural lands and a few commercial land uses.

The Bethlehem LWRP guides the Town in promoting sustainable economic growth, preserving the diverse character and ecological resources of the area, improving public awareness and access to the waterfront, enhancing related public recreational opportunities, and building long-term resiliency. This LWRP serves to protect these uses and maintain an appropriate balance among them. Additionally, the LWRP serves to ensure that the Town’s WRA remains an attractive place for residents, while allowing the economy to remain competitive both locally and regionally.

**LAND USE**

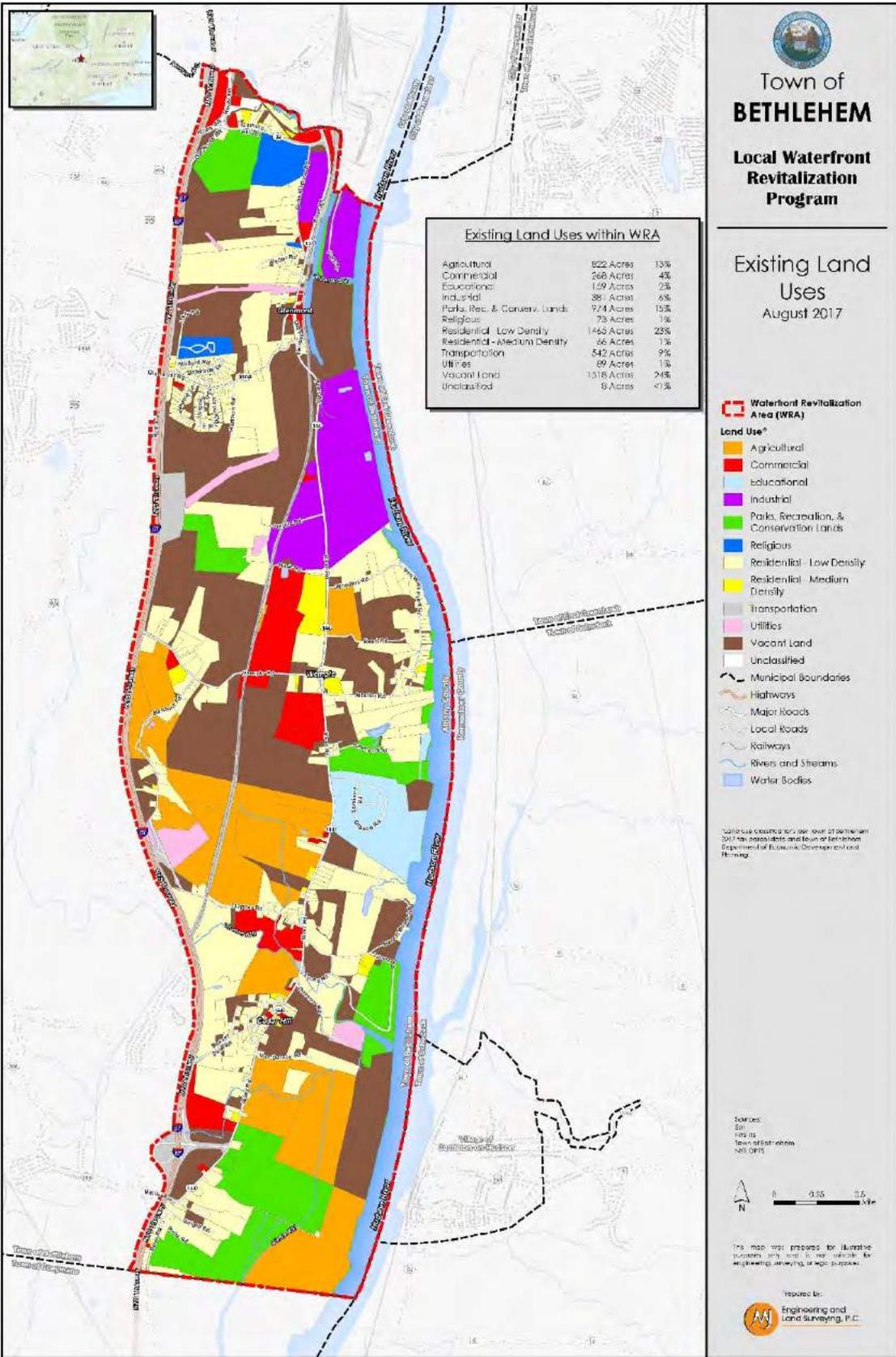
There are twelve (12) existing land uses within the Town’s WRA, which are listed below in Table 1. Their distribution within the WRA is illustrated on the [Existing Land Use Map](#).

The land uses most commonly found within the WRA by percentage breakdown are Vacant Land, Residential-Low Density, Parks, Recreation, and Conservation Lands, and Agricultural. The land uses least commonly found are Unclassified, Residential-Medium Density, and Religious. Generally, the Agricultural land uses are found within the southern half of the WRA, Industrial areas are within the northern half and Commercial land uses are found scattered throughout the WRA. Table 1 identifies the percentages of each land use found within the WRA.

**Table 1: Existing Land Use Composition**

Land Use Classification	Land Use Acreage	Land Use Percentage
Vacant Land	1,518	24%
Residential – Low Density	1,465	23%
Parks, Recreation, and Conservation Lands	974	15%
Agricultural	822	13%
Transportation	542	9%
Industrial	381	6%
Commercial	268	4%
Educational	159	2%
Religious	73	1%
Residential – Medium Density	66	1%
Utilities	89	1%
Unclassified	8	1%
<b>Total</b>	<b>6,365</b>	<b>100</b>

*Source: Town of Bethlehem*



The Town of Bethlehem integrated planning for agriculture into its comprehensive plan and developed a town level Agricultural and Farmland Protection Plan<sup>1</sup> in 2009. Both plans integrated public input specifically regarding agriculture and farmland. Through these plans, Bethlehem emphasizes the value of agriculture and a level of commitment to preserving open spaces in the face of development. The comprehensive plan encourages participation in agricultural districts<sup>2</sup> and recommends the use of conservation subdivision planning, right-to-farm ordinances, and updating zoning rules for rural areas to better accommodate a variety of uses like agritourism, farm stands, and other non-traditional functions.

To conserve, protect and encourage the availability of land for farming purposes the State Legislature enacted the New York Agricultural Districts law, Article 25-AA of the Agriculture & Markets Law. The law provides for a locally initiated mechanism at the county level in the creation, modification and approval of Agricultural Districts. Accordingly, counties manage the preliminary stages of creation or modification of an Agricultural District. The NYS Commissioner of Agriculture and Markets certifies that a district meets the purpose and intent of the Agricultural District Law after the county submits a resolution approving or modifying a district.

Agricultural districts encourage continued use of farmland for agricultural production. Districts are established by combining landowner incentives and protections, all of which are designed to prevent the conversion of farmland to non-agricultural uses. Albany County Agricultural Districts certified by the NYS Commissioner of Agriculture and Markets are not the same as agricultural zoning.

Portions of the Albany County Agricultural District #3 are located in the towns of Bethlehem, Coeymans, Cohoes, Colonie, Guilderland, and New Scotland. The lands of the Albany County Agricultural District #3 within WRA are illustrated on Farmland Soils and Albany County Agricultural District #3 Map. A significant portion of these lands is concentrated in the southern half of the WRA, north of Clapper road on the west side of SR 144 and south of Clapper Road on the east side of SR 144. The 2018 Albany County Agricultural and Farmland Protection Plan Update identifies this area as a priority for farmland protection<sup>3</sup>.

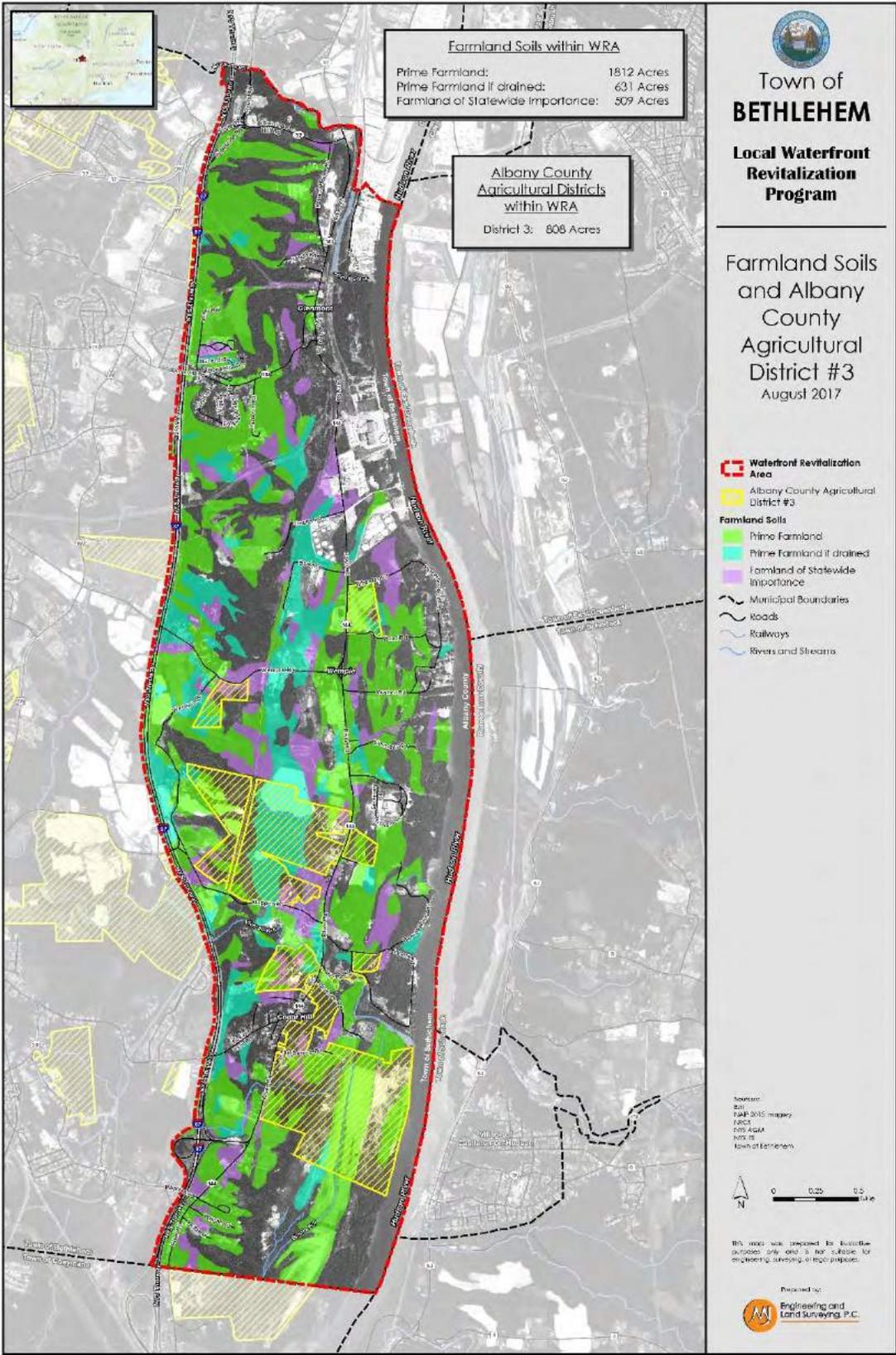
Due to the concentrated location of agricultural lands the Town will investigate ways to encourage landowners to conserve agricultural lands under the Town Conservation Easement Program. However, many properties located within the WRA already receive a tax exemption (80%) through the agricultural assessment of lands included in the Albany County Agricultural District #3. Consequently, the Conservation Easement Exemption program as it relates to agricultural lands is not as beneficial as expected from a tax savings standpoint since the assessment is greatly reduced by 80% already.

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1 <https://www.farmlandinfo.org/bethlehem-ny-agricultural-and-farmland-protection-plan>

2 A district established pursuant to Article 25-AA of the Agriculture and Markets Law.

3 [http://app.albanycounty.com/docs/edcp/20181126-Agricultural\\_and\\_Farmland\\_Protection\\_Plan.pdf](http://app.albanycounty.com/docs/edcp/20181126-Agricultural_and_Farmland_Protection_Plan.pdf)



The Town continues to encourage and promote participation in the local conservation easement program of those properties used for agriculture but not certified as part of the Albany County Agricultural District #3, which are not receiving an agricultural exemption. The voluntary protection of agricultural lands will also result in limiting development within the WRA, which has the added benefit of protecting water quality of the Hudson River and its tributaries, thereby complying with the NYSDEC MS4 Stormwater Regulations.

The acreage and percent of the WRA found in Albany County Agricultural District #3 are identified below.

**Table 2: Albany County Agricultural District #3**

Albany County Agricultural District	Total Within WRA (acres)	Percentage of the WRA
District #3	808	13%

*Source: New York State Department of Agriculture and Markets*

Approximately one third of the lands within the agricultural district are leased to farming operations. The remaining two thirds of the land within the district is owner occupied. Very few properties that are part of the Albany County Agricultural District #3 are not in agricultural use.

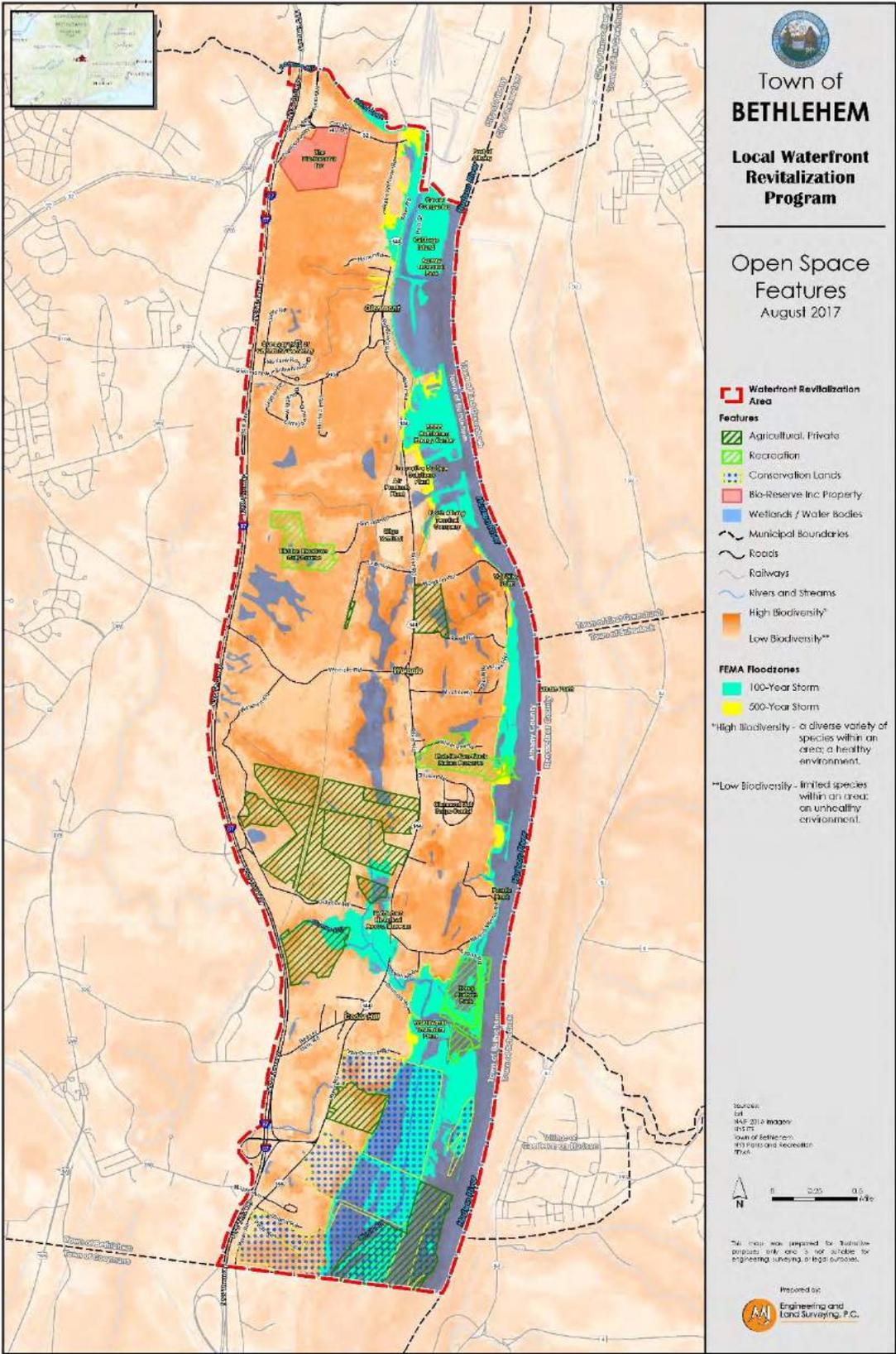
Some agricultural properties that are not part of the Albany County Agricultural District #3 are leased by farmers who are leasing land within the district. Those properties may represent an opportunity to be included in the agricultural district. The majority of parcels being leased for agricultural uses are leased by the same farmer and a majority of those lands are in the agricultural district.

The town is supportive of continued active agricultural use of farmland and any efforts to purchase development rights on existing farmland or vacant lands that could be returned to productive farmlands. Agriculture and farming are important for the local economy. As noted within this section of the LWRP, agricultural lands provide scenic value and opportunities for tourism within the WRA.

**OPEN SPACE**

The Town defines open space as any space or area characterized by natural scenic beauty whose existing openness, natural condition, or present state of use, if retained, would enhance the present or potential value of abutting or surrounding urban development or would maintain or enhance conservation of natural or scenic resources. For the purposes of this definition, natural resources shall include, but not be limited to, agricultural lands defined as open lands used in bona fide agricultural production.

The Open Space Plan: Conservation Criteria Implementation was completed in 2017. The Town Board passed a resolution in December of 2017 to implement this plan. The town's stated purpose of open space planning is "to ensure that future consumption of land for development is balanced with the conservation of land for its open space value".



The Open Space Plan<sup>4</sup> includes:

- An updated, town-wide open space inventory and database, as illustrated in four Open Space Conservation Values Maps
- A list of data-driven Conservation Criteria (25) with which to evaluate open space land for its conservation values; and,
- An effective, flexible, data-based method - the GIS Conservation Analysis Tool - to evaluate, numerically score, and prioritize the conservation of open space land.

The ongoing use and implementation of these plan components by the Town Board, Planning Board, Planning Department Staff, and the Conservation Easement Review Board, prepare and guide the town in responding to landowner inquiries about conservation opportunities, as well as informing the town's development review and design process.

Further, the Open Space Plan informs the use of limited financial resources and directs future funds to the conservation of open space land that will have the most beneficial impact town wide. Having this open space plan in place also supports town applications for state, regional and federal grant funding for conservation implementation.

The Open Space Plan: Conservation Criteria Implementation continues to be a useful guide to understand the open space benefits of land conservation opportunities, including within the WRA. The 25 conservation criteria cover agricultural lands, forests, wetlands, and stream corridors, etc, and their implementation will be beneficial to the town and its WRA.

In addition to agricultural lands, significant public and private open space within the WRA include: the 69-acres of natural land of the Bioreserve located on Old Route 9 in the Corning Hill District, the Moh-He-Con-Nuck Nature Preserve located on River Road and covering over 53 acres of natural land, Henry Hudson Park and Hidden Meadows Golf Course, and the undeveloped lands of the former Baker Farm site, spanning the Binnen Kill in the southern portion of the WRA, and owned by Scenic Hudson.

### **Henry Hudson Park**

Henry Hudson Park located along Lyons Road is the only park within the WRA and covers approximately 51 acres. A Master Plan for the enhancement of the park is included in Appendix B of the LWRP.

The park is the only site within that WRA that currently provides public access to Hudson River. The park draws residents and nearby community members to: fish, launch boats, picnic, recreate and simply enjoy the view of the river. Open spaces, woodlands, and park amenities are present. The park contains a softball field, a picnic pavilion, a lookout gazebo, volleyball courts, playground, grills and picnic tables, horseshoe pit, restrooms and portable toilet. The public boat launch, provided through a grant from New York State Department of Environmental Conservation, draws crowds for the striped bass season, mid-April to July. In August 2016, the Town opened their first kayak/canoe launch at Henry Hudson Park. The launch was paid for with assistance from a New York State Assembly grant.

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<sup>4</sup> Town of Bethlehem Open Space plan - [www.townofbethlehem.org/DocumentCenter/View/11149](http://www.townofbethlehem.org/DocumentCenter/View/11149)

### **Moh-he-con-nuck Nature Preserve**

In 1995, the Town acquired from the U.S. Department of the Interior through the National Park Service (NPS) two wooded parcels bordered by River Road to the west and Hudson River to the east and covering approximately 53-acres. The parcels are separated by a strip of land still owned by the federal government and currently administered by the US Department of Labor, as part of the Job Corp property. This town property is now known as the Moh-He-Con-Nuck Nature Preserve.



The preserve includes trails, interpretive signage, and is used for passive recreation. The Master Plan developed for the preserve supports continued passive recreation.

While the western parcel is adjacent to Hudson River, there are constraints to providing access to the river due to the lack of connectivity between the western and eastern parcels and the riverfront topography and seasonal flooding. The 2009 Master Plan for the Preserve references the ownership of the strip of land as the Glenmont Job Corps. The space is not utilized by the Glenmont Job Corps so the Town could work with the United States Department of Labor to allow public access here.

All development relating to the Moh-He-Con-Nuck Nature Preserve included the consideration of public accessibility and use. All trails work with “lay of the land” to follow natural contours while still being ADA compliant and minimizing site impacts to the greatest extent possible. The Town wishes to further investigate options for connecting the western side of the Preserve with the riverfront. A Riverfront Trail feasibility study addressing a trail along the riverfront would also address the Town’s desired use of the strip of land.

### **Hidden Meadow Golf Course**

The Hidden Meadow Golf Course is a privately-owned site located in the central portion of the WRA, east of I-87 and north of Wemple Road. It is open for public use, providing recreation to the area. The 18-hole (par 3) course is located at 138 Smultz Road.

### **Scenic Hudson Lands**

The land Scenic Hudson protects in Bethlehem includes a mosaic of floodplains and tidal wetlands along 2.5 miles of Hudson Riverfront as well as adjacent upland forests, farm fields and meadows through

which the Binnen Kill flows. All the properties are located within an Audubon-designated Important Bird Area and state-designated Estuarine Biologically Important Area (BIA)<sup>5</sup>.

Scenic Hudson<sup>6</sup> also owns the undeveloped lands of the historic Baker Farm site, located south of Henry Hudson Park, which will be planned for more formal public access. The Baker Farmhouse and other structures located on the former Baker Farm site are private. Other lands owned by Scenic Hudson are comprised of conservation easements with no public access, which allows these parcels to remain in their natural state and further enhance ecological value.

### LAND COVER

The [Land Cover Map](#) and [Table 3](#) illustrate the diversity of the land cover within the WRA.

The northern portion of the WRA has large concentrations of developed land as well as forested land. The central and southern WRA contain a significant amount of pasture/hay and cultivated croplands, and mixed forests with high natural and ecological value.

An example of such a location includes the Moh-He-Con-Nuck Nature Preserve, which offers an abundance of natural resources and wildlife. A hike on the preserve offers the opportunity to see many species of birds.

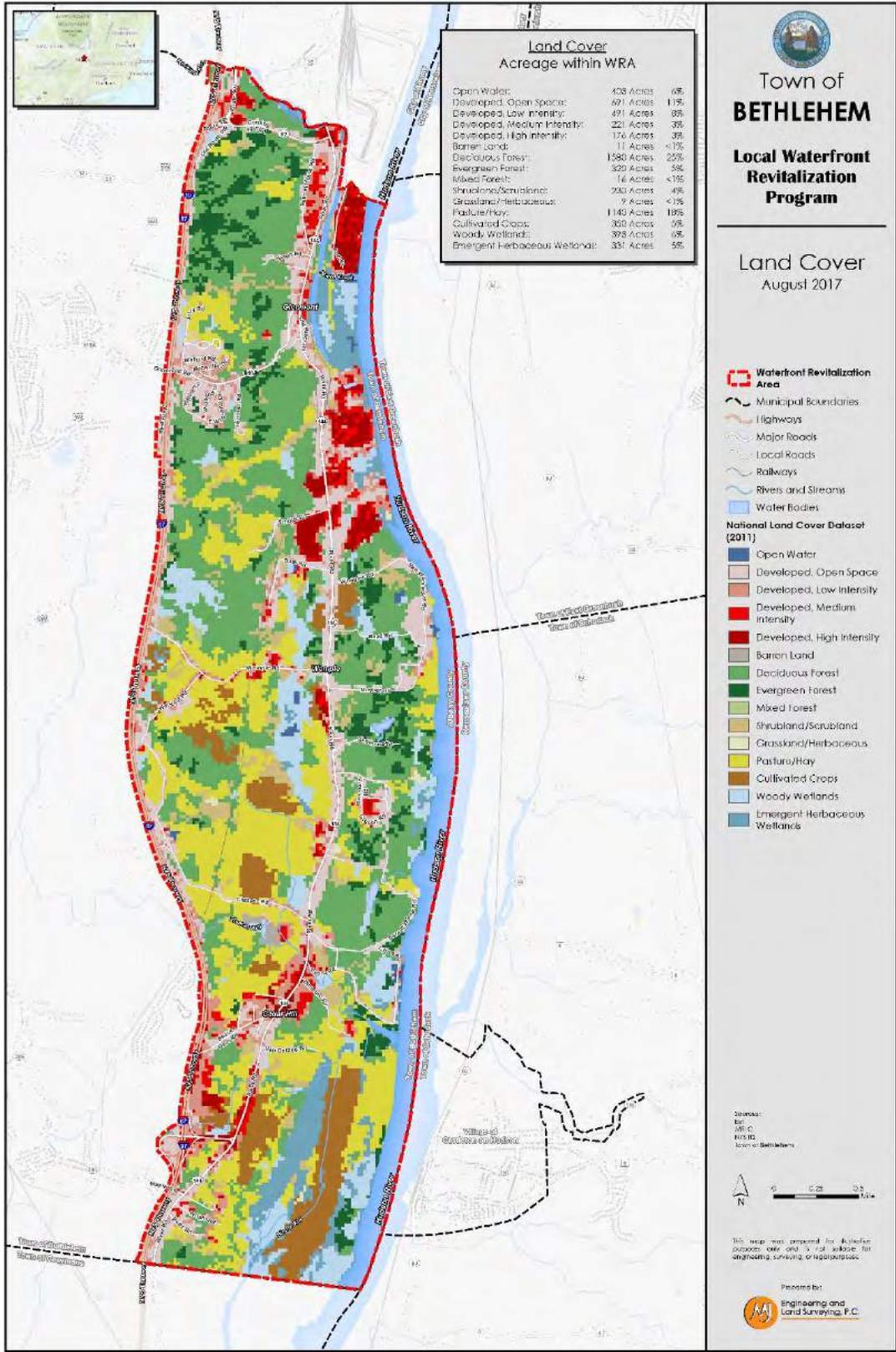
**Table 3: Natural Land Cover**

Land Cover	Acres	Percentage of WRA
Deciduous Forest	1,580	25%
Hay/Pasture	1,140	18%
Developed – Open Space	691	11%
Developed – Low Intensity	491	8%
Open Water	403	6%
Woody Wetlands	393	6%
Emergent Herbaceous	331	5%
Evergreen Forest	320	5%
Cultivated Crops	350	5%
Shrub/Shrubland	230	4%
Developed – Medium Intensity	221	3%
Developed – High Intensity	176	3%
Barren Land	11	<1%
Mixed Forest	16	<1%
Herbaceous	9	<1%

*Source: United States Fish and Wildlife Services*

<sup>5</sup> <https://www.scenichudson.org/news/release/deal-protects-131-scenic-ecologically-important-acres/2015-02-05>

<sup>6</sup> <https://www.scenichudson.org/>



### CONSERVATION EASEMENT EXEMPTION PROGRAM

The Town’s Conservation Easement Exemption program is intended to conserve open space lands, help maintain the character of the Town and provide financial incentives and assistance to those landowners willing to forego development and maintain open space. A five-member Conservation Easement Review Board (CERB) operates the Conservation Easement Exemption (CEE) program for the Town of Bethlehem by reviewing conservation easement agreement applications and advising the town on all open space planning efforts. Property owners with five (5) or more acres of land who commit to conserving their land as open space for a minimum of 15 years (and up to perpetuity) can receive an exemption on their property assessment resulting in a reduction in property taxes corresponding to the length of their conservation commitment.

Table 4 identifies the acreage and percentage of open space land cover found within the WRA. Compared to Table 3, Table 4 has removed the Developed – High Intensity which is defined by the National Land Cover Database 2006 as highly developed areas where people reside or work in high numbers and impervious surfaces account for approximately 80% to 100% of the total land cover.

**Table 4: Open Space Composition**

Land Cover	Acres	Percentage of WRA
Open Water	403	6%
Developed – Open Space	691	11%
Developed – Low Intensity	491	8%
Developed – Medium Intensity	221	3%
Barren Land	11	<1%
Deciduous Forest	1,580	25%
Evergreen Forest	320	5%
Mixed Forest	16	<1%
Shrub/Shrubland	230	4%
Herbaceous	9	<1%
Hay/Pasture	1,140	18%
Cultivated Crops	350	5%
Woody Wetlands	393	6%
Emergent Herbaceous	331	5%

*Source: Multi-Resolution Land Characteristics and  
National Agriculture Imagery Program*

Agricultural land within the WRA represents 23% of the study area when looking at land cover. This land is used as pastureland for hay harvesting and cultivating crops. Deciduous Forest is the largest land cover category on 25% of the WRA.

### EXISTING ZONING DISTRICTS

The Town has seventeen (17) zoning districts, ten (10) of which are found within the WRA. Chapter 128: Zoning and other local land use controls included in the Town Code and impacting the WRA are

discussed in Section V of the LWRP. The following are the current zoning districts within the WRA, as illustrated on the Zoning Districts within the [Waterfront Revitalization Area Map](#):

**Rural (R) Districts** include areas of the Town characterized by working landscapes. These areas have traditionally been places where resource-based economic activities have flourished. Rural districts encourage a variety of uses, including agriculture, residential, forestry, mining, small-scale commercial and light industrial activity, and development using traditional farmstead designs where appropriate.

**Residential A (RA) Districts** and **Residential B (RB) Districts** include areas of the Town characterized by traditional suburban residential development, as well as undeveloped residential building lots. The Residential A and B Districts aim to protect the residential viability of established residential settlements.

**Rural Riverfront (RR) Districts** are the areas within the Town located along areas overlooking the banks of the Hudson River. *Rural Riverfront Districts* limit density of residential development while encouraging tourism and recreational-based nonresidential development.

**Commercial Hamlet (CH) Districts** are typically the original settlement areas along major corridors. These corridors contain medium-scaled businesses and essential services in close proximity to residential neighborhoods. The purpose of these districts is to encourage the compact commercial development in neighborhood commercial centers throughout the Town.

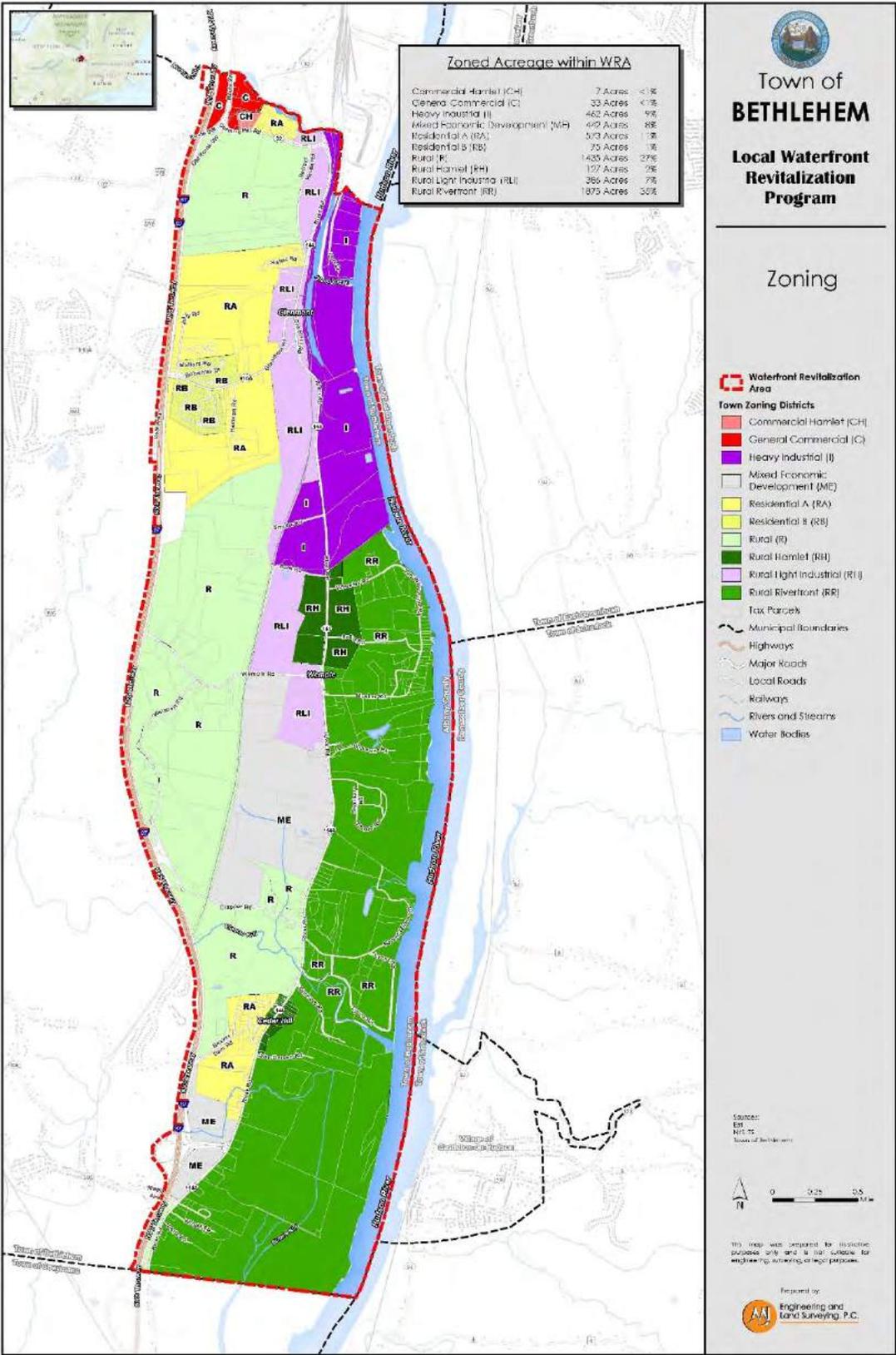
**Rural Hamlet (RH) Districts** are similar to Commercial Hamlet District areas within other parts of the town. The Rural Hamlet Districts recognize original settlement areas along major corridors, containing small-scaled businesses and essential service in close proximity to rural and moderately developed lands. The purpose of this district is to encourage compact commercial and residential development in rural neighborhoods.

**General Commercial (C) Districts** are areas of the Town that contain commercial and nonresidential services and businesses. The purpose of these districts is to encourage the development of a variety of small-scale and large-scale commercial retail and service businesses for the community, including shopping malls.

**Mixed Economic Development (MED) Districts** contain good highway access and do not presently contain significant agricultural uses. This district encourages the treatment of individual lots as part of an integrated plan for development of planned office, industry, service, small-scale retail, and technology-based businesses.

**Heavy Industrial (HI) Districts** and **Rural Light Industrial (RLI) Districts** are areas within the Town deemed appropriate for light and heavy industrial uses. These districts encourage the development of light and heavy industrial uses that require trucking or rail transportation to move goods and materials.

The town also has a floating **Planned Development District (PDD)** defined as a mixed-use development of land that is under unified control and is planned and developed as a whole in a single development operation or programmed series of development stages. The development may include uses and structures that exceed the permitted scale, density, or intensity of use in the district, as well as uses not otherwise allowed by the underlying zoning.



## LAND OWNERSHIP

The WRA is comprised of both public and private land. Publicly owned lands are illustrated on the [Land Ownership Map](#) and account for approximately 8% of the WRA, or 494.1 acres. Privately owned land accounts for approximately 92%, or 5,864 acres.

### PUBLIC LAND

Public Lands owners include the Town of Bethlehem, New York State, the Federal government and Port of Albany. The Port of Albany’s recent acquisition of land in the northeastern side of the WRA expanded the total land in public land within the WRA. The Town, State, and Federally publicly owned properties are primarily found along the Hudson River waterfront and are within close proximity to each other. The Glenmont Job Corps Center is administered by the U.S. Department of Labor. The town lands include the Henry Hudson Park and the Moh-He-Con-Nuck Nature Preserve. New York State owned land is located along the Hudson River in the southern part of the WRA, south of the Vloman Kill and north of the Coeymans/Bethlehem town line. This land was formed over a century ago by dredge spoil placed in the former channel of the Hudson River adjacent to Poplar and Schermerhorn Islands. There is potential for these three sites to provide a pedestrian and bicycle riverfront trail corridor to enhance public access to the river. Table 5 provides additional information about land ownership within the WRA.

**Table 5: Existing Land Ownership Classification**

Tax Parcel ID	Public Ownership	Description	Acreage
87.03-2-7	Town of Bethlehem	Vacant Land (former road right-of-way)	4.3
122.00-1-2.12	Town of Bethlehem	Clapper Road Water Treatment Plant	30.4
122.00-2-2.12	Town of Bethlehem	Mo-He-Con-Nuck Nature Preserve	53.8
110.04-1-27.2	Town of Bethlehem	Mo-He-Con-Nuck Nature Preserve	0.4
122.00-2-2.11	Federal Government	Glenmont Job Corps	158.2
122.00-1-25	Town of Bethlehem	Cedar Hill Schoolhouse/Bethlehem Historical Museum	0.7
122.00-2-21	Town of Bethlehem	Henry Hudson Park	64.2
122.00-2-33	Town of Bethlehem	Dinmore Road Sewage Treatment Plant	16.4
134.00-2-23	NYS Office of General Services	Rural Vacant Land/Adjacent to Poplar and Schermerhorn Islands	92.2
98.00-2-10.23	Port of Albany <sup>7</sup>	Industrial use district	73.5 <sup>8</sup>
<b>Total</b>			<b>494.1</b>

*Source: Town of Bethlehem*

<sup>7</sup> Port purchase of land was in August 2018, maps in LWRP, including Land Ownership reflect 2017 data

<sup>8</sup> GIS mapping of the area based on NY East map projections



In addition, Appendix E of the LWRP includes the Parcel Boundary and Ownership Map of the Natural Resource Inventory of the Binnen Kill and Tidal Freshwater Wetlands developed by NYS DEC<sup>9</sup>, which provides a close-up illustration of the ownership of lands along Binnen Kill.

### SCENIC HUDSON

Scenic Hudson is a non-profit organization dedicated to the protection and restoration of the Hudson River, and its riverfront, vistas and working landscapes as an irreplaceable national treasure for the United States and a vital resource for residents and visitors.

Within the WRA, Scenic Hudson is responsible for preserving both fee-protected and conservation easement lands. Fee protection relates to ownership of land, while a conservation easement relates to development restrictions on a property. Both are used for land protection purposes. These lands preserve agricultural, scenic and ecologically significant areas along the waterfront. Table 6 summarizes the acreages of privately held lands by Scenic Hudson.

**Table 6: Existing Private Conservation Lands**

Owner	Acreage
Scenic Hudson Property	243.3
Scenic Hudson Conservation Easement Property	294.1

*Source: Scenic Hudson*

### UNDERWATER LANDS

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The WRA also includes a portion of the bed of Hudson River. The Underwater Grant Index Maps provided by NYS Office of General Services and included in Appendix D show the Hudson River underwater lands in public trust. The People of the State of New York hold sovereign title to the lands now or formerly under the waters of the Hudson River and Island Creek that have not been granted to private upland owners or had their jurisdiction transferred to another State agency.

In 1992, recognizing the unique ecological and open space values of state-owned underwater lands, the New York State Legislature enacted new underwater lands legislation that gave the Office of General Services (OGS) clear authority to transfer jurisdiction over state-owned underwater lands with significant environmental values to the Department of Environmental Conservation (DEC), the Office of Parks, Recreation, and Historic Preservation (OPRHP) or other state agencies, even if the state agency is not the adjacent upland owner.

Underwater land may refer to lands in the bed of the Hudson River below the mean high tide mark (all lands subject to the ebb and flow of the tide), which may be wetlands, marshes, mudflats (areas between the high and low tide lines), and shallow water habitats, areas of high ecological importance

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<sup>9</sup> New York State Department of Environmental Conservation

which often provide public access to the Hudson River or land created by the deposition of dredged materials onto lands that were formerly underwater.

For almost a century, the U.S. Army Corps of Engineers has conducted extensive channel dredging operations in the Hudson River. The deposition of dredge fill into adjacent shallow areas and wetlands has created thousands of acres of new land along the Hudson, areas which because of their status as formerly underwater land are owned in fee title by the People of State of New York. In the WRA, this land is located adjacent to the Poplar and Schermerhorn Islands.

### **ABANDONED, DETERIORATED AND UNDERUTILIZED SITES AND BUILDINGS**

The Town has thirteen (13) properties available for development identified by the Town’s IDA. Each of the underutilized sites and structures has been categorized into one of three categories. The categories include Land, Office/Retail, and Warehouse/Industrial.

The following tables and the [Underutilized Sites and Structures Map](#) identify the underutilized sites and structures by category. There is a cluster of parcels totaling 181 acres south of Wemple Road. Another significant parcel exists in the northern portion of the WRA, recently purchased by the Albany Port District Commission totaling 82 acres.

There is a larger opportunity for Warehouse/Industrial in the southern portion of the WRA near exit 22 of the NYS Thruway, totaling approximately 55.3 acres. Tables 7 through 9 identify underutilized sites and structures within the study area.

**Table 7: Land Classified Available Sites and Structures**

<b>Tax Parcel ID</b>	<b>Zoning District</b>	<b>Owner</b>	<b>Acreage</b>	<b>Description</b>
110.00-1-20.122	Rural	VVK Inc.	10.2	Vacant land, no water or sewer connection
110.00-1-20.123	Rural	VVK Inc.	14.7	Vacant land, no water or sewer connection
110.00-2-21	Rural	Nicholson, James F	65.3	Vacant land, no water or sewer connection, parcel bisected by rail
110.00-2-21	Mixed Economic Development	Nicholson, James F	90.9	Vacant Land, no water or sewer connection, parcel bisected by rail.
134.00-3-2 (134.00-3-3 & 134.00-3-10.1 merged)	Mixed Economic Development	Selkirk Development, LLC	26.5	Vacant land, just south of the NY Thruway Exit 22 with public sewer and no water connection.
87.03-2-30	Rural	West Virginia Pulp and Paper, Co.	63.8	Conservation of the property may be suitable, due to the lack of road access, highway frontage, and

Tax Parcel ID	Zoning District	Owner	Acreage	Description
134.00-1-41	Mixed Economic Development	Finke Enterprises LLC	11.8	utilities. It is located adjacent to the Bio reserve a not for profit conservation organization. Vacant land no water or sewer connection.

*Source: Town of Bethlehem Industrial Development Agency*

**Table 8: Office/Retail Available Sites and Structures**

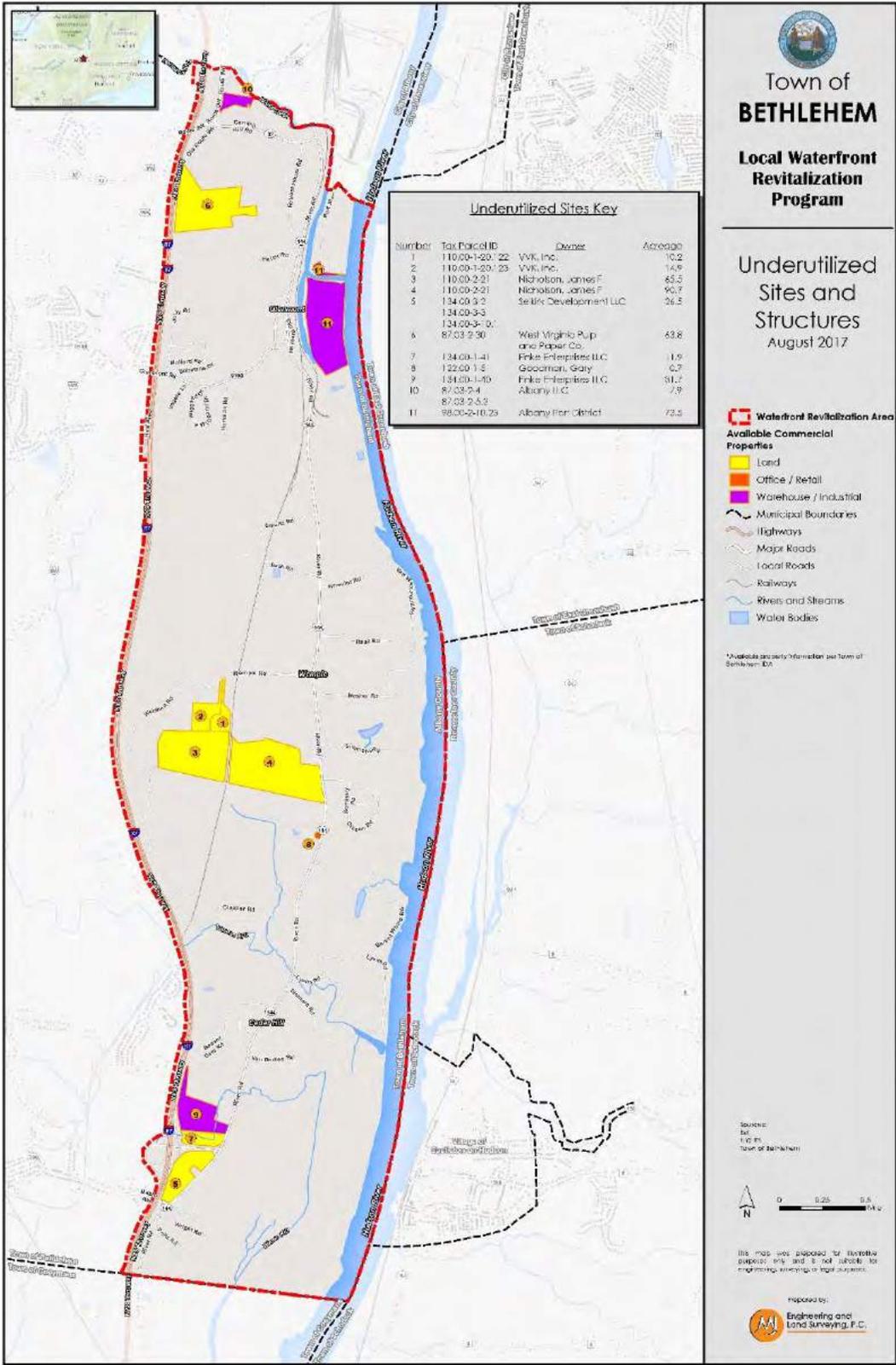
Tax Parcel ID	Zoning District	Owner	Acreage	Description
122.00-1-5	Mixed Economic Development	Goodman, Gary	0.7	Existing structure, former dairy building. Food manufacturing and office space available with floor drains and overhead doors. Public water connection no sewer connection.

*Source: Town of Bethlehem Industrial Development Agency*

**Table 9: Warehouse/Industrial Available Sites and Structures**

Tax Parcel ID	Zoning District	Owner	Acreage	Description
134.00-1-40	Mixed Economic Development	Finke Enterprises LLC	29.9	Existing structure used for light assembly, storage and office space. Room for additional development on site. Public water connection no sewer connection.
87.03-2-4	General Commercial	Albany LLC	7.4	Existing vacant distribution center on site. Multiple overhead door delivery bays. Visibility on major commuter corridor.
98.00-2-10.23	Heavy Industrial	Albany Port District Commission	73.5	Up to 1.13 million square feet available for Heavy Industrial uses, including warehouse, distribution and manufacturing.

*Source: Town of Bethlehem Industrial Development Agency*



## **DEVELOPMENT PATTERNS AND PROGRESS**

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Development refers to the patterns currently found within the WRA and current projects or projects in the Town's pipeline. The northern portion of the WRA, located generally north of Wheeler Road to the town line, primarily serves industrial and commercial services. The central portion of the WRA, located between Wheeler Road and Clapper Road/Vloman Kill, primarily serves residential, agricultural, and recreational uses. The southern portion of the WRA, south of Clapper Road/Vloman Kill, is characterized primarily by agricultural lands and open space, with low density residential.

According to the Capital District Regional Planning Commission, there was an increase in building permits for a variety of types of housing-units town-wide in 2014; including one-family, two-family, three-and-four-family, and five-or-more-family buildings. As of January 2018, there were approximately 1200 residential units either approved, under construction, or proposed town-wide, 199 units of that total are located in the WRA. These 199 units consist of single-family detached and single-family attached (townhomes) units. A review of Town Building Department permits information from 2013 to 2017 within WRA shows that there were 13 new residential building permits and 3 new commercial building permits issued over that five-year period. There were nine permits for residential additions, four sign permits and one tenant change in the same five-year period. The low number of building permit activity is most likely a reflection of the rural character of the majority of the WRA and the lack of infrastructure to support development.

The residential activity within the WRA has included a 100-lot conservation subdivision along Jolley Road adjacent to the NYS Thruway, and a 2018 subdivision application for 99-lots at the rear of Vagele Lane and Wiggand Drive (east of the NYS Thruway). Both residential developments are located within the Residential A zoning district, which allows 3 units per acre and both are adjacent to existing infrastructure (sewer/water), existing neighborhoods, and within the residential land use category.

Since 2013 commercial and industrial activity within the WRA has consisted of the expansion of existing industrial businesses (i.e. Air Products, Innovative Surface Solutions) and the occupancy of vacant industrial/commercial facilities (Carver Companies at Port Road South, and First Student Transportation Services and TerraSmart solar installers along River Road). The Port of Albany purchased approximately 80-acres of land along the Hudson River just south of existing Port property. There has also been interest in large scale commercial solar fields occupying vacant and agricultural property (2MW solar installation at Wemple and Weisheit Road).

## **TOWN-PROMOTED ECONOMIC DEVELOPMENT**

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The Town of Bethlehem has made a strong commitment to fostering economic development and diversification of the Town's tax base. The policy basis for this commitment is clear in the Town's 2005 Town Comprehensive Plan. In 2011 the Bethlehem 20/20 Committee prepared the Economic Development Strategy that included several elements to guide economic development initiatives. Several of these initiatives have been addressed or are ongoing as a result of the hiring of an Economic Development Coordinator in 2014. These initiatives that relate to the WRA include development of the

MED lands at Thruway Exit 22 and opportunities in northern riverfront area (Port Road South) adjacent to the Port of Albany. The Bethlehem Industrial Development Agency is prepared to provide financial assistance to eligible businesses that seek to develop in these areas of the WRA.

The Town Industrial Development Agency (IDA) was established in 1973 and provides financial assistance to eligible commercial and industrial projects in order to promote economic welfare and prosperity for its residents. It is a public benefit entity under New York State General Municipal Law 18 A. The IDA along with the Town’s Department of Economic Development and Planning is also responsible for the promotion, attraction, and development of job and recreational opportunities. Ultimately, this creates economically sound commerce within the Town’s borders. The Town’s Department of Economic Development and Planning may assist companies with grant applications, business plans, access to agencies and markets and other business and marketing issues. The IDA also assisted the 20/20 Advisory Committee with the creation of the 2011 Economic Development Strategy and continues to assist with implementing its goals. Table 10 identifies completed Industrial Development Agency (IDA) projects within the Town.

**Table 10: IDA Projects in WRA**

Town Project Name/Location	Project Year	Number of Jobs Created/Retained
126 Port Road South – Carver Companies	2017	4
Air Products	2017	67
PSEG Power NY Inc./380 River Road	2001	55

*Source: Town of Bethlehem Industrial Development Agency*

**GATEWAY COMMERCE**

The Gateway Commerce Center project received Master Plan approval from the Town Board in July 2016. The project involves a Development Master Plan for a +/-26.9-acre parcel located along River Road (NYS Route 144) between the NYS Thruway Exit 22 and Maple Avenue (NYS Route 396). The site is currently zoned Mixed Economic Development District (MED).

The proposal is to construct 169,050 square feet of warehouse space within three buildings for uses consisting of stocking, limited assembly, research and development, office and/or counter service space. Building A would consist of 33,000 square feet, Building B – 35,250 square feet, and Building C – 100,800 square feet. These buildings are proposed to accommodate multiple tenants. The project sponsor would be required to seek site plan approval from the Planning Board.

**126 PORT ROAD SOUTH**

The northernmost parcel in the WRA is currently under development by the owners (Carver Companies) of the Port of Coeymans, which is a private port located just south of the Town of Bethlehem. The project located at 126 Port Road South, plans to add a temporary spud barge, permanent inlet and trestle crane, which will accommodate barge repair within the existing 90,000 sq. ft building and loading and unloading construction bulk material.

The site currently has rail line access inside the building and offers excellent access to the highway system. In 2017, the Bethlehem IDA provided a mortgage recording and sales tax abatement for the adaptive re-use of the building and the project committed to create 4 new jobs and invest \$4,905,000 at the site. Federal, State, and local permits have been approved for the project.

### **AIR PRODUCTS & CHEMICALS**

Air Products, a 40-year resident of the Town of Bethlehem, is also undergoing an expansion at their 461 River Road location within the WRA. The industrial gas plant produces oxygen, nitrogen and argon. The project consists of upgrades and additions to equipment including construction of new holding tanks, and production towers in order to increase production at the facility. A new maintenance building, tractor trailer parking, fuel island stations, and circulation area for tractor trailer parking to be located at the southern portion of the site (adjacent to Smultz Road) will also be added to the site. In 2017, the company received an enhanced PILOT agreement, mortgage recording and sales tax abatement from the Bethlehem IDA for the expansion of the Glenmont operations. The project will result in the retention of 66 jobs in the region and an investment of over \$14 million.

### **PORT OF ALBANY EXPANSION**

In 2018, the APDC purchased an 80-acre site (known as “Beacon Harbor”), located along the Hudson River at the confluence of the Normans Kill, within the Town of Bethlehem as a result of their strategic plan for expansion. The expansion will result in adding land for development for private businesses that complement the Port as a logistics hub location. The Port received a \$5 million grant from the Regional Economic Development Council to make access improvements to the site to assist in their potential expansion.

Benefits to the Town resulting from the Port’s expansion would include the Port’s marketing ability to attract private tenants to the 80-acre site, which would help expand the Town’s commercial/industrial tax base so long as warehouse buildings are not owned by the Port. The “Beacon Harbor” site was identified as an opportunity area in the Town’s Economic Development Strategy.

The APDC is proposing to construct an industrial park at the Beacon Island site consisting of 1.13 million square feet to 160,000 square feet of industrial use facilities (warehouse space and laydown area). The industrial park would include associated access roads, employee parking, trailer parking, utility extensions, rail access from the north over Normans Kill and south through the PSEG site, and a bulkhead along Hudson River for on and offloading of equipment and materials (wharf). Due to the site’s location along the Hudson River and potential intensity of development a Generic Environmental Impact Statement (EIS) is being prepared. The Bethlehem Planning Board is serving as SEQR Lead Agency.

### **1273 RIVER ROAD – FINKE ENTERPRISES, LLC.**

This land owned by Finke Enterprises LLC is located along River Road, just north of NYS Thruway Exit 22. Several years ago, the previous use of the site was by the NYS Thruway Authority for office space/dispatch office, parking area, and vehicle repair shop for Thruway Authority vehicles and parking of other State vehicles. As of early 2018, TerraSmart, LLC, occupies the existing 8,100 square foot

building on the site. TerraSmart, LLC, is a Florida based solar racking provider and installer with several offices located around the country. TerraSmart, LLC, plans to use the leasing area as an office space, training facility, warehousing facility and storage location for racking-system materials, trucks and trailer equipment. Finke Enterprises owns 42 acres at the site, which offers an opportunity for additional economic development projects due to the proximity to the NYS Thruway Exit 22.

Most recently, town-wide industrial development activity has occurred in the northern portion of the WRA and is reflective of the new industrial businesses and business expansion projects listed above. Continued communication with and support of retaining businesses in the WRA remains important to help balance the Town's tax base.

### **PLANNED ECONOMIC DEVELOPMENT INITIATIVES**

Started in 2015, the Upstate Revitalization Initiative (URI) is a transformative economic development opportunity for New York, involving the creation of a development strategy to be driven by data and shaped by the community. Specifically, the URI supports investments in the Port of Albany for catalytic infrastructure improvements that translate into new middle-skill jobs. These improvements will allow costs to be driven down for regional importers and exporters, as well as position the Port to respond to future market trends and opportunities. This initiative would also allow the Port of Albany to invest in the sustainability of the Hudson River. The Port of Albany's purchase and plans to develop the "Beacon Harbor" site located in the northern side of WRA is consistent with URI's Gateway strategy.

The URI serves as an investment strategy for the Capital Region for the subsequent five (5) year periods. The vision includes a stronger, more sustainable, and more inclusive economy. Public and private partnerships will be further developed. Five (5) strategies were created in order to focus efforts. The strategy names are Next-Tech, Gateway, Talent, Lift-off, and Metro.

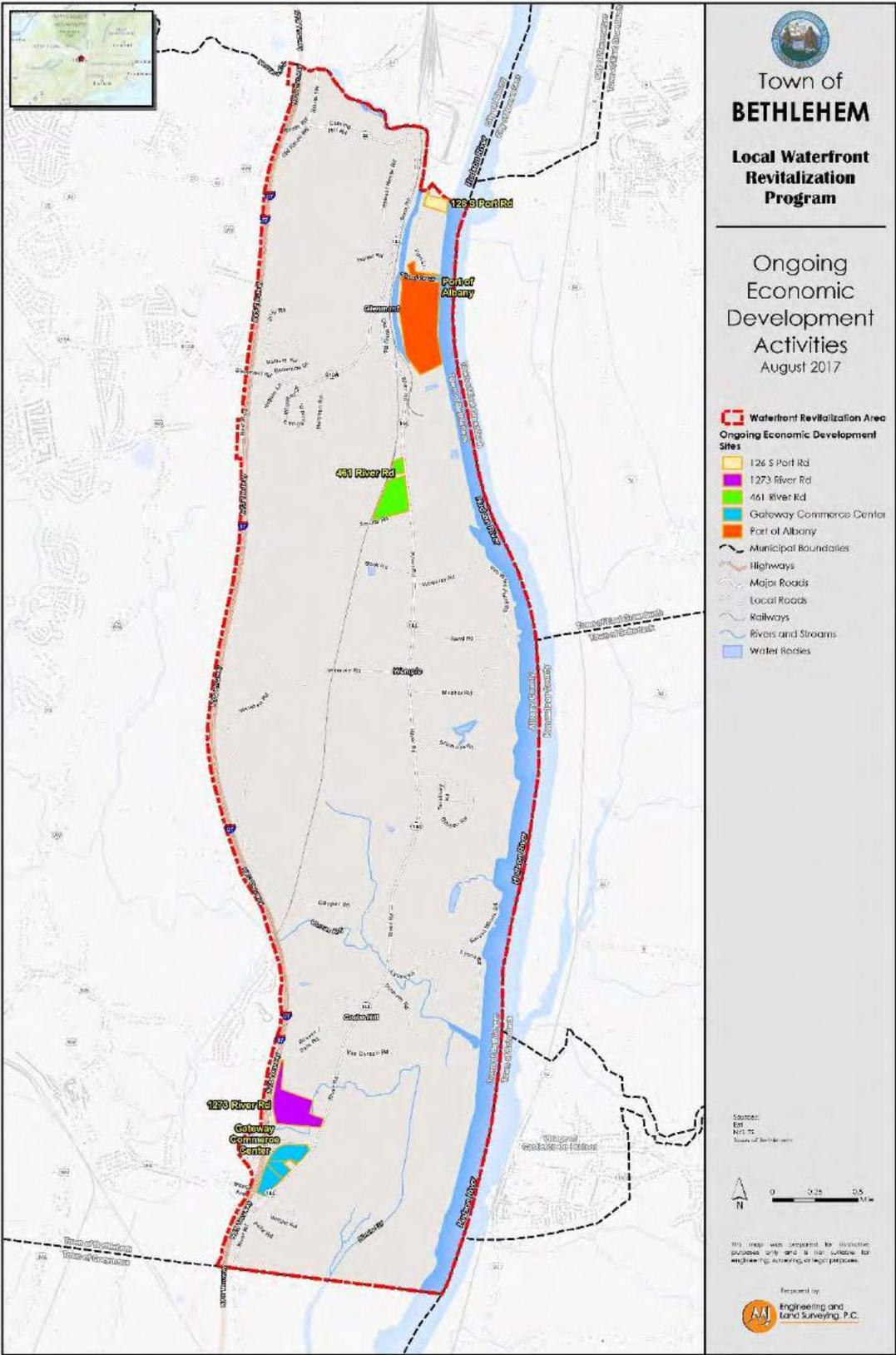
Next-Tech identifies the next two (2) growth horizons to be achieved within the Capital Region and they are health-tech and clean-tech.

Gateway will invest in port infrastructure and waterways and support the fast-growing distribution and logistics cluster. This would enable companies within the Capital Region to respond to external opportunities, thereby providing access to the critical inputs and customers.

Talent focuses on building the workforce of today and tomorrow. This strategy will invest in education to develop an innovative workforce solution that would address the national middle skills gaps, creating incentives to aid in growth of local institutions.

Lift-off includes accelerating ideas, entrepreneurs, and businesses. This strategy identifies three (3) high-potential entrepreneurial segments. These entrepreneurial segments are the creative economy, the rural entrepreneurs, and the research and development (R&D) innovators.

Metro includes building vibrant cities for businesses and families. This strategy aims to catalyze smart, mixed-use urban development, take a place-based approach to supporting small businesses and tackling blight in our most challenged neighborhoods. The goals for this strategy will better connect workers to jobs and improve transportation equity.



The Capital Region Economic Development Council creates initiatives and strategies to address the physical and built environment, the economic environment, and the policy environment. The Council is heavily focused on advertising the Capital Region as a region based on innovation and invention, becoming the center of New York State's Tech Valley. Focus has been placed on high tech, urban revitalization, entrepreneurship, transport and logistics, and higher education.

## **COMMERCIAL/INDUSTRIAL WATER DEPENDENT AND WATER ENHANCED USES**

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Commercial water dependent uses within the WRA are mostly related to the commercial shipping operations and facilities just north of the WRA at the Port of Albany in the City of Albany. The North Albany Terminal, Innovative Solutions, and Citgo Petroleum Corporation, which are businesses with facilities located within WRA, also undertake water dependent industrial activities such as shipping and transfer of petroleum and magnesium chloride from ships to shore. These businesses utilize the Hudson River to transport their goods. For example, Innovative Surface Solutions receives on average 3 large ocean vessels from Europe a year carrying approximately 15 million gallons of product.

Another commercial water dependent use within the WRA includes the Town of Bethlehem Dinmore Road Wastewater Treatment Plant. This plant treats the Town's wastewater and discharges treated water back into the Hudson River.

South of the Bethlehem WRA, the Port of Coeymans located in the Town of Coeymans is another site where commercial water-uses are concentrated. Shipping activity from points north destined for the Port of Coeymans travel within the WRA along Bethlehem's waterfront.

### **PORT OF ALBANY**

The Port of Albany is currently located outside of the WRA and approximately 143 miles north of New York City. It contains deep water facilities, five (5) transit sheds, two (2) backup warehouses, and a wharf length of 4,200 feet. The Port handles bulk transport of materials to and from its facilities. These shipments are then trucked, sent by rail, or further shipped to their next destination. Area roadways connect with major interstate highways to reach destinations near and far. Rail lines deliver cargo in close proximity to locations in North America. The Hudson River provides access to the State's extensive canal system, allowing goods to be carried further into northern New York and Canada.

In 2016, the Albany Port District Commission (APDC) prepared a Strategic Assessment and Growth Strategy, which identified areas for expansion, specifically: general warehouse, distribution and logistics supply chain real estate. In 2018, the APDC purchased an 80-acre site (known as "Beacon Harbor"), located along the Hudson River at the confluence of the Normans Kill, within the Town of Bethlehem as a result of their strategic plan for expansion. The expansion will result in adding land for development for private businesses that complement the Port as a logistics hub location.

The Port received a \$5 million grant from the Regional Economic Development Council to make access improvements to the site to assist in their potential expansion. Benefits to the Town resulting from the Port's expansion would include the Port's marketing ability to attract private tenants to the 80-acre site,

which would help expand the Town’s commercial/industrial tax base so long as warehouse buildings are not owned by the Port.

The APDC is proposing to construct an industrial park at the Beacon Island site consisting 1.13 million square feet to 160,000 square feet of industrial use facilities (warehouse space and laydown area). The industrial park would include associated access roads, employee parking, trailer parking, utility extensions, rail access from the north over Normans Kill and south through the PSEG site, and a bulkhead along Hudson River for on and offloading of equipment and materials (wharf). Due to the site’s location along the Hudson River and potential intensity of development a Generic Environmental Impact Statement (EIS) is being prepared. The Bethlehem Planning Board is serving as SEQR Lead Agency.

**PORT OF COEYMANS**

The Port of Coeymans is privately-owned, located outside of the WRA, in the Town of Coeymans, 10 miles South of Albany and 100 miles north of New York City. The Port of Coeymans provides stevedoring, tug and barge service, break bulk, heavy lifts, custom crushing, warehousing, property and equipment rentals. The Port has a 300-foot inlet channel and 30-foot fresh water deep draft as well as dock capacity for ships up to 750 feet.

The Port of Coeymans has purchased property at 126 Port Road South within the Town of Bethlehem. The development plans include the addition of a temporary spud barge and permanent inlet, which will accommodate barge and tugboat repair within the existing 90,000 square foot building and loading and unloading construction bulk material transported along the Hudson River. The site also includes a rail spur that would allow the facility to access three modes of transportation (highway, water, and rail).

Residential property owners within the WRA along the riverfront have expressed concern for the wakes from large ships traveling along the Hudson River that wash debris on shore and affect the shoreline. The town addressed the issue by contacting the Port of Albany, which informed the town of a Hudson River Pilots Association that handles complaints related to shipping on the Hudson.

**RECREATIONAL WATER DEPENDENT AND ENHANCED USES AND RESOURCES**

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Recreational uses bring life and activity to the waterfront. As the Town continues to grow there will be demand for additional facilities for such uses. As shown in Table 11, parks, recreation and other conserved lands comprise approximately 609 acres or 10% of the WRA.

**Table 11: Recreational Land Use**

Land Use	Acres	Percentage of WRA
Parks, Recreation and Conserved Land	609	10%

*Source: Town of Bethlehem*

Currently, there are few recreational opportunities within the WRA. Table 12 provides an overview of the existing recreational resources within the WRA.

**Table 12: Recreational Resources**

Recreational Resources	Type
Henry Hudson Park	Picnic Park
Henry Hudson Park Kayak Launch	Kayak Launch
Henry Hudson Park NYSDEC Boat Launch	Boat Launch
Moh-He-Con-Nuck Preserve	Nature Preserve (with walking trails)
Hidden Meadow Golf Course	Private Golf Course

*Source: Town of Bethlehem*

Limited tourism currently exists within the WRA boundary. While some visitors come to the area to enjoy the Henry Hudson Park, Moh-He-Con-Nuck Nature Preserve and events held at the Bethlehem Historical Association, most patronage comes from nearby communities.

The Glenmont Job Corps facility currently abuts the Hudson River shoreline for approximately half of a mile on Federally owned land, but no public access exists. The space is not utilized by the Glenmont Job Corps so the Town could work with the United States Department of Labor to allow public access here. Scenic Hudson owns the undeveloped land of the historic Baker Farm site, south of Henry Hudson Park, which is planned for more formal public access. There is potential to connect all of the publicly owned lands along the riverfront that are in close proximity to each other. A riverfront trail running through publicly owned lands and connecting one to another was suggested as a public benefit.

To attract additional visitors to the WRA, and benefit the local economy, utilization of regional nature-based assets such as the Schodack Island State Park, Papscanee Island, the undeveloped land owned by Scenic Hudson on the former Baker Farm Site, Henry Hudson Park found within the Town of Bethlehem, East Greenbush, Castleton and Schodack could be explored. Projects to utilize these resources would include the planning and development of a riverfront trail that connects parks/preserves within the WRA along the riverfront , and a nature-based tourism strategy to connect the public resources identified above via water trail.

### **BOAT LAUNCHES AND BOATING**

Town-owned Henry Hudson Park is the only site within the WRA that currently provides public access to the water. Henry Hudson Park, which in itself is considered a water enhanced use, is home to the Bethlehem Boating and Fishing Access Site. Both amenities supporting water dependent recreational uses were constructed in cooperation with the New York State Department of Environmental Conservation (NYS DEC). The park includes a boat launch that provides access for motorized crafts and other hand-powered craft, and a handicap-accessible fishing area. The boat launch is open daily one (1) hour before sunrise until 10 p.m. from early April through mid-October.

Another location providing a water dependent recreational use is a new kayak launch (opened in 2016) located at the south end of the Henry Hudson Park with access on the Vloman Kill. This launch area was designed for kayaks, canoes, and other hand powered boats and is open daily during daylight hours from late April to mid-October. In 2017 the Town contracted with Upstate Kayak Rentals to provide visitors an opportunity to rent kayaks at the park. An un-staffed Hub operated by Upstate Kayak Rentals is set up near the canoe/kayak launch at the south end of Henry Hudson Park. Reservations, policies, procedures,

and fees are available through the rental company's website and cost includes personal flotation devices and paddles. The launch provides access for recreational users to experience the Vloman Kill Falls. To enhance the recreational experience of canoers and kayakers, the Town will examine the possibility of purchasing lands along the Vloman Kill to expand the Henry Hudson Park.

### **FISHING AND HUNTING**

Henry Hudson Park has a handicap-accessible fishing pier along the Hudson River. River water quality is managed by the NYS DEC. The Hudson River is on the 303(d) List of Impaired Waters: Part 2b – Multiple Segment/ Categorical Waterbody Segments Impaired due to Fish Consumption Advisories (USEPA, 2016a). The impairment extends up into the river's tributaries, to the first impassable barrier. The fish consumption advisories (do not eat, or limit consumption) NY State has issued are due to high levels of PCBs in fish in the river. Despite the fish consumption advisories, the Hudson River is used for commercial and recreational fishing, as well as hunting and trapping along the riverbanks<sup>10</sup>.

Areas accessible by boat at the lower end of the Vloman Kill provide access for fishing and waterfowl hunting from the boat. Since 1935, The NYS DEC has worked with private landowners to ensure access to prime fishing waters. During that time, more than 1,300 miles of public fishing rights (PFR) easements have been purchased on more than 400 streams across the state. PFRs are permanent easements purchased by the NYS DEC from private landowners, giving sportsman right-of-way access to fish and walk along the bank. DEC has only purchased rights for the public to fish along a stream corridor, not the land itself. The land where PFR exists remains in private ownership. Fishing rights also allow the public to park in designated parking areas and to access the stream via marked footpaths<sup>11</sup>.

There are no public fishing rights (PFR) easements within the WRA. However, outside the WRA in the Town of Bethlehem a PFR easement is located along the Onesquethaw Creek at the Rupert Road Fishing Access site.

Also, there are no formal fishing areas along the portions of the Normans Kill, Vloman Kill, or Frothingham Lake located within the WRA.

### **SWIMMING AND DIVING**

There are no public outdoor swimming areas along the streams and ponds within the WRA. The water quality of the streams within the WRA is Class C, which is suitable for swimming, although other factors may limit the use for this purpose. The heavy concentration of silt in the Hudson River limits visibility to inches and prohibits recreational diving. New York State Navigation Law (NAV § 35-b) requires the use of a red flag with a diagonal white bar to be displayed on the water or from a boat by skin divers or scuba divers, which would indicate underwater diving and significantly mark their position in such waters<sup>12</sup>.

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<sup>10</sup> Hudson River Habitat Restoration, NY June 2019 - Draft Integrated Feasibility Report and Environmental Assessment

<sup>11</sup> Public Fishing Rights - <http://www.dec.ny.gov/outdoor/7746.html>

<sup>12</sup> New York Consolidated Laws, Navigation Law - NAV § 35-b. Markers for skin or scuba divers



In its Feasibility Report on Potential Swimming Access Sites Along the Hudson (2005) the Hudson River Estuary Program assesses a privately-owned narrow beach located on a bay north of the Henry Hudson Park as suitable for a swimming program when the water quality classification allows. The New York State water quality classification of the Hudson River at Henry Hudson Park does not permit swimming at this time. The Henry Hudson Park access road is located adjacent to the beach, no improvements

have occurred in this section, because the proposed beach development area identified in the Feasibility Report is private property.

This beach has a good slope and a narrow upland portion composed of small shale fragments. At a three-foot depth a few inches of mud and clay cover a rock-fragment beach surface. The upland beach material continues up to thirty feet in a wooded area. The size of a potential beach was not evaluated at this stage, since water quality classification currently precludes swimming at this site. Some observations indicate that the water quality in this area has improved and may be suitable for reclassification, opening a greater span of the Hudson River in Southern Albany and Rensselaer Counties for swimming and other activities. The analysis and review of the proper classification of this reach of the Hudson River may be useful as a part of the next phase of the Hudson River Swimming Feasibility Study. The review of water quality constraints in this section of the River is a necessary first step in determining the suitability of this site for swimming.

An additional issue that requires evaluation is the discharge from a wastewater treatment plant (Dinmore Road Sewage Treatment Plant) that is located to the south of the Park, approximately one third of a mile from the potential beach. Even if the reclassification of this reach of the Hudson is deferred, securing the beach for future use would be a wise action if the owner is willing, according to the Feasibility Study. The shallow bay location helps protect this site from north or south winds and currents. Wake from shipping along this narrow river reach will require similar lifeguard procedures as are exercised at Ulster Landing Park. Winds from the southeast and northeast will carry occasional choppy waves to the beach. The channel current at Henry Hudson Park is 2.2 fps, maximum tidal range is 4.5 feet. The Feasibility Study also identifies the Glenmont Job Corps Center containing riverfront property. It is believed the site now known as the Mo-He-Con-Nuck Preserve, which may be suitable for beach use, was acquired by the Town of Bethlehem from the US Department of Interior. Currently, this beach area is available for canoe and kayak access during low tide events; there is no trail access from the land side of the beach for a put-in from the Mo-He-Con-Nuck Preserve.

## HIKING, BICYCLING, AND TRAILS

Walking and hiking are activities undertaken by a large range of residents and visitors. Four (4) walking trails are found in the Moh-He-Con-Nuck Nature Preserve. The trail distance totals 1.2 miles, with the highest elevation change being 60 feet at the Hilltop Loops.

Moh-He-Con-Nuck Nature Preserve is an over 53-acre parcel bordered by River Road (NYS Route 144) on the west, the Glenmont Job Corps property to the south, residential properties and Simmons Road to the north, and the Hudson River to the east. This property bisected by a strip of federal land consist of two parcels conveyed to the town by the U.S. Department of the Interior through the National Park Service (NPS). The strip of land owned by the Glenmont Job Corps blocks the town from developing a trail that connects the western side of the Preserve with the river frontage. The town will continue its dialogue with the federal Department of Labor that administers the Job Corps property and seek funding sources to extend the existing trails within the Preserve and connect them with the riverfront.

The lack of publicly accessible walking trails to better experience the Hudson River was identified by the Local Waterfront Revitalization Advisory Group (LWRAG), the committee created to oversee the development of the Local Waterfront Revitalization Program in cooperation with municipal officials and the project consultants. A riverfront trail is needed to connect the Henry Hudson Park, Moh-He-Con-Nuck Nature Preserve, and the undeveloped lands owned by Scenic Hudson on the former Baker Farm site.

The Henry Hudson Park Master Plan incorporates multiple projects that seek to improve access to the Hudson River. These improvements consist of both physical improvements such walking trails, boat access, and shoreline stabilization to allow a better visual experience, and access for fishing.

## HARBOR MANAGEMENT AREA PLANNING

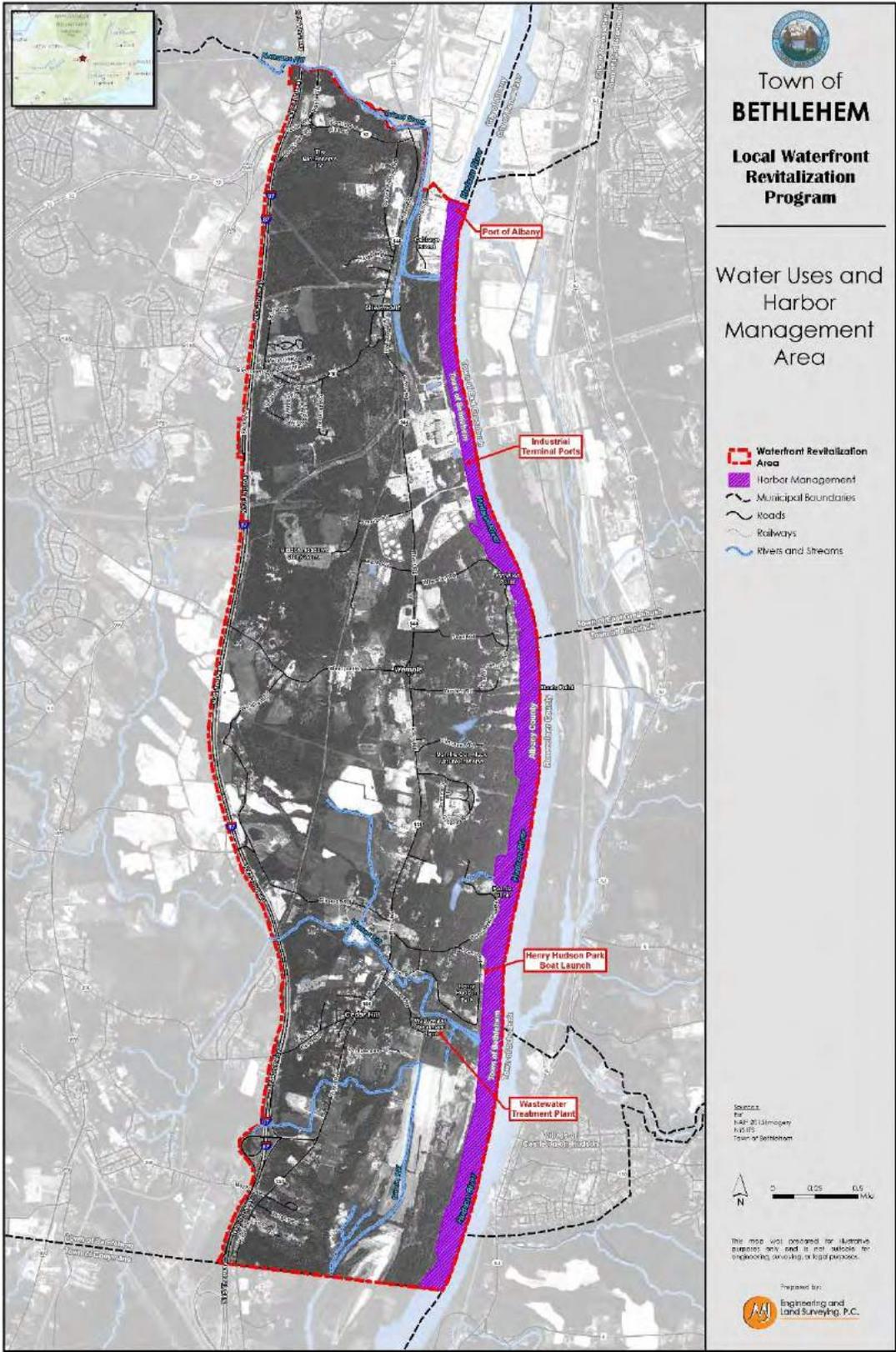
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The NYS Executive Law, Article 42-Waterfront Revitalization of Coastal Areas and Inland Waterways was amended in 1992 to provide local governments with the clear authority to comprehensively manage activities in nearshore areas within their WRA by developing comprehensive harbor management plans (HMPs) and local laws to implement these plans<sup>13</sup>. Pursuant to the 19 NYCRR Part 603, an LWRP must incorporate an HMP addressing existing or potential water-dependent use conflicts and associated local controls. An HMP must include an inventory of local and regional conditions and needs including, as applicable, the competing needs of commercial shipping and recreational boating, commercial and recreational fishing and aquaculture, waste management, mineral extraction, dredging, public access, recreation, habitat and other natural resource protection, water quality, open space needs, aesthetic values, common law riparian or littoral rights and the public interest in underwater lands. The harbor management plan covers all surface waters within the WRA.

The Bethlehem Harbor Management Area (HMA), depicted in the [Water Uses and Harbor Management Area Map](#), encompasses the waters of the Hudson River within the WRA.

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<sup>13</sup> <http://www.dos.ny.gov/communitieswaterfronts/pdfs/hmpguide.pdf>



The town's Harbor Management Plan (HMP), consisting of the information included in this subchapter, addresses issues commensurate to the local conditions related to the use of surface waters and underwater lands within the HMA, along the Hudson River.

The Hudson River is the primary surface water body in the region, its 153 miles between Troy and New York Harbor are a tidal estuary, which includes the Bethlehem HMA. Within the HMA, fresh water is running off the upland and into Hudson River from the following tributaries: Vloman Kill (stream), Binnen Kill (stream – tidal tributary) and Normans Kill (creek)/Island Creek. The HMA is within a portion of the Hudson River that is a part of the Lower Hudson Watershed, which makes up approximately 40% of the Hudson/Mohawk River Basin. This is one of the largest drainage areas on the eastern seaboard of the United States. The Lower Hudson Watershed extends from New York City to the Troy Dam at the confluence of the Mohawk River.

Approximately 537 acres of lands in the southern portion of the WRA, near the Binnen Kill, are privately owned or conserved by Scenic Hudson. These lands provide habitat, water quality and natural resource protection. Existing vacant properties along the Hudson River, just north of Henry Hudson Park, have participated in the Town's conservation easement exemption program, which helps to preserve open space adjacent to the HMA. The general visual setting of the HMA consists of two contrasting view sheds. In the north the setting is dominated by fully exposed industrial complexes (approximately 1/3 of the HMA) both from the road and river, while the central and southern settings is reflective of rural, undeveloped woods, and residential interspersed with agricultural uses.

#### **PUBLIC ACCESS TO THE WATERSIDE**

Henry Hudson Park is public open space owned by the Town of Bethlehem. The park is the only place in Bethlehem where the public can access the Hudson River for recreational water-dependent uses such as a kayaking, boating, and fishing. The southern section of the shoreline is in disrepair and currently consists of a dilapidated timber cribbing structure, filled with riprap between two timber crib walls, and capped with convex concrete segments. Most of the structure has either partially or completely failed; the crib walls are severely decomposed, the concrete cap has detached and been displaced, and riprap has moved from between the crib walls into the river. In sections of complete structural failure, upland areas show signs of erosion and are inundated during high tides.

The Hudson River Habitat Restoration Ecosystem Restoration Feasibility Study conducted by the U.S. Army Corps of Engineers (USACE) with the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of State (NYSDOS) proposes the restoration of this area.

#### **NAVIGATION ON HUDSON RIVER**

The navigation channel on Hudson River narrows considerably, between Kingston and Troy, presenting middle grounds, flats, and shoals as far north as Albany, NY.<sup>14</sup> USACE maintains the federal navigation channel in the Hudson River from Troy Lock and Dam to the New York-New Jersey Harbor, and periodically dredges the channel between Albany and New York City to a depth of 32 feet. There is

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<sup>14</sup> [http://hudsonriverpilots.com/uploads/3/1/1/3/3113206/cpb2\\_e41\\_c12\\_20120826\\_0006\\_web.pdf](http://hudsonriverpilots.com/uploads/3/1/1/3/3113206/cpb2_e41_c12_20120826_0006_web.pdf)

currently an active dredged material placement area on Houghtaling Island on the southern part of Schodack Island State Park. The channel supports commercial/industrial activities along the northern portion of the Bethlehem HMA.

The US Coast Guard maintains several aids to navigation to assist vessels using navigation channels and entering and leaving ports. The Hudson River is under the jurisdiction of the Commander of the First Coast Guard District. Shipping lanes are like divided highways. Inbound and outbound lanes are separated. “Hudson River has two high and low tides every 24 hours with tidal forces affecting the river as far north as Albany and Troy. The salt line of the river varies depending on seasonal patterns with snow melt runoff and the typical spring rains pushing the salt line below the Tappan Zee Bridge. Summer seems to see the salt line establish itself just south of Newburgh, NY and in the times of drought the salt line may push as far north as Poughkeepsie, NY. The mean range of tide along the Hudson varies from 4.5 feet at The Battery dropping to 2.8 feet at Newburgh and increasing again to 4.7 feet at Troy. In summer, when freshwater discharge is minimal, between Kingston and Troy the current speeds average 0.3 knots on the flood and 0.8 knots on the ebb.<sup>15</sup>”

To avoid any interference with navigation, the upland outdoor lighting located in areas visible from the river should be shielded, white and non-flashing so that it is not confused with any aids to navigation and does not interfere with navigation on the adjacent waterway.

### **SURFACE WATER QUALITY**

Stormwater management adjacent to the HMA is monitored as part of development reviews in accordance with MS4 requirements. Wastewater treatment adjacent to the HMA is processed by individual on-site septic systems within the low-density residential areas, in accordance with NYS regulations. Public sewer is currently used by one property (PSEG by way of private easement to Glenmont Road) in the northern industrial area, as well as at the Glenmont Job Corps site, and treated at the Town-owned Dinmore Road sewer treatment plant, located just south of the Vloman Kill.

### **NO-DISCHARGE ZONE**

The State of New York waters in the Hudson River from the Battery in Manhattan to the Federal Dam in Troy are designated a No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within an NDZ are completely prohibited from discharging any sewage, treated or untreated, into the NDZ waters. Outside the NDZ, discharge of sewage is regulated by 40 CFR 140.

### **PORT OF ALBANY IMPACT**

The Port of Albany has expanded into the Town of Bethlehem as a result of the purchase of an 80-acre site known as “Beacon Harbor”, located at the confluence of Normans Kill and the Hudson River. The expansion will result in adding land for development of industrial uses that complement the Port, as a logistics hub location. A wharf for loading and unloading materials and goods, and connection to rail lines is also planned.

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<sup>15</sup> The Hudson River Navigation Guide - <https://www.offshoreblue.com/cruising/hudson-river.php>

### **RECREATIONAL BOATERS NAVIGATING NEAR COMMERCIAL SHIPPING CHANNEL**

There is no speed limit for the Hudson River except as defined by the COLREGS and common sense. The standard caveats apply to wake responsibility<sup>16</sup>. Large commercial vessels and tugs with tows are often restricted in their ability to maneuver as defined in Rule 3 of the Inland Navigation Rules. Therefore, those vessels have the right of way over all recreational boats including sailboats.

In accordance with Rule 9 of the Inland Navigation Rules, vessels less than 20 meters in length shall not cross ahead or otherwise impede the passage of any vessel that can safely navigate only within a narrow channel or fairway. Recreational vessels should avoid commercial shipping channels and whenever possible transit them as near to the outer limit of the channel or fairway that lies on the vessel's starboard as is safe and practical. If it becomes necessary to cross a channel, check for other vessels and pass astern of oncoming vessels<sup>17</sup>.

### **DOCKS AND MARINAS**

Within the northern side of the HMA, there are eight (8) industrial docks (plus one inlet) used by businesses in the Heavy Industrial district and a few scattered residential docks (seasonal). Currently, while industrial users are required to obtain permits from State and Federal agencies related disturbance within the Hudson River for dock improvements there are no local requirements that regulate dock size or location for industrial users. The size and type of dock has a direct relation to the size, type, and frequency of ship usage, which has a potential impact on the adjacent residential community within the HMP area. Requirements for site plan review by the Planning Board for new industrial docks and inlets within the Heavy Industrial zoning district allow for the public to learn about potential changes to the HMA. There are no existing or proposed marinas within the WRA.

### **DREDGING HUDSON RIVER**

The commercial navigation along Hudson River depends on the depth of the navigational channel. Industrial users of the Hudson River shipping navigation channel have noted that with increased storm activity sedimentation occurs within the channel which reduces its depth to less than 32-foot.

In its natural state the Hudson River would be unsuitable for contemporary vessels used for commercial navigations. "Navigational improvements to the channel began as early as 1790. Initially, dams were built across the shallow side channels to divert flow into the main channel and scour it out. Engineering activities increased rapidly between 1836 and 1910, including construction of more dams to block side channels, construction of longitudinal dikes to channel the flow of the river, and dredging, resulting in a 3.7-meter-deep (12-foot-deep) navigation channel from the city of Hudson to Troy.

Very large volumes of materials dredged from the navigation channel were dumped behind the dikes and into side channels, destroying many of the shallow -water habitats in the upper estuary. By 1894, the U.S. Army Corps of Engineers was having trouble finding places to dump the dredge spoils and began to create new islands in the river out of the spoils. Dredging accelerated in the twentieth century as the

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<sup>16</sup> The Hudson River Navigation Guide- <https://www.offshoreblue.com/cruising/hudson-river.php>

<sup>17</sup> U.S. Coastal Pilot 2, Chapter 12, page 383, Hudson River

navigation channel was deepened to 8 meters (27 feet) in 1925 and 10 meters (32 feet) in 1954. Large amounts of dredge spoils were dumped on the shore and on islands in the river, to a depth of as much as 10 meters (32 feet).

These navigational improvements had profound effects on the character of the Hudson estuary, especially between the city of Hudson and Troy. Dredging and filling of the Hudson River navigation channel produced the most physical changes to the freshwater tidal habitats. These physical changes had many ecological effects. As we have seen, vegetated shallow-water habitats support high primary production and dense and diverse populations of fish, invertebrates, and water birds. The loss of these productive habitats (as well as of simple surface area of the river) must have caused enormous losses to primary production and animal populations in the Hudson, as well as shifting the kinds of plants and animals that lived in the river<sup>18</sup>.

### **SPEED AND WAKE DAMAGE**

Complaints from residential property owners are an ongoing issue due to the increasing usage by both commercial and recreational users. While there are no federal regulations that address vessel speed limits outside of federal anchorage grounds, all vessel operators are expected to operate at a safe speed and in a manner that does not put others at risk. Licensed commercial mariners are further expected to be familiar with ongoing evolutions within the port and honor the requests of other waterway users as a professional courtesy.

Title 46 Part 185.304 of the Code of Federal Regulations, states: "The operator of a vessel should pay special attention in regard to the potential caused by their wake." The operation of a vessel in a negligent manner is a violation of federal law that may carry a monetary penalty. In addition, vessel operators may incur civil liability for the damage caused to other persons or property. Parties alleging the creation of an excessive wake may document their concerns via videotape or pictures. This type of documentation could be the basis for opening a civil penalty case<sup>19</sup>.

Residents can report concerns of vessel speeds and impacts from wake to the Hudson River Pilots Association. The State of New York relies on the Hudson River Pilots Association to be the front line in the effort to protect the river environment and maintain safe commerce to all the ports along the river. NYS Navigation Law Article 4 Section 45 pertains to operation of vessels and speed.

### **REGULATED NAVIGATION AREA AND ICE CONDITIONS**

The ice season on the Hudson River usually starts in early January and ends in mid-March. Ice can cause damage to both natural shoreline and manmade structures on the river and can affect commercial navigation. In addition to the problem of getting through the ice, aids to navigation are covered or dragged off station by moving ice<sup>20</sup>. A regulated navigation area is a water area within a defined boundary for which regulations for vessels navigating within the area have been established. All

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<sup>18</sup> The Hudson Primer: The Ecology of an Iconic River by David L. Strayer, University of California Press, Nov 08, 2011

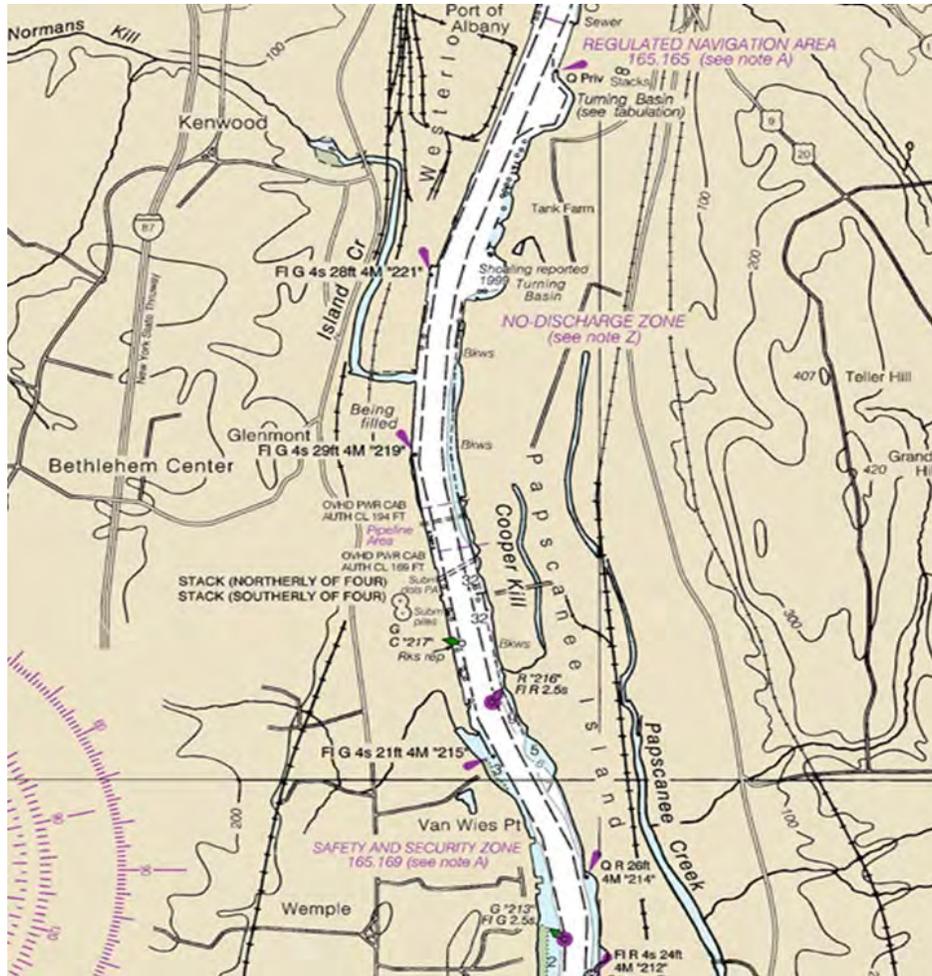
<sup>19</sup> U.S. Coastal Pilot 2 (2018), Chapter 12, page 383, Hudson River

<sup>20</sup> U.S. Coastal Pilot 2 (2018), Chapter 12, page 383, Hudson River

navigable waters of the Hudson River<sup>21</sup> south of the Troy Locks is a regulated navigation area, where regulations for navigation in hazardous icy conditions are enforced by the US Coast Guard.

Also, the U.S. Coast Guard assets conduct ice breaking operations<sup>22</sup> on the Hudson River. This action may push ice from the Hudson River onto the adjacent shorelines. The transit of large vessels during the ice breaking season may produce the same results. The town and its shoreline residents must plan accordingly for possible impacts from these ice breaking operations and navigation of large vessels.

**NOAA's Nautical Chart #12348<sup>23</sup>, excerpt #1**



### HAZARDS TO NAVIGATION

The bottom land of the HMA is crossed in multiple places by pipelines and power cables reaching from one bank of the river to the opposite bank. The Nautical Charts made available by NOAA warn

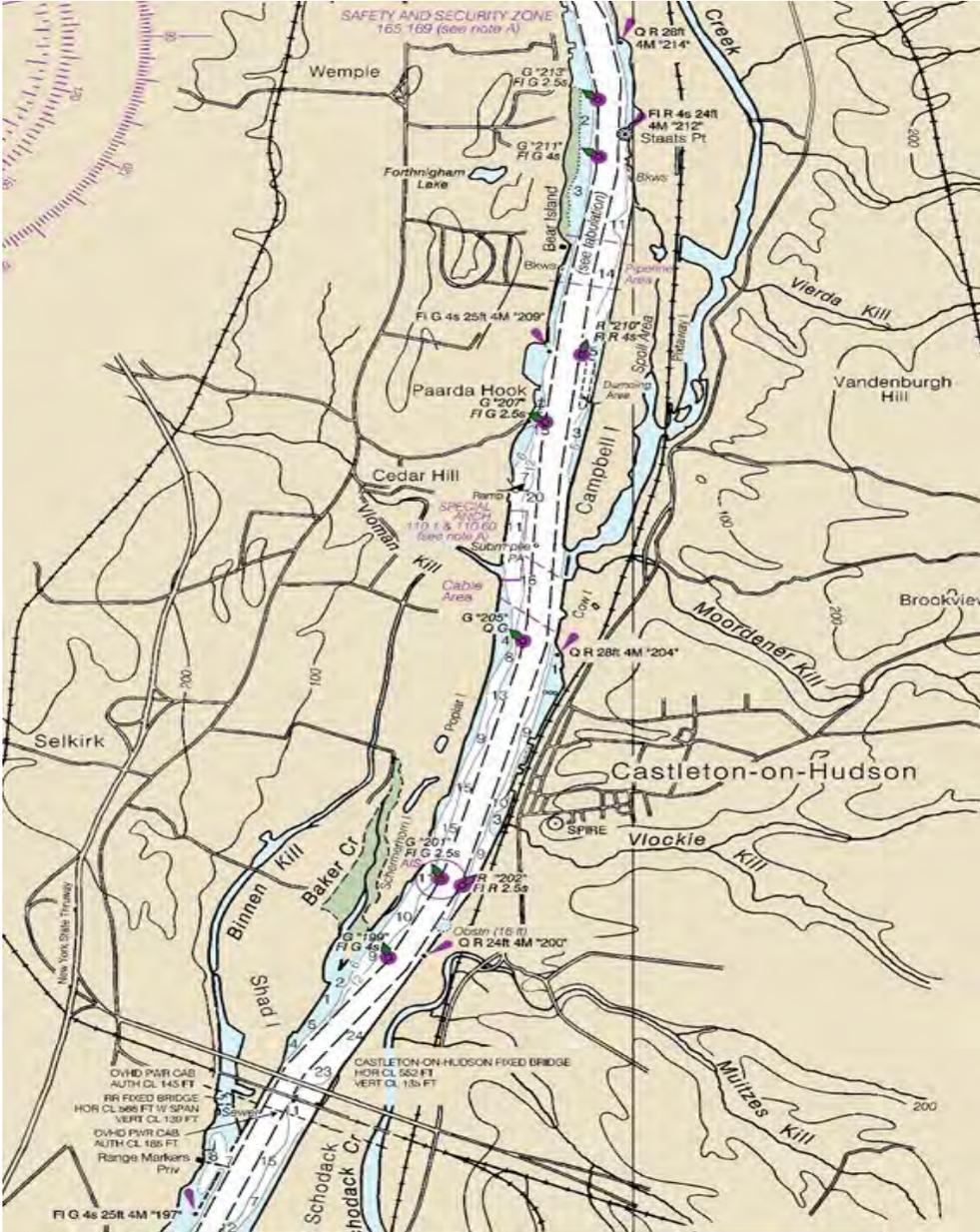
<sup>21</sup> U.S. Code: 33 CFR 165.165 - Regulated Navigation Area, Hudson River South of the Troy Locks, NY

<sup>22</sup> The SECNY Ice Officer could provide information on the USCG's icebreaking program in this area.

<sup>23</sup> www.charts.noaa.gov/PDFs/12348.pdf

mariners/boaters to be cautious when operating vessels in depth of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

**NOAA's Nautical Chart #12348<sup>24</sup>, excerpt #2**



**SHIPWRECKS**

Scientists mapping the bottom of the Hudson River with sonar technology found numerous shipwrecks. Wooden ships do not disintegrate very quickly in the freshwaters of the Hudson River if they are not

<sup>24</sup> www.charts.noaa.gov/PDFs/12348.pdf

exposed to air and even less quickly if they are covered with silt<sup>25</sup>. “The ghostly images provide a record of collisions and carelessness and storm-tossed fate - most of it previously unrecorded and utterly unknown - from the days of sail and steam through the diesel tugs and tankers on the river today.” More than 200 possible wrecks in various stages of deterioration spread out over 140 miles, from the southern tip of Manhattan to Troy, have been identified<sup>26</sup>. However, it is not known if the Bethlehem WRA has any shipwrecks<sup>27</sup>. There are no public maps indicating the location of those shipwrecks. In addition, the heavy concentration of silt in the Hudson River limits visibility to inches.

### **AQUACULTURE**

Currently there are no designated aquaculture areas within the HMA, nor are there any known current plans or proposals for such activities. Fish commonly angled in Hudson River contains high levels of PCBs. Along the portion of Hudson River between Hudson Falls and Troy, located north of the HMA, PCB contamination requires that anglers release all fish that they catch.

### **SHORELINE EROSION**

Current tidal changes, heavy precipitations, and ice erode the shoreline; future potential sea level rise could lead to faster rate of erosion of the shoreline. In addition to Federal and State permits needed for shoreline stabilization projects, local Bethlehem regulations include a Floodplain Development Permit (Town Code Chapter 69). The town will provide information to individual property owners about how to address a receding shoreline or failing bulkhead.

Projects proposed to be developed in the HMA to expand or improve water-dependent uses in the industrial area or to protect the quality of the Hudson River are described in Section IV of the LWRP.

## **EXISTING AUTHORITIES AND JURISDICTIONS WITHIN THE WRA**

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In general, the authority for the regulation of structures and uses above the mean high-water line in New York State is granted to the local municipalities. This is enacted locally by zoning and subdivision ordinances.

State regulatory authority rests principally with the NYSDEC. To obtain or renew a DEC permit, to report environmental or natural resource problems, or reach any DEC program for any reason, the first point of contact is DEC Region 4 office<sup>28</sup>.

The following laws prevent undesirable activities on the State’s water bodies:

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<sup>25</sup> Imaging the Depths of the Hudson River, by Jim Kennard, Shipwreck World, 10.6.2010

<sup>26</sup> Hudson Shipwrecks Found, but No Loose Lips by Kirk Johnson, New York Times, 12.18.2002 - <https://www.nytimes.com/2002/12/18/nyregion/hudson-shipwrecks-found-but-no-loose-lips.html>

<sup>27</sup> Hudson Shipwrecks Found, but No Loose Lips by Kirk Johnson, New York Times, 12.18.2002 - <https://www.nytimes.com/2002/12/18/nyregion/hudson-shipwrecks-found-but-no-loose-lips.html>

<sup>28</sup> <https://www.dec.ny.gov/about/558.html#region4>

- Article 15, Title 5, Protection of Waters<sup>29</sup>, requires permits for projects involving: disturbance of the bed or banks of a protected stream or other watercourse<sup>30</sup>; construction, reconstruction or repair of dams and other impoundment structures<sup>31</sup>; construction, reconstruction or expansion of docking and mooring facilities<sup>32</sup>; excavation or placement of fill in navigable waters and their adjacent and contiguous wetlands<sup>33</sup>; water quality certification for placing fill or undertaking activities resulting in a discharge to waters of the United States<sup>34</sup>. Also, in accordance with Section 401 of the Clean Water Act, applicants for a Federal license or permit for activities including but not limited to the construction or operation of facilities that may result in any discharge into waters of the United States are required to apply for and obtain a Water Quality Certification from DEC indicating that the proposed activity will not violate water quality standards.
- Article 24, Freshwater Wetlands<sup>35</sup>: for permits regarding activities that are proposed within the mapped State-regulated wetland areas or within a 100-foot wide adjacent area. Permit issuance standards are contained in the NYSDEC regulations found at 6 NYCRR Part 663.5.

In addition to direct permit authority, the NYSDEC also consults with the NYSDOS, the NYS Office of Parks, Recreation and Historic Preservation (NYS OPRHP) and the NYS Office of General Services (OGS) as part of its review of permit applications. Under some permit procedures, specific consent must be obtained from one or more of these agencies in order for the NYSDEC to issue a permit or, in the case of NYSDOS, the NYSDEC must ensure that its permits or other actions comport with New York's Coastal Management Program. Local governments are also asked to provide comments on proposed project required permits and located within the coastal area of the State.

Coordination with the NYS OGS Bureau of Land Management is required for projects involving underwater lands. Underwater lands, as defined by the NYSOGS, include lands currently or formerly under water. Additionally, structures, including historical fill materials, docks, piers, or other structures, located in, on, or above state-owned lands under water are regulated under the Public Lands Law. The owner of the upland property is known as the upland property owner.

The OGS Bureau of Land Management has the authority to convey interest in real property for the use of state-owned lands underwater. This includes transfer of property through easements as well as leasing of property through licenses and collection of fees. Therefore, any landowners, usually the upland landowner, interested in utilizing state-owned lands underwater for any purpose need to contact the OGS to determine what the requirements may be for the property in question.

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<sup>29</sup> <https://www.dec.ny.gov/permits/6042.html>

<sup>30</sup> <https://www.dec.ny.gov/permits/6554.html>

<sup>31</sup> <https://www.dec.ny.gov/permits/6552.html>

<sup>32</sup> <https://www.dec.ny.gov/permits/6550.html>

<sup>33</sup> <https://www.dec.ny.gov/permits/6548.html>

<sup>34</sup> <https://www.dec.ny.gov/permits/6546.html>

<sup>35</sup> <http://www.dec.ny.gov/permits/6058.html>

NYS OGS electronically maintains current information about applications and permitting processes on the land management webpage<sup>36</sup>. Information includes the following:

- Joint application forms (United States Army Corps of Engineers/New York State) for permits/determinations to undertake activities affecting streams, waterways, water bodies, wetlands, coastal areas, and sources of water supply.
- Instructions for completing the Joint Application
- Petition for a License, Easement, or Permit for docks, wharves, commercial marinas, and permanent structures
- Petition for an Easement for Permanent Structures
- Petition for Grant (fee title)
- Petition for an Easement for Pipelines or Cables

Federal authority rests with the USACE under Section 10 of the Rivers and Harbors Act 64 of 1899 and under Section 404 of the Clean Water Act. Under Section 10, a permit is required for any structure or work (including any dredge or fill) that takes place in, under, or over navigable water, or any wetland adjacent to navigable waters. Under this regulation, a permit is required from the USACE to place any dock, mooring, boat ramp, permanent inlet, spud barge or any other structure within or over the water of the Hudson River and its tributaries. Under Section 404 of the Clean Water Act, a permit is required for activities which involve a discharge of dredged or fill material into a water of the United States including wetlands.

Discharge activities which will drain or flood wetlands or significantly disturb the soils of a wetland also require a permit under this section. Some Federal permits also require concurrence or consent from New York State agencies. In particular, Federal permits in the coastal zone require a concurrence from the NYSDOS that the project is consistent with New York coastal management policies and Federal Section 404 permits require the issuance of a Water Quality Certification by the NYSDEC.

Some areas within the WRA, while not owned by a particular agency or authority, are required to abide by specific regulations set forth by agencies and authorities with jurisdiction. Agencies and authorities may manage resources through regulatory requirements such as permitting and other forms of compliance. Consultation with these agencies and authorities may be required as necessary for obtaining approval for specific projects. Consultation should be carried out during planning and prior to implementation of a project.

Section VI of the LWRP provides a complete list of actions and programs of State and federal agencies and authorities that could impact or be impacted by the approval and implementation this LWRP.

Federal agencies and authorities manage a wide range of resources related to, but not limited to the environment, safety, social justice, and water use. Section VI of the LWRP lists federal agencies and authorities that may have jurisdiction within the WRA.

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<sup>36</sup> NY OGS Bureau of Land Management - <https://www.ogs.ny.gov/BU/RE/LM/EGLP.asp>

**Table 13: Federal Agencies and Authorities**

Agency/Authority	Agency and Authority Abbreviation	Managed Resources
United States Army Corps of Engineers	USACE	Federal Waters, Public Works, and Related Environmental Resources
United States Environmental Protection Agency	USEPA	Human Health and Environmental Quality
United States Fish and Wildlife Service	USFWS	Fish, Wildlife and Natural Habitats
Bureau of Ocean Energy Management Regulation and Enforcement	BOEM	Environmental Protection, Energy Management
Federal Energy Regulatory Commission	FERC	Energy
United States Coast Guard	Coast Guard	Maritime Interests and Environments
United States Department of Transportation	USDOT	Transportation
Federal Aviation Administration	FAA	Aviation
United States Department of Housing and Urban Development	HUD	Housing, Inclusive Communities, Urban Development
United States Department of Labor	USDOL	Employment, Training

*Source: New York State Coastal Management Program*

New York State agencies and authorities manage a wide range of resources related to, but not limited to the environment, transportation, safety, economic development, recreation etc.

**Table 14: State Agencies and Authorities**

Agency/Authority	Agency and Authority Abbreviation	Managed Resources
New York State Department of Environmental Conservation	NYSDEC	Environmental Protection, Natural Heritage, Recreation
New York State Office of Parks, Recreation and Historic Preservation	NYSOPRHP	State Parks, Historic Sites, Natural Resource Protection
New York State Canal Corporation	NYS Canal Corp	Canal System, Recreational and Commercial Waterways, Tourism and Economic Development
New York Power Authority	NYPA	Public Power, Electricity and Natural Gas
New York Public Service Commission	NY PSC	Electric and Fuel Gas Transmission Facilities
New York State Department of Transportation	NYS DOT	Highway, Railroad, Ports

Agency/Authority	Agency and Authority Abbreviation	Managed Resources
New York State Department of State	NYSDOS	Economic Development, Revitalization and Natural Disaster Recovery, Coastal Consistency Approval
New York State Department of Health	NYSDOH	Public Health
New York State Department of Agriculture and Markets	NYS Ag & Markets	Agribusiness, Agritourism, Education

*Source: New York State Coastal Management Program*

The following activities, requiring permits, or other forms of authorization or approval from state agencies, are subject to the consistency provisions of the Coastal Zone Management Act, its implementing regulations in 15 CFR Part 930, Subpart D, and the New York Coastal Management Program.

- Compliance with New York State Department of Environmental Conservation’s (NYSDEC) Erosion and Sedimentation Control Standards (2016 Blue Book).
- Compliance with the NYSDEC’s Municipal Separate Storm Sewer System (MS4) Permit Program requirements.
- Application for NYSDEC’s State Pollutant Discharge Elimination System (SPDES) General Permit for Storm Water Discharges from Construction Activity (if project will involve soil/land disturbance of one or more acres or if project will involve soil/land disturbance under one acre but is part of a larger plan).
- Application for NYSDEC’s State Pollutant Discharge Elimination System (SPDES) Private/Commercial/Institutional (PCI) General permit for private commercial and institutional facilities having:
  - i. discharges to groundwater of 1,000 gallons per day (gpd) or more, and less than 10,000 gpd per treatment system (outfall) of treated sanitary sewage;
  - ii. a combined facility design flow of less than 30,000 gpd;
  - iii. no industrial wastes; and
  - iv. designs based on the Standard or Alternative Technologies referenced in the Design Standards for Intermediate-sized Wastewater Treatment Systems (4.2 MB, PDF) (NYSDEC, 2014), or for facilities in the Lake George Basin, the Design Standards for Wastewater Treatment Works in the Lake George Basin (4.1 MB, PDF) (NYSDEC 2015).
- Application for NYSDEC’s General Permit for Management of Invasive Species. The General Permit allows the removal of invasive species using hand harvesting techniques, suction harvesting techniques, and/or benthic barriers
  - i. within Freshwater Wetlands or their 100-foot wide adjacent areas, and/or
  - ii. within the bed or banks of Protected Streams, and/or
  - iii. within Navigable Waters, and/or
  - iv. in a designated Wild, Scenic and Recreational River area

- Application for NYSDEC’s General Permit for Breaching or Removal of Beaver Dams No More Than 2 Years Old.
- Application for NYSDEC’s General Permit for Tidal Wetland Bulkhead Replacement with Dredging. The General Permit allows:
  - i. The removal and replacement of functional and lawfully existing bulkheads (including returns and parallel capping boardwalks) in the same location;
  - ii. The replacement of a bulkhead 18 inches higher in elevation than the existing bulkhead;
  - iii. Limited maintenance dredging associated with the bulkhead replacement.
- Application for NYSDEC’s General Permit for Freshwater Wetland Adjacent Area. This General Permit authorizes the following activities within the 100-foot Adjacent Area of State Regulated Freshwater Wetlands:
  - i. Activities in currently disturbed areas that do not have natural vegetation, that are located a minimum of 50 feet from the NYSDEC staff determined wetland boundary.
  - ii. Currently disturbed areas include landscaped lawn or garden areas at existing facilities; existing parking or paved areas and existing structures.
  - iii. Demolition and removal of existing accessory/appurtenant structures;
  - iv. Construction of driveways or parking areas limited to 1000 sq. ft. within the adjacent area;
  - v. Additions to existing structures limited to 1000 sq. ft. basal area within the adjacent area
  - vi. Installation of garages, decks, porches, sheds, pools, utility lines and other accessory/appurtenant structures of less than 1000 sq. ft. basal area within the adjacent area;
  - vii. In-kind, in-place replacement of existing accessory/appurtenant structures, roads and associated utilities.

Regional agencies and authorities manage a wide range of resources related to, but not limited to transportation and land use planning. Table 1 provides a list of potential regional agencies and authorities with jurisdiction within the WRA.

**Table 15: Regional Authorities and Agencies**

Agency/Authority	Agency/Authority Abbreviation	Managed Resource
Capital District Transportation Authority	CDTA	Public Transportation
Capital District Transportation Commission	CDTC	Regional Transportation
Capital District Regional Planning Commission	CDRPC	Regional Planning

*Source: New York State Department of State*

CDTA is a public benefit corporation created in New York State overseeing a number of multi-modal parts of public transportation (bus, taxi-service, etc.) in the Capital District. CDTC is the designated

Metropolitan Planning Organization for the Albany-Schenectady-Troy and Saratoga Springs metropolitan areas. CDRPC is a regional planning and resource center serving upstate New York counties of Albany, Rensselaer, Saratoga and Schenectady.

The Town of Bethlehem governmental departments manage a wide range of resources related to local roads, building codes, permitted land uses, zoning compliance, etc. Table 1 provides a list of Town departments that have the potential to have authority within the WRA.

**Table 16: Town of Bethlehem Government Departments**

Agency/Authority	Managed Resource
Town Board	Town Legislation
Building Division	Zoning, Construction, Town Code Compliance, NYS Building Code, Floodplain Damage Prevention
Planning Board	Development Review – Site Plan, Subdivision, Special Use Permit
Conservation Easement Review Board	Conservation Easement Exemptions (Open Space)
Parks and Recreation	Park Operation and Recreational Programming & Facilities
Highway Department	Town Street, Sidewalk, Park Property Maintenance, Stormwater Management System Maintenance
Department of Public Works	Public Sewer, Water Infrastructure, Stormwater Management
Zoning Board of Appeals	Area and Use Variances

*Source: Town of Bethlehem*

The Town updated its Zoning Ordinance in 2006 and has revised different sections of the law up until 2016 based on Comprehensive Plan evaluation committees as well as the recommendations from other studies completed by the Town.

Depending on the proposed project, the Town of Bethlehem may require permits, or other forms of authorization or approval be obtained from the Town to ensure regulations are being followed for the items listed below:

- Subdivisions and Site Plans
- Lots Bordering Streams
- Flood Damage Protection
- Freshwater Wetlands
- Stormwater Management
- Erosion and Sediment Control

## NATURAL AND ENVIRONMENTAL RESOURCES

The waterfront revitalization area (WRA) contains many natural resources. The inventory and analysis are useful for identifying specific areas appropriate for development as well as critical habitat and environmental areas that should be protected or avoided during development. Aside from providing insight on development considerations, the analysis also offers opportunities to manage and/or utilize natural amenities and educate the community about the natural environment.

### GEOLOGY AND SOILS

As described in Section I of the LWRP, the WRA is bordered on the east by the western boundaries of the Town of East Greenbush and the Town of Schodack, which delineate the middle of the Hudson River. The Normans Kill/Island Creek acts as the northern boundary of the WRA. The Town of Coeymans municipal line serves as the southern boundary of the WRA, while the western side of the I-87 right of way serves as the western boundary of the WRA.

The Town’s topography varies greatly. Steep slopes (15% or greater) exist throughout the WRA. The [Geology and Soils Map](#) illustrates the landscape breakdown of the WRA, also identified in Table 17.

**Table 17: Landscape Composition**

Composition	Acres	Percentage of WRA
Land	5,243	82.3%
Wetlands	724	11%
Open Water	403	6%

*Source: Multi-Resolution Land Characteristics Consortium and Town of Bethlehem*

The New York State Museum Generalized Bedrock Geology Map identifies that the WRA is primarily made up of Austin Glen Formation (Oag) and Normanskill Shale (On). Both bedrock types are classified by the Middle Ordovician geologic age. According to the New York State Department of Environmental Conservation, no Unique Geologic Features exist within the waterfront revitalization area.

There are 62 soil types found within the WRA and they vary greatly. Soils range from somewhat excessively drained to very poorly drained, and the depth to bedrock ranges from 10 inches to over 80 inches. More than one third of the hydric soil within the Town is located within the WRA.

These soils are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Drainage class refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Depth to bedrock is the distance from the soil surface to the top of the bedrock layer.

Soil composition may create limitations for development due to poor drainage and lack of stability. Areas designated as wetlands may also include hydric soils.

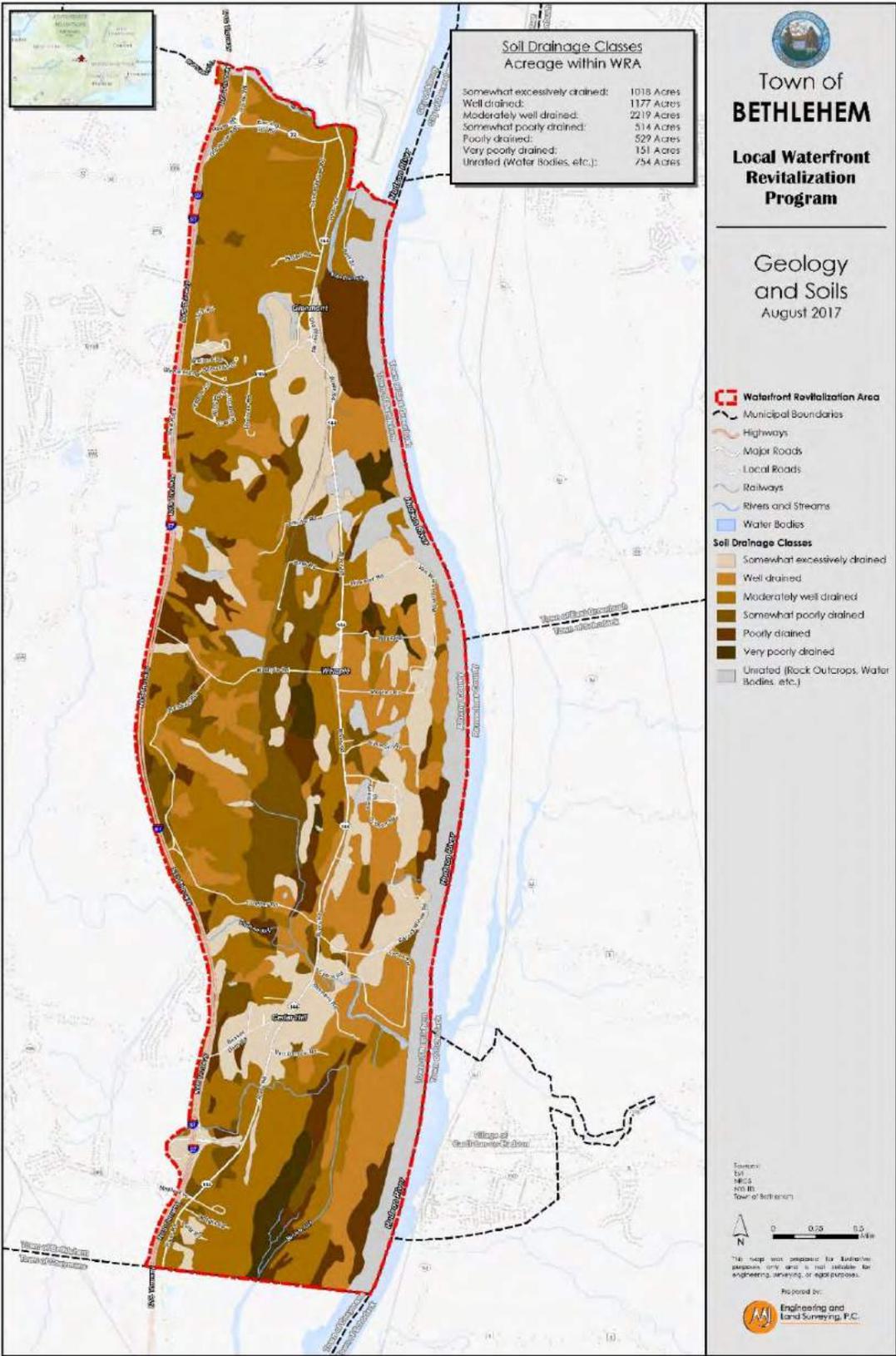


Table 18 summarizes the soils found within the WRA by drainage class. Understanding these characteristics can aid in locating future potential development.

**Table 18: Soils Found within the WRA**

Soil Type	Percentage Found in WRA
Moderately Well Drained	40%
Well Drained	18%
Somewhat Excessively Drained	17%
Somewhat Poorly Drained	12%
Poorly Drained	10%
Very Poorly Drained	3%

*Source: Multi-Resolution Land Characteristics Consortium and Town of Bethlehem*

### AGRICULTURAL SOILS

The WRA contains agricultural soils recognized by the United States Department of Agriculture (USDA) as either “Prime Farmland”, “Prime Farmland if drained”, or “Farmland of Statewide Importance”. The WRA contains 1,812 acres of Prime Farmland, 631 acres (34.8%) of Prime Farmland if drained, and 509 acres (28%) of Farmland of Statewide Importance. The parameters for Prime Farmland<sup>37</sup> are national. Soils must meet specific criteria with respect to several soil properties, including temperature, moisture regime, erodibility, pH, water table, permeability, rock fragment content, and others. Criteria are described in National Soil Survey Handbook section 622.3 / Farmland Classification. Prime farmland is not excessively eroded or saturated with water for long periods of time, and it either does not flood frequently during the growing season or is protected from flooding. Users of the lists of prime farmland map units should recognize that soil properties are only one of several criteria that are necessary. Other considerations for prime farmland are the following:

- (i) Land Use—Prime farmland is designated independently of current land use, but it cannot be areas of water or urban or built-up land as defined for the National Resource Inventories. Map units that are complexes or associations containing components of urban land or other miscellaneous areas as part of the map unit name (i.e., major components) may not be designated as prime farmland. The soil survey memorandum of understanding determines the scale of mapping, and local land use interests should be considered in designing map units.
- (ii) Flooding Frequency—Some map units may include both prime farmland and land not prime farmland because of variations in flooding frequency.
- (iii) Irrigation—Some map units have areas with a developed irrigation water supply that is dependable and of adequate quality while other areas do not have such a supply. In these map units, only the irrigated areas meet the prime farmland criteria.
- (iv) Water Table—Most map units are drained but a few undrained areas are included. Only the drained areas meet the prime farmland criteria.

<sup>37</sup> Prime farmland - <https://www.govinfo.gov/app/details/CFR-2012-title7-vol6/CFR-2012-title7-vol6-part657>

- (v) Wind Erodibility—The product of I (soil erodibility) x C (climate factor) may not exceed 60 to meet prime farmland criteria<sup>38</sup>.

Soils that are designated as Prime Farmland if drained meet all the prime farmland criteria except for depth to seasonal high-water table and are suitable for drainage. In New York, somewhat poorly drained soils are designated as prime farmland if drained, if they meet all criteria for prime farmland other than depth to water table. Criteria for farmland of statewide importance can be established within each state. In New York, Farmland of Statewide Importance soils are the soils that do not meet all the criteria for Prime Farmland or Prime Farmland if Drained, but are mineral soils in land capability classes 2e, 2s, 2w, 3e, 3s, 3w, or 4w. The State soil scientist is responsible for program-specific and State interpretative group assignments to map units and soil components, as appropriate. The State soil scientist ensures that all nationally significant interpretative group assignments to map units and soil components are included in the official soil survey database<sup>39</sup>. In general, the prime farmland soils are located on the east side of the NYS Thruway in fingers that extend from west to east. These lands with prime soils are primarily vacant and are zoned Residential A or Rural. In the northern section of the WRA prime farmland soil is located on lands with forest cover in areas around existing residential development and have been under development growth pressure. A concentration of prime farmland soils is located on the east side of SR 144/River Road south of Wheeler Road extending to the Town of Coeymans boundary in the south end of the WRA within the Rural Riverfront zone. In this area the soils are concentrated in areas that run in a north/south direction, parallel to the Hudson River. Again, these soils are primarily located in areas of forest cover on vacant or low-density residential lands. Prime farmland soils are located within areas of conserved lands in the southern WRA, including agricultural lands. In the southern area of the WRA there is little growth pressure where the prime soils are located, mainly as a result of conservation efforts by Scenic Hudson. Within the WRA the presence of prime farmland soils is a criterion that the Town considers when evaluating the open space benefits of land purchases, conservation easements, and conservation subdivision design as discussed throughout this section, and detailed in the Open Space<sup>40</sup> subsection.

**Table 19: Farmland Soils**

Farmland Soils	Soil Acreage	Soil Percentage
Prime Farmland	1,812	28.4%
Prime Farmland if Drained	631	9.9%
Farmland of Statewide Importance	509	8.0%

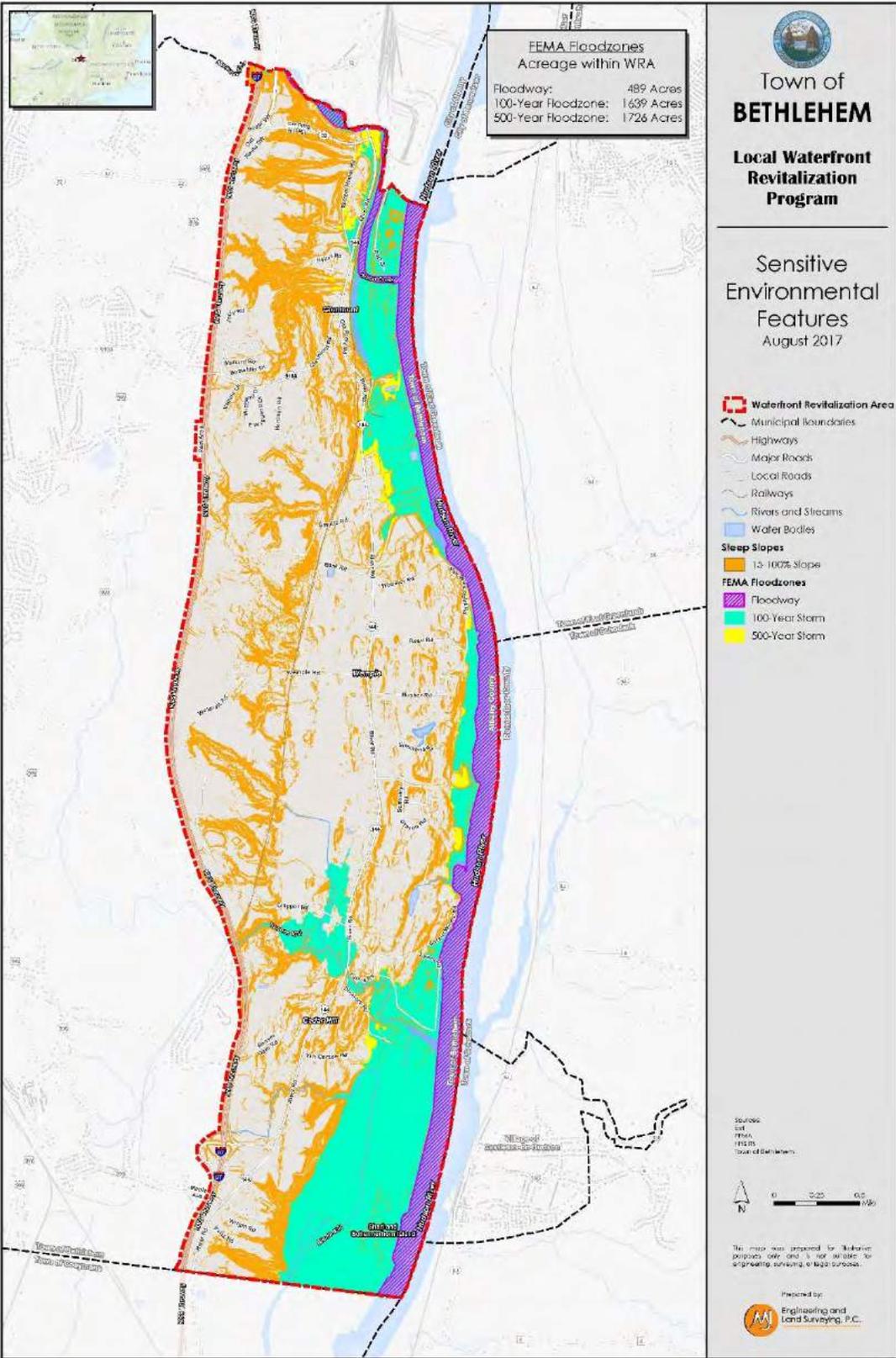
*Source: New York State Agriculture and Markets and Natural Resources Conservation Services*

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<sup>38</sup> Title 430 – National Soil Survey Handbook, 622.3 Farmland Classification - [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2\\_054242](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2_054242)

<sup>39</sup> Title 430 – National Soil Survey Handbook, 622.1 Procedures and Responsibilities

<sup>40</sup> This subsection explains the use of 25 conservation criteria that guide the town’s actions.



## STEEP SLOPES

Steep ravines are found throughout the Town, especially in the area near the Normans Kill, of which  $\frac{3}{4}$  of a mile is located within the WRA. Other areas of steep slopes exist along ravines carved by streams flowing into Hudson River as well. The [Sensitive Environmental Features Map](#) indicates the location of steep slopes within the WRA. Attempting to build on these slopes is not impossible, but it must be done with great care. Vegetated ground cover acts as a sponge, slowing down rainwater and snowmelt and allowing the water and nutrients to be absorbed into the soil. As explained in Section V of the LWRP, local land use controls regulate development on steep slopes. Careless development can expose the soil causing increased runoff and erosion, which can in turn increase sedimentation rates and nutrient loading in downstream waterways. Bethlehem has already experienced the impacts of severe soil erosion and landslides along the Normans Kill outside of the WRA. Land disturbance on soil conditions such as clay in combination with steep slopes could lead to landslides.

## SURFACE WATERS

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The WRA includes approximately 10 miles of the Hudson River and three (3) tributaries. The Hudson River is the primary surface water body in the region and part of one of the largest drainage areas on the eastern seaboard of the United States, the Hudson/Mohawk River Basin. The following are the Hudson River tributaries within WRA: Normans Kill (creek) and Island Creek, Vloman Kill (stream), and Binnen Kill (stream – tidal tributary).

### HUDSON RIVER

The Hudson River channel runs nearly straight north and south except for a few sharp bends through the Hudson Highlands. From Troy to Newburgh, the river is generally less than  $\frac{3}{4}$  mile wide. Over the 150 miles from the Troy Lock and Dam to the Battery, New York City, the river gradient is small, only 5 feet, and the river bottom at Albany is at sea level (Limburg et al., 1986, Cooper et al., 1988). This stretch of the river is really a drowned river valley. Intruding sea water flooded the lower river as the last glaciers melted and sea level rose.

Tidal water is considered saline by regulatory agencies (NOAA, NYSDOS) only downstream of Poughkeepsie. The tide is semidiurnal, meaning that two high tides and two low tides occur each day. The currents in the Hudson River are influenced by the same variables that affect the tides. Over 2,400 acres of tidal freshwater wetlands occur along the Hudson estuary between the Troy Lock and Dam and Haverstraw Bay. The Hudson River is one of only a dozen areas in the northeastern U.S. with more than 500 acres of tidal freshwater marsh and is the only such area in New York State.

The Hudson River corridor is part of the Atlantic Flyway, one of four major avian migratory routes in North America. Spring migration occurs along the estuary in February - May; fall migration occurs in September - November.<sup>41</sup>

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<sup>41</sup> Hudson River Habitat Restoration, NY - Draft Integrated Feasibility Report and Environmental Assessment

### **NORMANS KILL AND ISLAND CREEK**

The Normans Kill is a freshwater tributary located on the west side of the Hudson River, on the boundary between the City of Albany and the Town of Bethlehem, Albany County (7.5' Quadrangles: Albany, N.Y.; and Delmar, N.Y.). The Normans Kill is the largest tributary stream in Albany County, and is one of about four (4) major tributaries emptying into the northern portion of the Hudson River estuary. The Normans Kill is a warm water perennial stream with a medium gradient, a drainage area of over 170 square miles, and an average discharge volume of approximately 150 cubic feet per second. The first mile of the stream below the falls flows through a steep-sided wooded gorge and is relatively shallow with a gravelly substrate. The lower mile of the Normans Kill is referred to as Island Creek and is within the tidal range of the Hudson River. This area is relatively deep, with a silt and clay substrate. A portion of Island Creek was channelized in the past and its mouth relocated south in conjunction with nearby commercial and industrial developments.

Despite its proximity to the Port of Albany, the Normans Kill and its associated riparian zone located along the first mile in the western area of the WRA remain in a relatively natural condition. The last mile of the riparian zone, closer to the river, shows habitat disturbance in the area is impacted by commercial and industrial activity in addition to the presence of road and railroad crossings, litter, and discharges of stormwater runoff from paved areas.

The Normans Kill is an important spawning area for alewife, blueback herring, and white perch; it is one of only 10 significant spawning streams for these anadromous fishes in the upper Hudson River. Generally, these species enter the stream between April and June; the adults leave the area shortly after spawning, and within several weeks, the eggs have hatched, and larval fish begin moving downstream to nursery areas in the Hudson River. A substantial population of smallmouth bass also occurs in the Normans Kill throughout the year. Adults move into the upper section of the creek in May and early June to spawn and return to deeper areas as water temperatures rise. Freshwater inflows from the Normans Kill are also important for maintaining water quality in the Hudson River estuary.

### **VLOMAN KILL AND BINNEN KILL**

Vloman Kill is an 18.5-mile long tidal freshwater tributary of the Hudson River. It is a medium gradient, warm water stream with a gravelly substrate, and a drainage area of approximately 30 square miles. Vloman Kill is one of approximately 10 tributaries of the upper Hudson River. It offers views of waterfalls visible to kayakers. The Binnen Kill is a tidal freshwater tributary of the Hudson River that flows south of Vloman Kill, in the southern portion of the Bethlehem WRA. Both kills flow through the Shad and Schermerhorn Islands tidal and non-tidal wetlands and provide spawning and feeding habitat for American shad, blueback herring, alewife, and white perch, as well as resident freshwater species. Terrestrial portions of the area provide quality habitat for a variety of upland wildlife species, including white-tailed deer, ruffed grouse, eastern cottontail, and many passerine bird species. A naturally created sill area helps to keep the wetlands in this area flooded. The USACE<sup>42</sup> recommended in its Hudson River

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<sup>42</sup> United States Army Corps of Engineers - <https://www.nan.usace.army.mil/>

Habitat Restoration/Ecosystem Restoration Feasibility Study<sup>43</sup>, the restoration of Binnen Kill shallow water habitat through the creation of side channels, which were lost due to past USACE activities. However, the public and adjacent landowners were opposed to the implementation of proposed restoration because the disturbance that would have been caused to the established aquatic habitats and the adjacent upland areas. This resulted in the removal of this site from the recommended plan.

## LAKES AND PONDS

Frothingham Lake located between River Road and the Hudson River, north of Simmons Road, consists of 4.7 acres. A portion (1 acre) is located within the Mo-He-Con-Nuck Preserve. The majority of the pond is located on private property. There is a 950-ft. trail within the Preserve that leads to the Lake. Frothingham Lake is the only spring-fed lake in the town and is located to the north of Simmons Road. Based on local input, the lake contains turtles, some eels, and a large amount of weed growth, but no fish. Abutting



*Source: NYS DOS Geographic Information Gateway*

residents have seen a wide diversity of wildlife such as bear, deer, coyote, fox, raccoon, skunk, opossum, muskrat, weasel, rabbit, gray squirrel, red squirrel, flying squirrel, rats, mice, voles, moles, bats, garter snakes, snapping turtle, red-eared turtle, assorted frogs and peepers, eagles, hawks, owls, herons, ducks, geese, and turkeys. Wetlands are located around the perimeter of the lake.

Wheeler Pond is a man-made pond on private property along Wheeler Road. The pond is impounded by an earthen embankment dam and a dike. The dam is registered with the NYS DEC and receives visual inspections. The pond is surrounded by heavy vegetation.

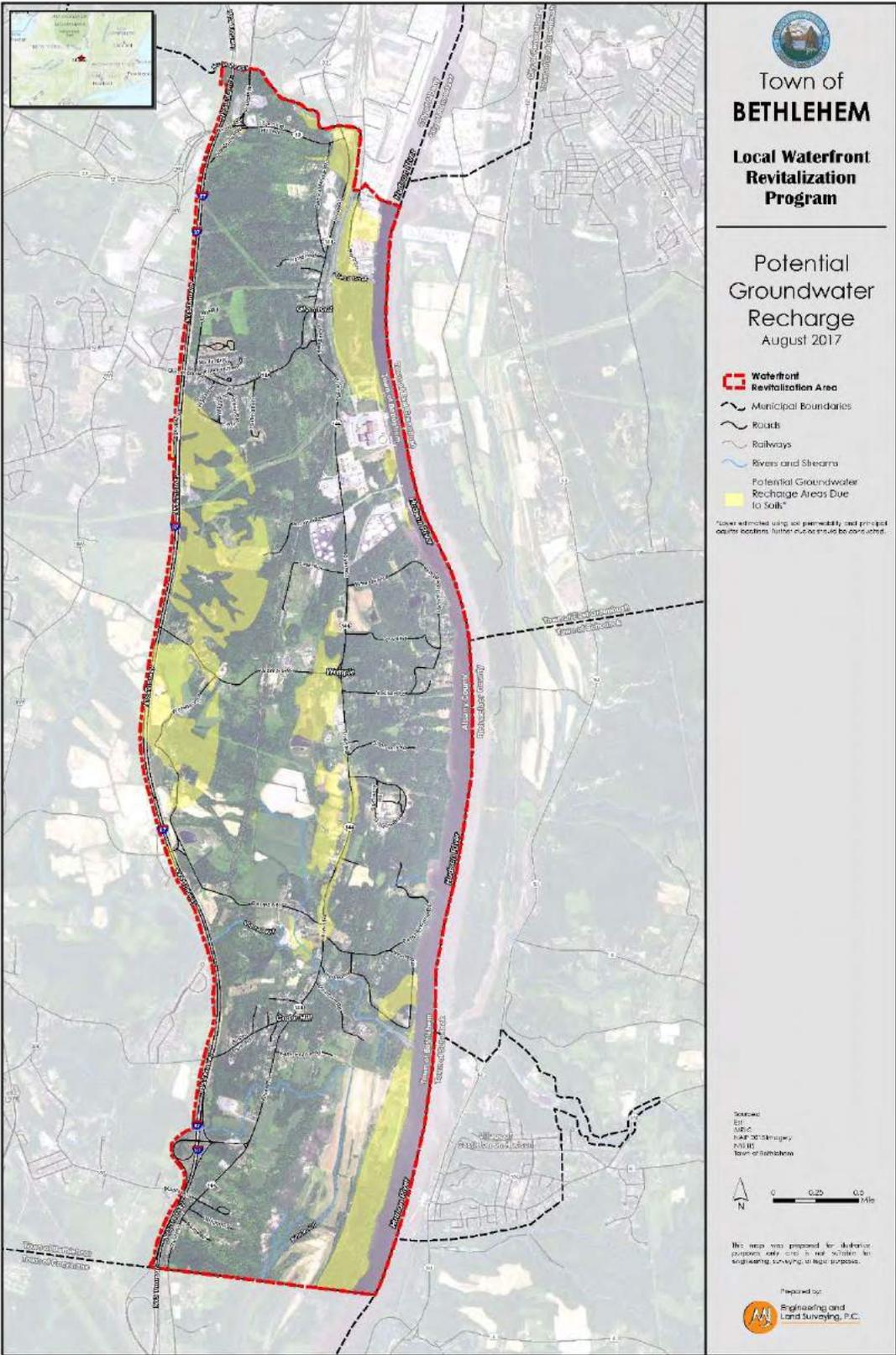
## GROUNDWATER

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Potential groundwater recharge areas (the percolation of rainwater through highly permeable soils) may contain an aquifer and highly permeable soils that could be protective of groundwater quality and quantity by contributing to groundwater recharge and the filtration of pollutants through soils. Aquifers are defined as saturated geologic zones in sediments and bedrock that receive, store, and transmit significant amounts of water to wells and springs. Groundwater recharge areas are unconsolidated water-table aquifers recharged rapidly by water percolating through permeable overlying material.

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<sup>43</sup> Hudson River Habitat Restoration, NY, June 2019 - Draft Integrated Feasibility Report and Environmental Assessment



The groundwater recharge areas illustrated on the [Potential Groundwater Recharge Map](#) are important to the ecosystems of groundwater-fed streams, as well as continuing to provide clean drinking water for residents who rely on wells.

## FLORA AND FAUNA

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This section provides details about flora and fauna found in the WRA. Flora refers to plant life and fauna refers to wildlife. Land cover is also discussed in this subsection as it relates to the significant amount of flora and fauna within the WRA. There are three (3) primary habitats within the WRA. These area habitats are the Hudson River, the Normans Kill, and the Shad and Schermerhorn Islands that span the border between the Town of Coeymans and the Town of Bethlehem. Shad and Schermerhorn Islands are located approximately one and one-half miles east of the hamlet of Selkirk, on the western shore of the Hudson River, across from the Village of Castleton-on-Hudson.

The Hudson River is a natural community and is classified as a subtidal wetland. The Hudson River is a unique water body because it is an estuary that experiences tidal flows. Tidal flows create a unique estuary habitat for a variety of aquatic creatures and serves as spawning and nursery ground for fish and shellfish species. More than 200 species of fish and numerous endangered and threatened species exist within the river and its tributaries. The estuary contains the only significant acreage of tidal freshwater wetlands within the state. Tidal freshwater wetlands aid in flood protection, erosion control, wildlife and food habitat, commercial fisheries, water quality, and recreation.

According to the New York Natural Heritage Program, the Hudson River is thought to be the world's longest tidal river, reaching 150 miles. According to the Hudson River Estuary Action Agenda prepared by the New York State Department of Environmental Conservation, the Hudson River provides a unique estuary habitat for a variety of aquatic creatures and serves as a spawning and nursery ground for important fish and shellfish species, including, but not limited to, striped bass, American shad, Atlantic Sturgeon, shortnose sturgeon, blue crab, glass eels and river herring. Shortnose and Atlantic Sturgeon, which inhabit the Hudson River, are amongst the oldest living fish species.

The Shad and Schermerhorn Islands comprise a relatively large, undeveloped, floodplain ecosystem on the Hudson River. Important littoral zone areas are located between the deepwater channel and the shoreline of the islands. This type of habitat serves as a nursery area for young herring, shad, striped bass, and white perch, as well as spawning and feeding areas for resident freshwater species in the Hudson River. This area, covering approximately 1,000 acres, is comprised of riverine littoral zones, freshwater wetlands, two (2) sizeable tributary streams (the Binnen Kill and Vloman Kill), floodplain forest, cliffs, and active agricultural lands. Portions of the habitat have been modified by dredge soil disposal.

The Natural Resource Inventory of the Binnen Kill and Tidal Freshwater Wetlands (NRI) completed for the NYSDEC and New England Interstate Water Pollution Control Commission identifies ecological communities, including occurrence of rare or endangered species and other natural features. The NRI serves as a basis for developing a management consensus that reconciles existing natural functions,

conservation priorities, and potential future management actions with the needs and rights of existing landowners.

Appendix E includes the NRI’s Ecologically Significant Habitats Map, which reflects the types of habitats located along Binnen Kill. Using a variety of records, the New York Natural Heritage Program has identified plant species that exist or were recorded within the WRA. Both categories are listed in the tables below. Appendix E of the LWRP also includes a map<sup>44</sup> depicting areas within the Town of Bethlehem where rare species and significant natural communities have been recorded. These areas are concentrated mostly in the eastern half of the WRA. Table 20 identifies confirmed species within the WRA. Although recent documentation is not available, it is possible that the species listed in the table may still exist within the WRA.

**Table 20: Confirmed Plants and Wildlife**

Common Name	Scientific Name	Subgroup	State or Federal Protection Status
Davis’ Sedge	<i>Carex davisii</i>	Sedges	Threatened
Delmarva Beggar-ticks	<i>Bidens bidentoides</i>	Asters, Goldenrods and Daisies	Rare
Mock-pennyroyal	<i>Hedeoma hispida</i>	Other Flowering Plants	Threatened
Side-oats Grama	<i>Bouteloua curtipendula</i> <i>var. curtipendula</i>	Grasses	Endangered
Troublesome Sedge	<i>Carex molesta</i>	Sedges	Threatened
Violet Wood-sorrel	<i>Oxalis violacea</i>	Other Flowering Plants	Threatened
Cobra Clubtail	<i>Gomphus vastus</i>	Dragonflies	Not Listed
Russet-tipped Clubtail	<i>Stylurus plagiatus</i>	Dragonflies	Not Listed

*Source: New York State Department of Environmental Conservation New York Natural Heritage Program*

**Table 21: Potential Plants and Wildlife**

Common Name	Scientific Name	Subgroup	State or Federal Protection Status
Alewife Floater	<i>Anodonta implicata</i>	Freshwater Mussels	Not Listed
Eastern Pondmussel	<i>Ligumia nasuta</i>	Freshwater Mussels	Not Listed
Tidewater Mucket	<i>Leptodea ochracea</i>	Freshwater Mussels	Not Listed
Yellow Lampmussel	<i>Lampsilis cariosa</i>	Freshwater Mussels	Not Listed
Riverine Clubtail	<i>Stylurus amnicola</i>	Dragonflies	Not Listed
Woodland Agrimony	<i>Agrimonia rostellata</i>	Other Flowering Plants	Threatened
Estuary Beggar-ticks	<i>Bidens hyperborea var.</i> <i>hyperborea</i>	Asters, Goldenrods and Daisies	Endangered
Green Rock-cress	<i>Boechera missouriensis</i>	Other Flowering Plants	Threatened
Glaucous Sedge	<i>Carex glaucoidea</i>	Sedges	Threatened
Great Plains Flatsedge	<i>Cyperus lupulinus ssp.</i> <i>lupulinus</i>	Sedges	Threatened
Cut-leaved Evening-primrose	<i>Oenothera laciniata</i>	Other Flowering Plants	Endangered
American Waterwort	<i>Elatine americana</i>	Other Flowering Plants	Endangered

<sup>44</sup> <http://www.dec.ny.gov/natureexplorer/app/>

Common Name	Scientific Name	Subgroup	State or Federal Protection Status
Swamp Lousewort	<i>Pedicularis lanceolata</i>	Other Flowering Plants	Threatened
Small's Knotweed	<i>Polygonum aviculare ssp. buxiforme</i>	Other Flowering Plants	Endangered
Northern Bog Violet	<i>Viola nephrophylla</i>	Other Flower Plants	Endangered

*Source: New York State Department of Environmental Conservation New York Natural Heritage Program*

Several types of aquatic vegetation are located along the Bethlehem waterfront. Submerged Aquatic Vegetation (SAV) and Unvegetated Flats are predominant in areas adjacent to the Hudson River. SAV is important for providing and improving habitat for fish populations as well as its contribution to primary production, the production of organic compounds from inorganic elements. Further inland, but still east of State Route 144/River Road, Graminoid Vegetation and Tree Swamps are present. Graminoid Vegetation is the wetlands zone that is periodically flooded with fresh tidal waters while Tree Swamps are the areas characterized by trees (i.e. Maple Trees) that are sporadically submerged by fresh tidal waters.

According to the United States Fish and Wildlife Service, one (1) mammal with a status of threatened has the potential to exist within the WRA. No mammals with a status of endangered are listed for the WRA and no critical habitats are listed to exist in this location. The threatened mammal is the Northern Long-eared Bat (*Myotis septentrionalis*). The Northern Long-eared Bat is a temperate, insectivorous bat whose life cycle can be coarsely divided into two (2) primary phases and they are reproduction and hibernation. The Northern Long-eared Bat hibernates in caves or mines during winter and then emerges in early spring. The Northern Long-eared Bat is sensitive to fragmentation and urbanization and requires interior forest for both foraging and breeding roost trees. In currently built out or residential areas, projects are not anticipated to disturb the Northern Long-eared Bat, due to the lack of an appropriate habitat for foraging and breeding.

**Table 22: Threatened/Endangered Mammals**

Common Name	Scientific Name	Status
Northern Long-eared Bat	<i>Myotis Spetentrionalis</i>	Threatened

*Source: United States Fish and Wildlife Services*

According to the United States Fish and Wildlife Services, seventeen (17) migratory birds of conservation concern have the potential to exist within the WRA and could potentially be affected by activities within the area. The birds of conservation concern with the potential to exist within the WRA are listed in the following table.

**Table 23: Migratory Birds of Conservation Concern**

Common Name	Scientific Name	Status
American Bittern	<i>Botaurus lentiginosus</i>	Bird of Conservation Concern
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Bird of Conservation Concern
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Bird of Conservation Concern
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>	Bird of Conservation Concern

Common Name	Scientific Name	Status
Blue-winged Warbler	Vermivora pinus	Bird of Conservation Concern
Canada Warbler	Wilsonia Canadensis	Bird of Conservation Concern
Golden-winged Warbler	Vermivora chrysoptera	Bird of Conservation Concern
Least Bittern	Ixobrychus exilis	Bird of Conservation Concern
Olive-sided Flycatcher	Contopus cooperi	Bird of Conservation Concern
Peregrine Falcon	Falco peregrines	Bird of Conservation Concern
Pied-billed Grebe	Podilymbus podiceps	Bird of Conservation Concern
Prairie Warbler	Dendroica discolor	Bird of Conservation Concern
Red-headed Woodpecker	Melanerpes erythrocephalus	Bird of Conservation Concern
Short-eared Owl	Asio flammeus	Bird of Conservation Concern
Upland Sandpiper	Bartramia longicauda	Bird of Conservation Concern
Willow Flycatcher	Empidonax traillii	Bird of Conservation Concern
Wood Thrush	Hylocichla mustelina	Bird of Conservation Concern

Source: United States Fish and Wildlife Services

## INVASIVE SPECIES

Marine invasive species are live marine plants and animals (including their seeds, eggs, spores or other biological structures) that cause harm when intentionally or unintentionally introduced into a marine, estuarine or brackish ecosystem where they are not native. Some invasive species are capable of being extremely destructive in their new environments. Plant and animal species such as Eurasian watermilfoil, Water Chestnut, Zebra mussel, Quagga mussel, and Asian clam are some of the more common aquatic invasive species (AIS) found at the Henry Hudson Park.

The Eurasian Watermilfoil has stems usually 3 to 10 feet in length and can range from pale pink to reddish brown in color. Bright green feathery leaves are finely divided and occur in whorls (circles) around the stem. Each leaf has 12-21 leaflet pairs. Native northern watermilfoil which it can commonly be confused with has 5-10 leaflet pairs.



The Water Chestnut has very flexible stems that can reach 12 to 15 ft. in length. On the water surface the plant contains a circular cluster of saw-toothed edged, triangular floating leaves that are connected to an inflated petiole (bladder) that provides added floatation. Featherlike leaves can be found along the submerged stem. Fruit is a nut with four 1/2-inch barbed spines.



Zebra Mussel has a shell shaped like a “D” usually with dark and light-colored stripes. Usually under 1 inch in size at maturity.



The Quagga Mussel is similar to the zebra mussel but more round in shape and has a pale color near the hinge. Average size is similar to the zebra mussel, although some can grow slightly larger.





Asian Clam has a triangular or rounded triangular shell usually around 1 inch in length. This clam is light brown in color with numerous rings on outside of shell. The inside of the shell is light blue or light purple in color.

Boaters must ensure that the watercraft that they own, or use do not spread AIS. Some of these species were first introduced into this country in the Great Lakes via the ballast water in large ocean-going vessels. Recreational boaters have since assisted in the spread of these species from these locations of initial introduction. Although boats are not the only way that AIS are spread from water to water, they are a significant vector that must be addressed. AIS can range from easy to detect aquatic plants to plankton and larval mussels that can only be spotted with a microscope. These microscopic species can survive in any standing water that remains in a boat or trailer. The only way to ensure that these species are not introduced into a new waterbody is to carefully check, clean and dry any boat, trailer or boating equipment that comes into contact with water. If drying is not possible, anything coming into contact with water must be adequately disinfected<sup>45</sup>.

Outreach and education are the most effective way to combat the spread of aquatic invasive species. The more people are made aware of the necessity of cleaning and drying boating and fishing equipment before using it in another waterbody, the less likely the aquatic invasive species will be spread to new waters. DEC has prepared guidance/reminder sign templates that are available for use at private access points<sup>46</sup>.

### **SEASONAL AMPHIBIAN MIGRATIONS**

While amphibians spend much of the year in their terrestrial habitats most breed in woodland pools, a type of small, temporary wetland found in forests. During early spring rains when temperatures rise above freezing, these amphibians migrate to breeding pools by the hundreds, if not thousands. The Hudson River Estuary Program and Cornell University Department of Natural Resources are working together to conserve forests, woodland pools and the wildlife that depend on these critical habitats. Because Bethlehem has numerous wetlands, in 2012, residents<sup>47</sup> helped monitor the migrations of woodland pool amphibians. This information is used for community planning and for groups of volunteers interested in starting "crossing guard" programs for the breeding season. It is also used to learn whether the timing of spring migrations is shifting due to climate change<sup>48</sup>.

## **SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS**

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The abundant fish and wildlife found in New York's coastal areas, particularly its estuaries, have long been recognized as important food resources and for their recreational and commercial value. The decline of certain species (often the rarer species) is frequently an early symptom of environmental

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<sup>45</sup> NYSDEC, A New York Boaters Guide to Cleaning, Drying and Disinfecting Boating Equipment

<sup>46</sup> Aquatic Invasive Species Outreach and Education Materials - <http://www.dec.ny.gov/outdoor/85939.html>

<sup>47</sup> <https://blog.timesunion.com/bethlehem/7723/its-amphibian-migration-time/>

<sup>48</sup> Conservation and Land Use Program for the Hudson River Estuary Watershed - <http://www.dec.ny.gov/lands/51925.html>

stress and degradation. Diversity of flora and fauna provides stability to an ecosystem. In addition, these living resources contribute to the productivity of coastal environments through their conversion of energy and recycling of materials. Use of all coastal resources is, however, constrained by the realization that to assure a reasonable quality of life for the long term, the coastal resources essential to society must be carefully husbanded. Hence, the basic goal of New York's fish and wildlife management programs has been to protect, manage, and develop these resources so that they sustain their capacity to continue providing these economic, social, and ecological benefits. This frugal use necessitates strong protection measures for certain fragile or rapidly diminishing resources.

Coastal habitats identified as important and being in need of protection have been mapped and designated as Significant Coastal Fish and Wildlife Habitats (SCFWH) by the Department of State, following the recommendations of the New York State Department of Environmental Conservation (DEC) which previously evaluated the significance of the coastal fish and wildlife habitat. For each designated SCFWH site, a habitat map and narrative are created to provide site-specific information. The narrative constitutes a record of the basis for the habitat's designation and provides specific information regarding the fish and wildlife resources that depend on its condition. General information is also provided to assist in evaluating impacts of proposed activities on characteristics of the habitat which are essential to the habitat's values. The protection of SCFWH within the Bethlehem WRA is the focus policies 7, 7A and 7B included in Section III of the LWRP.

Normans Kill and Shad and Schermerhorn Islands are SCFWHs located within the Bethlehem WRA. Maps and detailed descriptions of these two SCFWHs are included in Appendix C.

### **NORMANS KILL SCFWH**

The Normans Kill SCFWH is an approximate two-mile segment of the Normans Kill, extending from its mouth on the Hudson River to a fall which is located just downstream from the New York State Thruway (Interstate Route 87) bridge. The Normans Kill is a relatively large, medium gradient, perennial, warmwater stream, with a drainage area of over 170 square miles, and an average annual discharge volume of approximately 150 cubic feet per second. The first mile of stream below the falls flows through a steep-sided wooded gorge, and is relatively shallow, with a gravelly substrate. The lower mile of the creek (referred to as "Island Creek") is within the tidal range of the Hudson River, and is relatively deep, with a silt and clay substrate. At least part of this segment was channelized in the past and its mouth relocated south in conjunction with nearby commercial and industrial developments. Despite its proximity to the Port of Albany, the Normans Kill and its associated riparian zone remain in a relatively natural condition.

Several wetland areas are found along the creek in addition to a floodplain forest in the southeast portion of the habitat. Submerged aquatic vegetation beds, mainly water celery (*Vallisneria americana*), are found around the mouth of the creek. Habitat disturbance in the area can be attributed to the presence of road and railroad crossings, litter, discharges of stormwater runoff from paved areas, and stream channel alterations<sup>49</sup>.

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<sup>49</sup> <http://www.dos.ny.gov/opd/programs/consistency/scfwhhabitats.html>

The Normans Kill is the largest tributary stream in Albany County, and is one of about 4 major tributaries emptying into the northern portion of the Hudson River estuary. The length of stream channel accessible to migratory fishes and the lack of significant human disturbance in the upper portion of the creek provide favorable habitat conditions in the Normans Kill for a variety of coastal migratory as well as resident freshwater fish species. The Normans Kill is an important spawning area for several fishes: alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*) and white perch (*Morone americana*).

Generally, these species enter the stream between April and June; the adults leave the area shortly after spawning, and within several weeks, the eggs have hatched, and larval fish begin moving downstream to nursery areas in the Hudson River. A substantial population of smallmouth bass (*Micropterus dolomieu*) also occurs in the Normans Kill throughout the year. Adults move into the upper section of the creek in May and early June to spawn and return to deeper areas as water temperatures rise. American eels also make use of this creek. The submerged aquatic vegetation provides food and refuge for fish and invertebrates. Appendix C of the LWRP includes a map of the Normans Kill SCFWH, and additional information about it.

#### **SHAD AND SCHERMERHORN ISLANDS SCFWH**

The Shad and Schermerhorn Islands are also significant coastal fish and wildlife habitats (SCFWH). These islands located approximately one and one-half miles east of the hamlet of Selkirk, on the western shore of the Hudson River, in the towns of Bethlehem and Coeymans, across from the Village of Castleton-on-Hudson, comprise a relatively large and undeveloped floodplain ecosystem on the Hudson River. Important littoral zone areas are located between the deep-water navigation channel and the shoreline of the islands. This type of habitat serves as a nursery area for young herring, shad, striped bass, and white perch, as well as spawning and feeding areas for resident freshwater species in the Hudson River.

This fish and wildlife habitat area, covering approximately 1100 acres, is comprised of riverine littoral zones, submerged aquatic vegetation beds, freshwater wetlands, two sizeable tributary streams (the Binnen Kill and Vloman Kill), floodplain forest, cliffs, and active agricultural lands. The Vloman Kill is a medium gradient, warm water stream, with a gravelly substrate, and a drainage area of approximately 30 square miles. Substantial areas of shallow secondary channel habitat were filled with dredged material behind the historic islands connecting them to the mainland.

A number of listed plants are found in the wetland portion of this habitat: Hudson River water nymph (*Najas guadalupensis* ssp. *muenscheri*) (E), heartleaf plantain (*Plantago cordata*)(T), Davis' sedge (*Carex davisii*) (T), and Northern estuary beggar ticks (*Bidens hyperborea* var *heperborea*) (E). The invasive plants purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*) and water chestnut (*Trapa natans*) are also present.

A sewage treatment plant is located along the south side of the Vloman Kill near its mouth. Most of the land adjacent to Schermerhorn and Shad Islands is made up of large, privately owned estates. Therefore, access for public use is restricted from the landward side. However, the area is generally accessible by boat, along the Hudson River and in the lower end of the Vloman Kill. This provides access for fishing

and waterfowl hunting, primarily by Albany County residents. The fish and wildlife habitat within the Towns of Bethlehem and Coeymans covers approximately 1,000 acres and is comprised of riverine littoral zones, freshwater wetlands, two (2) sizeable tributary streams (the Binnen Kill and Vloman Kill), floodplain forest, cliffs, and active agricultural lands. Portions of the habitat have been modified by dredge soil disposal. Appendix C of the LWRP includes a map and additional information about the Shad and Schermerhorn Islands SCFWH<sup>50</sup>.

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## WETLANDS

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Wetlands are transition areas between uplands and aquatic habitats that are a breeding ground for vegetation, fish, and wildlife. Standing water is only one clue that a wetland may be present. Many wetlands only have visible water during certain seasons of the year. Areas designated as wetlands may include bogs, swamps, marshes, wet meadows, flood plains, and hydric soils. Wetlands provide critical flood and stormwater control functions. They absorb, store, and slow down the movement of rain and melt water, minimizing flooding and stabilizing water flow. Wetlands often serve as groundwater discharge sites; maintaining base flow in streams and rivers; and supporting ponds and lakes. In some places, wetlands are very important in recharging groundwater supplies. Wetlands also improve water quality by absorbing pollutants and reducing turbidity. Wetlands slow water velocity and filter sediments, protecting streams, lakes, reservoirs and navigational channels. They also buffer shorelines and agricultural soils from water erosion. Wetlands cleanse water by filtering out natural and many manmade pollutants, which are then broken down or immobilized. In wetlands, organic materials are also broken down and recycled back into the environment, where they support the food chain<sup>51</sup>. Wetlands can remove 20 to 60% of metals in the water, trap and retain 80 to 90% of sediment from runoff and eliminate 70 to 90% of entering nitrogen. Many types of plants are specially adapted to different kinds of wetlands, and a large percentage of the nation's imperiled plants and animals depend on wetlands for at least part of their life cycle.

Federal regulations define wetlands as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions<sup>52</sup>.” Wetlands are lands transitional between terrestrial and deep-water habitats where the water table usually is at or near the land surface or the land is covered by shallow water (Cowardin and others, 1979). Wetlands can be vegetated or non-vegetated and are classified based on their hydrology, vegetation, and substrate. At the most general level of the classification system, wetlands are grouped into five ecological systems: Palustrine, Lacustrine, Riverine, Estuarine, and Marine. The Palustrine System includes only wetlands, whereas the other systems comprise wetlands and deep-water habitats<sup>53</sup>.

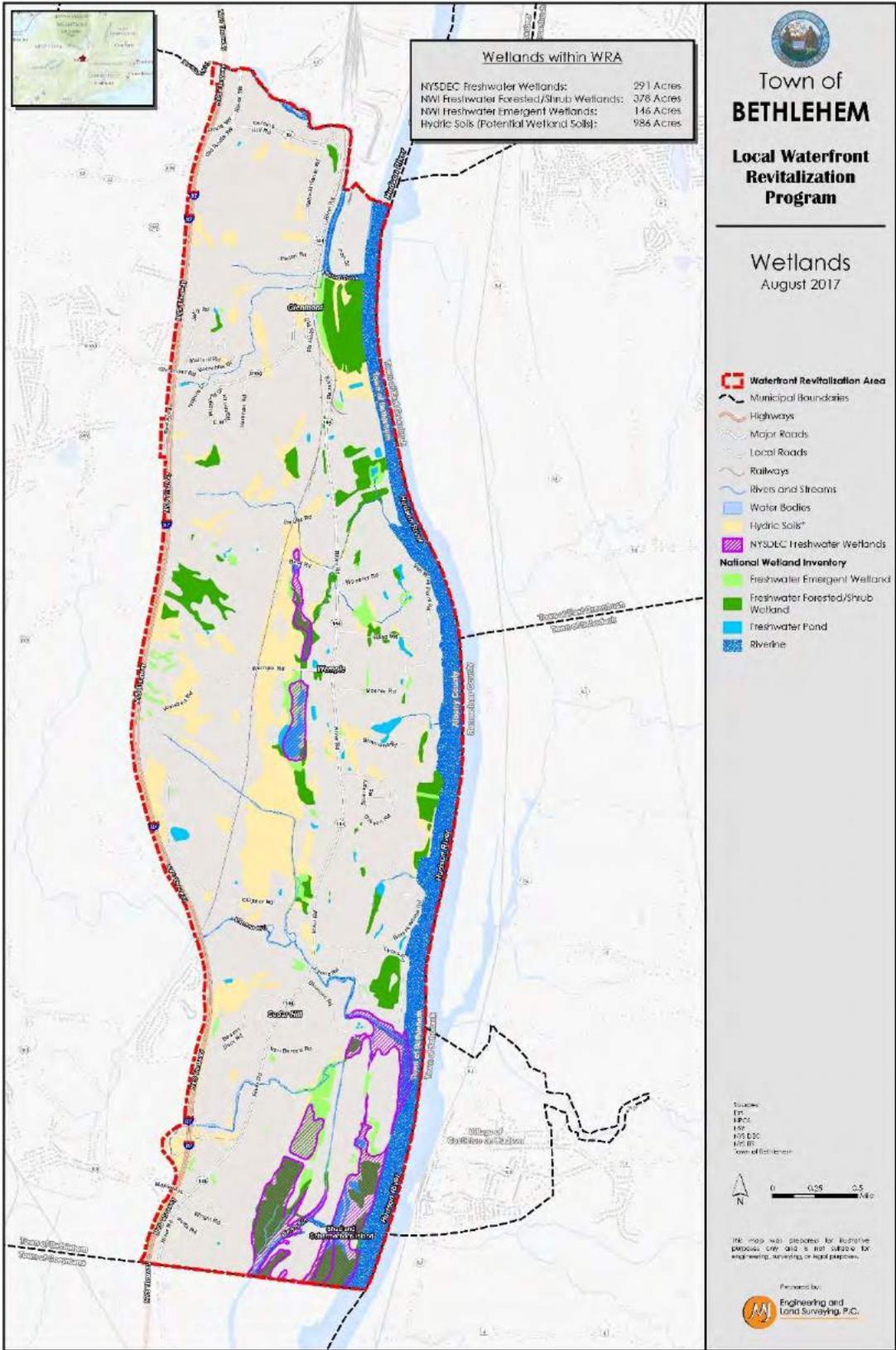
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<sup>50</sup> <http://www.dos.ny.gov/opd/programs/consistency/scfwhabitats.html>

<sup>51</sup> NYS DEC Freshwater Wetlands Program - <http://www.dec.ny.gov/lands/4937.html>

<sup>52</sup> Planner's Guide to Wetland Buffers or Local Governments, Environmental Law Institute

<sup>53</sup> National Water Summary on Wetland Resources-New York



The most significant cluster of wetlands within the WRA is in the southeastern portion of the Town, along the Hudson River. The following types of surface waters and wetlands are identified throughout the Bethlehem WRA in the National Wetlands Inventory<sup>54</sup>:

- Freshwater Forested/Shrub Wetlands such as PFO1E, PSS1, PFO1B, and PFO1R- Palustrine System of nontidal and tidal wetlands where surface water is present for extended periods during the growing season but is absent by the end of the season in most years. When surface water is absent, the substrate typically remains saturated at or near the surface.
- Freshwater Emergent Wetlands such as PEM1E, PEM5/1E, PEM1F - Palustrine System of nontidal and tidal wetlands usually characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens and dominated by perennial plants; and, where surface water is present for extended periods during the growing season, but is absent by the end of the season in most years, when the substrate typically remains saturated at or near the surface.
- Freshwater pond such as PUBF, PUBH, PUBHh, and PUBHx - Palustrine System of nontidal and tidal wetlands with salinity under 0.5 ppt, where water covers the substrate throughout the year in all years, and which have been created/modified by a man-made barrier or dam that obstructs the inflow or outflow of water or excavated by humans.
- Riverine, such as R1UBV (Hudson River and Normans Kill), R3UBH (Binnen Kill), R4SBC - Riverine System including all wetlands and deep-water habitats contained within a channel. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water. The Riverine System within the Bethlehem WRA could include one of the following subsystems: Tidal subsystem (for Hudson River and Normans Kill) that extends from the upstream limit of tidal fluctuations down to the upper boundary of the Estuarine System, where the concentration of ocean-derived salts reaches 0.5 ppt during the period of average annual low flow; Upper Perennial subsystem (Binnen Kill) characterized by a high gradient, no tidal influence and very little floodplain development; and, Intermittent subsystem with channels that contain flowing water only part of the year.

The National Wetlands Inventory (NWI) maps are produced by the U.S. Fish and Wildlife Service (USFWS) and contain information on the location and characteristics of wetlands and deep-water habitats. Wetlands are classified using the method described in the Classification of Wetlands and Deepwater Habitats of the United States, published by the U.S. Fish & Wildlife Service.

The map indicating the location of the freshwater wetlands subject to the NYS DEC Article 24 shows four freshwater wetlands. These are regulated by the New York State Department of Environmental Conservation (NYS DEC), under the New York State Freshwater Wetlands Act, and cover approximately 291 acres within the WRA. Also, in order to help better protect the wetland against surrounding disturbance, the adjacent area around a state- protected wetland called check zone is also subject to regulations. This check zone is a minimum of 100 feet. The New York State Department of Environmental Conservation generally regulates all wetlands that are 12.4 acres or more. Wetlands are

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<sup>54</sup> US FWS National Wetlands Inventory, Wetlands Mapper - <https://www.fws.gov/wetlands/data/Mapper.html>

classified from Class I (which provide the most benefits) to Class IV (which provide fewer benefits). The classification is based on the work that wetlands do, such as storing flood water and providing wildlife habitat. The system for classifying wetlands is contained in the New York State wetlands Classification System<sup>55</sup>.

The State-regulated wetlands within the WRA are Class II and illustrated on the [Wetland Map](#).

Where federal and state regulatory programs do not apply, local governments remain the only authority that could protect wetlands. However, local governments may protect wetlands by ensuring that land uses that occur on wetlands and around them are compatible with the natural processes occurring in wetlands and preserve their ecological functions and services.

Local governments can also control the pattern of development on and around wetlands to avoid reducing the original capacity of a wetland to store stormwater. Stormwater management plans pursuant to NYSDEC stormwater regulations and local government regulations provide for the management of stormwater as a result of development. Pre-development drainage patterns are required to be maintained through direction of flow and retention of water on site. Related local regulations enacted by the Town of Bethlehem are described in Section V of the LWRP. Table 24 identifies the types of regulated wetlands and the surface they cover within the WRA

**Table 24: Protected Wetlands**

Wetlands	Acres
Hydric Soils	986
NWI Freshwater Forested/Shrub Wetlands	378
NYSDEC Freshwater Wetlands	291
NWI Freshwater Emergent Wetlands	146

*Source: National Wetlands Inventory and New York State Department of Environmental Conservation*

Hydric soils comprise approximately 986 acres. The hydric soils are potential wetland soils. The majority of the hydric soils within the WRA are located with the central portion of the WRA. Wetlands classified as woody make up approximately 394 acres and Emergent Herbaceous Wetlands make up approximately 333 acres of the WRA.

The diversity of wildlife, the estuary habitat, and the natural physical landscape in the WRA was something the Local Waterfront Revitalization Advisory Group (LWRAG) envisioned as a basis for a nature-based tourism strategy to allow residents and visitors to enjoy the natural environment of the Hudson River. The WRA would benefit from a nature-based and heritage tourism strategy focused on the Hudson River.

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<sup>55</sup> 6 CRR-NY 664.5 Classification System

## WATER QUALITY STANDARDS AND CLASSIFICATION

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Water Quality Standards are the basis for programs to protect the state waters. Standards set forth the maximum allowable levels of chemical pollutants and are used as the regulatory targets for permitting, compliance, enforcement, and for monitoring and assessing the quality of the state's waters. Waters are classified for their best uses (fishing, source of drinking water, etc.) and standards (and guidance values) are set to protect those uses.

The water quality standards program administered by the NYS Department of Environmental Conservation (DEC) is a state program with federal oversight by the United States Environmental Protection Agency (US EPA). U.S. EPA defines a water quality standard to include the criteria, the designated (best) uses of the water, and an antidegradation policy. Information regarding the New York State Water Quality Standards Program can be found in state regulation, specifically New York Codes, Rules and Regulations Title 6 (6 NYCRR) and guidance documents found in the Division of Water Technical and Operational Guidance Series (TOGS). DEC establishes water quality standards and other criteria for many specific substances. These standards can be either narrative (e.g., "none in amounts that will impair ...") or numeric (e.g., "0.001 µg/L") and are found in NYS regulation 6 NYCRR Part 703<sup>56</sup>.

All waters in New York State are assigned a letter classification that denotes their best uses. Letter classes such as A, B, C, and D are assigned to fresh surface waters, and SA, SB, SC, I, and SD to saline (marine) surface waters. Best uses include source of drinking water, swimming, boating, fishing, and shellfishing. The letter classifications and their best uses are described in regulation 6 NYCRR Part 701. The classification of individual bodies of surface water is in regulation 6 NYCRR Chapter X (Parts 800 - 941). Surface waters of the State may be reclassified.

The best use of Class GA groundwater (all fresh groundwater in New York State is Class GA) and Class A, A-Special, AA, and AA-Special surface waters is a source of potable water supply. Standards and guidance values of the Health (Water Source) Type are established for these waters to protect this use. Separate standards for drinking water are promulgated by the New York State Department of Health (NYS DOH).

The surface waters within the WRA include portions of the Hudson River, the Normans Kill/Island Creek, the Vloman Kill, and the Binnen Kill. All surface waters found within the WRA are Class C, which indicates suitability for fish, shellfish and wildlife propagation and survival<sup>57</sup>. The best usage of these waters is fishing.

Also, according to 6 CRR-NY 701.8 this water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. Primary contact recreation means recreational activities where the human body may come in direct contact with raw water to the point of complete body submergence. Primary contact<sup>58</sup> recreation includes, but is not limited to,

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<sup>56</sup> NYS Department of Environmental Conservation, Water Quality Standards and Classifications - <http://www.dec.ny.gov/chemical/23853.html>

<sup>57</sup> Part 701 Classifications--Surface Waters and Groundwaters

<sup>58</sup> 6 CRR-NY 700.1

swimming, diving, water skiing, skin diving and surfing. Secondary contact recreation means recreational activities where contact with the water is minimal and where ingestion of the water is not probable. Secondary contact recreation includes, but is not limited to, fishing and boating.

**Table 25: NYS DEC Water Classifications**

Water Classification Letter	Description of Best Uses
A	A source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish and wildlife propagation and survival.
B	The best usages for Class B are primary and secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival.
C	The best usage of Class C waters is fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.
D	The best usage of Class D waters is fishing. Due to such natural conditions as intermittency of flow, water conditions not conducive to propagation of game fishery, or stream bed conditions, the waters will not support fish propagation. These waters shall be suitable for fish, shellfish and wildlife survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

*Source: New York State Department of Environmental Conservation*

The Hudson River serves as eastern boundary of the WRA. This portion of the Hudson River is a part of the Lower Hudson Watershed. Surface water quality in the Lower Hudson Watershed varies and is influenced by a wide range of pollutants and sources. These pollutants and sources may include, combined sewer overflows, and urban/stormwater runoff. Additionally, commercial and residential development increase impacts from runoff and wastewater discharges. Agricultural activity can also be a source of stormwater pollution if proper erosion control measures are not in place.

Protecting water quality of the Hudson River and its tributaries within the WRA would benefit from stream buffers in general. A healthy stream buffer improves stream health and water quality by slowing runoff, filtering pollution, preventing soil erosion, contributing essential nutrients to the food chain through leaf litter, providing woody debris for in-stream habitat, and shading the stream to keep waters cool. Buffers also absorb and slow flood waters, which protects property and human safety. Property owners can protect streams by allowing native trees, shrubs and vegetation to grow. The roots will hold stream banks and absorb flood waters. Municipalities can enact local buffer ordinances to protect stream buffers from development. Conservation groups can purchase conservation easements to legally protect streams in perpetuity<sup>59</sup>.

<sup>59</sup> Stream Buffers, A Tool for Watershed Protection, NYS DEC - [https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/hrewfssb1.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/hrewfssb1.pdf)

The NYS DEC provides funding through the Hudson River Estuary Program to implement priorities outlined in the Hudson River Estuary Action Agenda<sup>60</sup> aimed at conserving or improving clean water; fish, wildlife and their habitats; waterway access; the resiliency of communities; and river scenery. The importance of buffering streams was discussed by the LWRAG as a way to protect water quality and to serve as corridors for wildlife.

The Town will identify ways to improve the existing local regulations related to stream buffers including expansion of the existing 100-ft. stream buffer to up to 300-ft. This expansion would improve water quality within the streams of the Hudson River Estuary.

### **HARMFUL ALGAL BLOOMS**

Most algae are harmless and are an important part of the food web. Certain types of algae can grow quickly and form blooms. Even large blooms are not necessarily harmful. However, some species of algae can produce toxins that can be harmful to people and animals. Blooms of algal species that can produce toxins are referred to as harmful algal blooms (HABs).

HABs usually occur in nutrient-rich waters, particularly during hot, calm weather and are likely triggered by a combination of water and environmental conditions that may include excess nutrients (phosphorus and nitrogen), lots of sunlight, low-water or low-flow conditions, calm water, and warm temperatures. Depending on the weather and the characteristics of the lake, HABs may be short-lived (appearing and disappearing in hours) or long-lived (persisting for several weeks or more).

Because it is hard to tell a HAB from non-harmful algal blooms, it is best to avoid swimming, boating, otherwise recreating in, or drinking water with a bloom. Never drink untreated surface water, regardless of whether algae blooms are present. Untreated surface water may contain bacteria, parasites or viruses, as well as algal toxins that could cause illness if consumed. People not on public water supplies should not drink surface water, especially during an algal bloom. Even if the water is treated, in-home treatments such as boiling, disinfecting water with chlorine or ultraviolet (UV), and water filtration units do not protect people from HABs toxins.

No HAB were reported<sup>61</sup> within the Bethlehem WRA until the end of 2019.

### **LAWN FERTILIZERS AND NUTRIENT RUNOFF LAW**

Fertilizer used on lawns can be carried by rain into streams, lakes and reservoirs. Fertilizer in surface water can create excess algae and plant growth. After many years of data collection and research, scientists concluded that phosphorus runoff poses a threat to water quality.

The New York State Environmental Conservation Law, article 17, title 21 (ENV § 17-2105) and Agriculture and Markets Law § 146-g limit the use of fertilizer including phosphorus. Phosphorus-containing fertilizer may only be applied to lawns or non-agricultural turf when a soil test indicates that additional

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<sup>60</sup> NYS DEC Hudson River Estuary Program, Hudson River Estuary Action Agenda - <https://www.dec.ny.gov/lands/5104.html>

<sup>61</sup> DEC's harmful algal bloom notification map - <https://nysdec.maps.arcgis.com/apps/webappviewer/index.html?id=ae91142c812a4ab997ba739ed9723e6e>

phosphorus is needed for growth of a lawn or non-agricultural turf, or the fertilizer is used for newly established lawns or non-agricultural turf during the first growing season.

Local governments are allowed by the ENV § 17-2105 to “enact more stringent standards for the application of fertilizer for lawn and non-agricultural turf than established in this title, provided, however, that any local government that enacts such standards after January 1, 2011 must demonstrate to the department prior to enactment that additional or more stringent standards are necessary to address local water quality conditions.”

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## **STORMWATER MANAGEMENT**

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Stormwater is water from rain or melting snow that does not soak into the ground but runs off into waterways. The water may flow from rooftops, over impervious surfaces, bare soil, and through sloped lawns picking up a variety of materials and contaminants on its way. As the stormwater runoff continues to flow, it collects and transports soil, animal waste, salt, pesticides, fertilizers, oil, grease, debris, and other potential pollutants. Stormwater runoff is untreated and discharged into the waterbodies that are potentially used for fishing, swimming, and drinking water. Runoff quality varies based on many factors, and depends on the season, local meteorology, geography, and what activities are found along the path of the flow.

The Town is a municipal separate stormwater sewer system (MS4) community and a member of the Albany County Stormwater Coalition<sup>62</sup>. An MS4 program is required within boundaries of a Census Bureau defined as an “urbanized area”. For the Town this is the Albany urbanized area. This program is regulated by the United States Environmental Protection Agency’s Phase II Stormwater Rule and requires MS4s to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to water bodies to the maximum extent practicable. The primary goal of the program includes improving water quality and recreational use of waterways. The program calls for the implementation of six (6) minimum control measures (MCM)<sup>63</sup> in order to reduce pollutant discharges. The MCMs are public education and outreach, public involvement and participation, illicit discharge detection and elimination (IDDE), construction site runoff control, post construction stormwater management, pollution prevention and good housekeeping for municipal operations, stormwater program management, and training-staff, planning/zoning board, and other municipal officials.

The Stormwater Coalition of Albany County is comprised of eleven (11) municipalities and the University at Albany who each provide mutual support and assistance in implementation of MS4 Permit requirements. The coalition was formed in 2008 by local governments in Albany County that previously participated in two (2) New York State Department of Environmental Conservation Water Quality Improvement Project Program (WQIP) grants.

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<sup>62</sup> <http://www.stormwateralbanycounty.org/stormwater-coalition/intermunicipal-agreement/>

<sup>63</sup> [https://www.dec.ny.gov/docs/water\\_pdf/ms4considerations.pdf](https://www.dec.ny.gov/docs/water_pdf/ms4considerations.pdf)

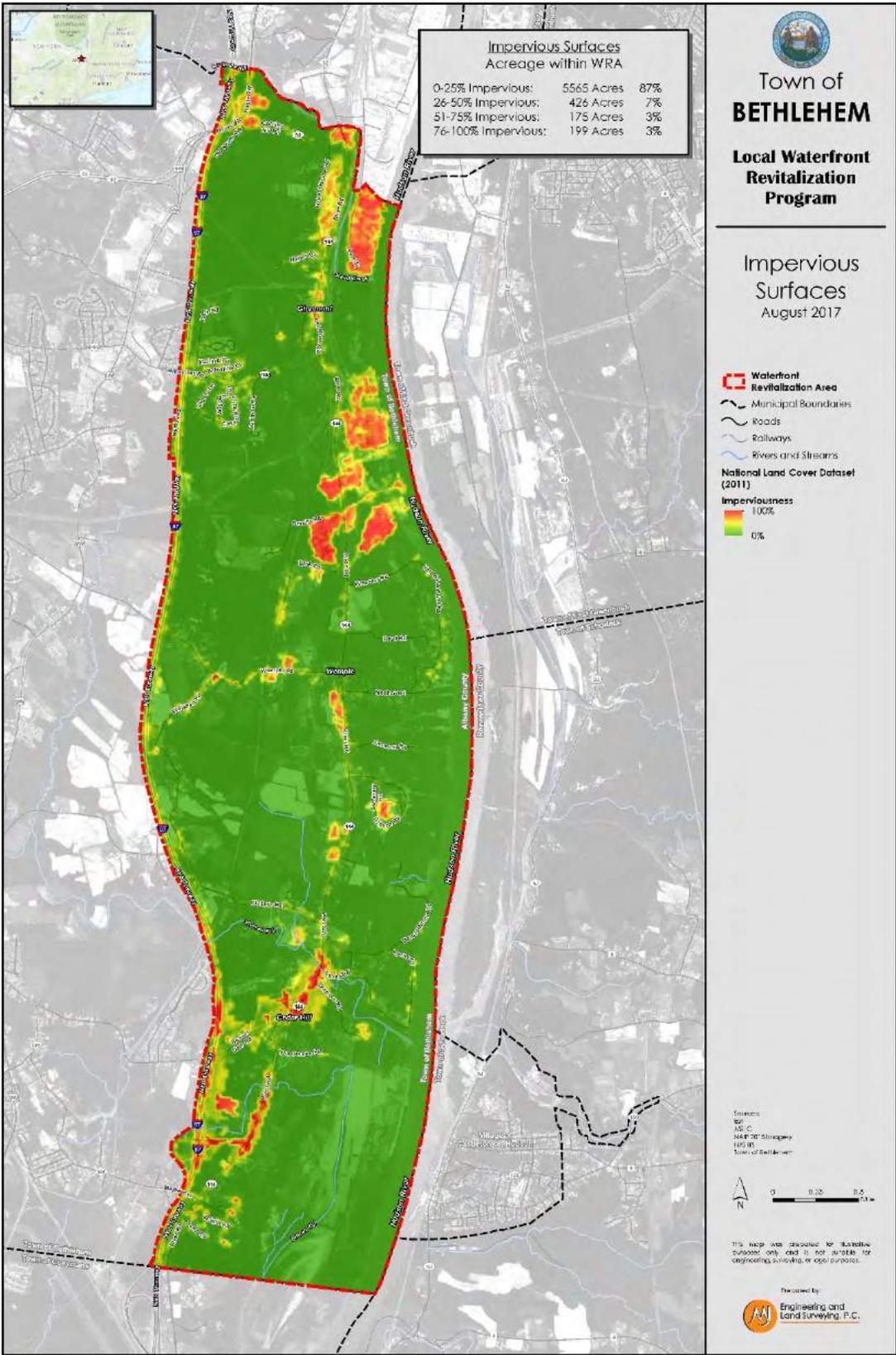


Table 26 identifies impervious surface percentages, while the [Impervious Surfaces Map](#) indicates the location of the most impervious surfaces within the WRA. Most of the land located within the WRA is mostly permeable.

**Table 26: Impervious Surfaces**

% Impervious	Acres
0-25%	5,565
26%-50%	426
51%-75%	175
76%-100%	199

*Source: Multi-Resolution Land Characteristics and National Agriculture Imagery Program*

## WASTE AND TOXIC SITES

The Hudson River is the only site within the Bethlehem WRA that is listed in the New York State Department of Environmental Conservation environmental site remediation database. The New York State Department of Environmental Conservation site code is 546031 and the site name is included as Hudson River PCB Sediments. Previous polychlorinated biphenyls (PCBs) contamination in the Hudson River from historical industrial use is well documented. Polychlorinated biphenyls, also known as PCBs, have polluted large stretches of the Hudson River since the late 1940s. The U.S. Environmental Protection Agency (EPA) has estimated that the two General Electric Company (GE) manufacturing facilities located in Fort Edward and Hudson Falls, New York, discharged up to 1.3 million pounds of PCBs into the river (EPA 2002), but the actual quantity of PCBs discharged into the river, while unknown, could be significantly higher. Since the mid-1970s, federal and state agencies and General Electric (GE) have collected over 10,000 water samples from the Hudson River and have tested these samples for PCBs. Approximately 85 percent of samples in the consolidated database contained PCBs, often at concentrations an order of magnitude or more above relevant state and federal regulatory criteria. The disposal of PCBs into the Hudson River has also led to significant environmental damage as defined in 6 NYCRR Part 375 Environmental Remediation Programs. The river has been included in the Federal National Priorities List. Remediation of the Hudson River is ongoing<sup>64</sup>. The listed site includes an approximate 200-mile stretch of the Hudson River from Hudson Falls in Washington County to The Battery in New York City and is part of the New York State Superfund Program.

A study conducted in four sections of the Hudson River, including a section between the Federal Dam in Troy, north of the WRA, and Schodack Island, south of the WRA, concluded that the eggs of the gray catbird (*Dumetella carolinensis*) that commonly nests along the Hudson River floodplain show significant

<sup>64</sup> Injury Determination Report—Hudson River Surface Water Resources, Hudson River Natural Resource Trustees

levels of Contamination with PCBs<sup>65</sup>. The nature and extent of floodplain soil contamination has not yet been established.

This length of the Hudson River is currently used for recreation, transportation, and even as a source of drinking water in some locations. Contamination caused by PCBs found in the Hudson River sediments pose a significant threat to human health and the environment. In the upper Hudson, the fishery is catch and release only, and the New York State Department of Health advisory is to not eat fish from this portion of the Hudson River. Although acute PCB toxicity is rare, exposure to very high levels of PCBs can result in death to wildlife. For example, high PCB concentrations in the brain have been associated with a high probability of death in a number of bird species (Hoffman et al. 1996).

In addition, lower concentrations may cause a variety of adverse effects, such as partial or complete reproductive failure, birth defects, impaired growth, behavioral changes, lesions, immune system dysfunction, hormone imbalances, and other adverse effects. These or other adverse effects have been observed in a wide variety of species, including fish, birds, and mink<sup>66</sup>. In 2013, the carcinogenicity of PCBs was reassessed by a working group of the International Agency for Research on Cancer<sup>67</sup>. Dioxin-like PCBs were also classified as human carcinogens<sup>68</sup>.

Within the Bethlehem WRA there could be potential contaminated sites where historic dredge material from the Hudson River navigation channel was deposited, or at locations impacted by past industrial operations and/or dated building materials. At this time, no contaminated sites have been identified or confirmed as being in need of remediation. Any disturbances and adaptive reuse of potential contaminated sites must be undertaken cautiously to avoid potential threats to human health or the environment.

## **SOLID WASTE FACILITIES**

There is a solid waste facility within the WRA operating under NYS DEC permits in the heavy industrial district along Port Road South. The operation is on 3 adjacent parcels totally 28 acres. The activities include transporting bulk commodities to and from the site as processed scrap metal, sand, stone, bauxite and salt.

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<sup>65</sup> Data Report for the Collection of Gray Catbird Eggs Along the Hudson River from Hudson Falls to Schodack Island, New York For Exposure to Polychlorinated Biphenyls (PCBs), Hudson River Natural Resource Trustees - <http://www.dec.ny.gov/lands/25609.html>

<sup>66</sup> Studies of the effects of PCBs on fish include: Stickel et al. 1984, Barron et al. 2000, Orn et al. 1998, Niimi 1996, Dey et al. 1993, Wirgin and Garte 1989, and Bowser et al. 1990. Studies of the effects of PCBs on birds include Hoffman et al. 1998, Hoffman et al. 1995, Van den Berg et al. 1992, and Tillitt et al. 1993. Studies of the effects of PCBs on mink include: Aulerich and Ringer 1977, Jensen et al. 1977, Wren et al. 1987, Heaton et al. 1995, Restum et al. 1998, and Bursian et al. 2003.

<sup>67</sup> IARC 2013, Lauby-Secretan et al. 2015

<sup>68</sup> Lauby-Secretan et al 2013

## **HISTORIC, CULTURAL AND SCENIC RESOURCES**

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Historic, cultural and visual resources often play a key role in attracting visitors to a specific location. The recognition of historic or archeologically sensitive areas<sup>69</sup> presents opportunities for a community to enhance its local economy and community character. This inventory and analysis provide an account of the significant historic, cultural, archaeological and scenic areas that currently exist within the waterfront revitalization area. Efforts to identify and recognize buildings and districts within the community are detailed below.

The Town of Bethlehem is thought to have been visited by Dutch explorer Henry Hudson in 1609. After which, early settlement along the Hudson River began to take place in what is now known as the Town of Bethlehem. Settlement also took place along the Normans Kill, Vloman Kill, and Binnen Kill. One of the Town's earliest homes was 1720 Parker-Winne House on Creble Road near the Vloman Kill. The Town continued to grow inland, establishing hamlets at crossroads along the way. This growth provided transportation for farmer's cash crops. The barges located at Winne's Dock at Cedar Hill shipped oats, hay, apples, and ice south to New York City. In 1835, as travel increased along the Hudson River, business for the Hudson Steamboat Company grew.

The Town was established in 1793 from the Town of Watervliet. The rich history of the Town of Bethlehem includes colonialism, shipping by water, agriculture, ice houses, ice harvesting, steamboats, summer homes on the riverfront and a tradition of hamlets. George Best operated the Best Ice Company, which was a large icehouse located at today's Henry Hudson Park. George Best's house is visible along Barent Winne Road near the Park.

The Town of Bethlehem's Town Historian assists with researching official Town records related to the history of the Town and provides education about Town history to the public. The Town Historian writes a blog about the history of the community and shares historic photographs. The Town Historian's blog can be viewed at <http://bethlehemnyhistory.blogspot.com/>. The Town Historian also conducts tours of historic areas in town including Slingerlands, Delmar, Selkirk and South Bethlehem. Kayak tours from Henry Hudson Park are also conducted. The Bethlehem Historical Association regularly offers programming at the Cedar Hill School House and Delmar Reformed Church. The Cedar Hill School House is located at the intersection of Clapper Road and State Route 144/River Road. Programming includes presentations on various topics related to the history of the town. The events calendar can be viewed at <http://bha1965.webs.com/eventsactivities.htm>.

### **NATIONAL REGISTER SITES AND DISTRICTS**

The National Park Service administers the National Register of Historic Places. The National Register is the official Federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture. National Register properties have significance to the history of their community state, or the nation. There are two (2) properties within the WRA currently listed as Historic Places and marked on the [Historical, Cultural, and Archeological Sites Map](#).

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<sup>69</sup> <https://cris.parks.ny.gov/>

The Bethlehem House, also known as the Nicoll-Sill House was constructed in 1735 and is one of the oldest structures in the Town of Bethlehem. The property is located in Cedar Hill off of NY Route 144 (River Road) near the Henry Hudson Park. The house is a 2 ½ story brick Dutch Manor House, built by Rensselaer Nicoll, who was the nephew of Kiliaen Van Rensselaer, the fourth Patroon of Rensselaerwyck. In 1795, Nicoll’s son, Francis, added on to the house and built a gambrel roof. In 1810, a two-story gabled addition was constructed on the west façade. In 1830, a one-story addition was constructed. Francis Nicoll, who served as a Colonel in the New York Militia from 1775 through 1778, was also a Deputy to the Provincial Congress (1775-1776). It is believed that Alexander Hamilton and Richard Burr attended Francis Nicoll’s daughter’s wedding to Captain Richard Sill at the Nicoll house in 1785. The property is listed on both the State and National Register of Historic Places.

The Cedar Hill School was built in 1859 and is located in Cedar Hill at 1003 River Road on the corner of Clapper Road. The schoolhouse is architecturally significant as a well-preserved two-room brick schoolhouse retaining much of its original form and setting. The school is an outstanding example of its type and stands as an important regional example of schoolhouse architecture in New York. It was redesigned in 1907 by notable architect, Marcus T. Reynolds from Albany. The structure was used as a school until 1960. The structure now serves as the Bethlehem Historical Association Museum. At the rear of the Bethlehem Historical Association Museum sits a carriage house that was built in 1851. This carriage house previously served as the Bethlehem Center Toll Gate.

**Table 27: National and State Register Sites**

Property	Address	Year	Listing	Year Listed
Bethlehem House (Nicoll-Sill House)	Dinmore Road, Cedar Hill	1735	National Register and locally significant	1973
District School No. 1	Route 144, Cedar Hill	1859	State Register	1998

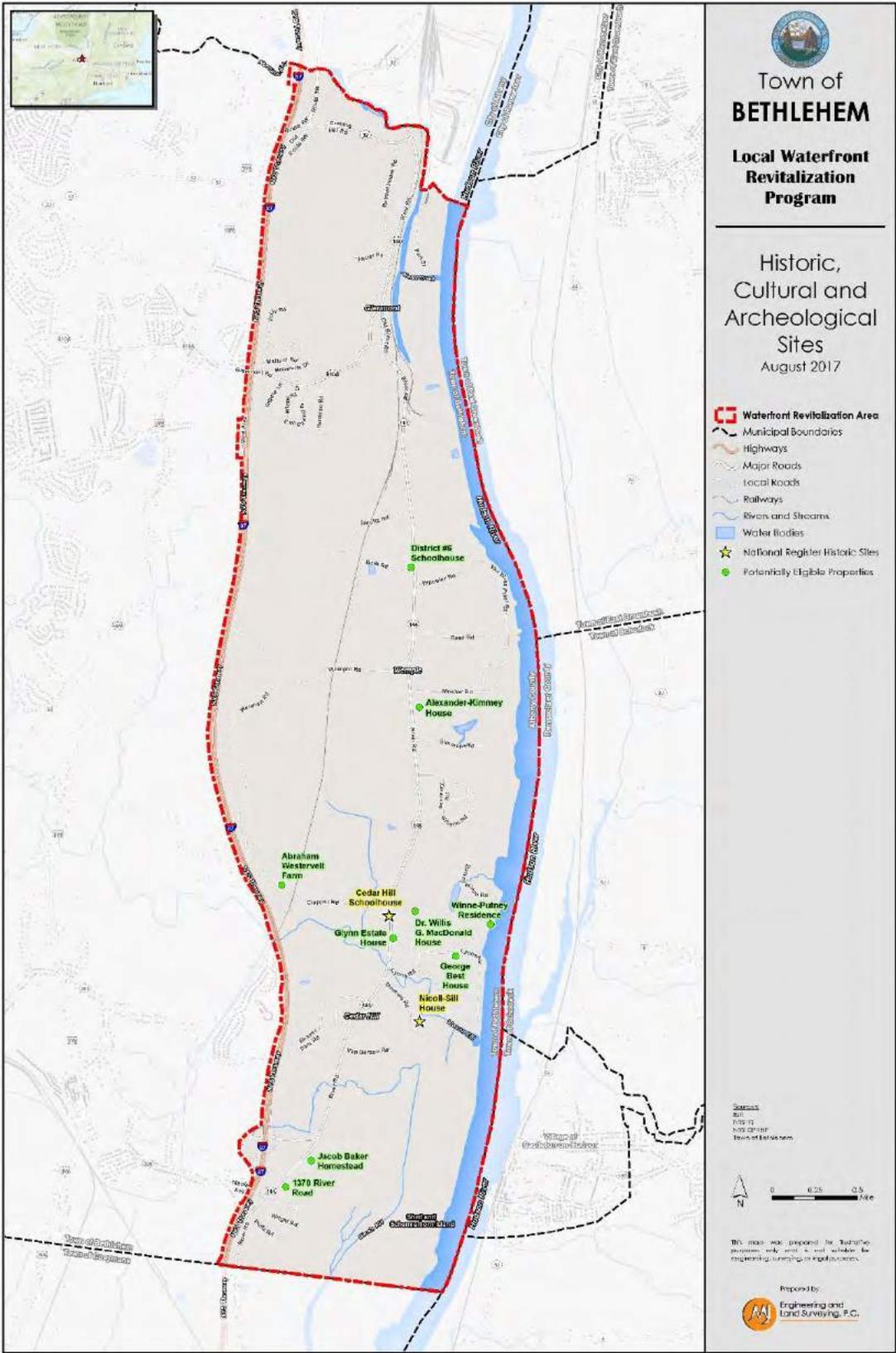
*Source: National Park Service Register of Historic Places*

### NATIONAL REGISTER ELIGIBLE SITES AND DISTRICTS

To be listed in the State and National Registers, a property must meet certain eligibility requirements. The criteria for listing are the same for both the State and National programs. Basic requirements for eligibility include that a property or district must retain its original integrity of location, design, materials and setting. In addition, the property or district must meet at least one of the following criteria:

- An historical association to persons or events that were significant in history;
- Architectural characteristics that represent a type, period, or method of construction, or the work of a master; or
- Contains information that is important to the understanding of history.

Therefore, the fact that a structure or district is of a certain age, does not necessarily mean that it qualifies for listing. Additionally, several properties within the Town of Bethlehem have been identified by the New York State Office of Parks, Recreation and Historic Preservation as eligible for listing.



**Table 28: Eligible properties within the WRA**

Site/District	Address	Historical use	Date
144 Barent Winne Road	144 Barrent Winne Road	Large brick Italianate style residence	1850
85-89 Barent Winne Road	85-89 Barrent Winne Road	Brick Second Empire style house	1884
Abraham Westervelt Farm	145 and 166 Clapper Road	Brick Greek Revival style farmhouse	1840
District No. 6 Schoolhouse	563 River Road	One-room brick Gothic Revival style school	1862
Alendander-Kimmey House	738 River Road	One-story vernacular eighteenth century stone house	NA
Dr. Willis G. MacDonald House	1012 River Road	Two-story frame Chalet style house	1905
Glynn Estate House	East side at Winne Road. South Side.		1907
Jacob Baker Homestead	East side, south of Thruway Exit 22	Two-story frame Italian Villa	1850
1370 River Road	1370 River Road	Two-story frame Queen Anne Victorian house	1890

*Source: Town of Bethlehem*

It should be noted that there are likely properties within the WRA that meet the State and National Register criteria. However, to date, few historic properties have been formally evaluated and submitted for review.

### LOCAL HISTORIC AND CULTURAL RESOURCES

The Cedar Hill area is locally known for having multiple historic properties. According to the Town Historian, it is believed this area of the town was first explored by Dutch Explorer Henry Hudson. Cedar Hill is home to a small cemetery where Colonel Francis Nicoll and seven other Revolutionary War soldiers are buried.

Van Wies Point is locally notable for historic homes and previous commercial uses with rich histories. Dutch colonist, Hendrick Gerritse Van Wies settled in the area and built a residence in 1679 at Van Wies Point. The Van Wies Dock, located on Van Wies Point Road, was owned by Peter and Henry Van Wies. In 1835, the dock was leased to the Hudson River Steamboat Company and served as a passenger terminal for Albany. Docks were used for shipping produce, hay, and ice to New York City.

Table 29 identifies locally significant sites within the WRA based on Reconnaissance Level Survey of Town of Bethlehem (1996).

**Table 29: Local Historic Resources**

Site/District	Address	Historical Use	Date
Nicol Sill Cemetery	Adjacent to 49 Dinmore Road (Cedar Hill)	Cemetery	N/A
Bethlehem Center Toll Gate	1003 River Road	Toll Gate	1851
Van Wies Dock	Van Wies Point	Passenger Terminal, Shipping	N/A
Hendrick Gerriise Van Wies House	Van Wies Point	Residence	1679
Westervelt House	551 Wemple Road	Greek Revival Farmhouse, Residence	Circa 1840
593 River Road	593 River Road	Residence	Circa 1837
Benjamin Nott House	146 Glenmont Road	Residence Two story brick house of Judge Benjamin Nott, who was at one time president of Union College. Built at some time between 1820 and 1825. The design has been attributed to Phillip Hooker.	1820 - 1825
Follywick	74 Lyons Road	Residence Two story brick Greek Revival house reported to have been built circa 1785 as a wedding gift from Francis Nicoll to his daughter Elizabeth and husband major Richard Sill	Circa 1785
Jacob Baker Farmhouse	1322 River Road	Residence Two-story clapboard house built circa 1791 by Jacob Baker, a settler from Connecticut. House has been added to and remodeled since that time.	Circa 1791
Barent Winne Road at Hudson River	Barent Winne Road at Hudson River	Winne Docs	19 <sup>th</sup> Century
Barent Winne Road at Henry Hudson Park	Barent Winne Road at Hendry Hudson Park	Unidentified wooden barge approximately 250 feet in length	NA
253 Clapper Road	253 Clapper Road	Farm with two-story frame Federal style farmhouse and a large dairy barn, possibly containing frame of an earlier barn.	Circa 1800
298 Clapper Road	John Henry Schoonmaker House	Two-story brick Greek Revival style farmhouse with five-bay center entrance façade and hipped roof.	Circa 1840
151 Glenmont Road	151 Glenmont Road	Nineteenth century board and batten house with alterations; may have served as a nineteenth century school associated with the Nott family.	NA
19 Retreat House Road	19 Retreat House Road	Large Shingle style house.	1890
31/35 Retreat House Road	Emmanuel Community Center	Large Colonial Revival including a two-story shingled main house and a smaller stone house to the west.	1910

Site/District	Address	Historical Use	Date
49 Retreat House Road	49 Retreat House Road	Two-story frame Italianate style house.	1860
99 Retreat House Road	99 Retreat House Road	Two-story frame Colonial Revival style garrison house.	1915
West side at Halter Road, North side	Beth Emeth Cemetery	Cemetery	NA
185 River Road	185 River Road	Large Queen Anne Victorian style house with projecting bay and corner turret.	1880
593 River Road	593 River Road	Two-story brick Greek Revival style house.	1840
681 River Road	681 River Road	One-and-one half story frame vernacular house	1857
682-684 River Road	682-684 River Road	One-and-one-half story frame Italian Villa.	1850
East side, at Clapper Road, North side.	Guy Park	Nineteenth century estate, also known as the Cooper-Lyon Estate, established 1836, altered throughout the nineteenth and early twentieth centuries. Cast concrete gatepost bearing lions remain extant at River Road and Winne Road. Gothic Revival style estate house destroyed.	1836
1016 River Road	Gov. Martin Glynn Estate	Two-story stucco Spanish Colonial Revival style mansion.	1907
1201 River Road	1201 River Road	One-and-one-half story frame, Greek Revival style farmhouse.	NA
1265 River Road	1265 River Road	Two-story frame Queen Anne Victorian style house	NA
East side, Southwest of Baker Homestead	East side, Southwest of Baker Homestead	Large two-story frame gambrel roofed house with L-shaped verandah oriented with view of Hudson River.	1890
East side, East of 1370	East side, East of 1370	Rambling two-story frame Shingle style House, orientated with long verandah facing river. Modern one-story frame storage building or garage immediately to the north.	1890
East side, end of Route 396 extension	East side, end of Route 396 extension	Unevaluated two-story frame house oriented toward river. L-shaped floor plan, gabled dormers and long front porch facing river. Several outbuildings and barns including a very large nineteenth century hay barn.	NA
66 Van Wies Point Road	66 Van Wies Point Road	Large Italianate style frame house with tower.	1860

Site/District	Address	Historical Use	Date
158 Van Wies Point Road	Rockledge	Large Colonial Revival style estate house	1890
168 Van Wies Point Road	Vail Residence	Two-story frame nineteenth century frame house with Colonial Revival style alterations.	1679
East side, at Hudson River, East side of number 168.	Van Wies Dock Site		NA
119 and 123 Weisheit Road	Col. John Moore House and Barns	One-and-one-half story frame Greek Revival style farmhouse with several early barns and non-historic engine repair shop.	1830.

*Source: Properties identified during the development of the LWRP*

LWRAG identified local historic resources as an asset to the WRA that needs to be highlighted to both residents and visitors to the area and could serve as part of a tourism strategy for the WRA. The tourism strategy will also include an updated inventory of local historic resources.

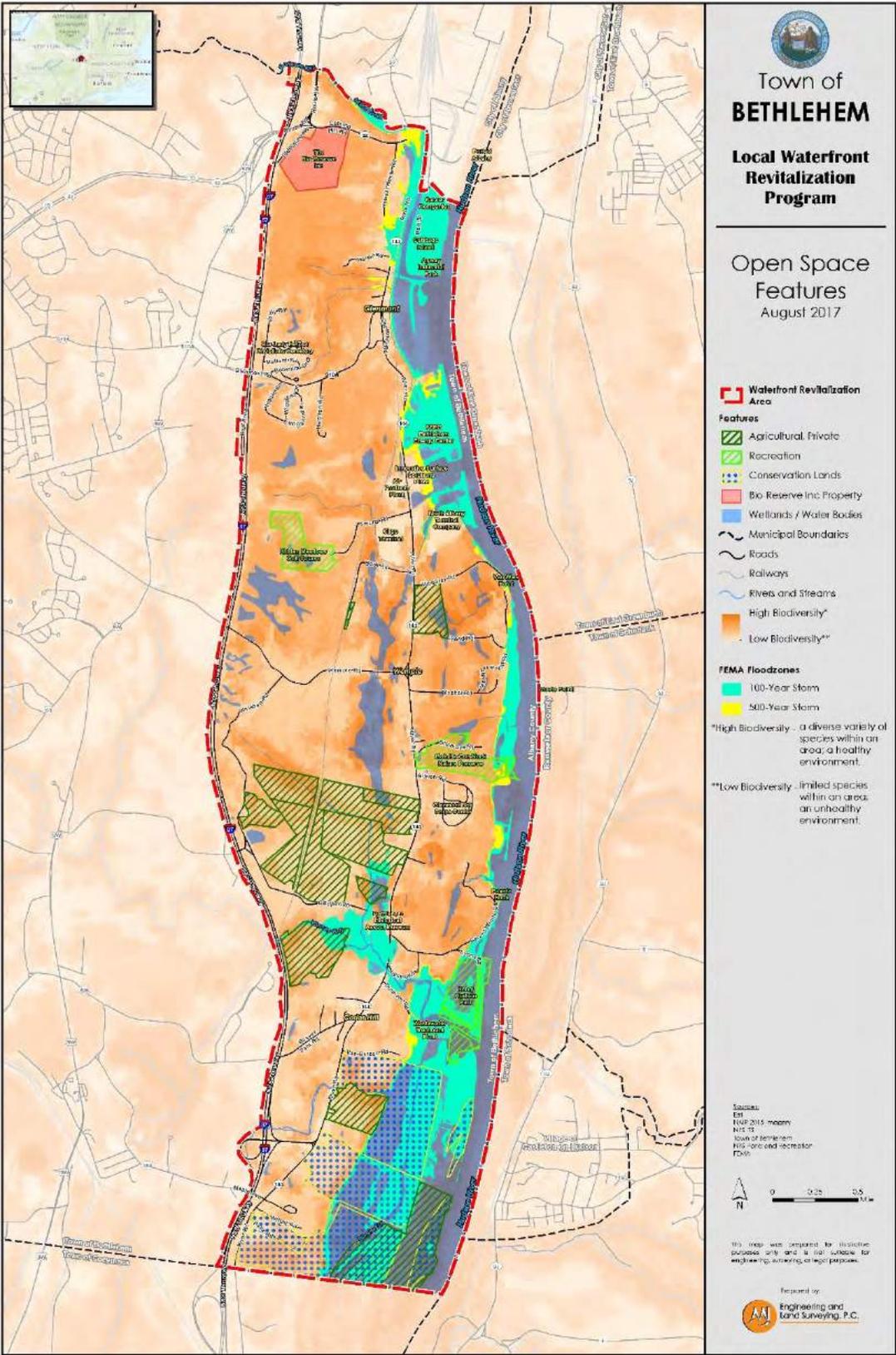
### ARCHAEOLOGICALLY SENSITIVE AREAS

According to the New York State Cultural Resource Information System (CRIS) online tool provided by the New York State Office of Parks, Recreation and Historic Preservation, the majority of the WRA is located within archeologically sensitive areas. The central district has the least amount of space designated as archeologically sensitive. As development projects are proposed within the WRA, the town uses the required NY State Environmental Quality Review (SEQR) process to determine what if any impacts there are to archeologically sensitive areas. New York State Office of Parks, Recreation and Historic Preservation reviews each individual project for potential impacts to sensitive areas and decides if further investigation is necessary.

### SCENIC RESOURCES AND VIEWSHEDS

Scenic resources include natural elements, such as distinctive geological features or views of coastal waters, and architectural and other human-made elements of aesthetic, cultural and historic value identified by the community. The [Open Space and Recreational Resources Map](#) depicts the viewsheds identified in the WRA as having visual quality.

While the Bethlehem WRA is not listed as a State-designated Scenic Area of Statewide Significance (SASS), it does offer landscape features and views that provide visual value. Areas in the southern portion of the WRA, including the undeveloped lands of the former Baker Farm site, are considered to have high scenic value due to the views it offers of the Taconic Mountain Range to the east. Agricultural lands found in the southern portion of the WRA have scenic value and provide sweeping views of the Taconic Mountain Range and the Hudson River. The steep slopes within this area, while limiting potential development, add to the exceptional views.



Views of the Taconic Mountain Range area also provided at the Wemple Road/Weisheit Road intersection and Clapper Road between the NYS Thruway and the railroad tracks when looking east.

The scenic views of the Taconic Mountains, Hudson River, and rural areas that are both wooded and fields were identified by the Local Waterfront Revitalization Advisory Group (LWRAG) as important. A scenic overlay district along these areas could be developed to preserve improve viewing opportunities of the Taconic Mountains.

The southern part of the WRA along the Hudson River has environmental constraints principally defined by the wetland nature of the area. However, this natural habitat adds to its scenic value. Views of the southern waterfront district from the water consist of mostly natural shoreline. Lands within this district are predominantly undeveloped, agricultural, or low-density residential offering unique viewsheds.

Scenic views from the Hudson River include the vast expanse of the estuary, the surrounding natural environment and the many historic and architecturally appealing homes located in areas such as Van Weiss Point and Cedar Hill. The Vloman Kill waterfall and the Normans Kill waterfall are scenic resources within the WRA. Henry Hudson Park, being the primary access point to the river, also provides views of the Hudson River.

## **FLOODING RISK ASSESSMENT AND RESILIENCY**

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This section focuses on risk assessment and resiliency as they apply to flooding from storm events and projected sea level rise in the WRA. Risk assessment includes identifying any erosion hazard areas or flood zones along with community assets in the WRA. Upon recognition of these hazards, steps may be established to create a more resilient WRA. Those steps are incorporated into the various projects identified in Section IV.

### **EROSION HAZARD AREAS**

There is no state designated coastal erosion zone hazard area within the Bethlehem WRA. However, steep slopes are located throughout the WRA, as illustrated in the [Sensitive Environmental Features Map](#). Uncontrolled disturbance of land and inadequately controlled land clearing activities can lead to failure of slopes. In this situation, damage to the natural environment, man-made structures and personal safety, and/or degradation of aesthetics may occur. Erosion contributes directly to stormwater management issues. Specifically, uncontrolled runoff carrying soil, organic material, and natural and man-made chemicals, metals, and toxins can affect the natural and built environment. Zoning Law 128-49, addresses grading, erosion and sediment control. This section of the code lists prohibited activities and regulated activities and outlines the permitting procedure for land disturbance.

### **FLOOD ZONES**

Portions of the WRA are located within the 100-year flood zone and the 500-year flood zone. The flood zones within the WRA are indicated on the [Sensitive Environmental Features Map](#). Areas located within a 100-year flood zone have a 1% chance of being equaled or exceeded in any given year. A base flood may also be referred to as a 100-year storm and the area inundated during the base flood is called the

100-year floodplain. Areas located within a 500-year flood zone have a 0.2% chance of being equaled or exceeded in any given year. A base flood may also be referred to as a 500-year storm and the area inundated during base flood is called the 500-year floodplain. The eastern boundary of the WRA, which is adjacent to the Hudson River, has the greatest potential for being flooded during a severe storm and/or flooding event. Table 30 provides information about the flood zones located within the WRA.

**Table 30: Existing Flood Zones**

Flood Zone	Acreage	Percentage
100 Year	1,639	25.8%
500 Year	1,726	27.1%

*Source: Federal Emergency Management Agency*

Chapter 69 of the Town Code, adopted January 2015, contains the Flood Damage Prevention section. The purpose of the chapter is to promote public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by providing certain regulations. A floodplain development permit is required for all construction and development undertaken in area of special flood hazard. The Town Building Inspector is responsible for the administration of the permit.

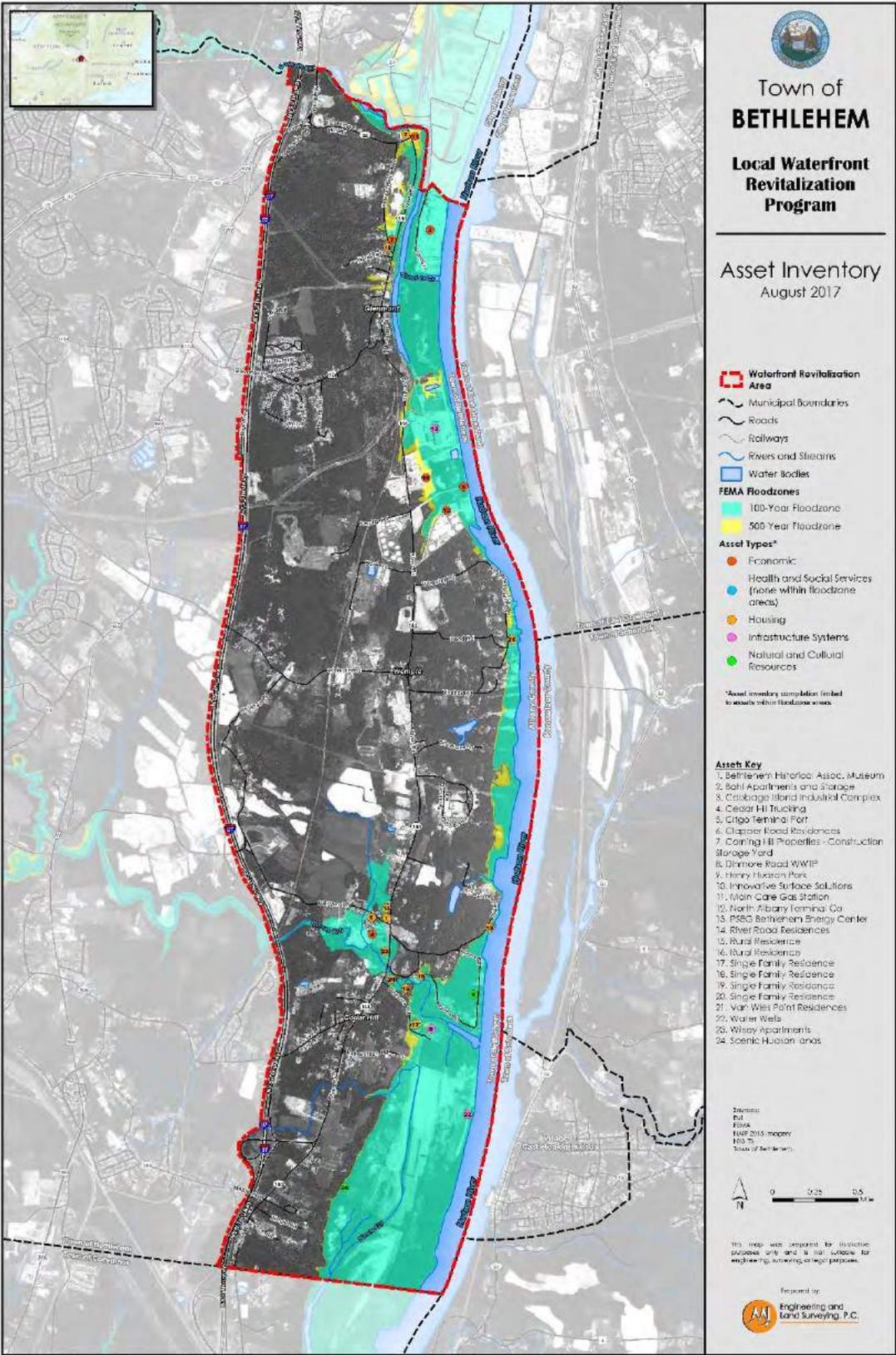
In the Town Zoning Law Section 128-53, there is a provision for lots bordering streams that prohibits the issuance of a building permit for the construction or installation of any permitted or accessory use in any district within 100-feet of the banks of the Normans Kill and the Vloman Kill and within the 100-year flood zone of those streams.

The Town created an Emergency Management Plan in 2016. The Emergency Management Plan sets forth the basic requirements in the Town that threaten continuity of government and delivery of vital services. A wide variety of emergencies may result in the loss of life, property, and income, and disrupt normal functions of government services, thereby potentially causing human suffering and economic loss. Continuing to revise the Emergency Management Plan will allow for optimal response and recovery within the Town.

Additionally, in July 2018 Albany County prepared a Multi-Jurisdictional Multi-Hazard Mitigation Plan (HMP). The purpose of the HMP is to “effectively reduce future disaster damages, public expenditure, private losses and community hazard vulnerability.” The HMP identified flood occurrences in Albany County between 2007 – 2017. Of those occurrences, two occurred in the Town of Bethlehem. One occurred on September 30, 2010 (Event #260381) with \$15,000 of reported property damage and the second occurred on February 24, 2016 (Event #615140) with no reported property damage.

**COMMUNITY ASSETS AND SYSTEMS**

Community assets within the study area may consist of places, services, groups, or infrastructure networks and can be categorized into five (5) asset classes related to their role in the Town. The five asset classes are Economic Centers, Health and Social Services, Housing, Infrastructure, and Natural and Cultural Resources. This categorization closely follows what has been developed by the Governor’s Office of Storm Recovery.



Assets located within the 100-year flood zone and 500-year flood zone were identified through discussions with the Town staff and the committee as well as by evaluating assets identified in the HMP such as essential facilities and lifeline utility systems. Information was added for each asset, including address, geographic coordinates, risk area, asset class and subcategory, critical facility designation, and whether the asset served socially vulnerable populations. Addresses and geographic coordinates pinpoint the location of assets for mapping, and once mapped, allow for risk area identification.

Asset classes characterize each asset for grouping. Additionally, spatial analysis was used to capture landscape attributes, or features of the landscape that could either mitigate or exacerbate the impacts of flooding and erosion to an asset. The [Asset Inventory Map depicts assets in the WRA](#).

In the tables below, the local assets are identified by asset class. Assets in the Economic category include downtown centers, business clusters, major employers and employment hubs, industrial and manufacturing centers, tourism destinations, and marina/water-based business areas. Assets in the Housing category include single family residences, multi-family residences, mobile homes, and senior care.

Assets in the Infrastructure category include transportation infrastructure, transportation-related facilities and utilities. Assets in the Natural and Cultural Resources category include natural habitats, wetlands, and marshes, recreation facilities, parks, open space, religious establishments, libraries, museums, historic landmarks, and performing arts venues.

**Table 31: Economic Assets within WRA**

Asset Name	Location
Cabbage Island Industrial Complex	Port Road South –adjacent to the Normans Kill
Cedar Hill Trucking	River Road/Clapper Road
Citgo Terminal Port	River Road
Commercial Small Structure	Retreat House Road
Innovative Surface Solutions	River Road
Main Care Gas Station	River Road
North Albany Terminal Company	River Road
PSEG	River Road

*Source: Federal Emergency Management Agency and National Agriculture Imagery Program*

**Table 32: Housing Assets within WRA**

Asset Name	Location
Clapper Road Residences	Clapper Road
River Road Residences	River Road
Rural Residence	Lyons Road
Rural Residence	Dinmore Road
Single Family Residence	Dinmore Road
Single Family Residence	Retreat House Road
Single Family Residence	Barent Winne Road

Asset Name	Location
Single Family Residence	River Road
Van Wies Point Residences	Van Wies Point Road
Wilsey Apartments	River Road

*Source: Federal Emergency Management Agency and National Agriculture Imagery Program*

**Table 33: Infrastructure Assets within WRA**

Asset Name	Location
Dinmore Road Wastewater Treatment Plant	Dinmore Road
PSEG Bethlehem Energy Center	River Road

*Source: Federal Emergency Management Agency and National Agriculture Imagery Program*

**Table 34: Natural and Cultural Resources within WRA**

Asset Name	Location
Henry Hudson Park	Lyons Road
Binnen Kill Tidal Wetland Habitat	River Road
Bethlehem Historical Association Museum	River Road

*Source: Federal Emergency Management Agency and National Agriculture Imagery Program*

Assets in the Health and Social Services category include fire protection, police services, hospitals, and emergency operations facilities. Other community assets include administrative and education amenities which serve a variety of public functions, from health treatment facilities to general purpose shelters in public schools. There are no Health and Social Services within the study area.

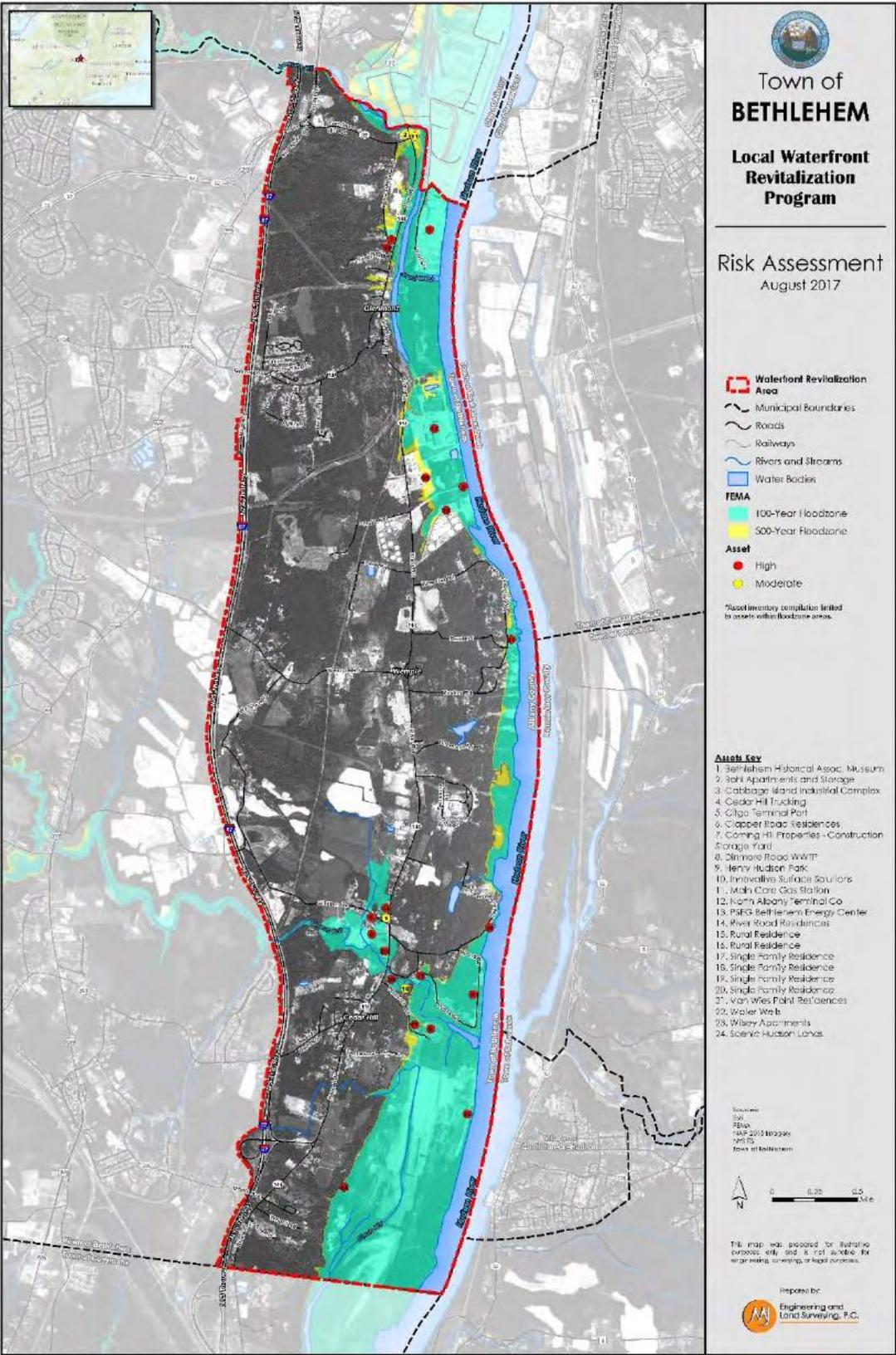
## RISK FACTORS

The essential functions that assets and asset systems provide to the Town often go unnoticed until they are compromised. Assessing the risk posed to these key assets and systems can help communities understand their vulnerabilities, and to develop plans and strategies which make more resilient communities in the long term.

A risk assessment based on flood zone areas (100-year flood zone and 500-year flood zone) was performed by using the Risk Assessment Tool as developed by the New York State Department of State. In riverine communities, the 100-year and 500-year flood zones represent High and Moderate Risk Areas, respectively.

This tool is spreadsheet-based and evaluates the flood risks posed to assets based on factors related to hazard, exposure, and vulnerability scores. Once the hazard, exposure, and vulnerability scores are entered, the Risk Assessment Tool produces a Risk Score for each asset using the following formula:

$$\text{Hazard Score} \times \text{Exposure Score} \times \text{Vulnerability Score} = \text{Risk Score}$$



**Town of  
 BETHLEHEM**  
**Local Waterfront  
 Revitalization  
 Program**

Risk Assessment  
 August 2017

- Waterfront Revitalization Area
- Municipal Boundaries
- Roads
- Railways
- Rivers and Streams
- Water Bodies
- FEMA**
- 100-Year Floodzone
- 500-Year Floodzone
- Asset**
- High
- Moderate

\*Asset inventory compilation limited to assets within floodzone areas.

- Asset Key**
1. Bethlehem Historical Assoc. Museum
  2. Rohl Apartments and Storage
  3. Coalbridge Island Industrial Complex
  4. Cedar Hill Trucking
  5. Ciliao Terminal Port
  6. Clapper Road Residences
  7. Coming Hill Properties - Construction Storage Yard
  8. Clinchans Road WWTP
  9. Henry Hudson Park
  10. Innovative Surface Solutions
  11. Main Care Gas Station
  12. North Albany Terminal Co.
  13. PAEG Bethlehem Energy Center
  14. River Road Residences
  15. Rural Residence
  16. Rural Residence
  17. Single Family Residence
  18. Single Family Residence
  19. Single Family Residence
  20. Single Family Residence
  21. Van Wines Point Residences
  22. Water Walk
  23. Wilsey Apartments
  24. Scienc Hudson Lanax

Sources:  
 GIS  
 FEMA  
 1981-2010 Imagery  
 2015 PD  
 Town of Bethlehem



This map was prepared for illustrative purposes only and is not suitable for engineering, planning, or legal purposes.

Prepared by:  
 Engineering and Land Surveying, P.C.

There are four (4) categories of risk: severe, high, moderate, and residual.

- Severe risk could represent that the asset is in an area prone to flooding and both exposure and vulnerability should be reduced, if possible, and relocation considered a priority option.
- High risk is defined as conditions that could lead to significant negative outcomes from a storm. Actions should be taken to reduce vulnerability and exposure, and if ineffective then relocation may be necessary.
- Moderate risk is defined as conditions that could lead to moderate to serious consequences from a storm. A combination of measures to reduce vulnerability and exposure may reduce risk to more acceptable levels.
- Residual risk is defined as conditions that indicate that floods would pose minor or infrequent consequences.

Of the 23 assets identified, four (4) assets have an asset risk score of Moderate. The remaining 19 assets have an asset risk score of High.

### **SCENIC HUDSON'S SEA LEVEL RISE MAPPER**

Scenic Hudson, an environmental not-for-profit working in the Hudson River Valley, provides information about projections for future sea level rise along the Hudson River and elsewhere in New York State that are documented in recent reports from the New York State Task Force on Sea Level Rise and the NYS2100 Commission. (Note: in February 2017 NYSDEC adopted sea level rise projections.) For the Hudson, north of Kingston, the increase in sea level rise is categorized as "Central Range"- 1 inch – 4 inches in 2020 to 11 inches- 26 inches in 2100. According to Scenic Hudson, over the past century, sea level on the Hudson has risen about a foot (12-inches) or 2.8 mm per year, a rate greater than the global average. In recent decades the rate of sea level rise has accelerated and since 1990 the yearly average has been 4.6 mm/year. According to Scenic Hudson the best data available indicates the Hudson River's water levels will continue rising up to six (6) feet (72-inches) by the end of this century, and perhaps that much again during the next century.

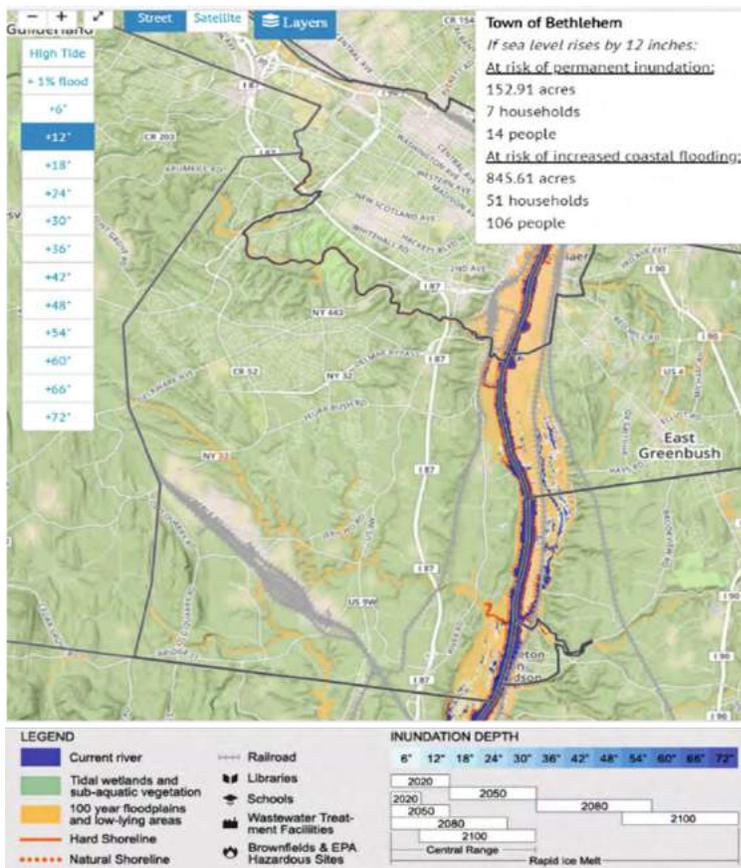
At its November 2016 LWRP Advisory Group meeting, Scenic Hudson provided a presentation on projected sea level rise in Bethlehem based on the SLR Mapper tool, which is used to visualize sea level rise scenarios and estimates from the 2020s through the year 2100. It is important to note that sea level rise results in areas to be inundated (underwater) at high tide. According to Scenic Hudson, sea level rise will create a "new normal" for elevation and extent of the river. Comparatively, flooding results from the increased intensity of major storm events. Scenic Hudson provided maps of Bethlehem that showed both projected sea level rise and floodplain limits. According to the Scenic Hudson website, the mapper data is a combination of analyses by Scenic Hudson and existing data from a variety of sources including NYS DEC, NOAA, The Stevens Institute, and FEMA. Elevation information was collected by the NYS DEC Hudson River Estuary Program in 2012 and is from a high-resolution LiDAR. According to the Scenic Hudson SLR Mapper website, the data generated is also the result of the following:

- The elevation of sea level along the estuary was derived from tidal datum research conducted by the Stevens Institute.

- Current 1 percent flood zone information was derived from FEMA base flood elevations.
- Projections of future areas under the high tide line (inundation) and within 100-year flood zones were generated by Scenic Hudson.

Areas of focus for sea level rise show the southern, central, and northern part of the WRA as susceptible. In the south WRA, Scenic Hudson notes that the Town’s wastewater treatment plant, production wells along the Hudson, and Henry Hudson Park are municipal assets that are vulnerable to the projected sea level rise. Further, this portion of the WRA includes the Binnen Kill area, which encompasses an important complex of tidal wetland and upland habitats representing one of the largest floodplains along the entire Hudson River Estuary (approx. 750-acres). Several historic islands (Shad Island and Schermerhorn Island) are now joined by dredge deposits, forming a large low-lying swath of land that abuts a steep bluff. Almost the entirety of these low-lying areas, including the man-made land, are within the reach of tidal influence projected for the 21<sup>st</sup> century. These same assets were identified through the Risk Assessment Tool utilizing floodplain boundaries. The following screenshot of the Scenic Hudson Sea Level Rise Mapper illustrates potential sea level rise of 12 inches and shows that the area most impacted is within the WRA.

**Scenic Hudson Sea Level Rise Mapper: +12 inches<sup>70</sup>**



It should be noted that sea level change is dynamic and will continue to fluctuate over time due to a variety of factors. Storm intensity is not the only factor determine flooding events and the impacts of flooding.

Identification of the wastewater treatment plant susceptibility to sea level rise was studied in the Town 2012 Sewer Master Plan. An evaluation of climate change impacts to the wastewater treatment plant at Dinmore Road analyzed four different scenarios to determine potential flooding and water quality of the effluent receiving stream. The recommendation from the study was to install between the final clarifiers and the outfall effluent pumping capable of conveying the maximum wastewater

<sup>70</sup> <http://www.scenicudson.org/slr/mapper>

treatment flow through the outfall with a Hudson River level of at least 15 feet (major flood stage).

In the central WRA, residences along Van Wies Point Road adjacent to the Hudson River are vulnerable to the projected sea level rise. This is similar to results of the Risk Assessment Tool utilizing floodplain boundaries.

In the north WRA, land along the Cabbage Island shoreline (both Normans Kill and Hudson River), Beacon Harbor shoreline and a substantial portion of the Innovative Surface Solutions property are vulnerable to the projected sea level rise. Comparatively, the Risk Assessment Tool utilizing floodplain boundaries identified a land area of greater extent vulnerable to flooding. For example, the land area bounded by Smultz Road, River Road, the Town boundary, and Hudson River are vulnerable to flooding based on the Risk Assessment Tool, while most of this entire area is not vulnerable to the projected sea level rise.

The Town can reduce risk from sea level rise and increased flooding by using a variety of different measures and approaches that have been outlined in the Draft New York State Flood Risk Management Guidance for implementation to the Community Risk and Resiliency Act, dated June 2018.

### **ICE BUILDUP AND FLOOD RISK**

During cold winters, an ice field could grow on and cover the surface waters of the Hudson River Estuary, from bank to bank. The ice thickness and coverage modify the hydrodynamics and salinity intrusion levels along the Hudson River and impact navigation, aquatic habitats, and the engineering of shoreline structures.

A report prepared in 2015 by the Davidson Laboratory at Stevens Institute of Technology for the Hudson River Sustainable Shorelines Project, to reflect the findings of a statistical and climatological analyses of the data found in a compilation of daily United States Coast Guard USCG ice reports, observe that in the Catskill-Albany region of the tidal Hudson River, where the Bethlehem WRA is located: ice has historically occurred 63.8% of days during the analyzed winter ice seasons; on average, the ice has been thicker in early February; and, in terms of coverage, the most ice coverage also appears in early February. When river ice gets to be around 10 or 11 inches thick or more, it becomes rigid enough to cause significant ice jams if it breaks up quickly before it has a chance to candle or rot<sup>71</sup>.

Accordingly, the engineering of shoreline stabilization projects along the tidal Hudson River needs to consider the possibility of ice jams resulting when ice passage in a river section is blocked and the ice piles up upstream. Usually, the most critical types of dynamic forces imposed by ice are horizontal loads on vertical and sloping structures. The magnitude of this type of loading is dependent on the point where the ice fails by crushing or splitting, which is dependent on its thickness (USACE 2011). This type of horizontal loading is typically experienced on vertical structures, such as walls, because their vertical face and height prevent ice from overtopping the structure before breaking apart. The force imposed by ice riding up over a structure, such as a revetment, is therefore much less than direct horizontal loading on the face of the revetment. Vertical ice forces include the weight of ice piling up on a structure and the cyclic stresses of the freeze and thaw cycles; they have small impact on established vegetated

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<sup>71</sup> [www.weather.gov/media/aly/stormbuster/Spring14SB.pdf](http://www.weather.gov/media/aly/stormbuster/Spring14SB.pdf)

shorelines. Adfreeze loads are pressure forces applied to a structure that has become encased and frozen in ice (Miller and Georgas 2015)".<sup>72</sup>

Ice jams are of two forms: Freeze up jams that usually occur early to mid-winter during extremely cold weather and Break up jams that usually occur mid to late winter with thaws. Ice jams cause localized flooding. Rapid rises behind the jams can lead to temporary lakes and flooding of homes and roads along rivers. A sudden release of a jam could lead to flash flooding below, including large pieces of ice.

Ice jams usually form in preferred locations along the Hudson River. Near Albany, a large ice jam occurred along Interstate 787 in 1976, and the river froze in 1994, 1996, and 2004. Up to this point in time, ice jams and related flooding have not occurred within the Bethlehem WRA. Increasing Local Resilience

The LWRAG supported the idea of creating a community resiliency plan and providing educational opportunities to businesses as well as residents in the WRA about the importance of climate change impacts to water levels along the Hudson River. The development of a Building Community Resiliency Plan that expands the findings of this subsection is proposed in Section IV of the LWRP. This proposed effort will assess the risk for additional public and private assets, examine the existing local regulations and proposes amendments, and identify and compare shoreline stabilization alternatives.

## **INFRASTRUCTURE, UTILITIES, AND RESOURCES**

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Infrastructure includes water, sewer, transportation, communication, and energy. The extent of the public infrastructure and the location of related facilities located within the WRA are illustrated on the [Utilities and Infrastructure Map](#). It is important to understand the availability, operational condition, and sufficiency of existing infrastructure to serve existing community needs and plan for potential future development.

### **DRINKING WATER**

The Town's Water Distribution System was established in 1927 and includes approximately 230 miles of water mains, 1670 fire hydrants, eight (8) water storage tanks, and seven (7) pressure regulating valve stations. The four (4) primary water sources are Vly Creek Reservoir, New Salem Wells, Dinmore Road Well Field, and the City of Albany municipal water. Water is treated at the New Salem and Clapper Road Water Treatment Plants.

The Clapper Road water treatment plant is within the WRA and is currently being renovated for improvements to meet water quality standards that have become more stringent since the plant was originally built in the 1990s. Improvements will be made to the treatment process at the plant, including a new approach for the removal of iron and manganese from the raw water. The current methodology includes the use of chlorine which, when added to unfiltered water, results in high levels of disinfection byproducts being formed. These improvements will be housed in a new 7,000 SF. pretreatment facility at the existing treatment plant on Clapper Road. The Clapper Road treatment plant improvements will also allow for an increase in water output. The current iron and manganese removal process is limited to

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<sup>72</sup> Report prepared by the Davidson Laboratory at Stevens Institute of Technology for the Hudson River Sustainable Shorelines Project, in 2015.

flow rates much lower than the designed capacity of the water treatment plant. By completing these improvements, the facility will be able to double its water production compared to the current operational limit.

Within the WRA, water main lines run along Corning Hill Road, Glenmont Road, Clapper Road, Barrent Winne Road, Lyons Road, Dinmore Road, and Beaver Dam Road. River Road includes a water line for most of its length except for a gap between Glenmont Road and Anders Lane, and Smultz Road and Wemple Road. Wemple Road includes only a small portion of water line in proximity to its intersection with River Road. The water district includes areas located around the water main lines, serving existing customers, but there are large portions of the WRA that are not within the public water supply district. These properties obtain water from private wells. Existing residential neighborhoods that access private wells include Van Wies Point, Weisheit Road, and Wemple Road. All industrial properties are served by public water supply.

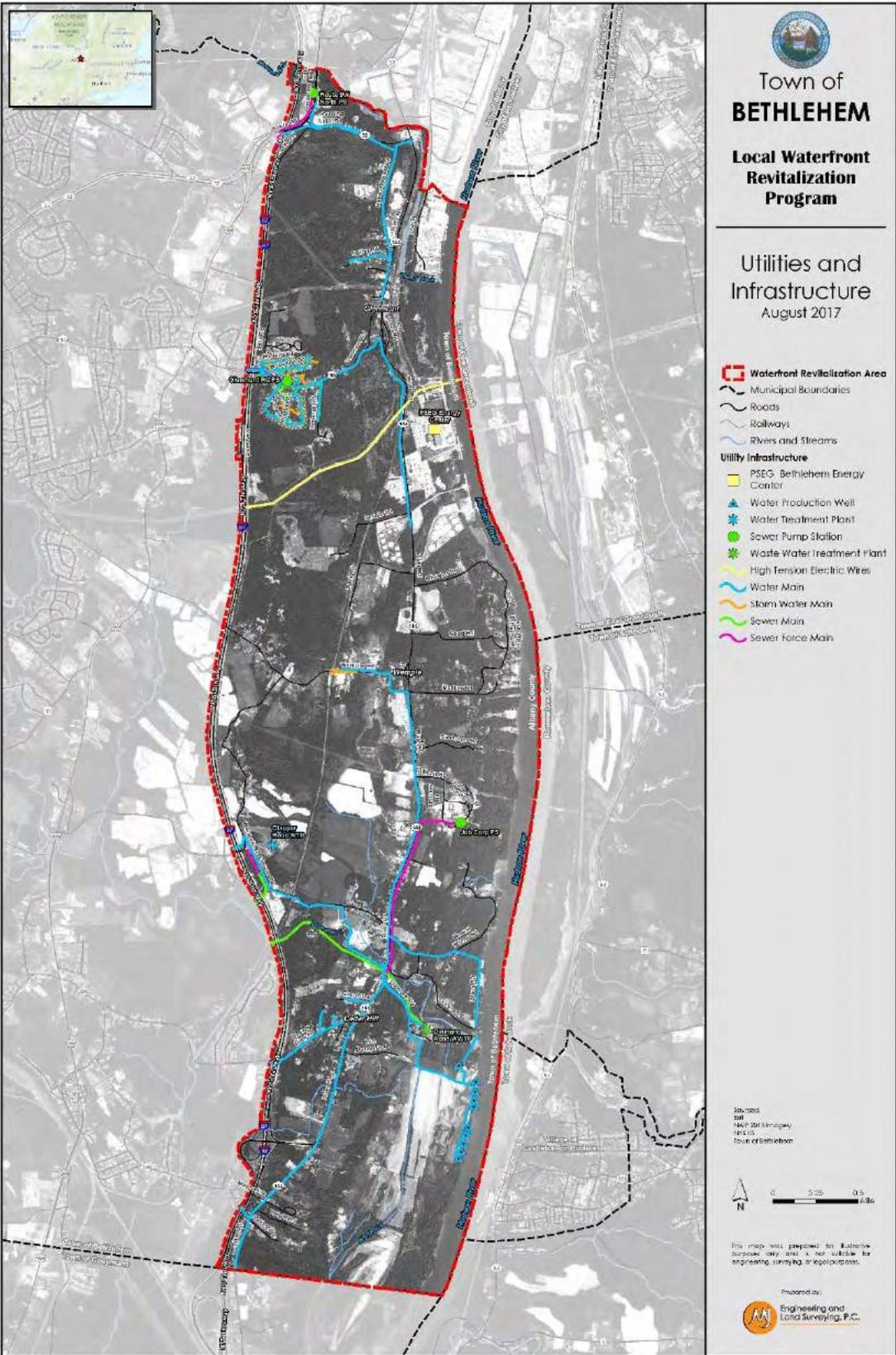
As a result of a recent expansion to the Air Products industrial gas plant, located at River Road and Smultz Road, the Department of Public Works installed a water line along River Road from Smultz Road to Wemple Road. This water line extension will fill in the previously mentioned gap and accommodate needed fire flows to the Air Products site. A portion of the project is being funded by Air Products as a condition of site plan approval. The new water line will also improve the water service between Glenmont Road and Beaver Dam Road by allowing water to be fed from either the north or the south along River Road, thus avoiding major water outages in the event of a water main break. The final benefit to the new water line is that it also addresses water quality issues at the dead-line water line at Wemple Road. Residents of the Van Wies Point neighborhood within the WRA have expressed the desire to be connected to public water system. The Town will investigate the feasibility of an extension of the existing public water system to the Van Wies Point neighborhood. If determined feasible, the water district extension map, plan and report; and the cost of infrastructure construction would be borne by property owners benefiting from the expansion.

The four (4) primary water sources within the Town are Vly Creek Reservoir, New Salem Wells, Dinmore Road Wellfield, and the City of Albany drinking water resources. Water is treated at the New Salem and Clapper Road Water Treatment Plants located in the WRA. The amount of water produced is generally controlled by two factors: the availability of water from the water sources, and the treatment capacity at the water treatment plants. Table 35 identifies the existing water sources and supplies.

**Table 35: Existing Drinking Water Sources and Supplies**

Water Source	Water Source Supply
Vly Creek Reservoir	3 million gallons per day (safe yield)
New Salem Wells	0.85 million gallons per day
Dinmore Road Well Field	6 million gallons per day
City of Albany	1.23 to 2.5 million gallons per day
<b>Total</b>	<b>11.08 to 12.35 million gallons per day</b>

*Source: Town of Bethlehem*



The New Salem water treatment plant was constructed in 1958 and expanded in 1972. It can produce a maximum of six (6) million gallons of water per day, with an average of 2.3 million gallons per day. This water treatment plant draws water from the Vly Creek Reservoir, which has a storage capacity of 1.25 billion gallons. The treatment process consists of chlorination for disinfection; taste and odor control with the use of activated carbon; coagulation with aluminum sulfate; filtration with rapid sand filter, and corrosion control. There is no fluoride added to the Bethlehem Water Supply. Water from this plant is delivered by gravity through a network of water mains.

The Clapper Road water treatment plant was constructed in 1994. It can produce a maximum of six (6) million gallons of water per day, with an average of 2 million gallons per day. This plant is supplied by facilities including a groundwater infiltration system and a well field that consist of eleven (11) drilled wells adjacent to the Hudson River. This plant uses four (4) Trident filter units for water purification with chlorine as the primary disinfection agent. Chemicals used include coagulation with Polyaluminum Chloride (PAC) and a non-ionic polymer, potassium permanganate for taste and odor control and a corrosion inhibitor.

To enhance capacity, the Town established two (2) interconnections with the City of Albany's water supply. One interconnection is located in a residential area on Kenwood Avenue and the other is in an industrial area on Creble Road. The Town currently purchases water from the City of Albany to supplement its capacity. The water contract with the City of Albany is scheduled to terminate in 2023. Planned upgrades to the Clapper Road Water Treatment Plant as discussed in Section II.V will increase capacity and offset the loss of water from the City of Albany upon the 2023 contract termination. An emergency interconnect is also available with the Town of Guiderland's water system in North Bethlehem, which can provide water from Bethlehem to Guiderland, or vice versa, depending upon which community needs supplemental water.

### **CAPACITY AND RESILIENCE OF THE WATER DISTRIBUTION SYSTEM**

The information in Table 35 shows that the Town's water sources could produce between 11.08 to 12.35 million gallons per day. Water demand in the Town is 4.38 million gallons of water per day, well below half of the daily capacity. The demand level has been relatively stable over the past few years according to the Town Department of Public Works.

### **SANITARY SEWER AND SEPTIC SYSTEMS**

There are approximately 170 miles of sewer mains and 37 sewer pumping stations that are operated and maintained by the Town; however, most of the sewer main system is located outside of the WRA and the majority of the WRA does not fall within the area of the sewer district. There is a single wastewater treatment plant located at Dinmore Road within the southern portion of the WRA, which was constructed in 1973. The Town's plant treats sanitary sewage and discharges treated water into the Hudson River. There is a sewer main trunk line that carries wastewater from the sewer system in town on the west side of the Thruway to the sewage treatment plant along Dinmore Road, and follows the Vroman Kill.

Along the sewer main line within the WRA there are small areas within the sewer district. The district is located north along SR 144 to the Glenmont Job Corps site from the main trunk line along Dinmore Road. There are also two small areas within the sewer district in the northern portion of the WRA along Route 9W at the Town boundary, and along Glenmont Road adjacent to the Thruway that encompasses existing residential neighborhoods. The PSEG site contains a private sewer lateral that crosses River Road connecting to the Glenmont pump station on Glenmont Road. Sewer pumping stations have been placed throughout the Town in areas that are unable to utilize gravity trunk mains due to elevation or location. There are three (3) pump stations located within the WRA. Wastewater reaches the treatment plant through a system of pressurized force mains and gravity trunk mains.

Since most properties within the WRA utilize septic systems to treat wastewater, any planned new development or expansion of existing neighborhoods or businesses shall evaluate the feasibility of being connected to the public sewer and water infrastructure. The Town sewer treatment plant has a daily capacity of 6 million gallons. Currently, the plant is treating approximately 3.25 million gallons per day, slightly above half of its daily capacity.

Residents of the Van Wies Point neighborhood within the WRA also have expressed the desire to be connected to public sewer facilities. The Town will investigate the feasibility of an extension of the existing public system to the Van Wies Point neighborhood. If determined feasible, the sewer district extension map, plan and report; and the cost of infrastructure construction would be borne by property owners benefiting from the expansion.

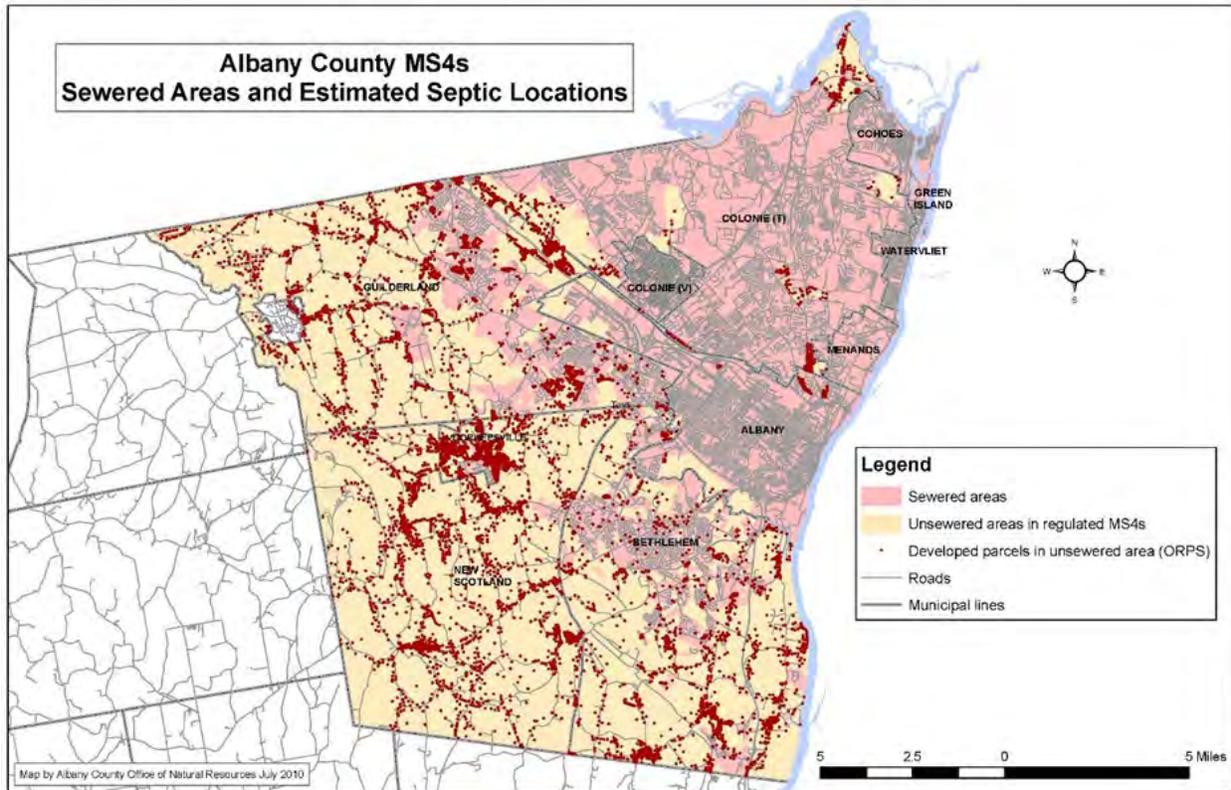
It has been noted that the Dinmore Road Wastewater Treatment Plant located immediately south of the Henry Hudson Park can detract from the experience at the park, particularly on weekends and holidays; offensive odor emissions associated with the treatment process can cause a nuisance to the enjoyment of the park. It is also recognized that the Wastewater Treatment Plant is a significant infrastructure resource for the community, providing public health, economic and environmental benefits to the community. The 2012 Sewer Master Plan includes an evaluation of potential odor reduction measures that strike a balance between the facility's capital and process needs and improved odor emissions.

### **CAPACITY AND RESILIENCE OF THE SANITARY SEWER AND SEPTIC SYSTEMS**

Currently, Dinmore Road sewer treatment plant has a daily capacity of 6 million gallons. The plant treats approximately 3.25 million gallons per day, slightly above half of its daily capacity. To address complaints about odors from the plant, the 2012 Sewer Master Plan should be revisited to consider odor control measures that have not been implemented.

Many properties within the WRA use private septic systems to handle wastewater. Septic systems are the responsibility of the property owner and must be designed and installed in accordance with NYS regulations. Keeping septic systems in good working order is important for maintaining surface and ground water purity. The Albany County Health Department keeps a database of properties that have had issues with septic system failure. The County Health Department did not identify issues of concern within the WRA for septic system failures.

### Sewer Areas and Estimated Septic Locations in Albany County



Source: Albany County Stormwater Coalition

## TRANSPORTATION

Transportation habits within the WRA are motor vehicle focused due to lack of facilities for pedestrian, bicycle, and public transit travel. Residents use Route 144/River Road as the only north-south roadway within the WRA, which connects to six east-west roadways (as described below).

### ROADWAYS

The major north and south roadways crossing the WRA are the New York State Thruway and State Route 144/River Road. The NYS Thruway is located on the Capital District Transportation Committee’s Freight Priority Network. The Freight Priority Network was developed as part of the Freight and Goods Study to provide a logical system of routes that facilitate truck mobility to and from the Capital Region. The purpose of the designation on the priority network is to bring roads that carry critical freight movement to the forefront in freight related investment decisions. State Route 144/River Road serves as a primary route through the WRA. This principal arterial has a posted speed limit of 55 miles per hour with limited traffic calming measures. The roadway functions well for motor vehicle travel, but due to high travel speeds and volume of heavy truck traffic the roadway does not feel safe to be used by pedestrians and bicyclists to reach destinations such as Henry Hudson Park. The primary east and west roadways in the WRA are: State Route 32/Corning Hill Road, State Route 910A/Glenmont Road, Wheeler Road, Wemple

Road, Mosher Road, Clapper Road, Barent Winnie Road, and Beaver Dam Road. The east and west roadways are classified as minor arterials with controlled intersections.

**Table 36: Average Annual Daily Traffic on the Roadways Within the WRA**

Roadway (Data Year Volume by segments)	From	To	AADT	% Heavy Vehicle – Truck (Data Year)
River Road ((2008)	SR 396	Exit 22	7036	11% (2006)
River Road (2010)	Exit 22	Glenmont Rd.	3996	12% (2006)
River Road (2015)	Glenmont Rd	Corning Hill Rd	6297	16% (2011)
River Road/Rt 32 (2010)	Corning Hill Rd	City Albany line	9090	16% (2006)
Wemple Road (2014)	Feura Bush Rd (outside WRA)	River Rd.	1240	6% (2014)
Glenmont Road (2014)	Rt.9W (outside WRA)	River Rd.	5780	5% (2014)
Corning Hill Road (2015)	Rt 9W	River Rd.	3405	19% (2006)

*Source: NYSDOT Traffic Data Viewer*

The highest number of trips found on the roadways within the LWRP where State traffic count data was available was on River Road, which is consistent with the fact that the State highway is a major transportation corridor for both vehicles and truck traffic. The highest number of trips found within the different segments on River Road was in the northern area of the WRA; from the intersection with Corning Hill Road to the City of Albany boundary, which reflects the traffic traveling between points in the City including the Port of Albany to points in the town, including the businesses in the industrial district as well as commuter traffic. The next segment from Corning Hill Road to Glenmont Road is high as well, which is the continuation of the area in the industrial district. Both of these segments had 16% heavy vehicle truck traffic.

The other segment of River Road with a high volume of trips is in the southern portion of the WRA from SR 396/Maple Avenue to the Exit 22 toll plaza area. This reflects the volume of traffic traveling between the Thruway exit and points west using SR 396/Maple Avenue to access industrial activities located outside of the WRA. A recent 2019 analysis of the existing intersection traffic volumes including truck traffic volumes done by the Albany Port District Commission (APDC) at Exit 22 of the NYS Thruway and River Road showed a total daily traffic volume of 1,218 trips. Truck volumes were 118 trips using the intersection with the toll plaza.

Corning Hill Road in the northern portion of the WRA (runs in an east west direction) had a lower volume of traffic compared to River Road but had a high percentage of truck traffic; almost 4 times higher than Glenmont Road, which is the nearest east west road crossing the WRA. This data is consistent with trucks traveling from the industrial district in this area of the WRA, west to Rt 9W to the exit 23 interchange with the NYS Thruway. The 2019 analysis by APDC of the existing intersection truck

traffic volumes at Corning Hill Road and River Road showed a total daily volume of 62 trucks; while Glenmont Road intersection had 8 trips.

The trip volume data for Glenmont Road shown in Table 36 is higher than Corning Hill Road, but the segment delineated by the NYS DOT data counter included a distance (approximately .4 miles) outside of the WRA. Glenmont Road is used as a connector for commuters during the week traveling between the City of Albany and the Town using River Road that provides an alternate route to Route 9W for those people traveling to Glenmont and Selkirk.

Wemple Road is located in the middle portion of the WRA and had a lower number of trips compared to the other east west connector roads. The intersection of Wemple Road and River Road is not a standard T-shaped intersection but is Y-shaped and has a steep grade. This intersection would be one to be included in any traffic studies that are done for River Road in the future in order to study options to improve the intersection and has also been noted by the Town as a sight distance concern for some residents with driveways on Wemple Road close to the intersection. Projects 10A and 10B proposed in Section IV of the LWRP addressed this concern.

Clapper Road is an east west town road in the southern portion of the WRA, the 2019 analysis of the traffic volume at the intersection with River Road including truck traffic showed less than 40 trips coming and going from Clapper Road with little to no truck traffic on a daily basis.

#### **RAIL SERVICE**

CSX freight railroad lines are also located within the WRA and enter the WRA in the vicinity of the Vloman Kill and Clapper Road area. These tracks are maintained by CSX and connect directly to the Selkirk Rail Yards located outside the WRA but within Bethlehem along Creble Road. According to CSX Rail train activity is minimal. At times there is one train on the line traveling north and one train traveling south in a 24-hour period, on some occasions there may be 2 trains a day, but on many days, there are none. Within the northern portion of the WRA, there are siding lines associated with Innovative Surface Solutions, Carver Companies site at 126 Port Road South, and Port Albany Ventures site at 140 Port Road South. Use of these sidings is minimal. While the concern for trains transporting petroleum through Albany County from the north to the Port of Albany and the high number of petroleum trains that are sitting on sidings in the City of Albany has been clearly identified in recent years by Albany County lawmakers; there is no number of petroleum trains that have been identified as traveling through the WRA.

#### **PUBLIC TRANSPORTATION**

The Capital District Transportation Authority (CDTA) is a public benefit corporation created in New York State to manage a number of multi-modal parts of public transportation (bus, taxi-service, etc.) in the Capital District, which includes the Bethlehem WRA. The Capital District Transportation Commission (CDTC) is the designated Metropolitan Planning Organization for the Albany-Schenectady-Troy and Saratoga Springs metropolitan areas.

CDTA operates the Route 7 bus within the WRA. Route 7 bus serves as a connection between Glenmont and the City of Albany. The bus route follows Route 9W to Glenmont Road, to River Road, to Corning Hill Road. Within the WRA, there are two (2) bus stops (northbound, southbound) located at 11 River Road and at Main Care (18 River Road) at the intersection of River Road and Corning Hill Road.

### **EMERGENCY MANAGEMENT PLAN**

The Town has a Comprehensive Emergency Management Plan that includes the WRA. The role and responsibilities of town departments and related agencies, both emergency and non-emergency management related, are outlined in the town plan. The Town's Emergency Management Office is designated to coordinate all emergency management activities.

Flooding within the WRA has not been a consistent problem. The floodplain areas within the WRA are located immediately along the shoreline of the Hudson River and Vroman Kill, as illustrated on the [Sensitive Environmental Features Map](#). Those areas are generally open space, vacant land, low density residential and an area of the industrial zone. The NY State Thruway is identified as a critical roadway as part of the infrastructure facilities in the plan. Fire protection and EMS services are provided by Selkirk Fire Department.

### **CAPACITY AND RESILIENCE OF TRANSPORTATION INFRASTRUCTURE AND SERVICES**

Traffic counts within the WRA don't show a level of use indicating a need for additional roads or increase in the size of existing roads. Flooding within the WRA has not been a recurrent problem indicating the need for specific road improvements. The population density within the WRA does not warrant the rerouting or increase of current CDTA mass transportation services within the WRA.

## **BICYCLE AND PEDESTRIAN INFRASTRUCTURE**

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In 2009, the town established the Pathways to Homes, Hamlets and Healthy Hearts (PaTHs 4) Committee (now known as the Bicycle and Pedestrian Committee) to address pedestrian and bicycle mobility<sup>73</sup> within the Town. There are seven (7) roadways within the WRA that are a part of the Town of Bethlehem Bicycle and Pedestrian Priority Network<sup>74</sup> illustrated on the map included in Appendix E. The roadways are Corning Hill Road, Glenmont Road, SR 144/River Road, Weisheit Road, Wemple Road, Clapper Road, and Beaver Dam Road. Most of the roads cross the NYS Thruway to connect west to east, but the Thruway represents a physical barrier that divides the WRA from the rest of the town.

There are currently no pedestrian and bicycling facilities throughout the WRA. Typically, advanced bicyclists travel from populated area of the Town via Wemple Road (west side of Thruway) to Weisheit Road to Clapper Road to access Henry Hudson Park and State Route 144/River Road for recreational cycling. However, there are no bicycle routes along roads or mixed-use trails that would accommodate beginner or intermediate bicyclists, which is why only advanced bicyclists use the existing routes.

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<sup>73</sup> [www.townofbethlehem.org/.../View/3728/Evaluation-Process-for-New-Pathway-Investment](http://www.townofbethlehem.org/.../View/3728/Evaluation-Process-for-New-Pathway-Investment)

<sup>74</sup> <http://www.townofbethlehem.org/DocumentCenter/Home/View/3726>

Further, the crossing at SR 144/River Road and Clapper Road intersection is difficult due to high motor vehicle speeds and frequency of tractor trailer truck traffic. The need for safer bicycle and pedestrian accommodations along this route and at the Clapper Road/River Road intersection to access the Henry Hudson Park and the waterfront was identified by the LWRAG. The Town will continue its efforts to identify safer bicycle and pedestrian accommodations and investigate their feasibility. Projects 10A and 10B proposed in Section IV of the LWRP addressed this concern.

The Capital District Trails Plan, published by CDTC in 2018, includes a survey<sup>75</sup> conducted within the Capital Region that indicates that an overwhelming majority (93%) of responders use trails for Health/Exercise/Recreation and 66% feel that they would be more likely to use the trail system for commuting, travel or other non-recreational trips if a regional trail system was established. This information will support the Town's efforts to establish facilities for bike and pedestrian users in the WRA.

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## COMMUNICATION SERVICES

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All of the areas along major north-south and east-west roadways within the WRA have internet services infrastructure available. The WRA is well provided with services for telephone, cable, and internet.

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## ENERGY AND GAS UTILITIES

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Access to energy is important for a healthy and sanitary life, it provides households with clean water, food, health and communication services. Electricity also impacts the economy, making it easier for businesses to run, and farmers to produce food. Food will also spoil quickly without refrigeration.

The WRA is served by National Grid which provides both electric and gas service to residents and businesses located within the WRA. A large number of older properties and some newer properties located in the more rural areas within the WRA use propane or oil for their gas needs. Homes located in subdivisions and businesses on the western side of the WRA in the northern portion have natural gas available. The WRA is well provided with services for electricity and natural gas.

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### PROPOSED PILGRIM PIPELINE PROJECT

As a result of a SEQR positive declaration, a Draft Generic Environmental Impact Statement (DGEIS) is currently underway for a proposed action to construct two (2) new parallel pipelines (mainlines) between Albany, New York to Linden, New Jersey, known as the Pilgrim Pipeline Project. The NYSDEC and NYS Thruway Authority are the designated Lead Agencies to conduct the environmental review under SEQR. One of the mainline pipelines would carry crude oil southbound from Albany and the second parallel mainline would carry refined petroleum products northbound from Linden. The proposed pipelines will be located on a linear right-of-way (ROW) within Albany, Rensselaer, Greene,

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<sup>75</sup> [https://www.cdtcmpo.org/images/bike\\_ped/TrailsPlan/CDTC\\_TrailsPlan\\_F3\\_reduced.pdf](https://www.cdtcmpo.org/images/bike_ped/TrailsPlan/CDTC_TrailsPlan_F3_reduced.pdf)

Ulster, Orange, and Rockland Counties in New York. The New York State Department of Environmental Conservation (NYSDEC) is tracking and documenting the progress of this project on their website.

Based on the information provided by the NYS Thruway Authority about seven (7) miles of the mainline would be located in Bethlehem (milepost 3 to milepost 10), which include land within the Town's WRA. Approximately 4.5 miles are to be located within the NYS Thruway ROW along the southbound side, and 2.5 miles are to be located on private land in the Town just north of the Wemple Road crossing of the Thruway (I87) for connection to the Buckeye Albany Terminal located at 301 Normanskill Street in Albany, south of the Port of Albany. The Buckeye Terminal is not located within the Port of Albany and therefore is not associated with the Port. In addition, a 0.33-mile-long Citgo and Apex Lateral will connect to land owned and operated by Citgo Petroleum Corp located between the CSX ROW and NYS Route 144/River Road in Bethlehem. Temporary access roads are proposed on private land with access from Town roads (Wemple Road, Beaver Dam Road and Trinity Place).

On May 11, 2016, Bethlehem's Town Board passed a resolution opposing the Pilgrim Pipeline. The Town's preference is to explore and implement renewable energy in order to eliminate negative risks that could cost human lives as well as cause serious damage to Town residents, properties, and the environment. The Town has a desire to participate as an involved agency during the DEIS process due to its concerns about the proposed project spanning the length of the Town along the NYS Thruway within the WRA. Town permits that may be needed for the project include a floodplain development permit, highway work permit, grading permit, and stormwater MS4 permit. The Town will participate in the EIS scoping phase when the scoping phase is initiated.

## AIR QUALITY

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"Local air quality changes daily and affects how we live and breathe. Air quality depends on numerous factors, such as weather, local pollution sources, and up-wind pollution sources. The U.S. Environmental Protection Agency has created the Air Quality Index (AQI) to measure and track the five major air pollutants regulated by the Clean Air Act. The five pollutants are: ground level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide. The AQI has a scale of 0 through 500. Each pollutant is scored daily and the highest score for an individual pollutant is the AQI score for the day. Scores of 0-100 range from Good to Moderate. Scores of 101 to 150 are Unhealthy for Sensitive Groups while scores of 151 to 500 are considered Unhealthy, Very Unhealthy, and Hazardous<sup>76</sup>."

The NY State DEC is the state agency that carries out both the state and federal air pollution control and monitoring programs. The New York State Ambient Air Monitoring Networks provides air pollution data to the public, determines compliance with ambient air quality standards and develops emission control strategies and studies<sup>77</sup>. The Bethlehem WRA is within the Albany-Schenectady-Troy, NY designated area under the Federal and State programs. The current network monitors sites closest to the Bethlehem WRA are located in Stillwater and Loudonville. The data collected between 2008 and 2011

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<sup>76</sup> [https://cdrpc.org/wp-content/uploads/2015/09/Regional\\_Indicators.pdf](https://cdrpc.org/wp-content/uploads/2015/09/Regional_Indicators.pdf)

<sup>77</sup> <http://www.dec.ny.gov/chemical/8406.html>

indicates different levels of reduction in the emissions for the five pollutants mentioned above. The Albany-Schenectady-Troy, NY area as of January 2018 was designated attainment for the most current ozone standards and so is currently in compliance with Federal ambient air quality standards.

In 2009, the Town of Bethlehem adopted a resolution to support reduce greenhouse gas emissions to the extent practical-and fiscally prudent in programs designed for Climate Smart Communities. As part of achieving this goal the Town encourages the production and use of renewable energy. Since 2009, Bethlehem has made significant upgrades to its facilities in order to save money, become more efficient, and reduce GHG emissions. The town has participated in multiple NYSERDA programs to identify energy efficiency and hydroelectric opportunities in the town's wastewater treatment and water treatment facilities. Bethlehem has improved the aeration system at the municipal wastewater treatment plant, located in the WRA, saving 460,000 kWh of electricity annually. Most recently, the town received funding to install a 30kW solar photovoltaic system at the Elm Avenue Park administration building, completed lighting upgrades in town hall and work in the town highway garage has been scheduled. This work is estimated to have an annual energy savings of 111,051 kWh and an annual cost savings of \$12,348. The upgrades were performed and partially funded through the National Grid Conservation Program.

The Town also advocates for opportunities to improve mobility and connectivity for bicyclists and pedestrians. The Town of Bethlehem has been awarded \$500,000 in Federal Safe Routes to School (SRTS) funding for sidewalks, handicap accessible ramps, and crosswalk markings near the Bethlehem Middle School, Hamagrael Elementary School, and St. Thomas the Apostle School. Improving mobility and connectivity for bicyclists and pedestrians has been emphasized as part of the needs of the WRA and included in Section IV under projects.

## **LOCAL AND REGIONAL PLANNING EFFORTS**

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Existing plans, policies, and land use regulations related to the waterfront were reviewed to create a vision for the waterfront. Documents reviewed were related to development, economic strategy, resource conservation, safety and resiliency, transportation, historic and cultural resources, community partnerships and the goals and policies of surrounding communities.

An LWRP reflects community consensus and should be aligned with local plans and programs. The LWRP should represent a balanced approach to achieving community needs. Documents specific to the Town were reviewed to gain a further understanding of existing conditions, and ongoing plans and initiatives.

### **TOWN OF BETHLEHEM COMPREHENSIVE PLAN AND GENERIC ENVIRONMENTAL IMPACT STATEMENT**

The Town Comprehensive Plan (Plan) and GEIS was adopted in 2005. It was subsequently evaluated in 2007 by the Comprehensive Plan Oversight Committee and 2013 by the Comprehensive Plan Assessment Committee, which made recommendations resulting in amendments to the Zoning law and related codes. The focus of the Plan was to achieve a balance and set forth guiding principles and goals that would allow the community to meet its vision for the Town in 2020. Guiding principles listed within the Plan include:

- Adaptability;
- Diversity;
- Environmental Sustainability;
- Fiscal Responsibility;
- Intermunicipal Cooperation and Community Partnerships; and
- Respect for Private Property.

The Plan provides specific recommendations that would assist the Town in reaching its goals. One of the many ways in which the Town hopes to achieve the goals included in the Plan is to develop and implement an LWRP. The Town anticipates that having an LWRP will provide more clarity about future growth and land use preferences in the riverfront area and could result in refined land use recommendations. This document will be a useful resource for completing the LWRP.

### **ZONING ORDINANCE**

The Town is divided into fifteen (15) zoning districts. In addition to the fifteen (15) zoning districts, the Town has designated the Delaware Avenue Hamlet Overlay District (DAH) and the Planned Development District (PDD). All districts are visually depicted on an adopted zoning map, most recently amended on April 27, 2016. Requirements and permitted uses for each of the districts are discussed within Chapter 128 of the Town of Bethlehem Code and are simplified within the Schedule of Uses, most recently amended on February 24, 2016. The Schedule of Area, Yard and Bulk Requirements, most recently amended on March 11, 2015, provides information regarding maximum density units per acres, lot sizes and required setbacks.

The purpose of the Town of Bethlehem Zoning chapter is to guide the future growth and development of the Town in accordance with the Town of Bethlehem Comprehensive Plan. The zoning intends to encourage the establishment of population densities that consider the most appropriate use of land relative to existing and trending social and economic factors and conditions within the Town and surrounding areas. Zoning is also intended to secure the Town from natural and other dangers, provide adequate light and air, prevent overcrowding of the land and unnecessary concentration of population, and conserve the value of natural and built environment in accordance with the character and suitability of a district.

### **COMPREHENSIVE PLAN ASSESSMENT COMMITTEE REPORT TO THE TOWN BOARD**

The Comprehensive Plan Assessment Committee was established to evaluate progress on the goals and objectives of the 2005 Comprehensive Plan and subsequent CPOC report to determine whether changes, additions or deletions are appropriate, considering changes in the community, the economic climate, as well as recommendations from advisory committees and the community at large. The CPAC Report from 2013 concluded that the Comprehensive Plan goals that were established to guide decision making remain high priorities for the Town. Further, the Report states the general consensus by the CPAC is that the accomplishments/work completed since the Town Board's adoption of the Comprehensive Plan in 2005 has followed these goals and the Town's land use and planning efforts continue to be on the right track.

### **CONSERVATION EASEMENT AGREEMENT EXEMPTION PROGRAM**

Local Law No. 2 of 2014 added Article VII Conservation Easement Agreement Exemption (Program) to Chapter 111 Taxation of the Town Code, which is administered by a Conservation Review Board. The Program is intended to conserve open space, maintain the character of the Town and provide financial incentives and assistance to landowners willing to forego development and maintain open space. This voluntary, incentive-based program provides a reduction in property taxes (Town and County) and school taxes within the Bethlehem Central School District for a minimum of 15 years. A minimum of 5 acres of open space must be maintained to be eligible for the incentives. There are conditions that can be included in a conservation agreement such as precluding development for residential, commercial, industrial uses and the placement of cell towers or other telecommunication facilities. However; allowable development can be related to agricultural activities, harvesting of timber, or recreation for private or public use.

This Program supports the waterfront by providing incentives for conserving open space, protecting and enhancing natural resources, scenic views and practicing environmental responsibility.

### **SUBDIVISION REGULATIONS**

The Town subdivision regulations were adopted in August 2006 and have been amended over the years, most recently in 2016. The regulations support the vision of the Comprehensive Plan by setting forth the policy for a balance of concentrated development, natural character, visual appearance and safety. The regulations evaluate the arrangement, location and width of streets and lots in relation to the above listed considerations. Future development of adjoining lands not yet subdivided is also taken into consideration during review.

### **AGRICULTURAL AND FARMLAND PROTECTION PLAN**

The Town of Bethlehem Agricultural and Farmland Protection Plan (Plan) was developed with grant assistance from the New York State Department of Agriculture and Markets. The Final Plan was issued in September of 2009. The intent of the Plan is to preserve and encourage a semi-rural setting for the Town and explore opportunities to support agriculture as a business and protect farmland as a land use in the community. The Plan aims to support preservation, conservation, management and improvement of lands which are part of viable farming operations. The Plan strategies were developed through participation of local farmers, landowners and stakeholders in the agricultural industry. The Plan specifically supports farm businesses and lists five (5) goals with supporting recommendations. Recommendations included development of a term conservation easement program and purchase of development rights program to provide financial incentives for land to remain in agricultural use, assistance to farmers for maintaining their land (addressing trespassing, encroachment, etc.), and support for agricultural businesses.

Plan goals address the following:

- Preservation of character;
- Natural resources;
- Open space; and

- Support for activities and businesses that aid in economic development.

### **COMPLETE STREETS RESOLUTION**

In August of 2009, the Town Board adopted a Complete Streets Resolution (Resolution), which aims to meet the goal of improving mobility, which the Resolution defines as “the ability of people, regardless of age and status, to engage in desired activities throughout the Town”. The Resolution was also developed in response to the Comprehensive Plan recommendations to maintain and enhance bicycle and pedestrian connections within neighborhoods and between neighborhoods and hamlet centers. The Bicycle and Pedestrian Committee (formerly the Paths 4 Bethlehem group) was created to explore bicycle and pedestrian facility connections, address issues, and acknowledge bicycling and walking as important forms of transportation and recreation in our community. The Complete Streets Resolution also acknowledges that bicycling and walking contribute to health, fitness, neighborhood vitality, social interaction and economic development. Integrating options for multiple modes has the potential to increase efficiency and capacity of the local transportation network. Additionally, the Resolution is anticipated to reduce traffic congestion by diversifying mobility options, as well as limit greenhouse gas emissions and improve general quality of life. The Resolution calls for bicycles and pedestrians to be equally as important as motorists during planning and design of all new street construction and reconstruction carried out by the Town.

### **BETHLEHEM’S PARKS AND RECREATION COMPREHENSIVE MASTER PLAN**

The Parks and Recreation Master Plan (Master Plan) was developed as a guide to enhance parks and recreation services and facilities within the community. The Master Plan provides an inventory of parks and facilities town-wide. The Master Plan provides a level of service analysis, an overview of community input received, a needs assessment, and an operational and marketing analysis. Recommended goals with corresponding objectives are provided. The goals and objectives are further supported by an accompanying action plan. Goals and objectives include:

- Improving organizational efficiencies;
- Increasing financial opportunities;
- Improving programs and service delivery; and
- Improving facilities and amenities.

Alternative funding ideas were also identified. The Master Plan describes the importance of developing individual park master plans and expressing the history and recreational heritage of the Town. Notable trends to be considered for future implementation throughout the Town include:

- Water recreation activities;
- Dog parks;
- Fitness, sports and mind-body activities;
- Festivals and Concerts;
- Natural environment and open space.

### **HENRY HUDSON PARK MASTER PLAN**

Henry Hudson Park Master Plan presents the conceptual design of the improvements proposed to the park, which was developed as part of the planning process for the development of the Town of Bethlehem LWRP. The plan also reflects opportunities to recharge utilization of the site, making it a resilient place and an economic booster through programming. With the help of the Town and community members, the design team was able to analyze existing conditions, its context area, and gather information from the community to produce a master plan that utilizes the park's full potential. The recommendations identified three strategies; improve pedestrian safety and park utilization, improve park connectivity and visitor experience, and utilize the entirety of the parkland. Eleven projects were developed that include estimated costs and components in order to allow flexible project phasing to be done. A copy of the Henry Hudson Park Master Plan completed in 2017 as part of the development of the LWRP is included in Appendix B.

### **CLIMATE SMART COMMUNITIES SEA LEVEL RISE VULNERABILITY ASSESSMENT REPORT**

Climate Smart Communities is a program<sup>78</sup> developed by the NYSDEC, to help local governments to identify and adopt technologies, programs, and support for low carbon initiatives, efficiency improvements and energy conservation. In 2009, the Town of Bethlehem formally adopted the Climate Smart Communities Pledge by passing a municipal resolution. This resolution initiated the community's commitment to greenhouse gas (GHG) emission reduction and climate adaptation.

During November of 2013, the Capital District Regional Planning Commission (CDRPC) and its consultant, VHB, conducted an in-person consultation with the Town to discuss local climate protection priorities. During the consultation, the Town discussed both the challenges and opportunities in addressing Pledge Element 7: Enhance Community Resilience and Prepare for the Effects of Climate Change. It was decided that a vulnerability assessment with a focus on flooding within the waterfront area would provide technical assistance to the community. The assessment would measure the projected increases in sea-level rise, identify sectors and systems potentially impacted and develop initial strategies to be included in the updated LWRP plan.

The Report discusses how potential Hudson River flooding would impact significant infrastructure, local government operations and community resources within the waterfront area. The assessment identified key threats and addresses risks related to climate change. This Report includes the methodology used to determine the projected increases in sea level rise that were estimated by Scenic Hudson and outlines a step by step process that can be followed to apply sea level rise projects outside of the WRA. This methodology is illustrated by six maps showing the sea level rise projects and a list of strategies that can be included in Bethlehem's updated LWRP to address the projected climate impacts from flooding. To supplement this Report, this LWRP evaluated the assets within the WRA potentially at risk under current conditions. These assets would be at even greater risk based on the sea level rise projection discussion in the Report.

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<sup>78</sup> <https://climatesmart.ny.gov/>

### **HENRY HUDSON SHORELINE STABILIZATION STUDY**

In 2007, the Town received a grant from the NYSDEC Hudson River Estuary Program to conduct a shoreline stabilization study in the Henry Hudson Park. The Study provides a history of stabilization methods implemented on the shoreline and an assessment of the existing conditions of the rip rap revetment, concrete capping and timber crib. The Study provides recommendations for the most appropriate methods for shoreline stabilization, based on the site constraints and project requirements. Recommendations consist of shoreline stabilization through joint planting in the playground area and vicinity of Vroman Kill, rock riprap revetment along the fishing platform and picnic areas and soft vegetation north of the boat launch. Estimated construction costs total \$2.5M, and \$1.8M without the soft vegetation stabilization north of the boat launch.

### **BETHLEHEM BICYCLE AND PEDESTRIAN PRIORITY NETWORK MAP**

The Bethlehem Bicycle and Pedestrian Priority Network Map was issued in October 2010 and last revised in April 2012. The map was developed by Bicycle and Pedestrian Committee and is in the brochure of the Sustainable Bethlehem: bicycle and pedestrian program available on the Town of Bethlehem website<sup>79</sup>. The Committee developed a ±103-mile bicycle and pedestrian priority network that the Town should make more accommodating for safe and efficient bicycle and pedestrian travel. It is envisioned that this network could become a continuous system of usable accommodations. These roadways were identified since they are parts of major travel routes throughout the Town. They connect major destinations (schools, shopping areas, recreation facilities, community facilities) with each other and residential neighborhoods. The network does not include many local low vehicle volume and speed roadways. In the case of bicyclists, the network accommodates commuter and recreational travel. The roads highlighted in red reflect those that would be more conducive to bicycle travel only due to adjacent development (land uses) and roadway characteristics. The roads highlighted in purple are recommended to accommodate both pedestrian and bicycle travel.

Roadways on the network located in the WRA include Corning Hill Road, Glenmont Road, River Road, Wemple Road, Weisheit Road, Clapper Road, and Beaver Dam Road. Only Glenmont Road is recommended for pedestrian travel. All the other network roads are recommended for bicycle travel, which is reflective of the rural, low density nature of the WRA.

### **MOH-HE-CON-NUCK NATURE PRESERVE MASTER PLAN**

In 1995, the Town acquired a 53+ acre wooded parcel from the U.S. Department of the Interior through the National Park Service (NPS). The Town named the parcel the Moh-He-Con-Nuck Preserve, since the area was originally occupied by the Mohican Indians, the name means "people of waters that are never still." In 2009, the Town prepared the Moh-He-Con-Nuck Nature Preserve Master Plan (Master Plan), which identifies recreation development opportunities of the preserve that are environmentally sensitive, accessible and retain the existing ecological balance. The Moh-He-Con-Nuck Nature Preserve

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<sup>79</sup> Bethlehem Bicycle & Pedestrian Program - <http://www.townofbethlehem.org/DocumentCenter/View/3038>

is intended for passive recreation. The Master Plan was developed with public participation that supported use of the property as a nature preserve where visitors can appreciate their surroundings.

Based on input from the community, the Master Plan provides a four-phase development scenario. Each phase provides a strategic location for development based upon public accessibility and use. To minimize site impacts to the greatest extent possible, all trails are recommended to be designed to follow natural contours of the existing land while still being ADA compliant. Community consensus determined that visual access to the river should be provided, while direct access may pose issues related to accessibility and disturbance of existing topography.

The Master Plan incorporates site amenities such as universally accessible trails, off-road parking, seating/benches, habitat viewing platforms, and interpretive signage and mapping identifying the vegetation, wildlife and history of the Preserve. Trails are constructed of stone dust, wood chips or comparable material and would not be paved to minimize environmental impacts. There are constraints to providing access to the river due to the topography, seasonal flooding, and the easement needed to access the river frontage.

In 2013, the Town constructed 1.2 miles of the trail system along with a parking area and information kiosk at the Preserve entrance.

### **CITIZEN GUIDE TO LAND USE, PLANNING AND DEVELOPMENT**

The purpose of this Citizen's Guide is to explain land use, planning and development in the Town of Bethlehem in nontechnical terms. The guide describes how planning is essential to ensure that the Town maintains a balance of economic growth, protection of natural resources, and sustainability in a manner that preserves the Town's aesthetic character. The Comprehensive Plan serves as the overarching guide to all planning and land use regulation in the town. The Town code includes regulations for zoning, subdivision and building construction and development. All proposed development follows a formal process, which may include Board review and approval. Town residents can comment on development proposals at public hearings, which are posted on the Town's website. Town residents can also view proposed development plans and meeting video recordings on the Town's meeting agenda webpage. The Citizen's Guide discusses the following topics:

- Planning Vision;
- Zoning and Uses;
- Hamlet Zoning;
- Review Boards;
- Development Process;
- Subdivision and Building Application Process;
- Balancing Development and Open Space Conservation Subdivisions;
- Mixed Economic Development Districts;
- Planned Development District;
- Planning Studies; and
- Frequently Asked Questions.

### **OPEN SPACE PLAN: CONSERVATION CRITERIA IMPLEMENTATION**

The Town Board passed a resolution in December of 2017 to implement an open space plan with conservation criteria. The town's stated purpose of open space planning is "to ensure that future consumption of land for development is balanced with the conservation of land for its open space value".

The Open Space Plan<sup>80</sup> includes:

1. An updated, town-wide open space inventory and database, as illustrated in four Open Space Conservation Values Maps
2. A list of data-driven Conservation Criteria (25) with which to evaluate open space land for its conservation values; and,
3. An effective, flexible, data-based method - the GIS Conservation Analysis Tool - to evaluate, numerically score, and prioritize the conservation of open space land.

The ongoing use and implementation of these plan components by the Town Board, Planning Board, Planning Department Staff, and the Conservation Easement Review Board, will prepare and guide the town in responding to landowner inquiries about conservation opportunities, as well as inform the town's development review and design process. Further, it will inform the use of limited financial resources and direct future funds to the conservation of open space land that will have the most beneficial impact town wide. Having this open space plan in place will also support town applications for state, regional and federal grant funding for conservation implementation. The Open Space Plan: Conservation Criteria Implementation adopted in December 2017 continues to be a useful guide to understand the open space benefits of land conservation opportunities. Within the WRA, all of the 25 conservation criteria are valued and include agricultural lands, forests, wetlands, and stream corridors, etc. Implementation of the conservation criteria will be beneficial to the town.

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Regional planning is beneficial for communities and provides wide-reaching impact with the potential to improve the quality of an entire State. Planning documents from nearby communities, the region and the State were reviewed to gain an understanding of opportunities for collaboration and potential partnerships. Partnership and collaboration can lead to sharing of resources, stronger opportunities for implementation of proposed project and regional connections.

### **TOWN OF SCHODACK AND VILLAGE OF CASTLETON-ON-HUDSON LOCAL WATERFRONT REVITALIZATION PROGRAM**

The Town of Schodack and Village of Castleton-On-Hudson LWRP was approved in 1995 by the NYS Secretary of State and the U.S. Office of Ocean and Coastal Resource Management. The LWRP area includes an 8-mile sparsely developed section of the Hudson River. The Village is located approximately in center of the 8-mile section, is the only urbanized area and is the only area with direct contact to the river. The WRA is comprised of natural wildlife habitat, wetlands and land used for agricultural purposes.

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<sup>80</sup> Town of Bethlehem Open Space Plan - [www.townofbethlehem.org/DocumentCenter/View/11149](http://www.townofbethlehem.org/DocumentCenter/View/11149)

The waterfront WRA provides limited public access to the water's edge as the high-speed rail located between the waterfront and Village acts as a barrier. The Village offers cultural resources with its historic buildings and cultural heritage and scenic views of open water, wetlands, and rural development.

The LWRP was adopted by the Town of Schodack Town Board in December 1991 and by the Village of Castleton-on-Hudson, Board of Trustees in February 1993. The Plan was approved by the New York State Secretary of State and the United States Office of Ocean and Coastal Resource Management in 1995.

Priority matters identified in the LWRP are as follows:

- Restricted Access to the Hudson River;
- Future Use and Development of Castleton Island State Park;
- Revitalization of Village Center;
- Preservation of Waterfront Environment; and
- Balance of Access, Recreation, Preservation and Economic Development.

The LWRP identifies opportunities to connect with other parts of the Town and Village but does not propose connections to other communities within the region.

#### **CITY OF ALBANY LOCAL WATERFRONT REVITALIZATION PROGRAM**

The City of Albany LWRP was adopted by the Albany Common Council and approved by the New York State Secretary of State in October 1991. In December 1991, the United States Office of Ocean and Coastal Resource Management concurred with approval by New York State.

Preparation and implementation of the LWRP focused on balancing redevelopment with preservation and enhancement of natural sites and recreational areas along the waterfront. The LWRP identifies the Albany Hudson riverfront as a unique opportunity for the City to restore the waterfront to a position of importance in the life of the City. Albany's central businesses district is identified as a generator of new development and revitalization. The LWRP conveys that water development can stimulate and enhance this revitalization by improving the image of the City as a business, financial and educational center and as a vital, active place to live and work.

#### **CAPITAL 2020 UPSTATE REVITALIZATION INITIATIVE**

In April 2015, Governor Andrew M. Cuomo announced the Upstate Revitalization Initiative (URI). This initiative challenged regions to develop a transformation economic development strategy. The strategy was required to be created by community input and supported by data. The Capital 20.20 Upstate Revitalization Initiative, completed in October 2015, was developed in response to this initiative.

The URI sets forth a proposal for how investment in the Capital Region can in turn provide economic growth, an increase in jobs, improvement in job quality, an increase in equal opportunity and an enhanced quality of life within the region over the next five years and into the future. The URI describes how the region can build upon its assets and work toward sustainable and inclusive growth. The URI proposes that the transformation will occur by shifting from an economy dependent on the public sector to an economy where the private sector is the primary driver of growth.

The initiative establishes five (5) strategies. The strategy most relevant to waterfront revitalization efforts in the Town of Bethlehem is Strategy 2 – Gateway: Connecting Markets and Business. This strategy includes Initiative 1: Ports Modernization and Expansion. This focuses on investing in the Port of Albany and Port of Coeymans by completing infrastructure improvements aimed toward creating new middle-skill jobs. The goal is to reduce the costs for regional importers and exporters, therefore allowing the region to respond to future market trends and opportunities while continuing to invest in the sustainability of the river.

The URI further examines this strategy in detail providing information on the existing conditions, constraints and opportunities associated with the Port of Albany and Port of Coeymans.

### **CAPITAL REGION ECONOMIC DEVELOPMENT COUNCIL**

#### **2015 PROGRESS REPORT – THE TECH VALLEY IN FOCUS**

The CREDC is one (1) of 10 Regional Economic Development Councils within the State. The purpose of the CREDC is to develop long-term strategic plans and public-private partnerships for economic growth within the Capital Region. The members of the council are local experts and stakeholders within various industries, and representatives of local governments and non-governmental organizations. The CREDC works toward investment, job creation and economic growth within the region.

The CREDC 2015 Progress Report (Report) provides a detailed overview of the progress made within the Capital Region since 2010. The Report reveals focus areas that are anticipated to lead the region into the next phase of development and they are: high tech, urban revitalization, entrepreneurship, transport and logistics, and higher education. The LWRP supports the regional plan in that it also encourages economic growth.

### **NYS 2100 COMMISSION**

In November 2012, Governor Andrew Cuomo convened the NYS2100 Commission in response to the recent, and unprecedented, severe weather events experienced by New York State and the surrounding region, including Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee.

The Commission was created to examine and evaluate key vulnerabilities in the State’s critical infrastructure systems, and to recommend actions that should be taken to strengthen and improve the resilience of those systems. The goal was to mitigate future damage and subsequent economic losses, while invigorating New York’s economy with a robust green technology sector and as a result enhance quality-of-life for all New Yorkers. The Report provides recommendations to improve the strength and resilience of the New York State infrastructure. Recommendations include nine (9) that span across multiple sectors and systems and they are:

- Protect, upgrade, and strengthen existing systems;
- Rebuild smarter: ensure replacement with better options and alternatives;
- Encourage the use of green and natural infrastructure;
- Create shared equipment and resource reserves;

- Promote integrated planning and develop criteria for integrated decision-making for capital investments
- Enhance institutional coordination;
- Improve data, mapping, visualization, communication systems;
- Create new incentive programs to encourage resilient behaviors and reduce vulnerabilities; and
- Expand education, job training and workforce development opportunities.

**NYS SEA LEVEL RISE TASK FORCE REPORT TO THE LEGISLATURE**

In 2007, the New York State Legislature created the Sea Level Rise Task Force and charged it with preparing a report that addresses issues related to sea level rise and its impact on developed and conserved areas. The report includes recommendations for an action plan to protect coastal communities and natural resources from rising sea levels and indicates that Albany County is one of the counties in New York State affected by sea-level-rise. NYS DEC leads the Task Force which is made up of a diverse group of representatives from state and local government agencies, non-governmental organizations and communities affected by sea level rise. The Task Force is given the responsibility of protecting New York’s remaining coastal ecosystems and natural habitats and increasing coastal community resilience in the face of sea level rise and using science and data to support their decisions. The Report also identifies the importance of considering sea level rise when building infrastructure such as roads, building and utilities. The recommendations encourage non-structural strategies for mitigation but acknowledge other approaches may be required depending on specific communities and specific circumstances. Additionally, in 2014 the New York Climate Risk and Resiliency Act (CRRA) was put in place. Through the CRRA, New York State has identified six management measures to increase coastal resilience through a planned approach.

**POTENTIAL REVITALIZATION PARTNERS**

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Developing an LWRP provides opportunities to work together with stakeholders identified throughout the project including but not limited to local business owners, local property owners, community and neighborhood groups or non-profit organizations. Additional partnerships include Federal, State, Regional or Local governmental agencies or other institutions. Many of these partners provide useful technical knowledge, funding, facilitation, and assist in supporting goals relevant to the LWRP.

A list of potential Federal agencies and offices that may be considered as partners during planning and implementation of the LWRP is included in Table 37. Potential partners are noted as able to provide funding or able to aid in facilitation of a project. Some of the potential partners have the capacity to assist in both manners.

**Table 37: Potential Federal Partners**

Potential Partner	Funding	Facilitation	Technical Expertise
United States Fish and Wildlife Services	X	X	X
Federal Highway Administration	X		X

Potential Partner	Funding	Facilitation	Technical Expertise
United States Environmental Protection Agency	X	X	X
United States Department of the Interior	X		X
United States Housing and Urban Development	X		X

*Source: New York State Department of State and 2010 LWRP*

Table 38 provides a list of potential State agencies and offices that may be considered as partners during planning and implementation of the LWRP. Potential partners are noted as able to provide funding or able to aid in facilitation of a project. Some of the potential partners have the capacity to assist in both manners. Partnerships can lead to creative projects that are non-traditional.

**Table 38: Potential State Partners**

Potential Partner	Funding	Facilitation	Technical Expertise
New York State Energy Research and Development Authority (NYSERDA)	X		X
New York State Council on the Arts	X		X
New York State Office for the Aging	X		X
Division of Alcoholism and Substance Abuse Services	X		X
Dormitory Authority of the State of New York	X	X	X
Office of Children and Family Services	X		X
Empire State Development Corporation	X		
Environmental Facilities Corporation	X		
Facilities Development Corporation	X		
Division of Housing and Community Renewal	X		X
New York State Education Department	X		X
New York State Power Authority			X
Hudson River Valley Greenway Communities Council	X		
Office of Mental Health	X	X	
Office for People with Developmental Disabilities	X	X	
New York State Canal Corporation	X		X
New York State Parks and Trails	X		X
New York State Assembly	X		
New York State Governor’s Office	X	X	X
Capital Region Regional Economic Development Council	X	X	X
New York State Department of State	X	X	X
New York State Department of Transportation	X	X	X

*Source: New York State Coastal Management Program*

As the Capital Region and Hudson River Watershed communities continue to grow and evolve, projects should be evaluated within a regional context, and with special consideration of nearby waterfront communities. Municipalities located nearby the study area include, but are not limited to:

- The City of Albany
- The City of Troy
- The Town of East Greenbush
- The Town of Castleton-on-Hudson
- The City of Rensselaer
- The Town of Coeymans
- The Town of Schodack

The nearby municipalities are diverse, as some are urban, while others rural, suburban or a mix of each. Despite their diversity, it is common for municipalities to recognize common goals and initiatives or projects that might help one municipality in one way and help another municipality in another manner. Open communication between nearby communities allows for productive brainstorming sessions and problem solving.

Regional agencies and offices also have the potential to provide funding or facilitation for projects. Regional agencies are especially useful since knowledge of the region is important in establishing regional connections or viewing a project within a regional context. Technical knowledge is especially helpful, and most groups are more than willing to provide, especially considering that they may have similar goals and visions for the region.

Local incubators within the Capital District may be useful connections. Incubators in the area include:

- Center for Economic Growth (CEG) Center
- Emergency Ventures Ecosystem
- Biomedical Acceleration and Commercialization Center at AMC (BACC)
- RPI Incubator Program
- INVEST

### **Albany County Land Bank**

The Albany County Land Bank<sup>81</sup> was established in 2014 by Albany County to facilitate the process of acquiring, improving, and redistributing tax-foreclosed, vacant or abandoned properties. The Land Bank is a nonprofit organization committed to revitalizing neighborhoods and strengthening communities throughout Albany County. The Albany County Land Bank uses funding from the Office of the New York State Attorney General, Albany County and the City of Albany to support property demolitions, acquisitions, stabilizations, lot improvements and renovation projects. The Albany County Land Bank works in partnership with local and state government, non-profits, residents, community groups, and responsible developers and investors to return properties to productive use and support community development. Recently, the Town of Bethlehem and Albany County Land Bank have worked together to

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<sup>81</sup> [www.albanycountylanbank.org](http://www.albanycountylanbank.org)

conserve as open space an eight-acre undeveloped parcel located outside of the WRA near the crossroads of Wemple Road and Route 9W and dominated by wetlands.

**Table 39: Potential Regional Partners**

Potential Partner	Funding	Facilitation	Technical Expertise
Scenic Hudson	X	X	X
Empire State Development Corporation	X		
Capital District Regional Planning Commission	X		X
Capital District Transportation Committee	X	X	
Albany Port District Commission			X
Capital District Transportation Authority			X
Capital Region Economic Development Council	X		
Mohawk Hudson Land Conservancy			X
Cornell Cooperative Extension – Albany County	X		X
Albany County Land Bank	X	X	
Adjacent Municipalities	X	X	X

*Source: New York State Department of State and 2010 LWRP*

The Town and local organizations can also provide funding and/or facilitation. The following is a list of potential local partners.

- Bethlehem Industrial Development Agency
- Bicycle and Pedestrian Committee
- Residents
- Local Property Owners
- Local Business Owners
- Local Advocacy Groups

There are many agencies and organizations that provide programs that offer funding and/or facilitation services. These programs aid in supporting LWRP initiatives once projects are recommended. The programs may provide the funding, tools, expertise and facilitation required to implement a project. A list of applicable programs is provided in Section VI: Federal and State Actions and Programs.

## SECTION III – COASTAL POLICIES WITHIN THE BETHLEHEM WATERFRONT REVITALIZATION AREA

This section includes the State Coastal Policies and an indication of which policies are applicable within the Town of Bethlehem Waterfront Revitalization Area described in Section I of this LWRP. Following the policy statements are explanation of policies, including any local refinement necessary to relate to the Bethlehem WRA.

The policies are organized and grouped under eleven headings:

- Development Policies (1-6)
- Fish and Wildlife Policies (7-10)
- Flooding and Erosion Hazards Policies (11-17)
- General Policy (18)
- Public Access Policies (19 and 20)
- Recreation Policies (21 and 22)
- Historic and Scenic Resources Policies (23-25)
- Agricultural Lands Policy (26 and 26A)
- Energy and Ice Management Policies (27-29)
- Water and Air Resources Policies (30-43)
- Wetlands Policy (44)

### DEVELOPMENT POLICIES

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#### POLICY 1

**Restore, revitalize, and redevelop deteriorated and underutilized waterfront areas for commercial, industrial, cultural, recreational, and other compatible uses.**

#### Explanation of Policy 1

The underutilized structures and sites within the Heavy Industrial Zoning District located in the northeastern side of the WRA is the focus revitalization area within the Bethlehem WRA. The Town supports the adaptive reuse of existing or future vacant facilities located within the Heavy Industrial zoning district illustrated on the [Underutilized Sites and Structures Map](#) included in Section II of the LWRP. This area of WRA represents the best opportunity for economic viability within the WRA, without encroaching on valuable waterfront open space, environmentally sensitive areas, or residential uses. The former Beacon Harbor site is the largest property within the Heavy Industrial Zoning District and represents a great opportunity for economic growth.

State and federal agencies must ensure that their actions further the revitalization of urban waterfront areas. The transfer and purchase of property; the construction of a new office building, highway or park; the provision of tax incentives to businesses; and establishment of enterprise zones, are all examples of

governmental means for spurring economic growth. When any such action or similar action is proposed, it must be analyzed to determine if the action would contribute to or adversely affect a waterfront revitalization effort.

It must be recognized that revitalization of once dynamic waterfront areas is one of the most effective means of encouraging economic growth in the State, without consuming valuable open space outside of these waterfront areas. Waterfront redevelopment is also one of the most effective means of rejuvenating or at least stabilizing residential and commercial districts adjacent to the redevelopment area.

In responding to this policy, several other policies must be considered: (1) Uses requiring a location abutting the water must be given priority in any redevelopment effort. (Refer to Policy 2 for the means to effectuate this priority); (2) As explained in Policy 5, one reason for revitalizing previously dynamic waterfront areas is that the costs for providing basic services to such areas is frequently less than providing new services to areas not previously developed; (3) The likelihood for successfully simplifying permit procedures and easing certain requirements (Policy 6) will be increased if a discrete area and not the entire urban waterfront is the focus for this effort. In turn, ease in obtaining permits should increase developers' interest to invest in these areas. Further, once this concentrated effort has succeeded, stabilization and revitalization of surrounding areas is more likely to occur.

Local governments through waterfront revitalization programs have the primary responsibility for implementing this policy. Though local waterfront revitalization programs need not be limited to redevelopment, local governments are urged to identify areas as suitable for redevelopment and establish and enforce redevelopment programs.

1. When a Federal or State action is proposed to take place in an urban waterfront area regarded as suitable for redevelopment, the following guidelines will be used:
  - a. Priority should be given to uses which are dependent on a location adjacent to the water (see Policy 2)
  - b. The action should enhance existing and anticipated uses. For example, a new highway should be designed and constructed so as to serve the potential access needs for desirable industrial development
  - c. The action should serve as a catalyst to private investment in the area
  - d. The action should improve the deteriorated condition of a site and, at a minimum, must not cause further deterioration. For example, a building could not be abandoned without protecting it against vandalism and/or structural decline
  - e. The action must lead to development compatible with the character of the area, with consideration given to scale, architectural style, density, and intensity of use
  - f. The action should have the potential to improve the existing economic base of the community and, at a minimum, must not jeopardize this base. For example, waterfront development meant to serve consumer needs would be inappropriate in an area where no increased consumer demands were expected, and existing development was already meeting demand
  - g. The action should improve adjacent and upland views of the water, and, at a minimum, must not affect these views in an insensitive manner
  - h. The action should have the potential to improve the potential for multiple uses of the site

2. If a State or Federal action is proposed to take place outside of a given deteriorated, underutilized urban waterfront area suitable for redevelopment, and is either within the relevant community or adjacent coastal communities, the agency proposing the action must first determine if it is feasible to take the action within the deteriorated, underutilized urban waterfront area in question. If such an action is feasible, the agency should give strong consideration to taking the action in that area. If not feasible, the agency must take the appropriate steps to ensure that the action does not cause further deterioration of that area.

## **POLICY 2**

### **Facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters.**

#### Explanation of Policy 2

The Heavy Industrial Zoning District located in the northeastern portion of the Bethlehem WRA is the location of existing industrial docks and could become the location of new industrial water-related and enhanced uses.

The Henry Hudson Park located in the southern half of the WRA provides most of the public recreation water dependent uses within the WRA.

There is a finite amount of waterfront space suitable for development purposes. Consequently, while the demand for any given piece of property will fluctuate in response to varying economic and social conditions, on a statewide basis the only reasonable expectation is that long-term demand for waterfront space will intensify.

The traditional method of land allocation, i.e., the real estate market, with or without local land use controls, offers little assurance that uses which require waterfront sites will, in fact, have access to the State's coastal waters. To ensure that such "water dependent" uses can continue to be accommodated within the State, State agencies will avoid undertaking, funding, or approving non-water dependent uses when such uses would preempt the reasonably foreseeable development of water dependent uses; furthermore, State agencies will utilize appropriate existing programs to encourage water dependent activities.

Water dependent activities shall not be considered a private nuisance, provided such activities were commenced prior to the surrounding activities and have not been determined to be the cause of conditions dangerous to life or health and any disturbance to enjoyment of land and water has not materially increased.

A water dependent use is an activity which can only be conducted on, in, over or adjacent to a water body because such activity requires direct access to that water body, and which involves, as an integral part of such activity, the use of the water.

The following uses and facilities are considered as water-dependent:

1. Uses which depend on the utilization of resources found in coastal waters (for example: fishing, mining of sand and gravel, aquaculture activities)
2. Recreational activities which depend on access to coastal waters (for example: swimming, fishing, boating, wildlife viewing)
3. Uses involved in the sea/land transfer of goods (for example: docks, loading areas, pipelines, short-term storage facilities)
4. Structures needed for navigational purposes (for example: dams, locks, lighthouses)

5. Flood and erosion protection structures (for example: breakwaters, bulkheads)
6. Facilities needed to store and service boats and ships (for example: marinas, boat repair, boat construction yards)
7. Uses requiring large quantities of water for processing and cooling purposes (for example: hydroelectric power plants, fish processing plants, pumped storage power plants)
8. Uses that rely heavily on the waterborne transportation of raw materials or products which are difficult to transport on land, thereby making it critical that a site near to shipping facilities be obtained (for example: coal export facilities, cement plants, quarries)
9. Uses which operate under such severe time constraints that proximity to shipping facilities become critical (for example: firms processing perishable foods)
10. Scientific/educational activities which, by their nature, require access to coastal waters (for example: certain meteorological and oceanographic activities)
11. Support facilities which are necessary for the successful functioning of permitted water-dependent uses (for example: parking lots, snack bars, first aid stations, short-term storage facilities). Though these uses must be near the given water dependent use they should, as much as possible, be sited inland from the water dependent use rather than on the shore.

In addition to water dependent uses, those uses which are enhanced by a waterfront location should be encouraged to locate along the shore, though not at the expense of water dependent uses. A water enhanced use is defined as a use or activity which does not require a location adjacent to or over coastal waters, but whose location on land adjacent to the shore adds to the public use and enjoyment of the water's edge. Water enhanced uses are primarily recreational, cultural, retail, or entertainment uses. A restaurant which uses good site design to take advantage of a waterfront view is an example of a water enhanced use.

If there is no immediate demand for a water dependent use in a given area but a future demand is reasonably foreseeable, temporary non-water dependent uses should be considered preferable to a non-water dependent or enhanced use which involves an irreversible or nearly irreversible commitment of land. Parking lots, passive recreational facilities, outdoor storage areas, and non-permanent structures are uses or facilities which would likely be considered as "temporary" non-water dependent uses.

In the actual choice of sites where water-dependent uses will be encouraged and facilitated, the following guidelines should be used:

1. Competition for space - competition for space, or the potential for it, should be indicated before any given site is promoted for water dependent uses. The intent is to match water dependent uses with suitable locations and thereby reduce any conflicts between competing uses that might arise. Not just any site suitable for development should be chosen as a water dependent use area. The choice of a site should be made with some meaningful impact on the real estate market anticipated. The anticipated impact could either be one of increased protection to existing water dependent activities or else the encouragement of water dependent development.
2. In-place facilities and services - most water dependent uses, if they are to function effectively, will require basic public facilities and services. In selecting appropriate areas for water-dependent uses, consideration should be given to the following factors:
  - a) The availability of public sewers, public water lines and adequate power supply;

- b) Access to the area for trucks and rail, if heavy industry is to be accommodated; and
  - c) Access to public transportation, if a high number of person trips are to be generated.
3. Access to navigational channels - if commercial shipping, commercial fishing, or recreational boating are planned, the locality should consider setting aside a site, within a sheltered harbor, from which access to adequately sized navigation channels would be assured.
  4. Compatibility with adjacent uses and the protection of other coastal resources – water dependent uses should be located so that they enhance, or at least do not detract from, the surrounding community. Consideration should also be given to such factors as the protection of nearby residential areas from odors, noise and traffic. Affirmative approaches should also be employed so that water dependent uses, and adjacent uses, can serve to complement one another. For example, a recreation-oriented water dependent use area could be sited in an area already oriented towards tourism. Clearly, a marina, fishing pier or swimming area would enhance, and in turn be enhanced by, nearby restaurants, motels and other non-water-oriented tourist activities. Water dependent uses must also be sited so as to avoid adverse impacts on the significant coastal resources.
  5. Preference to underutilized sites: The promotion of water-dependent uses should serve to foster development as a result of the capital programming, permit expediting and other State and local actions that will be used to promote the site. Nowhere is such a stimulus needed more than in those portions of the State's waterfront areas which are currently underutilized.
  6. Providing for expansion - a primary objective of the policy is to create a process by which water dependent uses can be accommodated well into the future. State agencies and localities should therefore give consideration to long-term space needs and, where practicable, accommodate future demand by identifying more land than is needed in the near future.

In promoting water dependent uses, the following kinds of actions will be considered:

1. Favored treatment to water dependent use areas with respect to capital programming. Particular priority should be given to the construction and maintenance of port facilities, roads, railroad facilities, and public transportation within areas suitable for water dependent uses.
2. When areas suitable for water dependent uses are publicly owned, favored leasing arrangements should be given to water dependent uses.
3. Where possible, consideration should be given to providing water dependent uses with property tax abatements, loan guarantees, or loans at below market rates.
4. State and local planning and economic development agencies should actively promote water dependent uses. In addition, a list of sites available for non-water dependent uses should be maintained in order to assist developers seeking alternative sites for their proposed projects.
5. Local, State and Federal agencies should work together to streamline permitting procedures that may be burdensome to water dependent uses. This effort should begin for specific uses in a particular area.
6. Local land use controls, especially the use of zoning districts exclusively for waterfront uses, can be an effective tool of local government in assuring adequate space for the development of water dependent uses.

### **POLICY 3**

**Further develop the State's major ports of Albany, Buffalo, New York, Ogdensburg, and Oswego as centers of commerce and industry, and encourage the siting, in these port areas, including those under the jurisdiction of State public authorities, of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people.**

#### Explanation of Policy 3

The aim of this policy is to support the further development of the Port of Albany. In 2018, the Albany Port District Commission (APDC) purchased an 80-acre site (known as "Beacon Harbor"), located along the Hudson River at the confluence of the Normans Kill, within the Town of Bethlehem as a result of their strategic plan for expansion. The Town will support the expansion of the Port by administering the site plan review process through the Town Planning Board and work cooperatively with the Albany Port District Commission to develop the required Generic Environmental Impact Statement (EIS) to be prepared by APDC.

Three other development policies, discussed in this Section, have significant implications for port development, namely: water dependency, concentration of development, and the expediting of permit reviews. In implementing this policy, state agencies will recognize the legally established jurisdictional boundaries of the port authorities. If an action is proposed for a site within or abutting a major port, or if there is a reasonable expectation that a proposed action elsewhere would have an impact on a major port, then the following guidelines shall be used in determining consistency:

1. In assessing proposed projects within or abutting a major port, given that all other applicable policies are adhered to, the overriding consideration is the maintenance and enhancement of port activity, i.e., development related to waterborne transportation, which will have precedence over other non-port related activities.
2. Dredging to maintain the economic viability of major ports will be regarded as an action of regional or statewide public benefit if: a clear need is shown for maintaining or improving the established alignment, width, and depth of existing channels or for new channels essential to port activity; and, it can be demonstrated that environmental impacts would be acceptable according to State regulations governing the activity.
3. Landfill projects in the near-shore areas will be regarded as an acceptable activity within major port areas, provided adverse environmental impacts are acceptable under all applicable environmental regulations and a strong economic justification is demonstrated.
4. If non-port related activities are proposed to be located in or near to a major port, these uses shall be sited so as not to interfere with normal port operations.
5. When not already restricted by existing laws or covenants and when there is no other overriding regional or statewide public benefit for doing otherwise, surplus public land or facilities within or adjacent to a major port shall be offered for sale, in the first instance, to the appropriate port authority.
6. In the programming of capital projects for port areas, highest priority will be given to projects that promote the development and use of the port. However, in determining such priorities, consideration must also be given to non-port related interests within or near the ports that have demonstrated critical capital programming needs.

7. No buildings, piers, wharves, or vessels shall be abandoned or otherwise left unused by a public agency or sold without making provisions for their maintenance in sound condition or for their demolition or removal.
8. Proposals for the development of new major ports will be assessed in terms of the anticipated impact on: a) existing New York State major ports; b) existing modes of transportation; and c) the surrounding land uses and overall neighborhood character of the area in which the proposed port is to be located; and other valued coastal resources.
9. Port development shall provide opportunities for public access insofar as these opportunities do not interfere with the day-to-day operations of the port and the port authority and its tenants do not incur unreasonable costs.
10. In applying the above guidelines, the information in harbor management plans being developed by local governments pursuant to Article 42 of the Executive Law and local laws that would implement them shall be considered.

#### **POLICY 4**

**Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities which have provided such areas with their unique maritime identity.**

##### Explanation of Policy 4

The topography, shoreline configuration, current land use, and need for protection of natural resources limit opportunities for commercial fishing, ferry services, and marinas within the Bethlehem WRA.

This policy recognizes that the traditional activities occurring in and around numerous smaller harbors throughout the State's coastal area contribute much to the economic strength and attractiveness of these harbor communities. Thus, efforts of state agencies shall center on promoting such desirable activities as recreational and commercial fishing, ferry services, marinas, historic preservation, cultural pursuits, and other compatible activities which have made smaller harbor areas appealing as tourist destinations and as commercial and residential areas. Particular consideration will be given to the visual appeal and social benefits of smaller harbors which, in turn, can make significant contributions to the State's tourism industry.

The following guidelines shall be used in determining consistency:

1. The action shall give priority to those traditional and/or desired uses which are dependent on or enhanced by a location adjacent to the water.
2. The action will enhance or not detract from or adversely affect existing traditional and/or desired anticipated uses.
3. The action shall not be out of character with, nor lead to development which would be out of the character with, existing development in terms of the area's scale, intensity of use, and architectural style.
4. The action must not cause a site to deteriorate, e.g., a structure shall not be abandoned without protecting it against vandalism and/or structural decline.

5. The action will not adversely affect the existing economic base of the community e.g., waterfront development designed to promote residential development might be inappropriate in a harbor area where the economy is dependent upon tourism and commercial fishing.
6. The action will not detract from views of the water and smaller harbor area, particularly where the visual quality of the area is an important component of the area's appeal and identity.
7. In applying the above guidelines, the information in harbor management plans being developed by local governments pursuant to Article 42 of the Executive Law and local laws that would implement them shall be considered.

## **POLICY 5**

**Encourage the location of development in areas where public services and facilities essential to such development are adequate.**

### Explanation of Policy 5

The town recognizes that certain forms of development might need to occur at locations which are not within or near areas of concentrated development. However, the town will encourage future development to occur in areas where public infrastructure exists or could be extended with minimal environmental impacts and consider the cumulative effects of existing and proposed uses within that area.

The Town's site plan and subdivision review process includes the assessment of the impacts from a proposed development on the environment as well as the surrounding neighborhood by conducting the State Environmental Quality Review (SEQR) procedure. During the SEQR analysis the Planning Board or Town Board (for a rezoning application) will consider any impacts to wetlands; both State and Federal, agricultural district lands, archeological sensitive areas, traffic conditions and roadway infrastructure, pedestrian and bicycle travel, visual considerations from surrounding properties and areas as well as applying stormwater management regulations.

By its construction, taxing, funding and regulatory powers, government has become a dominant force in shaping the course of development. Through these government actions, development, particularly large-scale development, in the Coastal Area will be encouraged to locate within, contiguous to, or in close proximity to, existing areas of concentrated development where infrastructure and public services are adequate, where topography, geology, and other environmental conditions are suitable for and able to accommodate development.

The above policy is intended to accomplish the following:

- a. strengthen existing residential, industrial and commercial centers
- b. foster an orderly pattern of growth where outward expansion is occurring
- c. increase the productivity of existing public services and moderate the need to provide new public services in outlying areas
- d. preserve open space in sufficient amounts and where desirable
- e. foster energy conservation by encouraging proximity between home, work, and leisure activities.

For any action that would result in large scale development or an action which would facilitate or serve future development, a determination shall be made as to whether the action is within, contiguous to, or

in close proximity to an area of concentrated development where infrastructure and public services are adequate. The following guidelines shall be used in making that determination.

- a. Cities, built-up suburban towns and villages, and rural villages in the coastal area are generally areas of concentrated development where infrastructure and public services are adequate.
- b. Other locations in the coastal area may also be suitable for development, if three or more of the following conditions prevail:
  - i. Population density of the area surrounding or adjacent to the proposed site exceeds 1,000 persons per square mile;
  - ii. Fewer than 50% of the buildable sites (i.e., sites meeting lot area requirements under existing local zoning regulations) within one-mile radius of the proposed site are vacant;
  - iii. Proposed site is served by or is near to public or private sewer and water lines;
  - iv. Public transportation service is available within one mile of the proposed site; and
  - v. A significant concentration of commercial and/or industrial activity is within one-half mile of the proposed site.
- c. The following points shall be considered in assessing the adequacy of an area's infrastructure and public services:
  - i. Streets and highways serving the proposed site can safely accommodate the peak traffic generated by the proposed land development;
  - ii. Development's water needs (consumptive and firefighting) can be met by the existing water supply system;
  - iii. Sewage disposal system can accommodate the wastes generated by the development;
  - iv. Energy needs of the proposed land development can be, accommodated by existing utility systems;
  - v. Stormwater runoff from the proposed site can be accommodated by on-site and/or off-site facilities; and
  - vi. Schools, police and fire protection, and health and social services are adequate to meet the needs of the population expected to live, work, shop, or conduct business in the area as a result of the development.

It is recognized that certain forms of development may and/or should occur at locations which are not within or near areas of concentrated development. Thus, this coastal development policy does not apply to the following types of development projects and activities.

- a. Economic activities which depend upon sites at or near locations where natural resources are present, e.g., lumber industry, quarries.
- b. Development which by its nature is enhanced by a non-urbanized setting, e.g., a resort complex, campgrounds, second home developments.
- c. Development designed to be a self-contained activity, e.g., a small college, an academic or religious retreat.
- d. Water dependent uses with site requirements not compatible with this policy or when alternative sites are not available.
- e. Development which because of its isolated location and small-scale has little or no potential to generate and/or encourage further land development.

- f. Uses and/or activities which because of public safety consideration should be located away from populous areas.
- g. Rehabilitation or restoration of existing structures and facilities.
- h. Development projects which are essential to the construction and/or operation of the above uses and activities.

In certain urban areas where development is encouraged by this policy, the condition of existing public water and sewage infrastructure may necessitate improvements. Those State and Federal agencies charged with allocating funds for investments in water and sewer facilities should give high priority to the needs of such urban areas so that full advantage may be taken of the rich array of their other infrastructure components in promoting waterfront revitalization.

## **POLICY 6**

### **Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.**

#### Explanation of Policy 6

For specific types of development activities and in areas suitable for such development, State agencies and local governments participating in the Waterfront Revitalization Program will make every effort to coordinate and synchronize existing permit procedures and regulatory programs, as long as the integrity of the regulations' objectives is not jeopardized. These procedures and programs will be coordinated within each agency. Also, efforts will be made to ensure that each agency's procedures and programs are synchronized with other agencies' procedures at each level of government. Finally, regulatory programs and procedures will be coordinated and synchronized between levels of government, and if necessary, legislative and/or programmatic changes will be recommended.

When proposing new regulations, an agency will determine the feasibility of incorporating the regulations within existing procedures, if this reduces the burden on a particular type of development and will not jeopardize the integrity of the regulations' objectives.

## **FISH AND WILDLIFE POLICIES**

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### **POLICY 7**

#### **Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.**

#### Explanation of Policy 7

Two State-designated Coastal Fish and Wildlife Habitat (SCFWH) areas are located within the Bethlehem WRA, the Normans Kill SCFWH and the Shad and Schermerhorn Islands SCFWH.

The Normans Kill SCFWH is located on the west side of the Hudson River and extends for approximately two miles, from the mouth of the Normans Kill on the Hudson River to a waterfall which is located just downstream from the New York State Thruway (Interstate Route 87) bridge. Normans Kill is a freshwater tributary of Hudson River forming a natural boundary between the City of Albany and the Town of Bethlehem. The first mile of the Normans Kill SCFWH below the falls flows through a steep-sided wooded gorge, and is relatively shallow, with a gravelly substrate. The lower mile, referred to as "Island Creek", is within the tidal range of the Hudson River, and is relatively deep, with a silt and clay substrate. At least part of this segment was channelized in the past and its mouth relocated south in

conjunction with nearby commercial and industrial developments. Despite its proximity to the Port of Albany, the Normans Kill and its associated riparian zone located along the first mile in the western area of the WRA remain in a relatively natural condition. The narrative and boundary map of the Normans Kill SCFWH are included in Appendix C of the LWRP

The Shad and Schermerhorn Islands are located approximately one and one-half miles east of the hamlet of Selkirk, on the western shore of the Hudson River, within the towns of Bethlehem and Coeymans. The Shad and Schermerhorn Islands SCFWH cover approximately 1100 acres and is comprised of riverine littoral zones, submerged aquatic vegetation beds, freshwater wetlands, portions of the tributary streams of the Binnen Kill and Vloman Kill, floodplain forest, cliffs, and active agricultural lands.

The Binnen Kill, which flows behind Shad Island and the wetlands between the historic Shad and Schermerhorn Islands also provide spawning and feeding habitat for American shad, blueback herring, alewife (*Alosa pseudoharengus*), and as well as resident freshwater species. Historically, the Vloman Kill has supported significant runs of these three river herring species and significant numbers of river herring have historically been present at the base of this tributary. Striped bass feed upon these herring. Smallmouth bass spawn here as well. Terrestrial portions of the area provide quality habitat for a variety of upland wildlife species, including white-tailed deer, ruffed grouse, eastern cottontail, and many passerine bird species. The small wetland areas in and around Shad and Schermerhorn Islands support limited numbers of waterfowl and furbearing mammals. The Shad and Schermerhorn Islands SCFWH narrative and boundary map are included in Appendix C of the LWRP.

Habitat protection is recognized as fundamental to assuring the survival of fish and wildlife populations. Certain habitats are particularly critical to the maintenance of a given population and therefore merit special protection. Such habitats exhibit one or more of the following characteristics:

- are essential to the survival of a large portion of a particular fish or wildlife population (e.g. feeding grounds, nursery areas);
- support populations of rare and endangered species;
- are found at a very low frequency within a coastal region;
- support fish and wildlife populations having significant commercial and/or recreational value; and
- would be difficult or impossible to replace.

In order to protect and preserve a significant habitat, land and water uses or development shall not be undertaken if such actions destroy or significantly impair the viability of an area as a habitat. When the action significantly reduces a vital resource (e.g., food, shelter, living space) or changes environmental conditions (e.g., temperature, substrate, salinity) beyond the tolerance range of an organism, then the action would be considered to “significantly impair” the habitat. Indicators of a significantly impaired habitat may include reduced carrying capacity, changes in community structure (food chain relationships, species diversity), reduced productivity and/or increased incidence of disease and mortality.

The range of generic activities most likely to affect significant coastal fish and wildlife habitats include but are not limited to the following:

1. Draining wetlands, ponds: Cause changes in vegetation, or changes in groundwater and surface water hydrology.

2. Filling wetlands, shallow areas of streams, lakes, bays, estuaries: May change physical character of substrate (e.g., sandy to muddy, or smother vegetation, alter surface water hydrology).
3. Grading land: Results in vegetation removal, increased surface runoff, or increased soil erosion and downstream sedimentation.
4. Clear cutting: May cause loss of vegetative cover, increase fluctuations in amount of surface runoff, or increase streambed scouring, soil erosion, sediment deposition.
5. Dredging or excavation: May cause change in substrate composition, possible release of contaminants otherwise stored in sediments, removal of aquatic vegetation, or change circulation patterns and sediment transport mechanisms.
6. Dredge spoil disposal: May induce shoaling of littoral areas or change circulation patterns.
7. Physical alteration of shore areas through channelization or construction of shore structure: May change volume and rate of flow or increased scouring, sedimentation.
8. Introduction, storage or disposal of pollutants such as chemical, petrochemical, solid wastes, nuclear wastes, toxic material, pesticide, sewage effluent, urban and rural runoff, leachate of hazardous and toxic substances stored in landfills: May cause increased mortality or sublethal effects on organisms, alter their reproductive capabilities, or reduce their value as food organisms.

The range of physical, biological and chemical parameters which should be considered include but are not limited to the following:

1. Physical parameters such as: Living space, circulation, flushing rates, tidal amplitude, turbidity, water temperature, depth (loss of littoral zone), morphology, substrate type, vegetation, structure, erosion and sedimentation rates.
2. Biological parameters such as: Community structure, food chain relationships, species diversity, predator/prey relationships, population size, mortality rates, reproductive rates, behavioral patterns, and migratory patterns.
3. Chemical parameters such as: Dissolved oxygen, carbon dioxide, pH, dissolved solids, nutrients, organics, salinity, pollutants (heavy metals, toxic and hazardous materials).

When a proposed action is likely to alter any of the biological, physical or chemical parameters as described in the narrative beyond the tolerance range of the organisms occupying the habitat, the viability of that habitat has been significantly impaired or destroyed. Such action, therefore, would be inconsistent with the above policy.

In cooperation with the State's Coastal Management Program, the Department of Environmental Conservation has developed a rating system incorporating these five parameters (The Development and Evaluation of a System for Rating Fish and Wildlife Habitats in the Coastal Zone of New York State Final Report, January 1981, 15 pp.).

To further aid federal and State agencies in determining the consistency of a proposed action with this policy, a narrative will be prepared for each significant habitat which will: (1) identify the location of the habitat; (2) describe the community of organisms which utilize the habitat; (3) identify the biological, physical and chemical parameters which should be considered when assessing the potential impacts of a project on that habitat; (4) identify generic activities which would most likely create significant impacts on the habitat; and (5) provide the quantities basis used to rate the habitat. Prior to formal designation of significant fish and wildlife habitats, copies of the individual habitat narratives plus copies of habitat

maps and completed rating forms will be provided to federal and State agencies and the public for the review and comment.

## **POLICY 8**

**Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bio-accumulate in the food chain or which cause significant sublethal or lethal effect on those resources.**

### Explanation of Policy 8

Hazardous wastes are unwanted by-products of manufacturing processes and are generally characterized as being flammable, corrosive, reactive, or toxic. More specifically, waste is defined in Environmental Conservation Law [§27-0901(3)] as "waste or combination of wastes which because of its quantity, concentration, or physical, chemical or infectious characteristics may: (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or otherwise managed." Hazardous wastes are listed in 6 NYCRR Part 371.4.

The handling (storage, transport, treatment and disposal) of the materials included on this list is being strictly regulated in New York State to prevent their entry or introduction into the environment, particularly into the State's air, land and waters. Such controls should effectively minimize possible contamination of and bioaccumulation in the State's coastal fish and wildlife resources at levels that cause mortality or create physiological and behavioral disorders.

Other pollutants are those conventional wastes, generated from point and non-point sources, and not identified as hazardous wastes but controlled through other State laws<sup>1</sup>.

There are no sites within the WRA that process hazardous waste. Any new solid waste activities not occurring before 1993 are subject to the provisions in the Town code that pertain to Solid Waste.

## **POLICY 9**

**Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources, supplementing existing stocks, and developing new resources.**

### Explanation of Policy 9

Recreational uses of coastal fish and wildlife resources include consumptive uses such as fishing and hunting, and non-consumptive uses such as wildlife photography, bird watching and nature study.

Any efforts to increase recreational use of these resources will be made in a manner which ensures the protection of fish and wildlife resources in marine and freshwater coastal areas and which takes into consideration other activities dependent on these resources. Also, such efforts must be done in accordance with existing State law and in keeping with sound resource management considerations. Such considerations include biology of the species, carrying capacity of the resource, public demand, costs and available technology.

The following additional guidelines should be considered by State and Federal agencies as they determine the consistency of their proposed action with the above policy.

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<sup>1</sup> [http://www.dos.ny.gov/opd/programs/pdfs/NY\\_CMP.pdf](http://www.dos.ny.gov/opd/programs/pdfs/NY_CMP.pdf) , NYS CMP Part II Section 6, page 28

1. Consideration should be made by Federal and State agencies as to whether an action will impede existing or future utilization of the State's recreational fish and wildlife resources.
2. Efforts to increase access to recreational fish and wildlife resources should not lead to overutilization of that resource or cause impairment of the habitat. Sometimes such impairment can be more subtle than actual physical damage to the habitat. For example, increased human presence can deter animals from using the habitat area.
3. The impacts of increasing access to recreational fish and wildlife resources should be determined on a case-by-case basis, consulting the significant habitat narrative (see Policy 7) and/or conferring with a trained fish and wildlife biologist.
4. Any public or-private sector initiatives to supplement existing stocks (e.g. stocking a stream with fish reared in a hatchery) or develop new resources (e.g. creating private fee-hunting or fee-fishing facilities) must be done in accord with existing State law.

## **POLICY 10**

**Further develop commercial finfish, shellfish, and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing on-shore commercial fishing facilities, increasing marketing of the State's seafood products, maintaining adequate stocks, and expanding aquaculture facilities.**

### Explanation of Policy 10

The topography, shoreline configuration, current land use, and need for protection of natural resources limit opportunities for large commercial fishing activities or onshore commercial fishing facilities within the Bethlehem WRA.

Commercial fishery development activities must occur within the context of sound fishery management principals developed and enforced within the State's waters by the New York State Department of Environmental Conservation and the management plans developed by the Regional Fisheries Management Councils (Mid-Atlantic and New England) and enforced by the U.S. National Marine Fisheries Service within the Fishery Conservation Zone. (The Fishery Conservation Zone is the area of coastal waters extending from the three mile State waters boundary to the 200 mile offshore boundary of the U.S. waters. The Conservation Zone is authorized by the U.S. Fishery Conservation and Management Act of 1976.) Sound resource management considerations include optimum sustained yield levels developed for specific commercial fish species, harvest restrictions imposed by State and federal governments, and the economic, political (uses conflicts), and technological constraints to utilizing these resources.

The following additional guidelines should be considered by State and federal agencies as they determine the consistency of their proposed action with the above policy:

1. A public agency's commercial fishing development initiative should not preempt or displace private sector initiative.
2. A public agency's efforts to expand existing or create new on-shore commercial fishing support facilities should be directed towards unmet development needs rather than merely displacing existing commercial fishing activities from a nearby port. This may be accomplished by taking into consideration existing State or regional commercial fishing development plans.
3. Consideration should be made by State and Federal agencies whether an action will impede existing utilization or future development of the state's commercial fishing resources.

4. Commercial fishing development efforts should be made in a manner which ensures the maintenance and protection of the renewable fishery resources.

## **FLOODING AND EROSION HAZARDS POLICIES**

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### **POLICY 11**

**Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.**

#### Explanation of Policy 11

On coastal lands identified as coastal erosion hazard areas, buildings and similar structures shall be set back from the shoreline a distance sufficient to minimize damage from erosion unless no reasonable prudent alternative site is available as in the case of piers, docks and other structures necessary to gain access to coastal waters to be able to function. The extent of the setback will be calculated, taking into account the rate at which land is receding due to erosion and the protection provided by existing erosion protection structures as well as by natural protective features such as beaches, sandbars, spits, shoals, barrier islands, bay barriers, nearshore areas, bluffs and wetlands. The only new structure allowed in coastal erosion hazard areas is a moveable structure as defined in 6 NYCRR 505.2(x). Prior to its construction, an erosion hazard area permit must be approved for the structure. Existing, non-conforming structures located in coastal erosion hazard areas may be only minimally enlarged.

In coastal lands identified as being subject to high velocity waters caused by hurricane or other storm wave wash - a coastal high hazard area - walled and roofed buildings or fuel storage tanks shall be sited landward of mean high tide; and no mobile home shall be sited in such area. In coastal lands identified as floodways, no mobile homes shall be sited other than in existing mobile home parks.

The Town participates in the National Flood Insurance Program which encompasses all land within the 100-year floodplain defined by the Federal Emergency Management Agency (FEMA). The Town follows FEMA guidance and Town standards established for siting new structures within any floodplain area in order to minimize loss of structures as a result of flood conditions in specific areas. The standards are designed to:

- a. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- b. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- c. Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;
- d. Control filling, grading, dredging and other development which may increase erosion or flood damages;
- e. Regulate the construction of flood barriers which will unnaturally divert flood waters, or which may increase flood hazards to other lands; and
- f. Qualify for and maintain participation in the National Flood Insurance Program

Where human lives may be endangered by major coastal storms, all necessary emergency preparedness measures should be taken, including disaster preparedness-planning

Bethlehem's Office of Emergency Management is responsible for coordinating the town planning efforts for the preparation for, mitigation of, response to, and recovery from a declared emergency affecting the Town of Bethlehem, and for assisting in the activities of the local emergency responders, town assets, and assistance from other public, private, county, state, and federal organizations by:

- Coordinating the town's response organization and facilitating the town's response activities
- Notifying and briefing town departments, agencies, and other organizations involved in an emergency response
- Maintaining and managing the Emergency Operations Center

Facilitating the coordination between the town and the incident commander, response agencies, other towns, cities, and villages in the county, County government, Local governments outside the county, New York State and Federal government agencies and public and private emergency support organizations.

## **POLICY 12**

**Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs.**

### Explanation of Policy 12

Beaches, dunes, barrier islands, bluffs, and other natural protective features help safeguard coastal lands and property from damage, as well as reduce the danger to human life, resulting from flooding and erosion. Excavation of coastal features, improperly designed structures, inadequate site planning, or other similar actions which fail to recognize their fragile nature and high protective values, lead to the weakening or destruction of those landforms. Activities or development in, or in proximity to, natural protective features must ensure that all such adverse effects are minimized. Primary dunes will be protected from all encroachments that could impair their natural protective capacity.

## **POLICY 13**

**The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs.**

### Explanation of Policy 13

Erosion protection structures are widely used throughout the State's coastal area. However, because of improper design, construction and maintenance standards, many fail to give the protection, which they were presumed to provide. As a result, development is sited in areas where it is subject to damage or loss due to erosion. This policy will help ensure the reduction of such damage or loss.

## **POLICY 14**

**Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations.**

### Explanation of Policy 14

Erosion and flooding are processes which occur naturally. However, by our actions, humans can increase the severity and adverse effects of those processes, causing damage to, or loss of property, and endangering human lives. Those actions include: the use of erosion protection structures such as groins, or the use of impermeable docks which block the littoral transport of sediment to adjacent shorelands, thus increasing their rate of recession; the failure to observe proper drainage or land restoration practices, thereby causing run-off and the erosion and weakening of shorelands; and the placing of structures in identified floodways so that the base flood level is increased causing damage in otherwise hazard-free areas.

## **POLICY 15**

**Mining, excavation or dredging in coastal waters shall not significantly interfere with the natural coastal processes which supply beach materials to land adjacent to such waters and shall be undertaken in a manner which will not cause an increase in erosion of such land.**

### Explanation of Policy 15

Coastal processes, including the movement of beach materials by water, and any mining, excavation or dredging in nearshore or offshore waters which changes the supply and net flow of such materials can deprive shorelands of their natural regenerative powers. Such mining, excavation and dredging should be accomplished in a manner so as not to cause a reduction of supply, and thus an increase of erosion, to such shorelands. Offshore mining is a future alternative option to land mining for sand and gravel deposits which are needed to support building and other industries.

## **POLICY 16**

**Public funds shall only be used for erosion protective structures where necessary to protect human life, and new development which requires a location within or adjacent to an erosion hazard area to be able to function, or existing development; and only where the public benefits outweigh the long term monetary and other costs including the potential for increasing erosion and adverse effects on natural protective features.**

### Explanation of Policy 16

Public funds are used for a variety of purposes on the State's shorelines. This policy recognizes the public need for the protection of human life and existing investment in development or new development which requires a location in proximity to the coastal area or in adjacent waters to be able to function. However, it also recognizes the adverse impacts of such activities and development on the rate of erosion and on natural protective features and requires that careful analysis be made of such benefits and long-term costs prior to expending public funds.

## **POLICY 17**

**Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.**

### Explanation of Policy 17

The town encourages the use of non-structural measures to minimize damage to natural resources and property from flooding and erosion along the portions of Hudson River and the portions of the Binnen, Vloman and Normans Kills located within the Bethlehem WRA.

This policy recognizes both the potential adverse impacts of flooding and erosion upon development and upon natural protective features in the coastal area as well as the costs of protection against those hazards which structural measures entail.

"Non-structural measures" shall include, but not be limited to: (1) within coastal erosion hazard areas identified under Section 34-0104 of Coastal Erosion Hazard Areas Law (Environmental Conservation Law Article 34), and subject to the permit requirements on all regulated activities and development established under that Law, (a) the use of minimum setbacks as provided for in Section 0108 of Environmental Conservation Law Article 34; and (b) the strengthening of coastal landforms by the planting of appropriate vegetation on dunes and bluffs, the installation of sand fencing on dunes, the reshaping of bluffs to achieve an appropriate angle of repose so as to reduce the potential for slumping and to permit the planting of stabilizing vegetation, and the installation of drainage systems on bluffs to reduce runoff and internal seepage of waters which erode or weaken the landforms; and (2) within identified flood hazard areas, (a) the avoidance of risk or damage from flooding by the siting of buildings outside the hazard area, and (b) the flood-proofing of buildings or their elevation above the base flood level.

This policy shall apply to the planning, siting and design of proposed activities and development, including measures to protect existing activities and development. To ascertain consistency with the policy, it must be determined if anyone, or a combination of, non-structural measures would afford the degree of protection appropriate both to the character and purpose of the activity or development, and to the hazard. If non-structural measures are determined to offer sufficient protection, then consistency with the policy would require the use of such measures, whenever possible.

In determining whether or not non-structural measures to protect against erosion or flooding will afford the degree of protection appropriate, an analysis, and if necessary, other materials such as plans or sketches of the activity or development, of the site and of the alternative protection measures should be prepared to allow an assessment to be made.

This policy shall apply to the town's actions and approvals of siting and design of proposed local activities and development, including measures to protect existing activities and development. To ascertain consistency with the policy, it must be determined if any one, or a combination of, non-structural measures would afford the degree of protection appropriate both to the character and purpose of the activity or development, and to the hazard. In determining whether or not non-structural measures to protect against erosion or flooding will afford the degree of protection appropriate, an analysis, and if necessary, other materials such as plans or sketches of the activity or development, of the site and of the alternative protection measures should be prepared to allow an assessment to be made. If non-structural measures are determined to offer sufficient protection, then consistency with the policy would require the use of such measures, whenever possible.

The local management measures used by the Town of Bethlehem to approve town permits for proposed actions are indicated below:

- An application for a local building permit for lots bordering streams shall be accompanied by a plot plan prepared and certified by a professional engineer or registered landscape architect. The intent of the design plan shall be to ensure that there will be no movement, storage or stockpiling of soil, sand, gravel, organic material or any other material that may potentially:
  - 1) Cause silt and eroded material to enter the stream during storm events or as a result of wind movement.
  - 2) Affect the efficiency or the capacity of the stream.
  - 3) Increase flood heights.
  - 4) Cause an increase in water flow velocity.
  - 5) Obstruct, catch or collect debris that would obstruct flow under flood conditions.
- No local building permit shall be issued for the construction or installation of any permitted or accessory use in any district within the WRA within 100 feet of the bank of the following streams or within the one-hundred-year flood zone of said streams:
  - 1) Normans Kill Creek.
  - 2) Vloman Kill Creek.
- The following regulated activities require a grading, erosion and sediment control permit:
  - 1) Land disturbance of 0.25 acre or more but less than one acre of land within the designated MS4 Phase II stormwater areas of the Town.
  - 2) Land disturbance of one acre or more shall comply with grading and erosion control regulations as well as State stormwater management regulations.
  - 3) Land disturbance within 100 feet of the bank of the following streams or within the one-hundred-year flood zone of said streams in the WRA:
    - a. Normans Kill Creek.
    - b. Vloman Kill Creek.
- Excavation or filling activity, which exceeds a rate of 200 cubic yards of material per acre of land physically altered by such excavation or fill, within any parcel or any contiguous parcels in any twelve-month period.
- Grading activity that establishes a slope gradient of 20% or more over a vertical rise of 20 feet or more, or a slope gradient of 33% or more over a vertical rise of 10 feet or more, or a slope gradient of 40% or more over a vertical rise of five feet or more.

## **GENERAL POLICY**

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### **POLICY 18**

**To safeguard the vital economic, social and environmental interests of the State and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the State has established to protect valuable coastal resource areas.**

#### Explanation of Policy 18

Proposed major actions may be undertaken in the coastal area if they will not significantly impair valuable coastal waters and resources, thus frustrating the achievement of the purposes of the

safeguards which the State has established to protect those waters and resources. Proposed actions must take into account the social, economic and environmental interests of the State and its citizens in such matters that would affect natural resources, water levels and flows, shoreline damage, hydro-electric power generation, and recreation.

## **PUBLIC ACCESS POLICIES**

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### **POLICY 19**

**Protect, maintain, and increase the level and types of access to public water-related recreation resources and facilities.**

#### Explanation of Policy 19

The town will maintain and enhance the existing access to the public water-related recreation resources and facilities within the Henry Hudson Park. The Henry Hudson Park is the only town park within the Bethlehem WRA and a recreation site where the public has access to a concentration of water-dependent and water-enhanced uses. The improvement of this site is a priority for the town. The Henry Hudson Park Master Plan included in Appendix B of the LWRP includes a list of proposed park improvements. Connections between the town park and other publicly owned lands were identified as an important task for the town to pursue.

The town is also working on identifying ways to connect the trails of the landward Mo-He-Con-Nuck Preserve with the western bank of the Hudson River to increase the public's access to water-related recreation.

This policy calls for achieving balance among the following factors: the level of access to a resource or facility, the capacity of a resource or facility, and the protection of natural resources. The imbalance among these factors is the most significant in the State's urban areas. Because this is often due to access-related problems, priority will be given to improving physical access to existing and potential coastal recreation sites within the heavily populated urban coastal areas of the State and to increasing the ability of urban residents to get to coastal recreation areas by improved public transportation. The particular water related recreation resources and facilities which will receive priority for improved access are public beaches, boating facilities, fishing areas and waterfront parks.

The following guidelines will be used in determining the consistency of a proposed action with this policy:

- a. The existing access from adjacent or proximate public lands or facilities to public water-related recreation resources and facilities shall not be reduced, nor shall the possibility of increasing access in the future from adjacent or proximate public lands or facilities to public water-related recreation resources and facilities be eliminated, unless in the latter case, estimates of future use of these resources and facilities are too low to justify maintaining or providing increased public access, or unless such actions are found to be necessary or beneficial by the public body having jurisdiction over such access as the result of a reasonable justification of the need to meet system-wide objectives.

The following is an explanation of the terms used in the above guidelines:

- i. Access - the ability and right of the public to reach and use public coastal lands and waters.

- ii. Public water-related recreation resources or facilities - all public lands, or facilities suitable for passive or active recreation that requires either water or a waterfront location or is enhanced by a waterfront location.
- iii. Public lands or facilities - lands or facilities held by State or local government in fee simple or less-than-fee simple ownership and to which the public has access or could have access, including underwater lands and the foreshore.
- iv. A reduction in the existing level of public access - includes but is not limited to the following:
  - 1) The number of parking spaces at a public water-related recreation resource or facility is significantly reduced.
  - 2) The service level of public transportation to a public water-related recreation resource or facility is significantly reduced during peak season use and such reduction cannot be reasonably justified in terms of meeting system-wide objectives.
  - 3) Pedestrian access is diminished or eliminated because of hazardous crossings required at new or altered transportation facilities, electric power transmission lines, or similar linear facilities.
  - 4) There are substantial increases in the following: already existing special fares (not to include regular fares in any instance) of public transportation to a public water-related recreation resource or facility except where the public body having jurisdiction over such fares determines that such substantial fare increases are necessary; and/or admission fees to such a resource or facility, and analysis shows that such increases will significantly reduce usage by individuals or families with incomes below the State government established poverty level.
- v. An elimination of the possibility of increasing public access in the future includes, but is not limited to the following:
  - 1) Construction of public facilities which physically prevent the provision, except at great expense, of convenient public access to public water-related recreation resources and facilities.
  - 2) Sale, lease, or other transfer of public lands that could provide public access to a public water-related recreation resource or facility.
  - 3) Construction of private facilities which physically prevent the provision of convenient public access to public water-related recreation resources or facilities from public lands and facilities.
- b. Any proposed project to increase public access to public water-related recreation resources and facilities shall be analyzed according to the following factors:
  - i. The level of access to be provided should be in accord with estimated public use. If not, the proposed level of access to be provided shall be deemed inconsistent with the policy.
  - ii. The level of access to be provided shall not cause a degree of use which would exceed the physical capability of the resource or facility. If this were determined to be the case, the proposed level of access to be provided shall be deemed inconsistent with the policy.
- c. The State will not undertake or fund any project which increases access to a water-related resource or facility that is not open to all members of the public.

- d. In their plans and programs for increasing public access to public water-related resources and facilities, State agencies shall give priority in the following order to projects located: within the boundaries of the Federal-Aid Metropolitan Urban Area and served by public transportation; within the boundaries of the Federal-Aid Metropolitan Urban Area but not served by public transportation; outside the defined Urban Area boundary and served by public transportation; and outside the defined Urban Area boundary but not served by public transportation.

## **POLICY 20**

**Access to the publicly owned foreshore and to lands immediately adjacent to the foreshore or the water's edge that are publicly owned shall be provided and it shall be provided in a manner compatible with adjoining uses.**

### Explanation of Policy 20

The town is working on enhancing public access to the publicly owned lands abutting Hudson River and promotes connectivity with other public and private points of interest within the Bethlehem WRA. The town will work with the Scenic Hudson and government agencies to increase and improve public access to Hudson River through publicly-owned sites abutting Hudson River within the Bethlehem WRA, such as the undeveloped lands of former Baker Farm Site that are now owned by Scenic Hudson and the portion of Glenmont Job Corps Site adjacent to the Moh-He-Con-Nuck Nature Preserve.

In coastal areas where there are little or no recreation facilities providing specific water-related recreational activities, access to the publicly owned lands of the coast at large should be provided for numerous activities and pursuits which require only minimal facilities for their enjoyment. Such access would provide for walking along a beach or a city waterfront or to a vantage point from which to view the seashore. Similar activities requiring access would include bicycling, bird watching, photography, nature study, beachcombing, fishing and hunting.

For those activities, there are several methods of providing access which will receive priority attention of the Coastal Management Program. These include: the development of a coastal trails system; the provision of access across transportation facilities to the coast; the improvement of access to waterfronts in urban areas; and the promotion of mixed and multi-use development.

While such publicly-owned lands referenced in the policy shall be retained -in public ownership, traditional sales of easements on lands underwater to adjacent onshore property owners are consistent with this policy, provided such easements do not substantially interfere with continued public use: of the public lands on which the easement is granted. Also, public use of such publicly owned underwater lands and lands immediately adjacent to the shore shall be discouraged where such use would be inappropriate for reasons of public safety, military security, or the protection of fragile coastal resources.

The regulation of projects and structures, proposed to be constructed in or over lands underwater, is necessary to responsibly manage such lands, to protect vital assets held in the name of the people of the State, to guarantee common law and sovereign rights, and to ensure that waterfront owners' reasonable exercise of riparian rights and access to navigable waters shall be consistent with the public interest in reasonable use and responsible management of waterways and such public lands for the purposes of navigation, commerce, fishing, bathing, recreation, environmental and aesthetic protection, and access to the navigable waters and lands underwater of the State. The following guidelines will be used in determining the consistency of a proposed action with this policy:

- a. Existing access from adjacent or proximate public lands or facilities to existing public coastal lands and/or waters shall not be reduced, nor shall the possibility of increasing access in the future from adjacent or nearby public lands or facilities to public coastal lands and/or waters be eliminated, unless such actions are demonstrated to be of overriding regional or statewide public benefit, or, in the latter case, estimates of future use of these lands and waters are too low to justify maintaining or providing increased access.

The following is an explanation of the terms used in the above guidelines:

- i. (See definitions under first policy of "access" and "public lands or facilities").
- ii. A reduction in the existing level of public access - includes but is not limited to the following:
  - 1) Pedestrian access is diminished or eliminated because of hazardous crossings required at new or altered transportation facilities, electric power transmission lines, or similar linear facilities.
  - 2) Pedestrian access is diminished or blocked completely by public or private development.
- iii. An elimination of the possibility of increasing public access in the future - includes but is not limited to, the following:
  - 1) Construction of public facilities which physically prevent the provision, except at great expense, of convenient public access to public coastal lands and/or waters.
  - 2) Sale, lease, or other conveyance of public lands that could provide public access to public coastal lands and/or waters.
  - 3) Construction of private facilities which physically prevent the provision of convenient public access to public coastal lands and/or waters from public lands and facilities.
- b. The existing level of public access within public coastal lands or waters shall not be reduced or eliminated.
  - i. A reduction or elimination in the existing level of public access includes but is not limited to the following:
    - 1) Access is reduced or eliminated because of hazardous crossings required at new or altered transportation facilities, electric power transmission lines, or similar linear facilities.
    - 2) Access is reduced or blocked completely by any public development.
- c. Public access from the nearest public roadway to the shoreline and along the coast shall be provided by new land use or development except where (a) it is inconsistent with public safety, military security, or the protection of identified fragile coastal resources; (b) adequate access exists within one-half mile; or (c) agriculture would be adversely affected. Such access shall not be required to be open to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the access way.
- d. The State will not undertake or fund any project which increases access to a water-related resource or facility that is not open to all members of the public.
- e. In their plans and programs for increasing public access, State agencies shall give priority in the following order to projects located: within the boundaries of the Federal-Aid Metropolitan Urban Area and served by public transportation; within the Federal-Aid Metropolitan Urban Area but not served by public transportation; outside the defined Urban Area boundary and served by public

transportation; and outside the defined Urban Area boundary but not served by public transportation.

- f. Proposals for increased public access to coastal lands and waters shall be analyzed according to the following factors:
  - i. The level of access to be provided should be in accord with estimated public use. If not, the proposed level of access to be provided shall be deemed inconsistent with the policy.
  - ii. The level of access to be provided shall not cause a degree of use which would exceed the physical capability of the coastal lands or waters. If this were determined to be the case, the proposed level of access to be provided shall be deemed inconsistent with the policy.
- g. In making any grant, lease, permit, or other conveyance of land now or formerly underwater, there shall be reserved such interests or attached such conditions to preserve the public interest in the use of state-owned lands underwater and waterways for navigation, commerce, fishing, bathing, recreation, environmental protection, and access to the navigable waters of the state. In particular, the granting of publicly owned underwater or formerly underwater lands to private entities will be limited to exceptional circumstances only.

## **RECREATION POLICIES**

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### **POLICY 21**

**Water-dependent and water-enhanced recreation will be encouraged and facilitated and will be given priority over non-water-related uses along the coast.**

#### Explanation of Policy 21

Water-related recreation includes such obviously water-dependent activities as boating, swimming, and fishing as well as certain activities which are enhanced by a coastal location and increase the general public's access to the coast such as pedestrian and bicycle trails, picnic areas, scenic overlooks and passive recreation areas that take advantage of coastal scenery.

Provided the development of water-related recreation is consistent with the preservation and enhancement of such important coastal resources as fish and wildlife habitats, aesthetically significant areas, historic and cultural resources, agriculture and significant mineral and fossil deposits, and provided demand exists, water-related recreation development is to be increased and such uses shall have a higher priority than any non-coastal dependent uses, including non-water-related recreation uses. In addition, water-dependent recreation uses shall have a higher priority over water enhanced recreation uses. Determining a priority among coastal dependent uses will require a case by case analysis.

Among priority areas for increasing water-related recreation opportunities are those areas where access to the recreation opportunities of the coast can be provided by new or existing public transportation services and those areas where the use of the shore is severely restricted by highways, railroads, industry, or other forms of existing intensive land use or development. The DOS, working with the Office of Parks, Recreation, and Historic Preservation and with local governments, will identify communities whose use of the shore has been so restricted and those sites shoreward of such developments which are suitable for recreation and can be made accessible. Priority shall -be given to recreational development of such lands.

The siting or design of new public development in a manner which would result in a barrier to the recreational use of a major portion of a community's shore should be avoided as much as practicable.

Among the types of water-dependent recreation, provision of adequate boating services to meet future demand is to be encouraged by this Program. The siting of boating facilities must be consistent with preservation and enhancement of other coastal resources and with their capacity to accommodate demand. The provision of new public boating facilities is essential in meeting this demand, but such public actions should avoid competition with private boating development. Boating facilities will, as appropriate, include parking, park-like surroundings, toilet facilities, and pump-out facilities. There is a need for a better location pattern of boating facilities to correct problems of overused, insufficient, or improperly sited facilities.

Water-related off-road recreational vehicle use is an acceptable activity; provide no adverse environmental impacts occur. Where adverse environmental impacts will occur, mitigating measures will be implemented, where practicable to minimize such adverse impacts. If acceptable mitigation is not practicable, prohibition of the use by off-road recreational vehicles will be posted and enforced. Ground water contamination presents a threat to Fire Island National Seashore water resources.

## **POLICY 22**

**Development when located adjacent to the shore will provide for water-related recreation, whenever such use is compatible with reasonably anticipated demand for such activities and is compatible with the primary purpose of the development.**

### Explanation of Policy 22

Many developments present practical opportunities for providing recreation facilities as an additional use of the site or facility. Therefore, whenever developments are located adjacent to the shore they should to the fullest extent permitted by existing law provide for some form of water-related recreation use unless there are compelling reasons why any form of such recreation would not be compatible with the development, or a reasonable demand for public use cannot be foreseen.

The types of development which can generally provide water-related recreation as a multiple-use include but are not limited to:

- parks
- highways
- power plants
- utility transmission rights of way
- sewage treatment facilities
- mental health facilities\*
- hospitals\*
- prisons\*
- schools, universities\*
- military facilities\*
- nature preserves\*
- large residential subdivisions (50 units)
- shopping centers
- office buildings

\* the types of recreation use likely to be compatible with these facilities are limited to the more passive forms, such as trails or fishing access. In some cases, land areas not directly or immediately needed by the facility could be used for recreation.

Prior to taking action relative to any development, State agencies should consult with the State Office of Parks, Recreation, and Historic Preservation, and if there is an approved local water-front program, with the municipality in which the development is to locate, to determine appropriate recreation uses. The agency should provide OPRHP and the municipality with the opportunity to participate in project planning.

Appropriate recreation uses which do not require any substantial additional construction shall be provided at the expense of the project sponsor provided the cost does not exceed 2% of total project cost.

In determining whether compelling reasons exist which would make inadvisable recreation as a multiple use, safety considerations should reflect recognition that some risk is acceptable in the use of recreational facilities.

Whenever a proposed development would be consistent with CMP policies and the development could, through the provision of recreation and other multiple uses, significantly increase public use of the shore, then such development should be encouraged to locate adjacent to the shore (this situation would generally only apply within the more developed portions of urban areas).

## **HISTORIC AND SCENIC RESOURCES POLICIES**

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### **POLICY 23**

**Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archeology or culture of the state, its communities, or the Nation.**

#### Explanation of Policy 23

Among the most valuable of the State's man-made resources are those structures on areas which are of historic, archeological, or cultural significance. The protection of these structures must involve recognition of their importance by all agencies and the ability to identify and describe them. Protection must include concern not just with specific sites but with areas of significance, and with the area around specific sites.

The policy is not to be construed as a passive mandate but must include active efforts when appropriate to restore or revitalize through adaptive reuse. While the program is concerned with the preservation of all such resources within the coastal boundary, it will actively promote the preservation of historic and cultural resources which have a coastal relationship.

The structures, districts, areas or sites that are of significance in the history, architecture, archeology or culture of the State, its communities, or the Nation comprise the following resources:

- a. A resource which is in a Federal or State park established, among other reasons, to protect and preserve the resource.
- b. A resource on, nominated to be on, or determined eligible to be on the National or State Registers of Historic Places.
- c. A resource on or nominated to be on the State Nature and Historic Preserve Trust.

- d. An archeological resource which is on the State Department of Education's inventory of archeological sites.
- e. A local landmark, park, or locally designated historic district that is located within the boundary of an approved local waterfront revitalization program.
- f. A resource that is a significant component of a Heritage Area (former Urban Cultural Park).

All practicable means to protect structures, districts, areas or sites that are of significance in the history, architecture, archeology or culture of the State, its communities or the Nation shall be deemed to include the consideration and adoption of any techniques, measures, or controls to prevent a significant adverse change to such significant structures, districts, areas or sites. A significant adverse change includes but is not limited to:

- a. Alteration of or addition to one or more of the architectural, structural, ornamental or functional features of a building, structure, or site that is a recognized historic, cultural, or archeological resource, or component thereof. Such features are defined as encompassing the style and general arrangement of the exterior of a structure and any original or historically significant interior features including type, color and texture of building materials; entry ways and doors; fenestration; lighting fixtures; roofing; sculpture and carving; steps; rails; fencing; windows; vents and other openings; grillwork; signs; canopies; and other appurtenant fixtures and, in addition, all buildings, structures, outbuildings, walks, fences, steps, topographical features, earthworks, paving and signs located on the designated resource property. (To the extent they are relevant, the Secretary of the Interior's "Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings" shall be adhered to.)
- b. Demolition or removal in full or part of a building, structure, or earthworks that is a recognized historic, cultural, or archeological resource or component thereof, to include all those features described in (a) above plus any other appurtenant fixture associated with a building structure or earthwork.
- c. All proposed actions within 500 feet of the perimeter of the property boundary of the historic, architectural, cultural, or archeological resource and all actions within an historic district that would be incompatible with the objective of preserving the quality and integrity of the resource. Primary considerations to be used in making judgment about compatibility should focus on the visual and location relationship between the proposed action and the special character of the historic, cultural, or archeological resource. Compatibility between the proposed action and the resource means that the general appearance of the resource should be reflected in the architectural style, design material, scale, proportion, composition, mass, line, color, texture, detail, setback, landscaping and related items of the proposed actions: With historic districts this would include infrastructure improvements or changes, such as, street and sidewalk paving, street furniture and lighting.

This policy shall not be construed to prevent the construction, reconstruction, alteration, or demolition of any building, structure, earthwork, or component thereof of a recognized historic, cultural or archeological resource which has been officially certified as being imminently dangerous to life or public health. Nor shall the policy be construed to prevent the ordinary maintenance, repair, or proper restoration according to the U.S. Department of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings of any building, structure, site or earthwork, or component thereof of a recognized historic, cultural or archeological resource which does not involve a significant adverse change to the resource, as defined above.

## **POLICY 24**

### **Prevent impairment of scenic resources of statewide significance.**

#### Explanation of Policy 24

The NYS Secretary of State has not yet identified scenic resources of statewide significance located within or adjacent to the Bethlehem WRA. If such resources are identified, they will be protected from any impairment.

The Coastal Management Program will identify on the coastal area map scenic resources of statewide significance. The following general criteria will be combined to determine significance:

**Quality** - The basic elements of design (i.e., two-dimensional line, three-dimensional form, texture and color) combine to create all high-quality landscapes. The water, landforms, and human-made components of scenic coastal landscapes exhibit variety of line, form, texture and color. This variety is not, however, so great as to be chaotic. Scenic coastal landscapes also exhibit unity of components. This unity is not, however, so complete as to be monotonous. Example: The Thousand Islands where the mix of water, land, vegetative and human-made components creates interesting variety, while the organizations of these same components create satisfying unity.

Often, high quality landscapes contain striking contrasts between lines, forms, textures and colors. Example: A waterfall where horizontal and vertical lines and smooth and turbulent textures meet in dramatic juxtaposition.

Finally, high quality landscapes are generally free of discordant features, such as structures or other elements which are inappropriate in terms of siting, form, scale, and/or materials.

**Uniqueness** - The uniqueness of high-quality landscapes is determined by the frequency of occurrence of similar resources in a region of the State or beyond.

**Public Accessibility** - A scenic resource of significance must be visually and, where appropriate, physically accessible to the public.

**Public Recognition** - Widespread recognition of a scenic resource is not a characteristic intrinsic to the resource. It does, however, demonstrate people's appreciation of the resource for its visual, as well as evocative, qualities. Public recognition serves to reinforce analytic conclusions about the significance of a resource.

When considering a proposed action, agencies shall first determine whether the action could affect a scenic resource of statewide significance. This determination would involve: 1) a review of the coastal area map to ascertain if it shows an identified scenic resource which could be affected by the proposed action, and 2) a review of the types of activities proposed to determine if they would be likely to impair the scenic beauty of an identified resource. Impairment will include: (i) the irreversible modification of geologic forms; the destruction or removal of vegetation; the modification, destruction, or removal of structures, whenever the geologic forms, vegetation or structures are significant to the scenic quality of an identified resource; and (ii) the addition of structures which because of siting or scale will reduce identified views or which because of scale, form, or materials will diminish the scenic quality of an identified resource.

The following siting and facility-related guidelines are to be used to achieve this policy, recognizing that each development situation is unique and that the guidelines will have to be applied accordingly. Guidelines include:

- a. siting structures and other development such as highways, power lines, and signs, back from shorelines or in other inconspicuous locations to maintain the attractive quality of the shoreline and to retain views to and from the shore;
- b. clustering or orienting structures to retain views, save open space and provide visual organization to a development;
- c. incorporating sound, existing structures (especially historic buildings) into the overall development scheme;
- d. removing deteriorated and/or degrading elements;
- e. maintaining or restoring the original landform, except when changes screen unattractive elements and/or add appropriate interest;
- f. maintaining or adding vegetation to provide interest, encourage the presence of wildlife, blend structures into the site, and obscure unattractive elements, except when selective clearing removes unsightly, diseased or hazardous vegetation and when selective clearing creates views of coastal waters;
- g. using appropriate materials, in addition to vegetation, to screen unattractive elements;
- h. using appropriate scales, forms and materials to ensure that buildings and other structures are compatible with and add interest to the landscape.

## **POLICY 25**

**Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.**

### Explanation of Policy 25

The scenic qualities of the central and southern portions of the Bethlehem WRA contribute to the area's rural character and beauty. Scenic views were identified in Section II from high points along Weisheit Road near Wemple Road and along Clapper Road west of the railroad crossing in the central WRA. Views from these locations include long range views of the Taconic Mountain range and the rural areas of the eastern side of the Hudson River as well as short range views of agricultural properties along Clapper Road. Another view shed to the Taconic Mountains is located in the southern portion of the WRA from a highpoint on SR 144/River Road just north of the Thruway Exit ramp. From this location a short-range view of fields and wooded areas within the conservation lands owned by Scenic Hudson and NYS can be enjoyed.

When considering a proposed action, which would not affect a scenic resource of statewide significance, agencies shall undertake to ensure that the action would be undertaken so as to protect, restore or enhance the overall scenic quality of the coastal area. Activities which could impair or further degrade scenic quality are the same as those cited under the previous policy, i.e., modification of natural landforms, removal of vegetation, etc. However, the effects of these activities would not be considered as serious for the general coastal area as for significant scenic areas.

The siting and design guidelines listed under the previous policy should be considered for proposed actions in the general coastal area. More emphasis may need to be placed on removal of existing elements, especially those which degrade, and on addition of new elements or other changes which enhance. Removal of vegetation at key points to improve visual access to coastal waters is one such change which might be expected to enhance scenic quality.

In order to enhance scenic qualities and protect scenic resources in the areas identified the following guidelines will be used:

- Consider the impact of new development in the locations of visual resources, prevent impacts to the scenic qualities by assessing building and/or structure scale, height, orientation and location on the site, use materials to ensure that building/structures are compatible with existing scenic elements, minimize the introduction of elements that are inconsistent with the character of the existing scenic view shed and use screening and buffering with vegetation.
- Encourage removal or restoration of deteriorated buildings within the scenic view shed.
- Screen elements that detract from the visual quality of scenic resources.
- Preserve existing vegetation and add new vegetation to enhance scenic quality.
- Incorporate existing historic structures into any new development proposal.

## **AGRICULTURAL LANDS POLICY**

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### **POLICY 26**

**Conserve and protect agricultural lands in the state's coastal area.**

#### **POLICY 26A**

**Conserve and protect land used in agricultural production in the portion of the Albany County Agricultural Districts #3 located within the Bethlehem WRA.**

#### Explanation of Policy 26

The first step in conserving agricultural lands is the identification of such lands. The Department of State is mapping all important agricultural lands within the State's coastal area. The following criteria have been used to prepare the maps, and the mapped information will be incorporated in the New York State Coastal Resources Inventory and on the Coastal Area Map.

Land meeting any of the following criteria is being mapped<sup>2</sup>.

- 1 Land which meets the definition of the U.S. Department of Agriculture as being prime farmland, unique farmland, or farmland of statewide importance.
  - a. Prime farmland is defined by USDA Soil Conservation Service in CRF #7 Agriculture Part 651.5(a), January 1979. A list of the soil associations that meet this definition has been prepared for each coastal county<sup>3</sup>.

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<sup>2</sup> N.Y.S. Public Authority Law, Article 3, Title 3.

<sup>3</sup> After mapping according to this definition was substantially completed, the NYS Department of Agriculture and Markets completed development of a new agricultural land classification system. As soon as is practical, the following definition will be the basis for revising the maps of coastal agricultural land. Important agricultural land shall include all land within an agricultural district or subject to an eight-year commitment that has been farmed within at least two of the last five years, or any land farmed within at least two of the last five years in soil groups 1-4 as classified by the Land Classification System established by the NYS Department of Agriculture and Markets, or any land farmed within at least two of the last five years that is influenced by climate conditions and that support the growth of high value crops. Additionally, agricultural land not meeting the above criteria but located adjacent to any such land and forming part of an on-going agricultural enterprise shall be considered important agricultural land.

- b. Unique farmland is defined by USDASCS in CRF #7 Agriculture Part 657.5(b). In the coastal area of New York all fruit and vegetable farming meets the terms of the definition.
  - c. Farmland of Statewide importance is defined by USDASCS in CRF #7 Agriculture Part 656.5(c). Lists of soil associations which constitute farmland of statewide importance have been prepared for each coastal county.
2. Active farmlands within Agricultural Districts. The maps of each Agricultural District show land committed by farmers. This is the land that will be mapped as active farmland. The district boundary will also be shown.
  3. Areas identified as having high economic viability for farming. Any farm not identified in 1 and/or 2 above and which is located in an area identified as having "high viability" on the map entitled "Economic Viability of Farm Areas" prepared by the Office of Planning Coordination in May 1969. This would be the basis for initial identification of areas having high economic viability for farming. Areas will be added and/or deleted based on comments from the agricultural community.
  4. Areas adjacent to land identified in 1 above if these areas are being farmed and are part of a farm with identified important agricultural lands.
  5. Prime farmland, unique farmland, and farmland of statewide significance will not be identified as important agricultural land whenever it occurs as parcels of land less than 25 acres in size and these small parcels are not within a mile of areas of active farming.

Given the Program's application to a narrow strip of land, implementing a policy of promoting agricultural use of land must, to be practical, concentrate on controlling the replacement of agricultural land uses with non-agricultural land use as the result of some public action. The many other factors such as markets, taxes, and regulations, which influence the viability of agriculture in a given area, can only be addressed on a Statewide or national basis.

The Program policy requires a concern for the loss of any important agricultural land. However, the primary concern must be with the loss of agricultural land when that loss would have a significant effect on an agricultural area's ability to continue to exist, to prosper, and even to expand. A series of determinations are necessary to establish whether a public action is consistent with the conservation and protection of agricultural lands or whether it is likely to be harmful to the health of an agricultural area. In brief these determinations are as follows: First, it must be determined whether a proposed public action would result in the loss of important agricultural lands as mapped on the Coastal Inventory. If it would not result, either directly or indirectly, in the loss of identified important agricultural lands, then the action is consistent with the policy on agriculture. If it is determined that the action would result in a loss of identified important agricultural lands, but that loss would not have an adverse effect on the viability of agriculture in the surrounding area, then the action may also be consistent with the agriculture policy. However, in that case the action must be undertaken in a manner that would minimize the loss of important farmland. If the action is determined to result in a significant loss of important agricultural land, that is if the loss is to a degree sufficient to adversely affect surrounding agriculture's viability, its ability to continue to exist, to prosper, and even to expand - then the action is not consistent with this agriculture policy.

The following guidelines define more fully what must be considered in making the above determinations:

- A. A public action would be likely to significantly impair the viability of an agricultural area in which identified important agricultural lands are located if:

1. The action would occur on identified important agricultural lands and would:
    - a. consume more than 10% of the land of an active farm<sup>4</sup> containing such identified important agricultural lands
    - b. consume a total of 100 acres or more of identified important agricultural land, or
    - c. divide an active farm with identified important agricultural land into two or more parts thus impeding efficient farm operation
  2. The action would result in environmental changes which may reduce the productivity or adversely affect the quality of the product of any identified important agricultural lands.
  3. The action would create real estate market conditions favorable to the conversion of large areas of identified important agricultural lands to non-agricultural uses. Such conditions may be created by:
    - a. public water or sewer facilities to serve non-farm structures
    - b. transportation improvements, except for maintenance of, and safety improvements to, existing facilities that serve non-farm or non-farm related development
    - c. major non-agribusiness commercial development adjacent to identified agricultural lands
    - b. major public institutions
    - c. residential uses other than farm dwellings.
    - d. any change in land use regulations applying to agricultural land which would encourage or allow uses incompatible with the agricultural use of the land
- B. The following types of facilities and activities should not be construed as having adverse effects on the preservation of agricultural land
1. Farm dwellings, barns, silos, and other accessory uses and structures incidental to agricultural production or necessary for farm family supplemental income.
  2. Agribusiness development which includes the entire structure of local support services and commercial enterprises necessary to maintain an agricultural operation, e.g., milk hauler, grain dealer, farm machinery dealer, veterinarian, food processing plants.
- C. In determining whether an action that would result in the loss of farmland is of overriding regional or statewide benefit, the following factors should be considered:
1. For an action to be considered overriding it must be shown to provide significantly greater benefits to the region or State than are provided by the affected agricultural area (not merely the land directly affected by the action). In determining the benefits of the affected agriculture to the region or State, consideration must be given to its social and cultural value, its economic viability, its environmental benefits, its existing and potential contribution to food or fiber production in the State and any State food policy, as well as its direct economic benefits.

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<sup>4</sup> A farm is defined as an area of at least 10 acres devoted to agricultural production as defined in the Agricultural District Law and from which agricultural products have yielded gross receipts of \$10,000 in the past year. (Source: NYS CMP)

- a. An agricultural area is an area predominantly in farming and in which the farms produce similar products and/or rely on the same agribusiness support services and are to a significant degree economically inter-dependent. At a minimum this area should consist of at least 500 acres of identified important agriculture land. For the purpose of analyzing impacts of any action on agriculture, the boundary of such area need not be restricted to land within the coastal boundary. If the affected agricultural lands lie within an agricultural district then, at a minimum, the agricultural area should include the entire agricultural district.
- b. In determining the benefits of an agricultural area, its relationship to agricultural lands outside the area should also be considered.
- c. The estimate of the economic viability of the affected agricultural area should be based on an assessment of
  - i. soil resources, topography, conditions of climate and water resources
  - ii. availability of agribusiness and other support services, and the level and condition of investments in farm real estate, livestock and equipment
  - iii. the level of farming skills as evidenced by income obtained, yield estimates for crops, and costs being experienced with the present types and conditions of buildings, equipment, and cropland.
  - iv. use of new technology and the rates at which new technology is adopted
  - v. competition from substitute products and other farming regions and trends in total demand for given products
  - vi. patterns of farm ownership for their effect on farm efficiency and the likelihood that farms will remain in use
- d. The estimate of the social and cultural value of farming in the area should be based on an analysis of:
  - i. the history of farming in the area
  - ii. the length of time farms remained in one family
  - iii. the degree to which farmers in the area share a cultural or ethnic heritage
  - iv. the extent to which products are sold and consumed locally
  - v. the degree to which a specific crop(s) has become identified with a community
- e. An estimate of the environmental benefits of the affected agriculture should be based on analysis of:
  - i. the extent to which the affected agriculture as currently practiced provides a habitat or food for wildlife
  - ii. the extent to which a farm landscape adds to the visual quality of an area
  - iii. any regional or local open space plans, and degree to which the open space contributes to air quality
  - iv. the degree to which the affected agriculture does, or could, contribute to the establishment of a clear edge between rural and urban development

- D. Whenever a proposed action is determined to have an insignificant adverse effect on identified important agricultural land or whenever it is permitted to substantially hinder the achievement of the policy according to DOS regulations, Part 600, or as a result of the findings of an EIS, then the required minimization should be under-taken in the following manner:
1. The proposed action shall, to the extent practicable, be sited on any land not identified as important agricultural, or, if it must be sited on identified important agricultural land, sited to avoid classes of agricultural land according to the following priority:
    - a. prime farmland in orchards or vineyards
    - b. unique farmland in orchard or vineyards
    - c. other prime farmland in active farming
    - d. other unique farmland
    - e. farmland of statewide importance in active farming
    - f. active farmland identified as having high economic viability
    - g. prime farmland not being farmed
    - h. farmland of statewide importance not being farmed
  2. To the extent practicable, agricultural use of identified important agricultural land not directly necessary for the operation of the proposed non-agricultural action should be provided for through such means as lease arrangements with farmers, direct undertaking of agriculture, or sale of surplus land to farmers. Agricultural use of such land shall have priority over any other proposed multiple use of the land.

#### Explanation of Policy 26 A

Agricultural districts are created through local landowner interest, preliminary county review, county adoption, and subsequent State certification, pursuant to Article 25-AA of the New York State Agriculture and Markets Law. As detailed in Section II of the LWRP and illustrated on the [Farmland Soils and Albany County Agricultural District #3 Map](#) lands of the Albany County Agricultural District #3 are concentrated mostly in the southern half of the Bethlehem WRA. Not all those lands within the agricultural district have prime farmland soils.

Many of the lands involved in agriculture and farming provide open space and the rural character within the WRA. To better control the conversion of lands used for agricultural and farming to other uses, the town established the Conservation Easement Program available to landowners who wish to conserve their land for a minimum of 15 years and receive property tax benefits by way of a reduction. The Program uses 25 conservation criteria to assess the benefits of a conservation easement to the Town, of which three are agriculture related. This includes identification of prime farmland soils and farmland of statewide importance soils, active agricultural land, and adjacency to active farmland.

In order to conserve and protect land in agricultural use within the WRA the following guidelines will be used by the town:

- Residential subdivision development will be encouraged to use conservation subdivision design to preserve and allow for the continued use of a portion of the lands in agriculture. Incentive zoning may also apply.

- The Town will prioritize coordination of efforts to work with other land conservation groups in order to secure funding for purchase of development rights from landowners interested in such a venture.
- Applications to the Conservation Easement Program will be given priority when the lands are actively farmed or in agricultural use, located adjacent to agricultural lands, and/or contain prime farmland soils and farmland of statewide importance soils.

## **ENERGY AND ICE MANAGEMENT POLICIES**

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### **POLICY 27**

**Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location.**

#### Explanation of Policy 27

New York's overall annual energy demand has begun to flatten over time, in part due to the success of State and utility energy efficiency programs. However, peak load (the highest amount of energy consumption in a given year) has continued to increase at a more rapid pace.<sup>5</sup> Renewable power sources—hydro, solar, wind, and other carbon-free solutions—also continue to grow as a share of the total energy produced in the State.<sup>6</sup> Significant investments in the billions of dollars are needed to replace New York's aging electric transmission and distribution infrastructure just to meet currently projected energy demand.<sup>7</sup> To respond to these significant shifts in the State's energy infrastructure, State energy policies are being designed to maintain energy system reliability during peak load in ways that improve the grid's overall system efficiency, from both energy transmission and capital investment perspectives.<sup>8</sup>

The New York State energy planning process provides a comprehensive framework for improving the State's energy system, addressing issues such as environmental impacts, resiliency, and affordability.<sup>9</sup> Key areas of focus for New York's energy planning and implementation policies include integration of renewable energy generation; local energy generation that can foster both economic prosperity and environmental stewardship; seeking innovative energy solutions across the State's public facilities and operations; increasing energy efficiency; and decreasing greenhouse gas emissions.<sup>10</sup> New York's energy policy is also central to how the State responds to the challenges presented by a changing climate. New York State's energy planning recognizes that extreme weather events demand more resilient energy infrastructure, and that climate change presents both challenges and opportunities to lead and innovate.<sup>11</sup>

A determination of public need for energy is the first step in the process for siting new facilities. The directives for determining this need are contained primarily in Article 6 of the New York State Energy

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<sup>5</sup> 2015 New York State Energy Plan, Vol. 1, p. 27.

<sup>6</sup> 2015 New York State Energy Plan, Vol. 1, p. 10.

<sup>7</sup> 2015 New York State Energy Plan, Vol. 1, pp. 25-26.

<sup>8</sup> 2015 New York State Energy Plan, Vol. 1, p. 27.

<sup>9</sup> 2015 New York State Energy Plan, Vol. 1, p. 9.

<sup>10</sup> 2015 New York State Energy Plan, Vol. 1, p.7., p.11.

<sup>11</sup> 2015 New York State Energy Plan, Vol. 1, p. 17.

Law. That Article requires the preparation of a State Energy Plan. With respect to transmission lines and the siting of major electric generating facilities, Articles 7 and 10 of the State's Public Service Law require additional forecasts and establish the basis for determining the compatibility of these facilities with the environment and the necessity for providing additional electric capacity.

The policies derived from the siting regulations under these Articles are entirely consistent with the general coastal zone policies derived from other laws, particularly the regulations promulgated pursuant to the Waterfront Revitalization of Coastal Areas and Inland Waterways Law. That law is used for the purposes of ensuring consistency with the Coastal Management Program. The Department of State will present testimony for the record during relevant certification proceedings under Articles 7 and 10 of the Public Service Law when appropriate; and use the State SEQR and DOS regulations to ensure that decisions regarding other proposed energy facilities (not subject to Articles 7 and 10 of the Public Service Law) that would affect the coastal area are consistent with coastal policies.

### **POLICY 28**

**Ice management practices shall not interfere with the production of hydroelectric power, damage significant fish and wildlife and their habitats, or increase shoreline erosion or flooding.**

#### Explanation of Policy 28

Prior to undertaking actions required for ice management, an assessment must be made of the potential effects of such actions upon the production of hydro-electric power, fish and wildlife and their habitats as will be identified in the Coastal Area Maps, flood levels and damage, rates of shoreline erosion damage, and upon natural protective features. Following such an examination, adequate methods of avoidance or mitigation of such potential effects must be utilized if the proposed action is to be implemented.

### **POLICY 29**

**The development of offshore uses and resources, including renewable energy resources, shall accommodate New York's long-standing ocean and Great Lakes industries, such as commercial and recreational fishing and maritime commerce, and the ecological functions of habitats important to New York.**

#### Explanation of Policy 29

The science of ecosystem connections between the coastal zone and offshore areas is increasingly better understood. The offshore environment is an ongoing focus of policy development at national, regional, and state levels. Within this context, New York seeks to accommodate longstanding offshore industries, such as commercial and recreational fishing and maritime commerce, while at the same time ensuring the ecological functioning of habitats important to New York, as the State considers the need for new offshore resource development and uses to occur.

While New York State has jurisdiction in its offshore waters, matters pertaining to the OCS43 are under the jurisdiction of the federal government. However, offshore resource development and other uses on the OCS may affect coastal resources and uses important to New York. Consequently, the NYS DOS actively participates in OCS planning and decision-making processes pursuant to the federal Outer Continental Shelf Lands Act and the Deepwater Port Act, among other federal statutes, and reviews and voices the State's concerns about federal OCS activities, licenses, permits, lease sales, plans, and other uses and activities. The federal government increasingly has invited State participation in offshore planning and decision-making processes. New York will continue to review and analyze federal licensing and permitting activities for federal consistency, including activities in offshore areas outside New York's

coastal zone. Proponents of offshore activities should use available offshore data to identify and reduce the potential effects on New York's coastal resources, activities and uses. Project proponents should consider the compatibility with, and seek to accommodate, the existing presence of resources, activities and uses that are important to the coastal area of New York State.

In addition to the development of energy resources and the siting of energy facilities, offshore uses of particular concern to New York State because of their potential effects on State coastal uses and resources include, but are not limited to: fisheries management; aquaculture; sand and gravel mining; military readiness training and related exercises; changes or upgrades to established navigation patterns and infrastructure, including the re-routing of existing navigation lanes and the location, placement or removal of navigation devices which are not part of the routine operations under the Aids to Navigation (ATON) program; permits for deep water ports; the identification of interim or permanent open-water dredged material disposal sites; the intentional submergence of vessels and other structures, including for the purpose of creating artificial reefs; the creation of human-made islands, tidal barriers, or the installation of other fixed structures; scientific research activities; and exploration and identification of potential resources for extraction, such as biopharmaceutical products.

In its review of proposed activities, licenses, permits, lease sales and plans in the Atlantic OCS and New York State coastal waters, the Department of State works with state and federal agencies to consider a number of factors, including but not limited to: the potential effects upon maritime traffic, including navigational safety leading into and from New York's ports; the potential for increased port development and economic activity; aspects of national security; the effects on important finfish, crustaceans, shellfish, seabirds, marine mammals, and other wildlife populations and their spawning, wintering, and foraging habitats and migrating corridors; impacts on biological communities and biodiversity; ecological functioning of ecosystems; economic and other effects upon commercial and recreational fishing activities; impacts upon tourism and public recreational resources and opportunities along the coasts and offshore; the potential for geo-hazards; water quality; and overall effects on the resilience of New York's coastal uses and resources.

Of special significance, New York State recognizes the need to develop energy resources, particularly those that contribute to achieving the State's energy goals, including greenhouse gas reduction. It also recognizes that any energy development may have reasonably foreseeable effects on existing coastal uses and resources. Among the various energy resources under consideration for development are those which may be found in offshore waters within the state's territorial limit or the Atlantic Outer Continental Shelf (OCS). There are currently no active licenses, permits, lease sales or plans for oil and gas exploration or production in the waters offshore New York State.

The State encourages the responsible development of renewable energy resources. Wind, wave, tidal, and water current resources located offshore New York are an increasing focus of development interest, which may continue to grow as projects become more technologically feasible. Offshore renewable wind energy development is a use which depends on the utilization of resources found in coastal waters. The State recognizes offshore projects directly interconnected to the New York electrical grid as qualifying for eligibility as a dependent use at the same level as though the facility were located within the State.

## **WATER AND AIR RESOURCES POLICIES**

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### **POLICY 30**

**Municipal, industrial, and commercial discharge of pollutants, including but not limited to, toxic and hazardous substances, into coastal waters will conform to State and National water quality standards.**

#### Explanation of Policy 30

Municipal, industrial and commercial discharges include not only "end-of-the pipe" discharges into surface and groundwater but also plant site run-off, leaching, spillages, sludge and other waste disposal, and drainage from raw material storage sites. Also, the regulated industrial discharges are both those which directly empty into receiving coastal waters and those which pass through municipal treatment systems before reaching the State's waterways.

The Federal Clean Water Act establishes standards for surface water and makes it unlawful to discharge pollutants into the Waters of the United States, unless permitted. Embedded within this Act and administered by the United States Environmental Protection Agency (EPA) is the National Pollutant Discharge and Elimination (NPDES) permit program which establishes rules and procedures related to the permitting process.

In New York State, the NPDES program is administered by the New York State Department of Conservation (NYSDEC) and is known as the State Pollutant Discharge and Elimination System (SPDES) permit program. The NYSDEC SPDES General Permit for Stormwater Discharges from Municipal Separated Storm Sewer System Permit No. GP-0-15-003 applies to regulated entities, often referred to as "MS4s". The Town of Bethlehem is a regulated MS4 municipality. The Town reviews and permits development projects for water quality before discharge to waters of the United States as part of the implementation of the State's requirements.

### **POLICY 31**

**State coastal area policies and management objectives of approved local waterfront revitalization programs will be considered while reviewing coastal water classifications and while modifying water quality standards; however, those waters already overburdened with contaminants will be recognized as being a development constraint.**

#### Explanation of Policy 31

Pursuant to the Federal Clean Water Act of 1977 (PL 95-217) the State has classified its coastal and other waters in accordance with considerations of best usage in the interest of the public and has adopted water quality standards for each class of waters. These classifications and standards are reviewable at least every three years for possible revision or amendment. Local Waterfront Revitalization Programs and State coastal management policies shall be factored into the review process for coastal waters. However, such consideration shall not affect any water pollution control requirement established by the State pursuant to the Federal Clean Water Act.

The State has identified certain stream segments as being either "water quality limiting" or "effluent limiting." Waters not meeting State standards, and which would not be expected to meet these standards even after applying "best practicable treatment" to effluent discharges are classified as "water quality limiting." Those segments meeting standards or those expected to meet them after application of "best practicable treatment" are classified as "effluent limiting," and all new waste discharges must receive "best practicable treatment". However, along stream segments classified as "water quality

limiting," waste treatment beyond "best practicable treatment" would be required, and costs of applying such additional treatment may be prohibitive for new development.

Currently, the water in the streams segments within the Bethlehem WRA is Class C. The best usage of Class C waters is fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

### **POLICY 32**

**Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities.**

#### Explanation of Policy 32

Alternative systems include individual septic tanks and other subsurface disposal systems, dual systems, small systems serving clusters of households or commercial users, and pressure or vacuum sewers. These types of systems are often more cost effective in smaller less densely populated communities and for which conventional facilities are too expensive.

### **POLICY 33**

**Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.**

#### Explanation of Policy 33

The Town encourages the use of green infrastructure practices during development project review and will analyze the WRA for identification of locations that contain suitable soils for infiltration of stormwater to better inform development project design. Bethlehem does not contain any combined sewer overflows. A separate sanitary sewer system and stormwater collection system exists.

Best management practices include both structural and non-structural methods of preventing or mitigating pollution caused by the discharge of storm water runoff and combined sewer overflows. At present, structural approaches to controlling storm water runoff (e.g., construction of retention basins) and combined sewer overflows (e.g., replacement of combined system with separate sanitary and stormwater collection systems) are not economically feasible. Proposed amendments to the Clean Water Act, however, will authorize funding to address combined sewer overflows in areas where they create severe water quality impacts. Until funding for such projects becomes available, non-structural approaches (e.g., improved street cleaning, reduced use of road salt) will be encouraged.

### **POLICY 34**

**Discharge of waste materials into coastal waters from vessels subject to state jurisdiction will be limited so as to protect significant fish and wildlife habitats, recreational areas and water supply areas.**

#### Explanation of Policy 34

All untreated sanitary waste from vessels is prohibited from being discharged into the State's coastal waters. Where coastal resources or activities require greater protection than afforded by this requirement the State may designate vessel waste no discharge zones. Within these no discharge zones the discharge of all vessel waste whether treated or not is prohibited. A determination from EPA that an

adequate number of vessel waste pump-out stations exists is necessary before the State can designate a no discharge zone. The State prepared a Clean Vessel Act Plan which identifies the coastal waters for which no discharge zones are needed, and the number of vessel waste pump outs required to obtain the determination from EPA. The discharge of other wastes from vessels is limited by State law.

The State of New York waters in the Hudson River from the Battery in Manhattan to the Federal Dam in Troy are designated as a No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within an NDZ are completely prohibited from discharging any sewage, treated or untreated, into the NDZ waters. Outside the NDZ, discharge of sewage is regulated by 40 CFR 140.

### **POLICY 35**

**Dredging and filling in coastal waters and disposal of dredged material will be undertaken in a manner that meets existing State dredging permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands.**

#### Explanation of Policy 35

Dredging, filling and dredge material disposal are activities that are needed for waterfront revitalization and development, such as maintaining navigation channels at sufficient depths, pollutant removal and other coastal management needs. Such projects, however, may adversely affect water quality, fish and wildlife habitats, wetlands and other important coastal resources. Often these adverse effects can be minimized through careful design and timing of the dredging or filling activities, proper siting of dredge material disposal sites, and the beneficial use of dredged material. Such projects shall only be permitted if they satisfactorily demonstrate that these anticipated adverse effects have been reduced to levels which satisfy State permit standards set forth in regulations developed pursuant to Environmental Conservation Law, (Articles 15, 24, 25 and 34), and are consistent with policies pertaining to the protection and use of coastal resources (State Coastal Management policies 7, 15, 19, 20, 24, 26 and 44).

### **POLICY 36**

**Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur.**

#### Explanation of Policy 36

See Policy 39 for definition of hazardous materials.

All businesses storing petroleum within the WRA must have a permit from the NYS DEC for Petroleum Bulk Storage (PBS) under PBS Program 6 NYCRR Part 613 regulations. Any spills are required to be reported to the NYS DEC.

### **POLICY 37**

**Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.**

#### Explanation of Policy 37

Best management practices used to reduce these sources of pollution could include but are not limited to, encouraging organic farming and pest management principles, soil erosion control practices, and surface drainage control techniques.

### **POLICY 38**

**The quality and quantity of surface water and groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.**

#### Explanation of Policy 38

Surface and groundwater are the principle sources of drinking water in the State, and therefore must be protected.

### **POLICY 39**

**The transport, storage, treatment and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreation areas, important agricultural land, and scenic resources.**

#### Explanation of Policy 39

The definitions of terms "solid wastes" and "solid waste management facilities" are taken from New York's Solid Waste Management Act (Environmental Conservation Law, Article 27). Solid wastes include sludge from air or water pollution control facilities, demolition and construction debris and industrial and commercial wastes. Hazardous wastes are unwanted by-products of manufacturing processes generally characterized as being flammable, corrosive, reactive, or toxic. More specifically, waste is defined in Environmental Conservation Law (Section 27-0901(3)) as waste or combination of wastes which because of its quantity, concentration, or physical, chemical or infectious characteristics may: 1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or 2) pose a substantial present or potential hazard to human health or the environment which improperly treated, stored, transported or otherwise managed." A list of hazardous wastes (NYCRR Part 366) will be adopted by DEC within 6 months after EPA formally adopts its list. Examples of solid waste management facilities include resource recovery facilities, sanitary landfills and solid waste reduction facilities. Although a fundamental problem associated with the disposal and treatment of solid wastes is the contamination of water resources, other related problems may include filling of wetlands and littoral areas, atmospheric loading, and degradation of scenic resources.

### **POLICY 40**

**Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards.**

#### Explanation of Policy 40

The State Board on Electric Generation Siting and the Environment must consider a number of factors when reviewing a proposed site for facility construction. One of these factors is that the facility should "not discharge any effluent that will be unduly injurious to the propagation and protection of fish and wildlife, the industrial development of the State, the public health, and public enjoyment of the receiving waters." The effects of thermal discharges on water quality and aquatic organisms will be considered by the siting board when evaluating an applicant's request to construct a new steam electric generating facility.

## **POLICY 41**

**Land use or development in the coastal area will not cause national or state air quality standards to be violated.**

### Explanation of Policy 41

New York's Coastal Management Program incorporates the air quality policies and programs developed for the State by the Department of Environmental Conservation pursuant to the Clean Air Act and State Laws on air quality. The requirements of the Clean Air Act are the minimum air-quality control requirements applicable within the coastal area. To the extent possible, the State Implementation Plan will be consistent with coastal lands and water use policies. Conversely, coastal management guidelines and program decisions with regard to land and water use and any recommendations with regard to specific sites for major new or expanded industrial, energy, transportation, or commercial facilities will reflect an assessment of their compliance with the air quality requirements of the State Implementation Plan. The Department of Environmental Conservation allocates substantial resources to develop a regulatory and management program to identify and eliminate toxic discharges into the atmosphere. The State's Coastal Management Program will assist in coordinating major toxic control programming efforts in the coastal regions and in supporting research on the multi-media nature of toxics and their economic and environmental effects on coastal resources.

## **POLICY 42**

**Coastal management policies will be considered if the State reclassifies land areas pursuant to the prevention of significant deterioration regulations of the Federal Clean Air Act.**

### Explanation of Policy 42

The policies of the State and local coastal management programs concerning proposed land and water uses and the protection and preservation of special management areas will be taken into account prior to any action to change prevention of significant deterioration land classifications in coastal regions or adjacent areas. In addition, the Department of State will provide the Department of Environmental Conservation with recommendations for proposed prevention of significant deterioration land classification designations based upon State and local coastal management programs.

## **POLICY 43**

**Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.**

### Explanation of Policy 43

The New York Coastal Management Program incorporates the State's policies on acid rain. As such, the Coastal Management Program will assist in the State's efforts to control acid rain. These efforts to control acid rain will enhance the continued viability of coastal fisheries, wildlife, agricultural, scenic and water resources.

## WETLANDS POLICY

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### POLICY 44

**Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.**

#### Explanation of Policy 44

Tidal wetlands include the following ecological zones: coastal fresh marsh; intertidal marsh; coastal shoals, bars and flats; littoral zone; high marsh or salt meadow; and formerly connected tidal wetlands. These tidal wetland areas are officially delineated on the Department of Environmental Conservation's Tidal Wetlands Inventory Map. Freshwater wetlands include marshes, swamps, bogs, and flats supporting aquatic and semi-aquatic vegetation and other wetlands so defined in the N.Y.S. Freshwater Wetlands Act and the N.Y.S. Protection of Waters Act.

The benefits derived from the preservation of tidal and freshwater wetlands include but are not limited to:

- habitat for wildlife and fish, including a substantial portion of the State's commercial fin and shellfish varieties; and contribution to associated aquatic food chains;
- erosion, flood and storm control;
- natural pollution treatment;
- groundwater protection;
- recreational opportunities;
- educational and scientific opportunities; and
- aesthetic open space in many otherwise densely developed areas.

Several surface water and wetland resources exist throughout the Bethlehem WRA. The types of surface waters and wetlands identified throughout the Bethlehem WRA in the National Wetlands Inventory and illustrated on [Wetlands Map](#) are discussed in Section II of the LWRP: Four Class II State-regulated freshwater wetlands are located in the central portion of the WRA, north and south of Wemple Road, and in the southeastern part of the WRA. Section II provides a discussion of wetlands within the WRA and a map that includes State, and Federal wetlands as well as hydric soils.

## SECTION IV – PROPOSED LAND AND WATER USES AND PROPOSED PROJECTS WITHIN THE WRA

### PROPOSED LAND USES

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Land uses were identified and thoroughly discussed with Town staff and the members of the Local Waterfront Revitalization Advisory Group (LWRAG) during committee meetings, and with the members of the public at the public workshops held during the development of the LWRP. The process for identifying potential new land uses included the review of the local vision for waterfront revitalization, the projects proposed in the LWRP, the existing conditions identified in Section II of the LWRP, and input received from the LWRAG and members of the public. The outcome of this interactive effort with the community largely reflects existing conditions within the Town's WRA. Consequently, there are no new land uses proposed within the WRA.

Future land uses implementing the LWRP and highlighted below will be an extension of the current land uses supported by the existing Zoning law.

- **Gateway Commercial Mixed Use**  
The primary land uses may include commercial and support the northern gateway.
- **Residential**  
The primary land uses may include single family residential and neighborhoods.
- **Industrial**  
The primary land uses may include industrial and commercial.
- **Rural Commercial Mixed Use**  
The primary land uses may include small-scale commercial and support the rural character of the adjacent Van Weis Point neighborhood.
- **Rural Mixed Use**  
The primary land uses may include agriculture, single family residential and small business.
- **Low Density Residential/Open Space**  
The primary land uses may include single family residential, neighborhoods, open space, and recreation.
- **Agricultural/Natural Resources**  
The primary land uses may include agriculture, conserved lands, and single family residential. Conserved lands within this proposed land use is consistent with the existing character of the Town in the southern portion of the WRA. These conserved lands may enable the Town to protect significant natural resources and community assets in relation to sea level rise.
- **Commercial Light Industrial Mixed Use**  
The primary land uses may include commercial light industrial.

Since the Hudson River is not visible from many areas of the WRA, the LWRAG recognized the need and identified the location of the northern and southern Waterfront Area Gateways, to clearly identify entry into the WRA for both residents and visitors. The northern gateway is located at the intersection of US Route 9W and Corning Hill Road and the southern gateway is located at the intersection of Exit 22 off of the NYS Thruway and NYS Route 144/River Road. The proposed gateway treatments are reflective of new signage and landscaping, and there are no changes in land use associated with the gateway idea or locations.

The Activity Node that supports service business, restaurants, and a convenient store among other things is located in the Rural zone, at the intersection of NYS Route 144/River Road and Clapper Road. The activity node could include a future bicycle and pedestrian crossing or Henry Hudson Park support services. The area where the activity node would be located currently serves as an entrance to Henry Hudson Park and as an area of cultural and historic value and is home to the Bethlehem Historical Society at the Cedar Hill Schoolhouse.

## **PROPOSED WATER USES**

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The water uses within the WRA may be categorized as commercial and industrial or recreational. These categories reflect existing water uses and the community's desire to continue supporting and enhancing these uses. The location of the existing water uses that will be continued is reflected on the Water uses and Harbor Management Area Map included in Section II of the LWRP.

- **Commercial and Industrial Water Uses**

The northeastern portion of the WRA adjacent to the Hudson River is devoted to industrial and commercial activity associated with the Port of Albany, which is located just north of the northern WRA border, and PSEG, Innovative Solutions, Air Products and the North Albany Terminal, which are located within the northeastern side of the WRA. In the southeastern portion of the WRA the Town of Bethlehem Dinmore Road Wastewater Treatment Plant treats wastewater and then discharges it back into the Hudson River.

- **Recreational Water Uses**

Henry Hudson Park is home to the Bethlehem Boating and Fishing Access Site. It was constructed in cooperation with the Town and New York State Department of Environmental Conservation. The park includes a boat launch that provides access for motorized craft and other hand-powered craft, and a handicap-accessible fishing area. The boat launch is open daily one (1) hour before sunrise until 10 p.m. from late April through mid-October.

Another location providing a recreational water dependent use is a new kayak launch located at the south end of the Henry Hudson Park with access on the Vloman Kill. This launch area is designed for kayaks, canoes, and other hand powered boats. This launch is open daily during daylight hours from late April to mid-October.

The undeveloped lands of the former Baker Farm Site may offer areas adjacent to the creek where kayakers may like to stop and come on the shore to admire the scenic view of the water.

## **PROPOSED PROJECTS**

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The goals and specific projects described below implement the Bethlehem LWRP. For each proposed project are provided the estimated cost for implementation, potential funding sources, potential construction permit requirements and the anticipated responsible entity.

Further environmental quality review will be conducted by the town as part of the implementation of each of the proposed projects.

Strong leadership from the Town along with coordination among several partners will be critical to the advancement of these projects.

### **NATURAL AND ENVIRONMENTAL RESOURCES AND WATER QUALITY**

#### *Continue to protect water quality of the Hudson River and its tributaries within the WRA to implement water resources policies of the LWRP*

This involves implementing several individual actions that collectively will serve to protect water quality, address non-point source pollution, and complement current local regulations implementing stormwater regulations in accordance with NYSDEC requirements.

#### **PROJECT 1**

##### **Explore revisions to the local land use regulations to protect water quality by controlling land disturbance activities covering less than 1-acre.**

Compliance with the NYSDEC Municipal Storm Sewer System (MS4) General Permit is required to address stormwater quantity and quality for land disturbance greater than or equal to 1-acre. Town Code Chapter 98 Part 2 – Stormwater Management and Chapter 128-49 - Grading, Erosion, and Sediment Control described in Section V of the LWRP ensures the Town’s compliance with these regulations. Currently, land disturbance less than 1-acre receives water quantity control only. Explore revisions to the Town Code Chapters 98 and 128-49 to address water quality treatment for land disturbance activities less than 1-acre. Current NYSDEC requirements are for stormwater quality and quantity disturbance greater than 1-acre. Some wetland delineation and mapping would be necessary.

*Estimated Cost: \$ 18,000*

*Potential Funding Sources: Town (including staff work), NYSDOS*

*Potential Project Partners: NYSDOS, NYSDEC, Albany County*

*Potential Permitting: Town Code amendment adoption procedures would be required*

*Responsible Entity: Town Planning Department & Town Engineering Department*

*Potential Town Code Amendment: Yes*

*Implementing LWRP Policies 7, 8, 12, 17, 18, 19, 30, 31, 32, 33, 34, 37, 38, 39, 40, 44*

## PROJECT 2

### **Identify ways to improve the existing local regulations controlling stream buffer and flood zone disturbance and streamline their implementation.**

A stream buffer and limitation on disturbance within the flood zone can serve as a natural filter to remove potential pollutants before reaching the stream. A stream buffer also creates additional wildlife habitat that can function as wildlife corridors. These measures also address flooding resiliency to protect homes, property, and business.

The Town currently addresses disturbance within certain named streams, and flood zones identified by FEMA through Town Code 128-53 Lots Bordering Streams, 128-49 Grading, Erosion and Sediment Control, and Chapter 69 Flood Damage Prevention (floodplain development permit). In the WRA, named streams includes the Vloman Kill and Normans Kill.

Coordination between the three sets of regulations is needed to better understand impacts and streamline the permitting process. Further consideration to expand the existing stream buffer distance to between 100-ft to 300-ft would improve water quality within the streams and Hudson River Estuary. Implementation of an expanded stream buffer could start with applying the buffer to all NYSDEC classified streams. Current exemptions found in Zoning Law 128-49 Grading, Erosion and Sediment Control could continue to apply.

*Estimated Cost: \$ 8,000*

*Potential Funding Sources: Town Budget (including Town Staff work), NYSDOS<sup>93</sup>, NYSDEC<sup>94</sup>*

*Potential Project Partners: NYSDOS, NYSDEC, Albany County, Scenic Hudson*

*Potential Approvals: Zoning amendment adoption procedures will be applied*

*Responsible Entity: Town Planning Department, Town Board*

*Potential Town Code Amendment: Yes*

*Implementing LWRP Policies 7, 8, 12, 17, 18, 19, 30, 31, 33, 34, 37, 38, 40, 44*

## PROJECT 3

### **Identify places within the WRA where the implementation of green infrastructure techniques will provide maximum benefits.**

Green infrastructure is an approach to managing stormwater that includes practices relying on soils, plants and natural processes such as infiltration to manage stormwater in a manner that mimics the natural water cycle. This evaluation would include an analysis of existing soil conditions based on readily available soil data. Such information would be useful to the town staff, planning board and potential applicants in determining which green infrastructure techniques are most appropriate based on soil conditions. It is recognized that other factors must also be considered when evaluating the effectiveness of green infrastructure, such as depth to water table. However, this effort could minimize the upfront time and resources required by the town and potential applicants.

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<sup>93</sup> Local Waterfront Revitalization Program Grants - [www.dos.ny.gov/opd/grantOpportunities/epf\\_lwrpGrants.html](http://www.dos.ny.gov/opd/grantOpportunities/epf_lwrpGrants.html)

<sup>94</sup> Climate Smart Communities Grant Program - [www.dec.ny.gov/energy/109181.html](http://www.dec.ny.gov/energy/109181.html)

*Estimated Cost: 15,000*

*Potential Funding Sources: Town (including staff work), NYSEFC<sup>95</sup>, NYSERDA, NYSDOS, NYSDEC<sup>96</sup>*

*Potential Project Partners: NYSDOS, NYSDEC*

*Potential Permitting: TBD*

*Responsible Entity: Town Planning Department & Town Engineering Department*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 7, 8, 12, 13, 14, 17, 18, 19, 30, 31, 33, 34, 37, 38, 40, 44*

*Educate residents and visitors about invasive species that could negatively impact the town's waterfront habitats and agricultural fields.*

#### **PROJECT 4**

**Design and construct an educational kiosk at the Henry Hudson Park to provide information about marine invasive species and recommendations to protect and restore fish and wildlife habitats.**

The purpose of this educational kiosk would be to inform the public how they can assist in protecting and restoring fish and wildlife habitats. Best practices would be identified in an easy to understand manner. Henry Hudson Park boat launch or kayak launch is a logical location since recreational users of the river benefit directly from healthy fish and wildlife habitats. The Town could partner with local community organizations, conservancies, or scout troops to develop the content and construct the kiosk.

*Estimated Cost: \$18,000*

*Potential Funding Sources: Town (including staff work), NYSDEC, NYSOPRHP, NYSDOS, Private Sponsor, Community Organizations*

*Potential Project Partners: NYSDEC, US Army Corps of Engineers*

*Potential Permitting: Depends on location*

*Responsible Entity: Town Planning Department & Parks and Recreation Department with assistance from local scout troops or community organizations.*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 7, 8, 9, 12, 17, 19, 30, 31, 33, 34, 37, 38, 40, 44*

#### **CLIMATE CHANGE RESILIENCY**

*Become a community resilient to climate risks*

#### **PROJECT 5A**

**Develop a Building Community Resiliency Plan that expands the findings of the Risk Assessment and Resiliency included in the LWRP to comprise additional public and private assets, examines the existing local regulations and proposes amendments, and identifies and compares shoreline stabilization alternatives.**

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<sup>95</sup> Green Innovation Grant Program (GIGP) - <https://www.efc.ny.gov/GIGP>

<sup>96</sup> Climate Smart Communities Grant Program - <https://www.dec.ny.gov/energy/109181.html>

The Bethlehem-specific Building Community Resiliency Plan will expand on the work reflected in the Flooding Risk Assessment and Resiliency subsection included in Section II of the LWRP, which includes a refinement of potential public assets at risk based on local conditions and current sea-level rise projections. The additional effort would identify best practices techniques to improve resiliency for public assets as well as businesses and private property owners. Those techniques may vary based on the category of shoreline ownership and condition. Some steps to be examined in this plan might include an inventory of existing Town regulations, such as the Flood Damage Prevention chapter which outlines construction and site development standards that safeguard investment from flood damage, and shoreline stabilization along the entire waterfront. Engaging key partners, such as Scenic Hudson and local businesses, will be critical to informing the plan and implementing its recommendations.

*Estimated Cost: \$50,000*

*Potential Funding Sources: Town (including staff work), NYSERDA<sup>97</sup>, NYSES, NYSDOS, NYSDEC*

*Potential Project Partners: Scenic Hudson, Army Corps of Engineers*

*Potential Permitting: Permitting requirements for implementation will be identified in the plan.*

*Responsible Entity: Town Planning Department & Town Engineering Department*

*Potential Town Code Amendment: Yes*

*Implementing LWRP Policies 1, 2, 5, 7, 9, 11, 12, 13, 14, 17, 18, 19, 23, 33, 42, 43, 44*

## **PROJECT 5B**

**Update the analysis done in the 2012 Sewer Master Plan for evaluation of climate change impacts to the wastewater treatment plant at Dinmore Road and outline avenues of funding the recommendation from the study.**

The 2012 Sewer Master Plan included a detailed chapter on the evaluation of climate change impacts on the wastewater treatment plant. Since the study is dated prior to NYS DEC adopting certain sea level rise projections in February 2017, the analysis should be updated to support the continued recommendation identified in the plan for infrastructure improvements, such as effluent pumping. The updated analysis would also identify funding sources for the recommendation.

*Estimated Cost: \$15,000-25,000*

*Potential Funding Source(s): NYSERDA, ESD, DOS, DEC, Town*

*Potential Project Partner(s): Army Corps of Engineers*

*Potential Permitting: Not applicable. Permitting requirements may be identified in the plan.*

*Responsible Entity: Town Department of Public Works, Engineering Division*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 1, 2, 5, 7, 9, 11, 12, 13, 14, 17, 18, 19, 23, 33, 42, 43, 44*

## **PROJECT 6**

**Apply to FEMA's Community Rating System program created under the National Flood Insurance Program. Identify information and floodplain management activities recommended by the**

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<sup>97</sup> <https://www.nyscrda.ny.gov/Funding-Opportunities/Current-Funding-Opportunities>

**Community Rating System (CRS) program and currently not undertaken by the town, investigate which of these activities will work best within the town and be accepted by the public, create a framework to undertake the selected activities, and ultimately receive CRS classification.**

The National Flood Insurance Program’s Community Rating System<sup>98</sup> (CRS) recognizes community efforts beyond the minimum standards by reducing flood insurance premiums for the community’s property owners. CRS discounts range from 5% to 45%. To participate in CRS, the Town would choose to undertake some or all of 19 different public information and floodplain management activities described in the program. The town is already doing some of the activities on the list, including the MS4 program activities, local flood regulations, conservation easement program, open space planning, etc.

*Estimated Cost: \$18,000*

*Potential Funding Sources: Town (including staff work), NYSDEC; NYSDOS*

*Potential Project Partners: NYSDEC Floodplain Management Section*

*Potential Permitting: Not Applicable*

*Responsible Entity: Town Planning Department & Town Building Department*

*Potential Town Code Amendment: Yes*

*Implementing LWRP Policies 1, 2, 5, 7, 9, 11, 12, 13, 14, 17, 18, 19, 23, 33, 42, 43, 44*

## **PROJECT 7**

**Create educational brochures and provide periodic education forums to businesses and property owners on topics that build resiliency.**

The purpose of this project is to inform and educate private property owners and business along the shoreline about the sea-level rise and relationship with flooding along Hudson River and impacts of increased occurrences of storm events. Educational brochures and periodic educational forums could be held to discuss potential resiliency measures that protect homes, properties and business. One particular brochure would include an outline of the state and federal agencies (NYSDEC, ACOE, NYSDOS, OGS) permitting requirements that residents, businesses, and landowners need to follow when maintaining or improving their shoreline. For example, one of the brochures may be developed in collaboration with US Coast Guard District 1<sup>99</sup> and explain the impact of the ice that may be pushed into adjacent shoreline by the ice breaking operations of the Coast Guard assets or by the wake produced by vessels transiting the Hudson River. This project includes the identification of topics, content development, design and printing.

*Estimated Cost: \$28,000*

*Potential Funding Source(s): Town (including staff work), NYSDOS, community organizations*

*Potential Project Partner(s): Bethlehem Chamber of Commerce, Bethlehem Industrial Development Agency*

*Potential Permitting: Not Applicable*

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<sup>98</sup> <https://www.fema.gov/media-library/assets/documents/16104>

<sup>99</sup> Contact SECNY Ice Officer for information on the USCG's icebreaking program in this area.

*Responsible Entity: Town Planning Department, Town Engineering Department*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 1, 2, 5, 7, 9, 11, 12, 13, 14, 17, 19, 28, 23, 32, 44*

## **ZONING AND LAND USE**

*Improve the consistency of the local land use controls with the LWRP.*

### **PROJECT 8**

**Update the Zoning Law to improve the implementation of the LWRP policies and goals.**

While land uses are not proposed to change as a result of this LWRP, there are improvements that can be made to the Zoning Law to increase efficiency of land use controls. Future zoning amendments must be consistent with the LWRP.

*Estimated Cost: \$12,000*

*Potential Funding Sources: Town (including staff work), NYSDOS*

*Potential Project Partners: NYSDOS, Albany County*

*Potential Permitting: Not Applicable*

*Responsible Entity: Town Planning Department & Town Board*

*Potential Town Code Amendment: Yes*

*Implementing LWRP Policies: to be determined*

### **PROJECT 9**

**Develop design guidelines for rural roadways.**

The purpose of design guidelines for rural roadways is to identify an aesthetic framework within a rural context that reflects the character of that corridor and protects that character. Design Guidelines may be applicable across several rural roadways, such as Clapper Road and Weisheit Road, should be a user-friendly graphic oriented tool, and typically include building setbacks, buffering, maximum height, and landscaped screening to maintain the rural character of the roadway. The design guidelines may identify the most appropriate type of landscaping, such as tree species and would likely be implemented through an overlay district or by incorporation into the town's site plan review regulations. Involved departments of the design guidelines may include the Town Highway Department, Planning Board, and Department of Public Works.

*Estimated Cost: \$35,000*

*Potential Funding Sources: Town (including staff work), NYSDOS*

*Potential Project Partners: NYSDOT, Albany County*

*Potential Permitting: Not Applicable*

*Responsible Entity: Town Planning Department*

*Potential Town Code Amendment: yes*

*Implementing LWRP Policies 1, 4, 7, 8, 9, 25, 26, 41, 43*

## INFRASTRUCTURE IMPROVEMENTS

*Improve transportation access to the waterfront, livability conditions for residents, and enjoyment of recreation users*

### PROJECT 10A

**Identify alternative types of improvements that will reduce the speed of vehicles, enhance pedestrian safety at crossing locations, and improve the experience and safety of bicyclists along the NYS Route 144 /River Road corridor and select the best options.**

### PROJECT 10B

**Work with NYSDOT to implement design and construction improvements identified as the best option for NYS Route 144 /River Road corridor.**

As a designated truck route and primary access to Henry Hudson Park, River Road is heavily used by through traffic as well as residents and businesses. The current conditions lead to challenges for pedestrians crossing the road, particularly given the posted 55 mph speed limit. The Town will perform a comprehensive corridor study to assist in determining where the key issues are and what steps to undertake to alleviate those issues. The focus will be on the Clapper Road/Lyons Road intersection with River Road as well as the Wemple Road and River Road intersection. Coordination with NYSDOT will be critical as this is a State route. The NYSDOT should consult with the Town when a pavement preservation project is scheduled to identify low cost and effective improvements that could improve bicycle and pedestrian travel along the corridor. Accident reports provided by the Bethlehem Police Department indicate that during a ten-month period in 2017, 29 accidents were reported on River Road resulting in 11 injuries and a fatality.

*Estimated Cost: \$75,000*

*Potential Funding Sources: Town (including staff work), CDTC, NYSDOT, NYSDOS*

*Potential Project Partners: NYSDOT*

*Potential Permitting: To be determined by feasibility study*

*Responsible Entity: Town Planning Department & Town Engineering Department, NYSDOT*

*Potential Town Code Amendment: no*

*Implementing LWRP Policies 2, 4, 5, 19, 32, 38, 43*

### PROJECT 11

**Reassess existing conditions and recommendations to reduce odors emanating from the wastewater treatment plant, which impact the public's experience of the Henry Hudson Park.**

The Henry Hudson Park Master Plan improvements reinforce the park as a significant public gathering space on the Hudson River. Further, as WRA projects are implemented that attract residents and visitors to the waterfront area the need to address odors from the Wastewater Treatment Plant become apparent. It has been noted that the Wastewater Treatment Plant located immediately south of the park can detract from the experience at the park, particularly on weekends and holidays; offensive odor emissions associated with the treatment process can cause a nuisance to the

enjoyment of the park. It is also recognized that the Wastewater Treatment Plant is a significant infrastructure resource for the community, providing public health, economic and environmental benefits to the community.

The 2012 Sewer Master Plan includes an evaluation of potential odor reduction measures that strike a balance between the facility's capital and process needs and improved odor emissions. The Town will revisit the recommendations in the Master Plan and consider the odor control measures that have not been implemented. The implementation of the odor control measures will be a different project based on the cost estimates identified in this study.

*Estimated Cost: \$75,000+ implementation*

*Potential Funding Sources: Town, NYSEFC*

*Potential Project Partners: Albany County Health Department, NYSDOH*

*Potential Permitting: NYSDEC, NYSDOH*

*Responsible Entity: Town Department of Public Works*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 4, 5, 15, 16, 32, 38, 43*

## **PROJECT 12**

### **Examine the feasibility and impact of expanding the existing sewer and/or water infrastructure to the currently developed parts of the Van Wies Point Neighborhood.**

This feasibility study would identify potential expansion areas and evaluate the costs and benefits of expanding sewer and water infrastructure in this part of the WRA. Additionally, the potential induced impacts on growth patterns resulting from new infrastructure would be evaluated and considered.

It should be noted that the costs to construct water and sewer infrastructure to serve new areas of Town are mostly the responsibility of the property owners benefiting from the expansion. A requirement of the process is the development of a map, plan and report by a licensed professional engineer, which should include some of the items identified in this potential project.

*Estimated Cost: \$55,000*

*Potential Funding Sources: Town, NYSEFC, NYSDEC, NYSDOS*

*Potential Project Partners: NYSDEC, Albany County Health Department, NYSDOH*

*Potential Permitting: To be identified in the study*

*Responsible Entity: Town Planning Department and Town Department of Public Works*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 4, 5, 27, 32, 38, 43*

## COORDINATE WATERFRONT REVITALIZATION EFFORTS

Coordinate with all level of governments and organizations regarding riverfront development and preservation efforts.

### PROJECT 13

**Coordinate with regional entities, such as the Capital District Regional Planning Commission (CDRPC), to conduct an annual or biannual riverfront community roundtable and events to discuss or present similar and shared waterfront-related issues/opportunities.**

Regional planning agencies are best equipped to coordinate a riverfront development initiative with neighboring communities. As riverfront communities, there are likely shared experiences that could be learned from to support continued waterfront efforts. The Town's role would be to engage in discussions with CDRPC to engage other riverfront communities in this project. CDRPC, as a regional entity, would take the lead in initiating these discussions.

*Estimated Cost: \$2,000/year*

*Potential Funding Sources: Town (including staff work), NYSDOS, NYSDEC*

*Potential Project Partners: CDRPC, NYSDEC, NYSDOS, Scenic Hudson*

*Potential Permitting: Not Applicable*

*Responsible Entity: Regional entity such as CDRPC*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 2, 3, 14, 15, 19, 24, 25, 29, 34, 40, 41, 44*

## IMPROVE THE USE OF LOCAL HISTORIC, CULTURAL, AND SCENIC RESOURCES

Enhance tourism opportunities and leverage the unique resources of the region.

### PROJECT 14

**Develop a heritage and nature-based tourism strategy focused on the Hudson River and involving regional partners and neighboring municipalities.**

The preparation of a Regional Heritage and Nature Based Tourism Strategy would enhance tourism opportunities and leverage the unique resources of an entire region. A regional approach offers more potential resources and more potential opportunities to keep visitors in the region longer, thereby increasing tourism dollars spent. Potential nature based locations could include Schodack Island State Park, Papscaene Island, the undeveloped lands of the former Baker Farm Site owned by Scenic Hudson, Henry Hudson Park found within Bethlehem, East Greenbush, Castleton and Schodack.

*Estimated Cost: \$100,000*

*Potential Funding Sources: Town (staff work), NYSESD, NYSDOS, , partner communities*

*Potential Project Partners: CDRPC, Center for Economic Growth, Hudson Valley Tourism*

*Potential Permitting: Not Applicable*

*Responsible Entity: Town Planning Department and Town Historian with partners*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 1, 9, 19, 22, 23, 24, 25, 26*

## PROJECT 15

### **Develop a scenic overlay district along the areas of Wemple Road/Weisheit Road/Clapper Road to preserve and improve viewing opportunities of the Taconic Mountains**

This project would first identify key scenic views and corridors within the WRA and then develop an overlay district that encompasses those views and corridors. The overlay district would include design guidelines to address setbacks and building height, to preserve viewsheds.

*Estimated Cost: \$8,000*

*Potential Funding Sources: Town (including staff work), NYSDOS*

*Potential Project Partners: NYSDOS, NYSDEC, local organizations, Scenic Hudson*

*Potential Permitting: Zoning amendment adoption procedures would be required.*

*Responsible Entity: Town Planning Department & Town Board*

*Potential Town Code Amendment: Yes*

*Implementing LWRP Policies 1, 19, 22, 23, 24, 25, 26, 35*

## PROJECT 16

### **Create a self-guided history tour, including a brochure with key destinations and historical information.**

The WRA has a storied history that should be told. The purpose of this project is to provide an opportunity for residents and visitors to experience that history on their own time, perhaps via bicycle. School groups and scout groups may also take part as an educational opportunity.

*Estimated Cost: \$15,000*

*Potential Funding Sources: Town (including staff work), NYSDOS, Town Historical Society, Private Sponsors*

*Potential Project Partners: Hudson Valley Tourism, Town Historical Society*

*Potential Permitting: Not Applicable*

*Responsible Entity: Town Historical Society & Town Historian*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 1, 19, 22, 23, 24, 25, 26*

## WATERFRONT REVITALIZATION

### [Support Revitalization within the WRA](#)

## PROJECT 17

### **Develop and implement a strategy to continue to support growth of existing businesses and industry within the WRA.**

Current efforts to support economic development include Town sponsored business roundtable discussions, IDA-managed incentives, and the Town's economic development grant programs including the Microenterprise program and Small Business Assistance program. The available

commercial and industrial properties listing on the IDA website also helps to attract outside businesses to the Town.

*Estimated Cost: \$18,000 + implementation*

*Potential Funding Sources: NYSESD<sup>100</sup>, Town IDA, NYSHCR<sup>101</sup>*

*Potential Project Partners: Bethlehem Chamber of Commerce, Bethlehem Industrial Development Agency, NYS Homes and Community Renewal*

*Potential Permitting: Project/site specific*

*Responsible Entity: Town Planning Department and IDA*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 1, 2, 3, 4, 5, 6, 10, 11, 12, 14, 21, 22, 29, 36*

### **PROJECT 18**

**Conduct a market analysis focused on waterfront uses to identify regional trends and business sectors that could be supported within the WRA.**

The purpose of the WRA market analysis is to identify the business sectors that would best be suitable within the WRA and attract them to the available industrial and mixed economic development district lands. The market analysis would include but not be limited to a work force assessment, availability of industrial/commercial buildings and land, utility infrastructure (water, sewer, electric, gas), and transportation access.

*Estimated Cost: \$50,000*

*Potential Funding Sources: NYSESD, Town IDA, National Grid*

*Potential Project Partners: Bethlehem Industrial Development Agency, Empire State Development*

*Potential Permitting: Unknown - Project/site specific*

*Responsible Entity: Town Planning Department and IDA*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 1, 2, 3, 4, 5, 6, 10, 11, 12, 14, 21, 22, 29, 36*

### **OPEN SPACE, PUBLIC ACCESS, RECREATION, AND TOURISM**

*Provide for improved public access to recreational opportunities within the WRA while continuing to explore open space conservation*

### **PROJECT 19**

**Conduct a Riverfront Trail Feasibility Study to develop an off-road riverfront trail along the Hudson River waterfront that connects the Moh-He-Con-Nuck Nature Preserve, Glenmont Job Corps, Henry Hudson Park and the undeveloped lands of former Baker Farm Site, now owned by Scenic Hudson.**

Conduct a Riverfront trail feasibility study to explore viable options for developing a continuous riverfront trail along the Hudson River within the Town. This will include partnering with property

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<sup>100</sup> Empire State Economic Development Fund Program - <https://esd.ny.gov/empire-state-economic-development-fund-program>

<sup>101</sup> Community Development Block Grant - <https://hcr.ny.gov/funding-opportunities>

owners along the waterfront to enhance public access, including connecting key destinations such as Moh-He-Con-Nuck Nature Preserve and Henry Hudson Park (3.5 miles). Key properties to explore include the Glenmont Job Corps Facility, Scenic Hudson lands and State property. The purpose of the study is to identify a preferred route alternative, estimate costs for right-of-way or easement acquisition, identify necessary construction, estimate design and construction costs, and determine long-term management and maintenance costs and responsibilities. The study will identify the location of the trail and comply with State Department of Health wellhead protection setbacks and requirements.

*Estimated Cost: \$50,000*

*Potential Funding Sources: Town (including staff work), NYSDOS, NYSOPRHP, CDTC, Scenic Hudson*

*Potential Project Partners: US Dept. of Labor, Private Landowners, Scenic Hudson*

*Potential Permitting: will be determined during feasibility study*

*Responsible Entity: Town Planning Department and Town Department of Public Works*

*Potential Town Code Amendment: No*

*Implementing LWRP Policies 1, 2, 4, 12, 14, 19, 20, 21, 22, 25, 26*

## **PROJECT 20**

### **Implement bicycle and pedestrian improvements along Wemple Road, Weisheit Road, and Clapper Road to connect the central area of the Town to the waterfront area.**

A common theme heard through the community engagement process was the need for safe bicycle and pedestrian connections to the waterfront. The specific routes identified includes Wemple Road to Weisheit Road to Clapper Road. These routes are already supported by the Town's Bicycle and Pedestrian Priority Network. This project should implement safe crossings for bicyclists and pedestrians and coordinate with the River Road Transportation Corridor Study.

*Estimated Cost: \$400,000*

*Potential Funding Sources: Town (including town staff), CDTC, NYSDOT,*

*Potential Project Partners: Town Bicycle and Pedestrian Committee, Local Bicycling Club, Private Landowners*

*Potential Permitting: NYSDOT*

*Responsible Entity: Town Planning Department & Town Engineering Department, NYSDOT*

*Potential Town Code Amendment: no*

*Implementing LWRP Policies 1, 2, 4, 12, 14, 19, 21, 22, 25, 26*

## **PROJECT 21**

### **Develop a plan to increase public access to the undeveloped lands of former Baker Farm Site, which are currently owned by Scenic Hudson, and connect them, to the proposed Riverfront Trail.**

The undeveloped lands of the historic Baker Farm Site are currently owned by Scenic Hudson and located within the habitat rich Binnen Kill area. The farmhouse and other structures on the former Baker Farm site are currently privately owned and will not be considered in this plan. The plan should identify potential connections with the future Riverfront Trail and propose design and location of

parking areas, signage, and educational kiosks, tell the story of the former farm, address ADA accessibility and propose a long-term maintenance program.

Note: If the town will seek State funding and be awarded a State grant for the implementation of proposed public access improvements to the Scenic Hudson property, an agreement between the Town and Scenic Hudson would need to be drafted and signed, pursuant to the contractual requirements of the awarded State grant.

*Estimated Cost: \$30,000*

*Potential Funding Sources: Scenic Hudson, Town (including staff work), NYSOPRHP, NYS DOS*

*Potential Project Partners: Scenic Hudson, NYSDOS*

*Potential Permitting: To be determined in the study*

*Responsible Entity: Town Planning Department and Scenic Hudson*

*Potential Town Code Amendment: no*

*Implementing LWRP Policies 1, 2, 4, 12, 14, 19, 21, 22, 25, 26*

## **PROJECT 22**

### **Develop a multi-use path along NYS Route 144/River Road.**

Conduct a study to examine feasibility of installing a multi-use path along River Road. This would complement the Riverfront Trail and also assist in providing safer travel options along River Road. This study would coordinate with and occur after the development of the River Road Corridor Study. The feasibility study would examine locations, design options, costs and constraints such as right-of-way, wetlands, and topography.

*Estimated Cost: \$75,000 + implementation costs*

*Potential Funding Source(s): Town (including staff work), CDTC, NYSEDA, NYSDOT*

*Potential Project Partner(s): NYSDOT, Bethlehem Bicycle and Pedestrian Committee*

*Potential Permitting: To be determined during feasibility study*

*Responsible Entity: Town Planning Department and Town Engineering Department*

*Potential Town Code Amendment: no*

*Implementing LWRP Policies 1, 2, 4, 12, 14, 19, 20, 21, 22, 25, 26*

## **PROJECT 23**

### **Identify the best locations and designs elements of gateways for the waterfront area along River Road at the Normans Kill, Clapper Road, Scenic Hudson property, and NYS Thruway Exit 22.**

Gateways signify an arrival at a special place. Consistent, themed signage and landscaping are often used to define a gateway. The Bethlehem waterfront is unique in that the Hudson River cannot be seen from most locations, including from River Road. The result is that many traveling through the Bethlehem WRA are not aware they are in a unique place and so close to an amazing waterfront. Identifying and establishing gateways will help to inform passersby about the hidden aspects of that place.

*Estimated Cost: \$26,000 + implementation costs*

*Potential Funding Sources: Town (including staff work), NYSDOS, Bethlehem Garden Club and other community organizations and private businesses*

*Potential Project Partners: NYSDOT, Scenic Hudson*

*Potential Permitting: to be identified in the planning and design phase*

*Responsible Entity: Town Planning Department, Town Engineering Department, Town Recreation Department, community organizations*

*Potential Town Code Amendment: no*

*Implementing LWRP Policies 1, 2, 4, 9, 12, 19, 20, 21, 22, 25, 26*

## **PROJECT 24**

### **Implement the Town-wide Open Space Plan**

The implementation of the Open Space Plan<sup>102</sup> will allow the town to expand voluntary land conservation initiatives, in the waterfront area. Through the interest of willing landowners, a variety of techniques may be utilized such as the conservation easement exemption program, conservation subdivision, land acquisitions, and purchase of development rights. Additional educational opportunities and outreach are also recommended.

*Estimated Cost: Implementation costs will be project specific*

*Potential Funding Sources: Town (including staff work), NYSDASNY<sup>103</sup>, NYSOPRHP*

*Potential Project Partners: Mohawk Hudson Land Conservancy, Scenic Hudson, Open Space Institute*

*Potential Permitting: Project specific*

*Responsible Entity: Town Planning Department, Town Parks and Recreation Department, Town Board*

*Potential Town Code Amendment: yes*

*Implementing LWRP Policies 1, 4, 7, 8, 9, 26, 41, 43*

## **PROJECT 25**

### **Implement projects proposed in the Henry Hudson Park Master Plan.**

The town developed the Henry Hudson Park Master Plan to promote increased utilization of the park site, year-round outdoor recreation, and improved connections throughout the park. The Master Plan is included in Appendix B of the LWRP.

The plan includes an interconnected pedestrian loop system at the riverfront park area that will link all riverfront amenities, diversify park spaces, create riverfront overlooks and access, and collectively enrich the park experience and utilization for visitors of all ages and abilities. Pedestrian safety and increased park utilization are improved by shifting a segment of Lyon's Road to the west to place the existing parking lot along the riverfront park area. This eliminates the need to cross Lyon's Road, creating a safe and direct pedestrian connection into the park adjacent to a relocated pavilion that takes advantage of the river view. Lastly, a multi-purpose trail surrounding the forested wetland perimeter encourages the utilization of the entire 51-acre park property while creating opportunity for year-round recreation, educational opportunity and the connectedness of all components of Henry Hudson Park.

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<sup>102</sup> Town of Bethlehem Open Space Plan - [www.townofbethlehem.org/DocumentCenter/View/11149](http://www.townofbethlehem.org/DocumentCenter/View/11149)

<sup>103</sup> Economic Development Grant Programs Administered by DASNY - <https://www.dasny.org/about-us/what-we-do/grants-administration>

The park design was delineated into flexible priority project phasing to further pursue grant funding to feasibly implement the recommended park enhancements. Henry Hudson Park improvements shall comply with State Department of Health wellhead protection setbacks and requirements. The Henry Hudson Park Master Plan is included in Appendix B of this LWRP



**Henry Hudson Park Proposed Projects:**

**A. Shoreline Stabilization**

The shoreline stabilization project implementation is dependent upon funding and can be constructed in phases recommended in the Shoreline Stabilization Study manual. The project requires Flood Analysis and permitting

**B. Riverfront Loop Promenade**

This project includes proposed 8'-10' wide concrete riverfront walk along shore, 5-8' wide concrete loop path connecting to riverfront walk, 5' wide concrete sidewalk connectors within loop, removal of chain-link fence, natural buffer planting between walk and river bank, pedestrian scale lighting along riverfront walk, primary river overlook, trellis swing, benches, picnic tables, trash receptacles and bike racks.

*Note: Any outdoor lighting in the park or other shoreline sites visible from the river must be located or shielded so that it is not confused with any aids to navigation and does not interfere with navigation on the adjacent waterway. If installed, the lights must be white and non-flashing.*

**C. Natural /Adventure Playground**

This project includes community gathered equipment, off the shelf equipment, land manipulation such as hills, depressions, tunnels, and mulch bedding.

**D. Park Pavilion and Restrooms**

Design and construction of new park pavilion and restroom facilities

**E. Road Realignment and Parking Lot Extensions**

Remove old pavilion, realign Lyons Road, remove existing road and replace with topsoil and grass, extend existing primary parking south, full depth construction of kayak/canoe parking, cross walks from parking lot to softball field.

**F. Recreation Components**

Construct volleyball courts, horseshoes, Bocci ball court, disc golf area, additional overlooks, and kayak and canoe locker.

**G. Multi-purpose Loop Trails**

Design and construct an 8-foot wide multi-use asphalt loop trail around park perimeter linking north and south ends of riverfront park area for pedestrians, bicyclists, rollerblades, and build a bicycle repair station.

**H. Low Ropes Course**

Construct a low-ropes course with low ropes stations and mulch bedding at stations.

**I. Secondary Picnic Areas**

Design and build northern secondary park pavilion and southern secondary park pavilion.

**J. Passive Nature trails and Boardwalks**

Clear passive trails, design and build boardwalks over wet areas, design and install interpretive and wayfinding signage and informational bird blinds.

**K. Pedestrian Bridge to the undeveloped lands of former Baker Farm Site owned by Scenic Hudson**

Design and install a pedestrian bridge to connect the park with the lands of the historic Baker Farm that are owned by Scenic Hudson. The Baker Farmhouse is privately owned and not included in this project

*Estimated Cost: Implementation costs will be project specific*

*Potential Funding Sources: Town (including staff work), NYSDASNY<sup>104</sup>, NYSOPRHP, NYS DOS, NYS DEC, NYS ESD, USACE*

*Potential Project Partners: NYS DOS, NYS DEC, NYS ESD, USACE*

*Potential Permitting: Project specific*

- SWPPP
- SEQR
- Floodplain Development Permit

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<sup>104</sup> Economic Development Grant Programs Administered by DASNY - <https://www.dasny.org/about-us/what-we-do/grants-administration>

- Wetland delineation
- NYS Freshwater Wetlands Permit
- NYS Protection of Waters Permit
- Rare Animals, Rare Plants, and Significant Natural Communities Permit
- Archeological assessment

*Responsible Entity: Town Planning Department, Town Parks and Recreation Department, Town Department of Public Works, Town Board*

*Potential Town Code Amendment: No  
Implementing LWRP Policies 1, 4, 7, 8, 9, 26, 41, 43*

## SECTION V – TECHNIQUES FOR LOCAL IMPLEMENTATION OF THE BETHLEHEM LWRP

This section of the LWRP describes the local land use controls that support the implementation of the LWRP policies, the local management structure that will ensure the implementation of the LWRP and conduct reviews of actions to determine consistency with LWRP policies and purposes, and the financial resources necessary to implement the LWRP. Other local and private actions that will implement the LWRP policies and purposes and in which the town will have limited or no involvement will also be presented in this section.

### LOCAL LAWS AND REGULATIONS NECESSARY TO IMPLEMENT THE LWRP

The following local laws and regulations are necessary to implement the LWRP policies and purposes. The local management structure responsible for the implementation of those laws and regulations, including the LWRP policies and purposes, is described under Local Management Structure for Implementing the LWRP.

**Table 40: Town Laws Implementing Coastal Policies**

LWRP Coastal Policy	Category	Implementing Legislation
1-6	Development	Zoning (§128); Subdivision Regulations (Town Code Chapter 103, including Conservation Subdivision); Site Plan Review (Zoning Law 128-71); special use permit (Zoning Law 128-69), Planned Development District (PDD) (Zoning Law 128-40); <i>Incentive Zoning</i> (§128-51)
7-10	Fish and Wildlife	Freshwater Wetlands (§72); Lots Bordering Streams (§128-53)
11-17	Flooding and Erosion	Grading, Erosion, and Sediment Control (§128-49); Flood Damage Protection (§69); Stormwater Management and Erosion and Sediment Control (§98, Part 2)
18	General Policy	Town Code
19-20	Public Access	Zoning (§128); Subdivision Regulations (Town Code Chapter 103, including Conservation Subdivision); Site Plan Review (Zoning Law 128-71)
21-22	Recreation	Parkland Reservation and Fee Requirements (§128-57)

LWRP Coastal Policy	Category	Implementing Legislation
23-25	Historic Resource and Visual Quality	Zoning (§128); Subdivision Regulations (Town Code Chapter 103, including Conservation Subdivision); Site Plan Review (Zoning Law 128-71)
26	Agricultural Lands	Agricultural Uses and Right to Farm (§128-43)
27-29	Energy and Ice Management	Zoning (§128); Site Plan Review (Zoning Law 128-71)
30-44	Water and Air Resources	Freshwater Wetlands (§72); Grading, Erosion, and Sediment Control (§128-49); Flood Damage Protection (§69); Lots Bordering Streams (§128-53)

Note: The State Environmental Quality Review Act (SEQRA) 6 NYCRR Part 617 applies to each project.

*Source: Town of Bethlehem*

## CHAPTER 128 ZONING

The Town Zoning Law was initially adopted on October 28, 1944. The Zoning Law was readopted on March 23, 1988 and then on August 23, 2006. Amendments within the Zoning Law are noted where applicable and have been made by the town based on updates and recommendations from committees, residents and staff. The existing zoning regulations effectively implement the desired goals and policies outlined in this LWRP. No Zoning amendments were necessary for the local adoption and approval of the LWRP.

The Town has seventeen (17) zoning districts, ten (10) of which are found within the WRA. The Zoning Map included in Section II of the LWRP illustrates on the Zoning Districts within the WRA during the preparation and approval of the LWRP. The Town’s zoning regulations establish zoning districts and regulations applicable to the uses allowed within each district. The zoning regulations establish setback and density requirements; and regulate the bulk and arrangement of buildings, the area of lots covered by development and open space, the provision of off-street parking, and the location of accessory structures that support the principal uses and buildings on each property. The zoning supports the implementation of the land uses within the WRA. The following zoning districts are present within the WRA:

- Rural (R)
- Residential A (RA)
- Residential B (RB)
- Rural Riverfront (RR)
- Commercial Hamlet (CH)
- Rural Hamlet (RH)
- General Commercial (C)
- Mixed Economic Development (MED)
- Heavy Industrial (HI)
- Rural Light Industrial (RLI)

Descriptions for each of the zoning districts (Article V District Regulations, §128-24) as well as an area and bulk schedule of uses (§128, Attachment 2) may be accessed online through General Code or at the Town of Bethlehem Department of Planning and Economic Development.

The following definitions of each zoning district may be found within the WRA, in accordance with the Town's Zoning Law (Section 128).

**Rural (R) Districts.** Areas of the Town designated under this district are characterized by working landscapes. Traditionally, these areas have been places where resource-based economic activities have flourished. Rural areas typically have less demand for public services, and, outside of the hamlets, agriculture and forestry have been the primary uses. With its remaining agricultural businesses, undeveloped lands, and natural resources, this portion of the community stands in contrast to the more developed areas of the Town. Its rural character is highly valued by those that live in these areas and it also contributes to the overall quality of life of the Town. The purpose of this district is to encourage a variety of uses, including agriculture, forestry, mining, small-scale commercial and light industrial activity, and development using traditional farmstead designs where appropriate.

**Residential A (RA) Districts and Residential B (RB).** Areas of the Town designated under these districts are characterized by traditional suburban residential development, including developed single-family dwellings, as well as undeveloped residential building lots. These areas also include active agricultural lands facing immediate growth pressures to convert to nonagricultural uses. The purpose of these districts is to protect the residential viability of established residential settlements.

**Rural Riverfront (RR) Districts.** Areas of the Town designated under this district are those located along areas overlooking the banks of the Hudson River. The purpose of this district is to limit the density of residential development while encouraging tourism and recreational-based nonresidential development.

**Commercial Hamlet (CH) Districts.** Areas of the Town designated under this district are typically original settlement areas along major corridors that contain medium-scale businesses and essential services in close proximity to residential neighborhoods. The commercial hamlets tend to be more oriented to vehicular rather than pedestrian access and are less likely to have mixed-use commercial and residential buildings. The adaptive reuse of residential buildings as commercial uses is a common feature of this district. The near proximity to traditional residential neighborhoods distinguishes this district from the General Commercial District. The purpose of this district is to encourage compact commercial development in neighborhood commercial centers throughout the Town.

**Rural Hamlet (RH) Districts.** Areas of the Town designated under this district are typically original settlement areas along major corridors that contain small-scale businesses and essential services in close proximity to rural and moderately developed lands. The rural hamlets tend to be more oriented to vehicular rather than pedestrian access and are less likely to have mixed-use commercial and residential buildings. Rural hamlet districts tend to be adjacent to rural lands and active agricultural uses. The purpose of this district is to encourage compact commercial and residential development in rural neighborhoods throughout the Town.

**General Commercial (C) Districts.** Areas of the Town that contain commercial and nonresidential services and businesses. The purpose of these districts is to encourage the development of a variety of small-scale and large-scale commercial retail and service businesses for the community, including shopping malls.

**Mixed Economic Development (MED) Districts.** Areas of the Town designated under this district are those that contain good highway access and do not presently contain significant agricultural uses. This district encourages the treatment of individual lots as part of an integrated plan for development of planned office, industry, service, small-scale retail, and technology-based businesses. Residential uses may be permitted as accessory to the nonresidential business development.

**Heavy Industrial (HI) Districts and Rural Light Industrial (RLI) Districts.** Areas of the Town designated under these districts are those with good highway access and which are deemed appropriate for light and heavy industrial uses. Portions of these areas presently include some limited residential uses, although the dominant uses are manufacturing, assembly, processing and transportation related. The purpose of these districts is to encourage the development of light and heavy industrial uses that require trucking or rail transportation to move goods and materials.

The Rural Riverfront and Rural districts encompass two large areas of 1,875 and 1,435 acres, respectively, within the WRA. The Commercial Hamlet and General Commercial districts encompass two small areas of seven (7) and 33 acres, respectively, within the WRA. The two (2) zoning districts next to the Hudson River are Heavy Industrial and Rural Riverfront. Additionally, the General Commercial and Commercial Hamlet zoning districts are located in the northern most tip of the WRA. The remaining six (6) zoning districts may be found mixed throughout the rest of the WRA.

The Planned Development District (PDD) (Zoning Law 128-40) is a floating zone intended to provide for new residential uses in which economies of scale or creative architectural or planning concepts may be utilized by the developer. The Planning Board is an advisory board to the Town Board for Planned Development District (PDD) review. The Planning Board reviews the proposed concept plans, site plans and maps for the project and issues a report recommending a SEQR determination of significance for the project as well as a recommendation on whether or not the project meets the criteria established in Zoning Law 128-40 C (11). The Town Board has the authority for PDD approval.

The Zoning Districts Map illustrates the zoning districts that will implement the land uses proposed within the WRA.

Table 41 lists the zoning districts within the WRA. Table 42 identifies allowable uses by zoning district.

**Table 41: Existing Zoning Districts within the WRA**

Zoning District	Zoning District Acreage	Zoning District Percentage
<b>Residential Districts</b>		
Rural	1,435	27%
Residential A	573	11%
Residential B	75	1%
<b>Mixed-Use Districts</b>		
Rural Riverfront	1,875	35%
Commercial Hamlet	7	<1%
Rural Hamlet	127	2%
<b>Commercial Districts</b>		
General Commercial	33	<1%
Mixed Economic Development	442	8%

Zoning District	Zoning District Acreage	Zoning District Percentage
Heavy Industrial	462	9%
Rural Light Industrial	386	7%

*Source: Town of Bethlehem*

**Table 42: Existing Allowable Uses by Zoning District**

Zoning District	Allowable Uses Per Zoning
Rural	Appliance Repair, Bed and Breakfast, Club/Lodge, Nursery School, Nursing Home, Day Care Center
Residential A	One-Family Dwelling
Residential B	One-Family Dwelling
Rural Riverfront	One-Family Dwelling, Agriculture/Agricultural, Marina, Restaurant
Commercial Hamlet	Appliance Repair, Bed and Breakfast, Club/Lodge, Funeral Home, Nursery School, Nursing Home, Day Care Center, Home Based Businesses
Rural Hamlet	Appliance Repair, Bed and Breakfast, Club/Lodge, Nursery School, Nursing Home, Day Care Center, Home Based Businesses
General Commercial	Single-Family Residential, Agricultural, Animal Hospital, Banks/Financial Institution, Business Office, Conservancy, Library, Art Gallery, Car Dealers, Professional Office, Convenience Store, Fitness Club, Hotel/Motel, Church, Theater, Laundry/Dry Cleaning, Restaurant, Retail, Service Business, Shopping Center
Mixed Economic Development	Residential, Agricultural, Restaurants, Retail and Shopping Centers, General Office and Office Parks, Shopping Center, Research & Development/Technology, Service Businesses, Bank/Financial Institution, Conference Center, Hotel, High Tech Manufacturing, and Industrial Park
Heavy Industrial	Beverage and Bottle Distribution, Office, Cold Storage, Lumberyard/Mill, Manufacturing, Packaging Facilities, Distribution Centers, Industrial Park, Wholesaling, Warehouse and Self-Storage Facilities, and Bulk Storage of Petroleum
Rural Light Industrial	Beverage and Bottle Distribution, Office, Cold Storage, Lumberyard/Mill, Manufacturing, Packaging Facilities, Distribution Centers, Industrial Park, Wholesaling, Warehouse and Self-Storage Facilities, Commercial Bakery, Vehicle Sales, Hotel, Restaurant, Retail

*Source: Town of Bethlehem*

**CHAPTER 103 SUBDIVISION REGULATIONS AND SITE PLAN REVIEW (§128-71)**

Other land use controls include subdivision regulations found in Town Code Chapter (including conservation subdivision), site plan review (Zoning Law 128-71) and special use permit (Zoning Law 128-69).

Subdivision regulations control the division of a tract of land by requiring development according to design standards and procedures adopted by local ordinance. In Bethlehem, the Planning Board is the body authorized to review and approve subdivisions, site plans, and special use permits applications. The Planning Board reviews the site plans and maps for the project to assure that they meet the stated purposes and standards of the zoning district, provide for necessary public facilities, and protect and preserve topographical features and adjacent properties through the appropriate siting of structures and landscaping.

Special use permits are granted for uses that meet the intent and purpose of a particular zoning district, and meet performance standards, which require review and approval by the Planning Board in order to ensure that there are no adverse impacts on adjacent uses, structures, or public services and facilities. Table 43 identifies zoning district permitted uses by special use permit.

**Table 43: Zoning District Permitted Uses by Special Use Permit**

Zoning District	Uses Allowed by Special Use Permit*
Rural	Cemetery-public, Commercial Recreation, Kennel, Mining-mineral extraction, Motor Vehicle Service Station, Solar PV-principal use, Solar PV-accessory use, and Telecommunications Facilities non-collocated facilities.
Residential A	Accessory apartment, Cemetery-public, Conservancy, House of Worship, Solar PV-accessory use, and Telecommunications Facilities-non-collocated facilities.
Residential B	Accessory apartment, Cemetery-public, Conservancy, House of Worship, Solar PV-accessory use, and Telecommunications Facilities-non-collocated facilities.
Rural Riverfront	Accessory Apartment, Cemetery-public, Commercial Recreation, Marina, Riding Academy, Solar PV-accessory use, and Telecommunications Facilities- non-collocated facilities.
Commercial Hamlet	Accessory Apartment, Car Wash, Cemetery-public, Motor Vehicle Repair Shop, Motor Vehicle Sales, Motor Vehicle Service Station, Nursery, Public Transportation Terminal, Restaurant with Drive-Through, Solar PV-accessory use, and Telecommunication Facilities- non-collocated facilities.
Rural Hamlet	Accessory apartment, Car Wash, Cemetery-public, Commercial Recreation, Kennel, Motor Vehicle Repair Shop, Motor Vehicle Sales, Motor Vehicle Service Station, Nursery, Outdoor Drive-in Theater, Public Transportation Terminal, Restaurant with Drive-Through, and Telecommunications Facilities- non-collocated facilities
General Commercial	Car Wash, Cemetery-public, Commercial Recreation, Kennel, Motor Vehicle Repair Shop, Motor Vehicle Service Station, Nursery, Public Utilities, Restaurant with Drive-Through, Solar PV-accessory use, and Telecommunication Facilities- non-collocated facilities.
Mixed Economic Development	Solar PV-principal use (as a primary use) and Solar PV-accessory use.

Zoning District	Uses Allowed by Special Use Permit*
Heavy Industrial	Adult Business Use, Airport, Automobile Salvage and Reclamation Yards and Facilities, Bulk Storage of Materials, Car Wash, Cemetery-public, Concrete and Asphalt Plants, Grain Storage, Processing and Distribution, Junkyard, Laboratories for Research, Testing and Experimental Purposes-Including Offices for Research and Development, Marina, Mining-mineral extraction, Motor Vehicle Service Station, Processing or Production of Oil, Natural Gas, Geothermal Resources, or other Hydrocarbons, Public Transportation Terminal, Slaughter Plants-Packing Houses-Animal By-product Rendering-and other such Animal Processing Activities, Solar PV-principal use, Solar PV-accessory use, Telecommunications Facilities- non-collocated facilities, and Transportation Terminal-Delivery Service-Moving and Storage Facilities-Truck Maintenance.
Rural Light Industrial	Airport, Car Wash, Cemetery-public, Commercial Recreation, Grain Storage-Processing and Distribution, Kennel, Laboratories for Research, Testing and Experimental Purposes-Including Offices for Research and Development, Mining-mineral extraction, Nursery, Public Utilities, Solar PV-principal use, Solar PV-accessory use, and Telecommunications Facilities- non-collocated facilities.

*\*Please note that this table serves as a summary of the Town of Bethlehem Schedule of Uses Table (Section 128 Attachment 1) printed on May 1, 2016 and should not serve as a sole reference for zoning related requirements.*

*Source: Town of Bethlehem*

### **AGRICULTURAL USES AND RIGHT TO FARM (§128-43)**

The Town supports the use of land for agricultural purposes and has attempted to provide, to the fullest extent allowed by law, for the protection of agricultural uses and lands suitable for agricultural production. The Town supports the continued operation of active farm operations and has provided, through the regulations of this law and through its Subdivision Regulations, the means for the Planning Board to approve nonagricultural land development subject to such conditions as may be required to assure the long-term viability of active farm operations and agricultural activities by limiting the potential for conflict between established farms and agricultural uses and newly established nonagricultural land uses. The Town supports sound agricultural practices necessary for the on-farm production, preparation and marketing of agricultural commodities, and supports the farm protection policies set forth in §308 of the Agriculture and Markets Law.

### **GRADING, EROSION, AND SEDIMENT CONTROL (§128-49)**

Uncontrolled disturbance of land and inadequately controlled land clearing activities can lead to failure of slopes and the mass movement of earth; damage to the natural environment, man-made structures and personal safety; and the degradation of aesthetics. In addition, the failure to properly regulate large-scale clear-cutting and land clearing activities, particularly on steep slope areas, has been shown to have dire short-term and long-term impacts on the wetlands, streams, ponds and lakes that make up the unique environmental landscape of the Town. In particular, uncontrolled runoff carrying soil, organic material, and natural and man-made chemicals, metals and toxins has been shown to have the following deleterious effects on the natural and the built environment.

The intent of this regulation requires that all activities involving land disturbance in all areas of the Town are carried out so as to ensure the maximization of benefits to the public and the residents of the Town and the protection of the natural and man-made environment, by ensuring that soil erosion is controlled

to the maximum extent practicable. A grading, erosion and sediment control permit is required for any proposed land disturbance within 100 feet of the bank and the one-hundred- year flood zone of the Normans Kill Creek, Vloman Kill Creek, Onesquethaw Creek, Phillipin Kill Creek, and Dowers Kill Creek south of Route 32.

### **INCENTIVE ZONING (§128-51)**

The Town has established a policy of encouraging the preservation of open space and the provision of facilities and amenities that would benefit the Town. This is carried out by providing incentives through density bonuses to applicants seeking approval of a major subdivision plat to develop residential lots within conservation subdivisions, and applicants seeking approval of multifamily development, when such projects preserve open space and provide public facilities and amenities.

### **LOTS BORDERING STREAMS (§128-53)**

Building permits are not issued for the construction or installation of any permitted or accessory use in any district within 100 feet of the bank of 5 designated streams or within the one-hundred-year flood zone of these streams. The five streams are Normans Kill Creek, Vloman Kill Creek, Onesquethaw Creek, Phillipin Kill Creek, and Dowers Kill Creek south of Route 32.

### **PARKLAND RESERVATION AND FEE REQUIREMENTS (§128-57)**

In reviewing residential site plans, residential subdivisions and proposals for planned residential and mixed economic developments, the Planning Board, in the case of site plans and subdivisions, or the Town Board, in the case of planned residential and mixed economic developments, shall ensure that the park and recreation demands generated by new residential development are addressed.

### **OPEN SPACE PLAN: CONSERVATION CRITERIA IMPLEMENTATION RESOLUTION**

The Town Board passed a resolution in December of 2017 to implement an open space plan with conservation criteria. The town's stated purpose of open space planning is "to ensure that future consumption of land for development is balanced with the conservation of land for its open space value". The Open Space Plan<sup>105</sup> includes:

1. An updated, town-wide open space inventory and database, as illustrated in four Open Space Conservation Values Maps
2. A list of data-driven Conservation Criteria (25) with which to evaluate open space land for its conservation values; and,
3. An effective, flexible, data-based method - the GIS Conservation Analysis Tool - to evaluate, numerically score, and prioritize the conservation of open space land.

The ongoing use and implementation of these plan components by the Town Board, Planning Board, Planning Department Staff, and the Conservation Easement Review Board, will prepare and guide the town in responding to landowner inquiries about conservation opportunities, as well as inform the town's development review and design process. Further, it will inform the use of limited financial resources and direct future funds to the conservation of open space land that will have the most beneficial impact town wide. Having this open space plan in place will also support town applications for state, regional and federal grant funding for conservation implementation.

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<sup>105</sup> Town of Bethlehem Open Space Plan - [www.townofbethlehem.org/DocumentCenter/View/11149](http://www.townofbethlehem.org/DocumentCenter/View/11149)

The Open Space Plan: Conservation Criteria Implementation adopted in December 2017 continues to be a useful guide to understand the open space benefits of land conservation opportunities. Within the WRA, all of the 25 conservation criteria are valued and include agricultural lands, forests, wetlands, and stream corridors, etc. Implementation of the conservation criteria will be beneficial to the town.

#### **CHAPTER 69 FLOOD DAMAGE PROTECTION**

These regulations promote the public health, safety and general welfare and minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities.
- Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.
- Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.
- Control filling, grading, dredging and other development which may increase erosion or flood damages.
- Regulate the construction of flood barriers which will unnaturally divert floodwaters, or which may increase flood hazards to other lands.
- Qualify for and maintain participation in the National Flood Insurance Program.

#### **CHAPTER 72 FRESHWATER WETLANDS**

Article 24 of the NYS Environmental Conservation Law (ECL) allows municipalities to co-regulate state wetlands, either pursuant or in accordance with Municipal Home Rule Law. The Municipal Home Rule Law authorizes every local government to adopt laws relating to its “property, affairs, or government”, so long as those enactments are not inconsistent with the Constitution or any general law. Therefore, where communities do decide to co-regulate, their regulations must be at least as stringent, and may be more protective, than Article 24. Municipalities can also regulate wetlands that have not been designated by the state.

The local regulations apply to all areas defined as "freshwater wetlands" in §24-0107 of the Environmental Conservation Law and so designated on the Freshwater Wetlands Maps prepared pursuant to §24-0301 of the Environmental Conservation Law when filed with the Clerk of the Town of Bethlehem.

Within an officially designated wetland, any person proposing to conduct or cause to be conducted any of the activities specified below in Subsections A through E shall be required to file an application for a permit with the Town Clerk. These activities are subject to regulation whether or not they occur upon the wetland itself, if they impinge upon or otherwise affect the wetlands; provided, however, that no regulation shall apply to any area situated more than 100 feet from the boundary of such wetland or any such greater or lesser distance therefrom as determined by the Planning Board. Activities requiring such a permit are as follows:

- A. Erecting any structures, roads, the driving of pilings or placing of any other obstructions whether or not changing the ebb and flow of the water.

- B. Any form of pollution, including but not limited to installing a septic tank, running a sewer outfall, discharging sewage treatment effluent or other liquid wastes into or so as to drain into a freshwater wetland.
- C. Any form of draining, dredging, excavation or removal of soil, mud, sand, shells, gravel or other aggregate.
- D. Any form of dumping, filing or depositing of any soil, stones, sand, gravel, mud, rubbish or fill of any kind, either directly or indirectly.
- E. Any other activity which impairs any of the several functions served by freshwater wetlands or the benefits derived therefrom which are set forth in §24-0105 of the Environmental Conservation Law.

### **CHAPTER 97 SOLID WASTE**

Information regarding solid waste management and facilities can be found in Chapter 97 of the Town Code. The code provides standards for permitting by the Town Board for solid waste facilities and handling of solid waste.

### **CHAPTER 98 STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL**

Information regarding Town stormwater management and erosion and sediment control regulations may be found in Part 2 of Chapter 98 Stormwater Management of the Town Code. Part 2 identifies minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in §98-21 hereof. This Part 2 seeks to meet those purposes by achieving the following objectives:

- A. Meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02, as amended or revised;
- B. Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities, GP-02-01, as amended or revised;
- C. Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and streambank erosion and maintain the integrity of stream channels;
- D. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality;
- E. Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and
- F. Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.

### **STEEP SLOPES CONTROLS**

All land disturbance activities subject to subdivision and site plan approval by the Planning, and grading permits subject to approval by the Town Engineer are required to comply with Zoning Law (§128-

49.F(2)(i)) related to construction or land disturbance activities on steep slopes. This Zoning Law section requires certification from a New York State licensed engineer, landscape architect or surveyor stating that the proposed land disturbance activity does not fall within the angle of repose of 20% or greater of any slope having a vertical rise of 20 feet or more, or 33% or greater of any slope with a vertical rise of 10 feet or more, or 40% or greater of any slope with a vertical rise of five feet or more. In the event the proposed land disturbance activity does fall within the angle of repose, in accordance with Zoning Law 128-49.C(1) the applicant for a subdivision and site plan approval, or grading permit shall provide the Town a report from a licensed Geotechnical Engineer certifying that such construction or land disturbance activities are consistent with generally accepted engineering standards, meet or exceed established factors of safety against slope failure and would not result in undue risk of slope failure or danger to human health, welfare or property.

#### **THE CONSERVATION EASEMENT EXEMPTION PROGRAM**

This Town program is intended to conserve open space lands, help maintain the character of the Town, and provide financial incentives and assistance to those landowners willing to forego development and maintain open space. Property owners who commit to conserving land as open space for a minimum of 15 years can receive an exemption on their property assessment resulting in a reduction in property taxes, under such conditions as specified within Section 491 of the Real Property Tax Law, the Bethlehem Town Code, and as are further specified in a conservation easement agreement with the Town. While conserving developable lands is the central purpose of the program, constrained lands, and other lands that may be held out of development because of agricultural use or otherwise being preserved are also highly valued as open space, and for their contribution of habitat for wildlife or active or passive enjoyment by the public at large. A five-member Conservation Easement Review Board reviews applications and makes a recommendation to the Town Board for approval.

The Conservation Easement currently applies to all Town and Fire District taxes, Albany County taxes, and to Bethlehem Central School taxes. The other school districts within the Town have the option to join in the program but have not yet done so.

#### **LOCAL WATERFRONT REVITALIZATION PROGRAM CONSISTENCY REVIEW LAW**

State and federal coastal management laws require State and Federal agencies to determine that a proposed action which they may directly undertake, fund, or approve within the boundaries of an approved LWRP is consistent with the policies and purposes of that LWRP. An action which is inconsistent may not be undertaken, except in extraordinary cases which meet the strict tests established for exceptions. To secure this significant benefit of an approved LWRP, the municipality must make a similar commitment to ensure consistency of local government actions with the LWRP policies and purposes.

These include both procedural and substantive consistency requirements that apply to municipal agency reviews and decision-making, such as zoning changes, subdivision approvals, site plan reviews, special use permits, municipal construction projects, and municipal funding activities. This is achieved, in part, by making sure that local laws implementing the program, such as the zoning law, reflect the provisions of the LWRP. In addition, the drafting and adoption of a LWRP Consistency Review Law is needed to establish consistency requirements for actions directly undertaken or funded by the municipality and to provide for the review of all major actions proposed within the waterfront to ensure their consistency with the LWRP.

The purpose of the LWRP Consistency Review Law is to provide the legal framework for the agencies of the Town of Bethlehem to incorporate the policies and purposes contained in the LWRP when reviewing applications for proposed actions or direct agency actions located within the WRA, and to assure that the proposed actions and direct actions undertaken by Town agencies are consistent with the LWRP policies and purposes. The Consistency Review Law includes a list of minor actions that are not subject to the consistency review and a Waterfront Assessment Form that assist municipalities to identify the type of the proposed action and initiate the local consistency review process.

The Town's LWRP Consistency Review Law is drafted and adopted concurrent with the development and adoption of the LWRP. The Town's LWRP Consistency Review Law, including the Waterfront Assessment Form, is included in Appendix A of the LWRP.

### **STATE ENVIRONMENTAL QUALITY REVIEW ACT (SEQRA)**

The State Environmental Quality Review Act (SEQRA)<sup>106</sup> requires all state and local government agencies to consider environmental impacts equally with social and economic factors during discretionary decision-making. The SEQR process examines the potential environmental impacts related to a proposed action, such as the projects proposed in Section IV of the LWRP.

## **OTHER PUBLIC AND PRIVATE ACTIONS NECESSARY TO IMPLEMENT THIS LWRP**

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### **ACTIONS UNDER DEVELOPMENT**

#### **PORT OF ALBANY**

The Port of Albany purchased an approximately 80-acre site in the Town of Bethlehem just south of the existing Port facility within the City of Albany. The Port is proposing to expand its activities on this site by constructing an industrial park with 5 conceptual layouts that range from 1.13 million square feet to 160,000 square feet of industrial use facilities (warehouse space and laydown area). Each concept would include associated access roads, employee parking, trailer parking, utility extensions, rail access from the north over Normans Kill and south through the PSEG site, and a bulkhead along Hudson River for on and offloading of equipment and materials (wharf).

Pursuant to the State Environmental Quality Review Act (SEQRA), the Bethlehem Planning Board will act as lead agency and hold a Public Scoping Session to solicit public comment on the Draft Scoping<sup>107</sup> document for the Draft Generic Environmental Impact Statement for the Albany Port District Commission (APDC) Port Expansion Project. Once accepted, the completed Scope will serve as the outline for what will be studied in the Generic Environmental Impact Statement (GEIS). Once the GEIS is accepted it will be used at a future date when an application is made to the Town Planning Board for the specific project to be built to assess impacts and mitigation measures.

#### **UNITED STATES ARMY CORPS OF ENGINEERS (USACE) – NEW YORK DISTRICT**

The U.S. Army Corps of Engineers, New York District (NY District), is conducting a Habitat Restoration Ecosystem Restoration Feasibility Study<sup>108</sup> of the Hudson River Basin from the Troy Lock and Dam to the

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<sup>106</sup> <http://www.dec.ny.gov/permits/6208.html>

<sup>107</sup> <http://www.townofbethlehem.org/DocumentCenter/View/9744>

<sup>108</sup> Extensive information is available in the reports drafted by USACE and here:  
<https://www.nan.usace.army.mil/Missions/Environmental/Environmental-Restoration/Hudson-River-Habitat-Restoration/>

Governor Mario M. Cuomo (formerly Tappan Zee) Bridge. The study was authorized by section 551 of the Water Resources Development Act of 1996 (P.L. 104-303). Alternatives developed were evaluated and compared to identify a Tentatively Selected Plan (TSP). Within the Bethlehem WRA, ecosystem restoration will be conducted at the Henry Hudson Park.

The restoration measures would directly address past impacts of the federal navigation channel and other human activities, including filling shallow water habitat and side channels, hardening and diking shorelines, and fragmenting critical habitat for migratory taxa. Measures at Henry Hudson Park would also contribute to restoring a mosaic of interconnected, large river habitats, by creating a living shoreline with intertidal wetland in lieu of a hardened bulkhead.<sup>109</sup>

## **REGIONAL ACTIONS AND PROGRAMS**

### **SCENIC HUDSON**

Scenic Hudson is a not for profit organization which expands its conservation work through land acquisition and land protection. Scenic Hudson owns undeveloped lands of the former Baker Farm spanning the Binnen Kill, in the southern portion of the WRA. The organization continues to work towards maintaining the land in an agricultural state, enhancing ecological value, and supporting the Town's interest in public access to the waterfront. The Baker Farmhouse located on the Baker Farm site is privately owned and not opened to the public.

### **CAPITAL DISTRICT TRANSPORTATION COMMITTEE (CDTC)**

CDTC developed the Capital District Trails Plan (2019), a trail plan for the Capital Region with the goal of developing an updated vision for a seamless regional transportation network that connects cities, towns, and villages throughout the Capital District. River Road/SR 144 within the Bethlehem WRA was identified in the plan as a future bike trail opportunity. It is described in the plan as a continuation of the South End Bikeway Connector within the City of Albany, that would follow the Hudson River south, connecting downtown Albany with the Town of Coeymans.

## **STATE ACTIONS AND PROGRAMS**

### **DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

- Funding assistance with planning studies and/or design and construction of projects targeted to control the erosion of steep slopes in the Town's waterfront area.
- Review and approval for septic system installation and replacement in areas without public septic systems of the waterfront, within the WRA
- Implement and administer Article 24 of the State's Environmental Conservation Law for the Town of Bethlehem regulated wetland areas.
- Map, adopt, and administer the State's Section 505 Coastal Erosion Control legislation.
- Technical assistance, review, and approval of public access improvements within the Town's waterfront revitalization area.

### **DIVISION OF HOMES AND COMMUNITY RENEWAL**

- Funding and technical assistance with revitalization efforts within the WRA.

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<sup>109</sup> Excerpt from Draft Integrated Feasibility Report and Environmental Assessment

#### **ENVIRONMENTAL FACILITIES CORPORATION**

- Funding assistance for the planning, design and construction of sewer extensions or other improvement projects within the WRA.

#### **DEPARTMENT OF STATE**

- Technical assistance for LWRP implementation of various planning, design and construction projects proposed within the WRA.
- Funding assistance through the Environmental Protection Fund for the implementation of projects proposed in Section IV of the LWRP

#### **NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY**

- Funding and technical assistance with energy efficiency studies and projects.

#### **NEW YORK STATE DEPARTMENT OF TRANSPORTATION**

- Provide improvements which will improve circulation and access for pedestrians and bicyclists.
- Provide traffic calming improvements within the WRA

#### **EMPIRE STATE DEVELOPMENT CORPORATION**

- Provide assistance for the preparation of economic feasibility studies for the reuse of various deteriorated and unutilized structures, with the siting or improvement of public facilities and with revitalization efforts within the northeastern part of the WRA.

#### **OFFICE OF GENERAL SERVICES**

- Prior to any development occurring near the bank or in the water of Hudson River, OGS will be contacted for a determination of the State's interest in underwater or formerly underwater lands and for authorization to use and occupy such lands.

#### **OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION**

- Funding assistance for the planning, design and construction of expansion or improvement projects at Henry Hudson Park.
- Funding approval under programs such as the Land and Water Conservation Fund and the Clean Water / Environmental Protection Fund for development of or improvements to waterfront parkland.
- Provide funding assistance to the Town of Bethlehem for the planning, development, construction, major renovation, or expansion of existing and planned recreational facilities located in or adjacent to Hudson River waters.

#### **FEDERAL ACTIONS AND PROGRAMS**

##### **FEDERAL HIGHWAY ADMINISTRATION**

- Funding and technical assistance for the design and construction of improvements for traffic calming and circulation /access for pedestrians and bicyclists.

#### **DEPARTMENT OF COMMERCE**

- Funding and technical assistance for economic development projects within the WRA

#### **DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**

- Funding assistance for community projects through the Community Develop Block Grants program.

#### **SMALL BUSINESS ADMINISTRATION**

- Funding and technical assistance for local businesses within the WRA to stimulate economic development.

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## **LOCAL MANAGEMENT STRUCTURE FOR IMPLEMENTING THE LWRP**

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### **MANAGEMENT AND COORDINATION OF LOCAL ACTIONS**

Actions directly undertaken, funded, or approved by the town government and agencies within the Bethlehem WRA must be reviewed for consistency with LWRP policies and purposes, pursuant to the LWRP Consistency Review Law included in Appendix A of the LWRP. For each action proposed within the WRA, which is not a minor action pursuant to the Bethlehem LWRP Consistency Review Law, a Waterfront Assessment Form (WAF) must be completed to assess if the proposed action conflicts with any of the LWRP policies. The WAF is also included in Appendix A of the LWRP.

Several town agencies or local officials are responsible for management and coordination of the LWRP implementation and are directly involved in ensuring that consistency reviews are completed for actions proposed within the WRA. These agencies or officials, with their responsibilities are described below.

The **Town Supervisor** will provide overall management of the Local Waterfront Revitalization Program as it applies to the town of Bethlehem.

The **Director of the Department of Economic Development and Planning** will maintain and make available to the public a copy of the approved LWRP for use during normal business hours and distribute waterfront assessment forms (WAF) to applicants. The town clerk will also keep records for town government correspondence, communications, and actions pertaining to the implementation of the LWRP. A copy of the LWRP document approved by the NYS Secretary of State is formally filed with the town Clerk.

The **Town Board** is the government or legislative body of the Town of Bethlehem that adopts the Bethlehem LWRP and will oversee all LWRP activities to ensure that all proposed actions under the town's jurisdiction and within the WRA are consistent with the policies of the LWRP.

The **Waterfront Coordinator** is delegated by the Town Board to advise, assist, and make consistency recommendations to other town agencies in the implementation of the LWRP, LWRP policies, and proposed projects. The LWRP Consistency Review Law designates the Director of the Department of Economic Development and Planning as the Waterfront Coordinator. The recommendations of the Waterfront Coordinator will inform the decisions of the Town Board, Planning Board and Zoning Board of Appeals. Any action that is proposed within the Bethlehem WRA and must be approved, funded, or undertaken by the Town requires completion of a Waterfront Assessment Form and must be reviewed for consistency with the LWRP policies, pursuant to the Local Waterfront Revitalization Program Consistency Review Law. The Waterfront Coordinator will also schedule semiannual LWRP coordinating

meetings with representatives including but not limited to the Town Board, Planning Board, ZBA, and such other departments as appropriate.

The **Town Building Inspector** will be responsible for enforcing building code regulations; and will issue summonses for violations of the Town of Bethlehem LWRP Consistency Review Law.

The Town has two (2) land use review boards, the Planning Board and the Zoning Board of Appeals (ZBA). These Boards are described in state law and have a legal role in Town land use oversight. Town Law governs the powers and duties of the Planning Board and the ZBA. The members of the Planning Board and ZBA are appointed by the Town Board.

The **Bethlehem Planning Board** has the authority to review and approve subdivision, site plans, and special use permit applications proposed within the WRA. The Waterfront Coordinator will make recommendations to the Planning Board, while the Planning Board will determine if its approval of the applications is consistent with the LWRP policies and purposes.

The Town of Bethlehem Planning Board is the body authorized to review and approve subdivisions, site plans, and special use permits applications. Subdivision regulations control the division of a tract of land by requiring development according to design standards and procedures adopted by local ordinance. Site plan review is the review of private projects.

The Planning Board reviews the site plans for the project to assure that they meet the stated purposes and standards of the zoning district, provide for necessary public facilities, and protect and preserve topographical features and adjacent properties through the appropriate siting of structures and landscaping. Special use permits are granted for uses that meet the intent and purpose of a particular zoning district, and meet performance standards, which require review and approval by the Planning Board in order to ensure that there are no adverse impacts on adjacent uses, structures, or public services and facilities.

The Planning Board also provides guidance to the Town Board on zoning changes, Mixed Economic Development Districts and is an advisory board for Planned Development District (PDD) review. The PDD is a floating zone intended to provide for new residential uses in which economies of scale or creative architectural or planning concepts may be utilized by the developer. The Planning Board reviews the proposed concept plans, site plans for the project and issues a report recommending a SEQR determination of significance for the project as well as a recommendation on whether or not the project meets the criteria established in Zoning Law 128-40 C (11). The Town Board has the authority for PDD approval.

The **Bethlehem Zoning Board of Appeals** decides on appeals for area and use variances from decisions and determinations made by the Town Building Inspector as well as matters referred to it as prescribed by Town Law. Also, the Bethlehem ZBA is the town agency designated to review and approve or deny an application for a Zoning variance proposed within the WRA and subject to the LWRP Consistency Review Law. The Zoning Board of Appeals shall consider the written consistency recommendation of the Waterfront Coordinator in the event and at the time it makes a decision to grant such a Zoning variance and shall impose appropriate conditions on the variance to make the activity consistent with the objectives of the law.

To aid in the town-wide development review process, the Town has created the Development Planning Committee. This committee serves as a workgroup giving pre-proposal review so that a project can be evaluated before it goes through the formal review stages. The Development Planning Committee consists of the various Town departments that are involved in facilitating or servicing development

projects within the Town and function under the direction of the Department of Economic Development and Planning.

The Development Planning Committee facilitates early communication between the Town and developers during the project concept phase with regard to a variety of issues, which are later considered by the Planning Board. These issues include, but are not limited to, consistency with planning, zoning, building code, and land use regulations; environmental impacts, stormwater regulation, and potential for land conservation or parkland development.

Table 44 identifies the general steps taken for the development review process. It should be noted that some steps may take place concurrently and/or be repeated.

**Table 44: Town-wide Development Review Process**

Step	Development Review Process Steps
1	Applicant meets with Town staff to discuss proposal – Development Planning Committee
2	Applicant submits development plans
3	Town departments provide review comments
4	Applicant revise plans and provides initial presentation to the Planning Board
5	Applicant addresses comments from Town departments and Planning Board
6	Application may be referred to Albany County Planning Board
7	Planning Board conducts environmental review
8	Planning Board either approves, approves with modifications/conditions, or disapproves the project
9	If needed, applicant addresses approval modifications/conditions Plans receive Planning Board Chairman’s approval stamp
10	Building Department issues Building Permit
11	Applicant constructs the project in accordance with the approved plans
12	Building Department issues Certificate of Occupancy at construction completion

*Source: Town of Bethlehem*

**LOCAL REVIEW OF STATE AND FEDERAL ACTIONS**

Municipal, State, and federal consistency requirements share the common objectives of ensuring that agency actions at each level of government are consistent with and advance applicable policy objectives. Each level of government has separate procedural requirements to help ensure the actions or activities of its agencies meet relevant consistency obligations. The municipal procedural and substantive consistency requirements should not be confused with State and federal procedural and substantive consistency requirements.

For State purposes, in accordance with State consistency provisions, State agencies are required to make their own determinations regarding the consistency of their proposed actions with CMP policies, which include the policies of approved LWRPs.

For federal purposes, only the Department of State has the authority to make consistency decisions concurring with or objecting to an applicant's consistency certification or a federal agency's consistency determination. In accordance with CZMA, its implementing regulations, and the NYCMP, that authority cannot be subsumed, preempted, or abrogated by any federal, other State, or any local agency.

To help coordinate municipal, State, and federal decision-making and avoid conflicting decisions between agencies at different levels of government, as part of the Department of State's review of federal activities, municipalities with approved LWRPs are notified by the Department of State of the proposed activities and provided the opportunity to inform the Department of State and other agencies of actual or potential conflicts between activities being considered and the policies and purposes of their approved LWRPs. This notification and consultation process ensure the Department of State and other State agencies are provided with relevant information when assessing and considering the consistency of an activity with the WRA covered by an approved LWRP. A municipality's detailed knowledge of local circumstances often results in the identification of key information that is not otherwise available to or known by the Department and other State and federal agencies when assessing and considering activities and their effects.

The Waterfront Coordinator, as described in the local LWRP Consistency Review Law, is designated to provide adequate and timely feedback to the New York State Department of State and other State agencies on the consistency of state and federal agencies actions proposed within the Bethlehem WRA. All State and Federal actions proposed within the Town of Bethlehem WRA will be reviewed in accordance with the guidelines inserted below, which were established by the New York State Department of State and refined to reflect the participation of the Town of Bethlehem.

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## **GUIDELINES FOR NOTIFICATION AND REVIEW OF STATE AGENCY ACTIONS PROPOSED WITHIN THE WRA COVERED BY THE APPROVED BETHLEHEM LWRP.**

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### **I. PURPOSES OF GUIDELINES**

- A. The Waterfront Revitalization of Coastal Areas and Inland Waterways Act (the Act) (Article 42 of the Executive Law) and the Department of State's regulations (19 NYCRR Part 600) require certain state agency actions identified by the Secretary of State to be consistent to the maximum extent practicable with the policies and purposes of the approved Town of Bethlehem Local Waterfront Revitalization Program (LWRP). These guidelines are intended to assist state agencies in meeting that statutory consistency obligation.
- B. The Act also requires that state agencies provide timely notice to the Town of Bethlehem whenever an identified action will occur within the WRA covered by the approved Bethlehem LWRP. These guidelines describe a process for complying with this notification requirement. They also provide procedures to assist the Town of Bethlehem in carrying out their review responsibilities in a timely manner.
- C. The New York State Secretary of State is required by the Act to confer with state agencies when notified by the Town of Bethlehem government that a proposed state agency action may conflict with the policies and purposes of the approved Bethlehem LWRP.

These guidelines establish a procedure for resolving such conflicts.

## II. DEFINITIONS

- A. Action means:
1. A "Type I" or "Unlisted" action as defined by the State Environmental Quality Review Act (SEQRA);
  2. Occurring within the boundaries of the Waterfront Revitalization Area (WRA) within which the policies and purposes of the approved Town of Bethlehem LWRP apply; and
  3. Being taken pursuant to a state agency program or activity which has been identified by the Secretary of State as likely to affect the policies and purposes of the Town of Bethlehem LWRP.
- B. Consistent to the maximum extent practicable means that an action will not substantially hinder the achievement of any of the policies and purposes of the approved Bethlehem LWRP and, whenever practicable, will advance one or more of such policies. If an action will substantially hinder any of the policies or purposes of the approved Bethlehem LWRP, then the action must be one:
1. For which no reasonable alternatives exist that would avoid or overcome any substantial hindrance;
  2. That will minimize all adverse effects on the policies or purposes of the LWRP to the maximum extent practicable; and
  3. That will result in an overriding regional or statewide public benefit.
- C. Coastal Assessment Form (CAF) is the form used by the State agency to assess the consistency of its actions proposed within the Town of Bethlehem Waterfront Revitalization Area with the policies and purposes of the approved Bethlehem LWRP.
- D. EIS or Environmental Impact Statement means a form used by an agency to assist it in determining the environmental significance or non-significance of actions, pursuant to 6NYCRR 617 (SEQR)
- E. Local Waterfront Revitalization Program, or Bethlehem LWRP, means the program prepared and adopted by the Town Board and approved by the Secretary of State pursuant to Executive Law, Article 42; which program contains policies on the management of land, water, and man-made resources, proposed land uses and specific projects that are essential to program implementation.
- F. Secretary of State or Secretary is the head of the New York State Department of State, which is the state agency responsible for administering and coordinating activities essential for the implementation of the Coastal Management Program, including approved LWRPs.
- G. Town of Bethlehem Waterfront Coordinator will be responsible for the review of state agencies actions and for providing state agencies with findings to the appropriate state agency contact. The Waterfront Coordinator is the Town of Bethlehem Director of the Department of Economic Development and Planning.
- H. Town means the Town of Bethlehem
- I. Town Board is the government or legislative body of the Town of Bethlehem that adopted the Bethlehem LWRP.

- J. Waterfront Revitalization Area is the portion of the state's coastal area covered by the approved Bethlehem LWRP

### **III. NOTIFICATION PROCEDURE**

- A. When a state agency is considering an action as described in II. DEFINITION within the defined Waterfront Revitalization Area boundary of the approved Bethlehem LWRP, the state agency shall notify the Waterfront Coordinator.
- B. Notification of a proposed state agency action:
  - 1. Shall fully describe the nature and location of the action;
  - 2. Shall be accomplished by use of other existing state agency notification procedures, or through any alternative procedure agreed upon by the state agency and the Town of Bethlehem government; and
  - 3. Should be provided to the Waterfront Coordinator as early in the planning stages of the action as possible, but in any event at least 30 days prior to the agency's decision on the action. The timely filing of a copy of a completed Coastal Assessment Form (CAF), available to State agencies, to the Waterfront Coordinator should be considered adequate notification of a proposed action.
- C. If the proposed action will require the preparation of a draft environmental impact statement (EIS), the filing of this draft document with the Waterfront Coordinator can serve as the state agency's notification to the Town.

### **IV. LOCAL GOVERNMENT REVIEW PROCEDURE**

- A. Upon receipt of notification from a state agency, the Waterfront Coordinator will be responsible for evaluating the proposed state agency action against the policies and purposes of the approved Bethlehem LWRP. Upon request of the Town of Bethlehem Waterfront Coordinator, the state agency should promptly provide whatever additional information is available which will assist the Waterfront Coordinator to evaluate the proposed action.
- B. If the Waterfront Coordinator cannot identify any conflicts between the proposed action and the applicable policies and purposes of the approved Bethlehem LWRP, the Waterfront Coordinator should notify in writing the state agency of the finding. Upon receipt of the written finding, the state agency may proceed with its consideration of the proposed action in accordance with 19 NYCRR Part 600.
- C. If the Waterfront Coordinator does not notify the state agency in writing of the finding within the established review period, the state agency may then presume that the proposed action does not conflict with the policies and purposes of the approved Bethlehem LWRP.
- D. If the Town of Bethlehem notifies the state agency in writing that the proposed action does conflict with the policies and/or purposes of the approved Bethlehem LWRP, the state agency shall not proceed with its consideration of, or decision on, the proposed action as long as the Resolution of Conflicts procedure established in V. Resolution of Conflicts below shall apply. The Town of Bethlehem shall forward a copy of the identified conflicts to the Secretary of State at the time when the state agency is notified. In notifying the state agency, the Waterfront Coordinator shall identify the specific policies and purposes of the LWRP with which the proposed action conflicts.

## **V. RESOLUTION OF CONFLICTS**

- A. The following procedure applies whenever the Town of Bethlehem has notified the Secretary of State and state agency that a proposed action conflicts with the policies and purposes of its approved LWRP.
1. Upon receipt of notification from the Town of Bethlehem that a proposed action conflicts with its approved LWRP, the state agency should contact the Waterfront Coordinator to discuss the content of the identified conflicts and the means for resolving them. A meeting of state agency and Town of Bethlehem representatives may be necessary to discuss and resolve the identified conflicts. This discussion should take place within 30 days of the receipt of a conflict notification from the Town.
  2. If the discussion between the Town of Bethlehem and the state agency results in the resolution of the identified conflicts, then, within seven days of the discussion, the Town of Bethlehem Waterfront Coordinator shall notify the state agency in writing, with a copy forwarded to the Secretary of State, that all of the identified conflicts have been resolved. The State agency can then proceed with its consideration of the proposed action in accordance with 19 NYCRR Part 600.
  3. If the consultation between the Town of Bethlehem and the state agency does not lead to the resolution of the identified conflicts, either party may request, in writing, the assistance of the Secretary of State to resolve any or all of the identified conflicts. This request must be received by the Secretary of State within 15 days following the discussion between the Town of Bethlehem and the state agency. The party requesting the assistance of the Secretary of State shall forward a copy of their request to the other party.
  4. Within 30 days following the receipt of a request for assistance, the Secretary, or a Department of State official or employee designated by the Secretary, will discuss the identified conflicts and circumstances preventing their resolution with appropriate representatives from the state agency and Town of Bethlehem.
  5. If agreement among all parties cannot be reached during this discussion, the Secretary shall, within 15 days, notify both parties of his/her findings and recommendations.
  6. The state agency shall not proceed with its consideration of, or decision on, the proposed action as long as the foregoing Resolution of Conflicts procedures shall apply.

## **PROCEDURAL GUIDELINES FOR COORDINATING NEW YORK STATE DEPARTMENT OF STATE (DOS) AND LWRP CONSISTENCY REVIEW OF FEDERAL ACTIONS**

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### **I. FEDERAL AGENCY ACTIVITIES**

- A. After acknowledging the receipt of a consistency determination and supporting documentation from a federal agency, DOS will forward copies of the determination and other descriptive information on the proposed federal activities to the Town of Bethlehem Waterfront Coordinator and other interested parties.
- B. This notification will indicate the date by which all comments and recommendations must be submitted to DOS and will identify the Department's principal reviewer for the proposed federal activity.

- C. The review period will be about twenty-five (25) days. If comments and recommendations are not received by the date indicated in the notification, DOS will presume that the Town of Bethlehem has "no opinion" on the consistency of the proposed federal activity with the approved Town of Bethlehem LWRP policies.
- D. If DOS does not fully agree with and/or has any questions on the comments and recommendations submitted by the Waterfront Coordinator, DOS will contact the Town of Bethlehem to discuss any differences of opinion or questions prior to concurring or objecting to the federal agency's consistency determination on the proposed federal activity.
- E. A copy of DOS' "concurrence" or "objection" letter to the federal agency will be forwarded to the Town of Bethlehem Waterfront Coordinator.

## **II. ACTIVITIES REQUIRING FEDERAL LICENSES, PERMITS AND OTHER REGULATORY APPROVALS**

- A. DOS will acknowledge the receipt of an applicant's consistency certification and application materials. At that time, DOS will forward a copy of the submitted documentation to the Town of Bethlehem Waterfront Coordinator and will identify the Department's principal reviewer for the proposed federal activity.
- B. Within thirty (30) days of receiving such information, the Waterfront Coordinator will contact the principal reviewer for DOS to discuss: (a) the need to request additional information for review purposes; and (b) any possible problems pertaining to the consistency of a proposed federal activity with the LWRP policies.
- C. When DOS and the Town of Bethlehem Waterfront Coordinator agree that additional information is necessary, DOS will request the applicant to provide the information. A copy of this information will be provided to the Waterfront Coordinator on receipt.
- D. Within thirty (30) days of receiving the requested information or discussing possible problems of a proposed federal activity with the principal reviewer for DOS, whichever is later, the Waterfront Coordinator will provide DOS with a non-binding opinion on the proposed federal activity, from the perspective of the LWRP policies.
- E. After the notification, the Waterfront Coordinator will submit the Town's written comments and recommendations on a proposed federal activity to DOS before or at the conclusion of the official public comment period. If such comments and recommendations are not forwarded to DOS by the end of the public comment period, DOS will presume that the Town of Bethlehem has "no opinion" on the consistency of the proposed federal activity with the LWRP policies.
- F. If DOS does not fully agree with and/or has any questions on the comments and recommendations submitted by the Town of Bethlehem on a proposed federal activity, DOS will contact the Town of Bethlehem Waterfront Coordinator to discuss any differences of opinion prior to issuing a letter of "concurrence" or "objection" to the applicant.
- G. A copy of the DOS' "concurrence" or "objection" letter to the applicant will be forwarded to the Waterfront Coordinator.

## **III. FEDERAL FINANCIAL ASSISTANCE TO STATE AND LOCAL GOVERNMENTS**

- A. Upon receiving notification of a proposed federal financial assistance, DOS will request information on the federal financial assistance from the applicant for consistency review purposes. As appropriate, DOS will also request the applicant to provide a copy of the

application documentation to the Town of Bethlehem Waterfront Coordinator and will serve as notification that the proposed federal financial assistance may be subject to review.

- B. DOS will acknowledge the receipt of the requested information and provide a copy of this acknowledgement to the Town of Bethlehem Waterfront Coordinator. DOS may, request the applicant to submit additional information for review purposes within the timeframes provided for in 15CFR Part 930 Subpart F.
- C. The review period will conclude fifteen (15) days after the date on DOS' letter of acknowledgement or the receipt of requested additional information, whichever is later. The review period may be extended for major federal financial assistance.
- D. The Waterfront Coordinator must submit the Town's comments and recommendations on the proposed federal financial assistance to DOS within twenty days (or other time agreed to by DOS and the Waterfront Coordinator) from the start of the review period. If comments and recommendations are not received within this period, DOS will presume that the Town of Bethlehem has "no opinion" on the consistency of the proposed federal financial assistance with the LWRP policies.
- E. If DOS does not fully agree with and/or has any questions on the comments and recommendations submitted by the Town of Bethlehem, DOS will contact the Town of Bethlehem Waterfront Coordinator to discuss any differences of opinion or questions prior to notifying the applicant of DOS' consistency decision.
- F. A copy of DOS' consistency decision letter to the applicant will be forwarded to the Town of Bethlehem Waterfront Coordinator.

## **FINANCIAL RESOURCES NECESSARY TO IMPLEMENT THE LWRP**

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Financial resources are required to implement the legal and administrative activities and the proposed projects that will further the policies and purposes of the Town of Bethlehem LWRP. Resources necessary for the first two activities associated with the Town's efforts to oversee conformance and enforcement of the LWRP would come from general revenue sources and would be reflected in the Town's annual budget through Department staffing. The Town recognizes that the implementation of most of the proposed projects identified in Section IV of the LWRP may include administrative costs, capital outlays, maintenance costs and, in some cases, property acquisition. Capital costs reflect the costs incurred by the Town to complete specific projects. The costs for the projects identified in Section IV are just estimative. A number of these projects, however, would require significant capital expenditures. The Town has successfully accomplished beneficial projects along the waterfront, and will continue to pursue outside funding and, where appropriate, creative financing mechanisms for these and similar efforts. Where applicable, the Town will work diligently to secure funding through grants that are available under State and Federal programs to support the implementation of LWRP projects. Most of these programs require matching funds and/or in-kind service contributions. The Town may also consider bond issues and other similar revenue enhancements to facilitate LWRP implementation.

### **TOWN OF BETHLEHEM FUNDING SOURCES**

Local government funding sources to implement the LWRP will primarily be the Town's annual budget and capital budget. It is anticipated that the implementation of most public projects will be a partnership and combine multiple funding sources. Additionally, the Town may utilize the work of its

staff to assist in implementing some public projects identified in the LWRP as local match for awarded grants.

Below are detailed the potential external funding sources mentioned in the project descriptions included in Section IV.

## **POTENTIAL STATE FUNDING SOURCES**

### **Environmental Protection Fund**

The Environmental Protection Fund (EPF) is the source of grants for a series of State programs that support the implementation of planning, design, and construction of waterfront revitalization projects, parks and recreation improvements, and historic preservation projects. Depending on the State program and its requirements, awarded grants can be used for planning and design services, land acquisition and construction of improvements. Department of State, Office of Parks, Recreation and Historic Preservation and the Department of Environmental Conservation award grants to the most competitive applications/projects submitted on an annual basis. The municipalities seeking funding from the EPF have to submit their applications through the Consolidated Funding Application (CFA) process.

### **Local Government Efficiency (LGE) Program**

The NYS Department of State provides grants to municipalities, school districts and special districts and public authorities for planning and implementation projects that will provide cost savings through consolidation of services. The goal of the program is to encourage these entities to work cooperatively with one another to deliver public services more efficiently and at a lower cost. Projects must demonstrate that the cost to deliver services through cooperative arrangements is less than the cost for such services to be delivered by individual entities. The grant amount may not exceed the amount of cost savings that would result from cooperation. Capital projects that require the cooperation of two or more entities should be considered for LGE funding under the Regional Delivery of Services or Shared Cooperative Services categories.

### **Environmental Facilities Corporation - Green Innovation Grant**

The Environmental Facilities Corporation (EFC) offers competitive grants to municipalities, public authorities, not for profit corporations, for-profit corporations and soil and water conservation districts for projects that improve water quality through the reduction of storm sewer infiltration. Successful projects utilize innovative “green infrastructure” such as permeable pavement, green roofs, riparian buffers, and stormwater harvesting and reuse.

### **Department of Environmental Conservation Water Quality Improvement Program (WQIP)**

The NYS Department of Environmental Conservation (DEC) administers the Water Quality Improvement Program (WQIP), a competitive grant program which allocates funds from the Environmental Protection Fund to projects that reduce polluted runoff, improve water quality and restore habitat in New York's water bodies. Eligible applicants include towns, Municipal Corporations, Soil and Water Conservation Districts and Not for Profit Corporations (in some cases). Applicable project types include Nonagricultural Nonpoint Source Abatement and Control (NPS) and Aquatic Habitat Restoration (AHR). Depending on the type of project, reimbursement is available for up to 85% of the total cost of the project.

## **Empire State Development**

The New York State Empire State Development (ESD) provides a variety of assistance aimed at helping businesses. It offers loans, grants and tax credits, as well as other financing and technical assistance, to support businesses and encourage their growth within New York State. The following ESD programs are available:

- Empire State Development Grant Funds
- Excelsior Jobs Tax Credits
- Market New York
- Business Incubator and Innovation Hot Spot
- Economic Development Purposes Fund
- Strategic Planning and Feasibility Studies
- Environmental Investment Program
- Industrial Development Bond Cap

## **Consolidated Funding Application (CFA)**

The CFA process replaced multiple applications for proposed projects with a single application for state resources from numerous state agencies and institutionalized the role of the Regional Economic Development Councils in identifying priorities for state resources.

## **POTENTIAL FEDERAL FUNDING SOURCES**

### **Moving Ahead for Progress in the 21st Century**

In 1991, the U.S. Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA) requiring that bicycle and pedestrian transportation projects be included in metropolitan transportation plans. ISTEA significantly increased funding for such projects. The Transportation Equity Act for the 21st Century (TEA-21) and its successor, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) enacted in 2005 increased funding for bicycle and pedestrian transportation projects.

In 2012, the U.S. Congress adopted Moving Ahead for Progress in the 21st Century (MAP-21). This program includes funding for transportation enhancements, recreational trails, scenic byways and safe routes to school, as well as HOV lanes, diesel retrofits and truck stop electrification, in one new program, "Transportation Alternatives." Funds may also be available for environmental mitigation and vegetation management.

Most of the funding will be allocated through competitive grants administered through the Metropolitan Planning Organizations, which for Albany County is the Capital District Regional Planning Commission (CDRPC). Most federal funding programs provide up to 80% of the total amount as a grant and require 20% local matching funds. The Transportation Enhancement Program in the past permitted the non-federal match to be in-kind contributions; all other programs require cash match.

### **Highway Safety Improvement Program**

The purpose of the Highway Safety Improvement Program is to identify and correct locations that may constitute a danger to motorists, bicyclists and pedestrians. These funds can be used for trail development, where it is documented that use of the roadways has resulted in a significant number of accidents involving cycling and/or pedestrians.

### **Surface Transportation Program (STP)**

This program typically focuses on road construction, reconstruction and repair. However, a permitted use of STP funds is the development of transportation facilities in conjunction with road projects. STP funds can also be used for maps, brochures and public service announcements.

### **Congestion Mitigation and Air Quality (CMAQ)**

This program provides funds for transportation projects that reduce congestion and emissions that affect air quality. Project may include facilities for pedestrians and bicyclists.

### **National Highway System Funds**

NHS funds can be used to develop multi-use trails and shoulder improvements in highway corridors.

### **Recreational Trails Grants**

The New York State Office of Parks, Recreation and Historic Preservation periodically administer grants through the Recreational Trails Program. Applications are expected to be administered through the Consolidated Funding Application (CFA) process. This program provides matching reimbursement grants to communities and not-for-profit organizations to provide and maintain recreational trails for both motorized and non-motorized recreational trail use.

### **Drinking Water State Revolving Fund**

The NYS Environmental Facilities Corporation (EFC) offers subsidized low interest rate financing and limited grants for construction of eligible water system projects to municipalities and public financing authorities in New York State. The program provides a significant financial incentive for public and private water systems to finance needed drinking water infrastructure improvements (e.g. treatment plants, distribution mains, storage facilities). Potential projects must be submitted to EFC for rating and listing on the Intended Use Plan (IUP.)

Projects that protect maintain or improve water quality are eligible. Projects that are ready to proceed are generally funded. Limited funds are available. Suitable projects are those which address problems with the quality of a water supply source, including public sources and private "community" sources such as for a restaurant or manufactured home park.

### **Community Development Block Grant**

NYS Homes and Community Renewal administers the competitive Community Development Block Grant (CDBG) program for non-entitlement communities (towns and villages with population under 50,000 population and counties under 200,000.) Competitive CDBG grants are available for public facilities, community and economic development activities, wastewater and drinking water facilities, housing and public infrastructure projects. In 2013, the grant limit for infrastructure projects is \$750,000. Economic Development grants may be requested for projects involving water, wastewater or other infrastructure to serve projects that create or retain jobs for moderate-income persons (at \$15,000 per job created/retained).

Project beneficiaries must be predominantly persons with low or moderate incomes. Projects must correct or prevent health and safety problems, slums or blight. The most highly rated infrastructure projects will be those that solve serious, documented public health and safety problems, such as private water supplies that are contaminated by bacteria or other substances.

**Rural Utilities Service Water and Wastewater Disposal Loan and Grant Program**

U.S. Department of Agriculture Rural Development provides loans and grants to water and wastewater facilities and services to low-income communities whose residents face significant health risks with service area populations below 10,000. Loan terms are typically 38-years. The interest rate is indexed to the Median Household Income of the municipality or service area. Eligible water and wastewater projects are those that serve economically disadvantaged populations and solve serious public health problems. Financial assistance should result in reasonable user costs for rural residents.

## **SECTION VI– STATE AND FEDERAL ACTIONS AND PROGRAMS LIKELY TO AFFECT IMPLEMENTATION**

State and federal actions will affect and be affected by implementation of the LWRP. Under State Law and the U.S. Coastal Zone Management Act, certain State and federal actions within or affecting the local waterfront revitalization area must be consistent, or consistent to the maximum extent practicable, with the enforceable policies and purposes of the LWRP. This consistency requirement makes the LWRP a unique, intergovernmental mechanism for setting policy and making decisions, and helps to prevent detrimental actions from occurring and future options from being needlessly foreclosed. At the same time, the active participation of State and federal agencies is also likely to be necessary to implement specific provisions of the LWRP.

### **6.1. STATE ACTIONS AND PROGRAMS WHICH SHOULD BE UNDERTAKEN IN A MANNER CONSISTENT WITH THE LWRP**

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Pursuant to the State Waterfront Revitalization of Coastal Areas and Inland Waterways Act (Executive Law, Article 42), the Secretary of State notifies affected State agencies of those agency actions and programs that are to be undertaken in a manner consistent with approved LWRPs. The following list of State actions and programs is that list. The State Waterfront Revitalization of Coastal Areas and Inland Waterways Act requires that an LWRP identifies those elements of the program that can be implemented by the local government, unaided, and those that can only be implemented with the aid of other levels of government or other agencies. Such statement shall include those permit, license, certification or approval programs; grant, loan subsidy or other funding assistance programs; facilities construction, and planning programs that may affect the achievement of the LWRP.

#### **OFFICE FOR THE AGING**

- 1.0 Funding and/or approval programs for the establishment of new or expanded facilities providing various services for the elderly.

#### **DEPARTMENT OF AGRICULTURE AND MARKETS**

- 1.00 Agricultural Districts Program
- 2.00 Rural Development Program
- 3.00 Farm Worker Services Program
- 4.00 Permit and approval programs:
  - 4.01 Custom Slaughters/Processor Permit
  - 4.02 Processing Plant License
  - 4.03 Refrigerated Warehouse and/or Locker Plant License
- 5.00 Farmland Protection Implementation Grant
- 6.00 Agricultural Nonpoint Source Abatement and Control Program

**DIVISION OF ALCOHOLIC BEVERAGE CONTROL/ STATE LIQUOR AUTHORITY**

- 1.00 Permit and Approval Programs:
  - 1.01 Ball Park - Stadium License
  - 1.02 Bottle Club License
  - 1.03 Bottling Permits
  - 1.04 Brewer's Licenses and Permits
  - 1.05 Brewer's Retail Beer License
  - 1.06 Catering Establishment Liquor License
  - 1.07 Cider Producer's and Wholesaler's Licenses
  - 1.08 Club Beer, Liquor, and Wine Licenses
  - 1.09 Distiller's Licenses
  - 1.10 Drug Store, Eating Place, and Grocery Store Beer Licenses
  - 1.11 Farm Winery and Winery Licenses
  - 1.12 Hotel Beer, Wine, and Liquor Licenses
  - 1.13 Industrial Alcohol Manufacturer's Permits
  - 1.14 Liquor Store License
  - 1.15 On-Premises Liquor Licenses
  - 1.16 Plenary Permit (Miscellaneous-Annual)
  - 1.17 Summer Beer and Liquor Licenses
  - 1.18 Tavern/Restaurant and Restaurant Wine Licenses
  - 1.19 Vessel Beer and Liquor Licenses
  - 1.20 Warehouse Permit
  - 1.21 Wine Store License
  - 1.22 Winter Beer and Liquor Licenses
  - 1.23 Wholesale Beer, Wine, and Liquor Licenses

**OFFICE OF ALCOHOLISM AND SUBSTANCE ABUSE SERVICES**

- 1.00 Facilities, construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Permit and approval programs:
  - 2.01 Certificate of approval (Substance Abuse Services Program)
- 3.00 Permit and approval:
  - 3.01 Letter Approval for Certificate of Need
  - 3.02 Operating Certificate (Alcoholism Facility)
  - 3.03 Operating Certificate (Community Residence)
  - 3.04 Operating Certificate (Outpatient Facility)
  - 3.05 Operating Certificate (Sobering-Up Station)

**ALBANY PORT DISTRICT COMMISSION (regional agency)**

- 1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Commission.
- 2.00 Facilities construction, rehabilitation, expansion, or demolition.

**CAPITAL DISTRICT REGIONAL PLANNING COMMISSION (CDRPC) regional agency**

- 1.00 facilitate and coordinate a variety of regionally administered programs

- deploy NYSERDA’s Clean Energy Communities program
- provide technical support to the communities participating in the New York State Climate Smart Communities (CSC) program
- review and analyze surface transportation planning issues in conjunction with the Capital District Transportation Committee
- coordinating the effort to address problems associated with combined sewer overflows into the Hudson River with NYS DEC.

**CAPITAL DISTRICT TRANSPORTATION AUTHORITY COMMITTEE (CDTA) regional agency**

- 1.00 . CDTA plans, finances, implements and delivers transit services in the Capital Region.
- 2.00 . Continually identifying ways to increase transit ridership and revenue.
- 3.00 Identifying appropriate funding sources to meet the region’s transportation needs.

**CAPITAL DISTRICT TRANSPORTATION COMMITTEE (CDTC)**

**MPO for the counties of Albany, Rensselaer, Saratoga, and Schenectady.**

- 1.0 develops a long-range regional transportation plan to guide transportation decision making and activities.
- 2.0 develops a short-range program of projects to be implemented with federal transportation funds.

**COUNCIL ON THE ARTS**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Architecture and environmental arts program.

**OFFICE OF CHILDREN AND FAMILY SERVICES**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Homeless Housing and Assistance Program.
- 3.00 Permit and approval programs:
  - 3.01 Certificate of Incorporation (Adult Residential Care Facilities)
  - 3.02 Operating Certificate (Children's Services)
  - 3.03 Operating Certificate (Enriched Housing Program)
  - 3.04 Operating Certificate (Home for Adults)
  - 3.05 Operating Certificate (Proprietary Home)
  - 3.06 Operating Certificate (Public Home)
  - 3.07 Operating Certificate (Special Care Home)
  - 3.08 Permit to Operate a Day Care Center

**DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION**

- 1.0 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

**DORMITORY AUTHORITY OF THE STATE OF NEW YORK**

- 1.00 Financing of higher education and health care facilities.
- 2.00 Planning and design services assistance program.

**EDUCATION DEPARTMENT**

- 1.00 Facilities construction, rehabilitation, expansion, demolition or the funding of such activities.
- 2.00 Permit and approval programs:
  - 2.01 Certification of Incorporation (Regents Charter)
  - 2.02 Private Business School Registration
  - 2.03 Private School License
  - 2.04 Registered Manufacturer of Drugs and/or Devices
  - 2.05 Registered Pharmacy Certificate
  - 2.06 Registered Wholesale of Drugs and/or Devices
  - 2.07 Registered Wholesaler-Repacker of Drugs and/or Devices
  - 2.08 Storekeeper's Certificate
- 3.00 Administration of Article 5, Section 233 of the Educational Law regarding the removal of archaeological and paleontological objects under the waters of the State.

**OFFICE OF EMERGENCY MANAGEMENT**

- hazard identification,
- loss prevention, planning, training, operational response to emergencies,
- technical support, and disaster recovery assistance.

**EMPIRE STATE DEVELOPMENT/ EMPIRE STATE DEVELOPMENT CORPORATION**

- 1.00 Preparation or revision of statewide or specific plans to address State economic development needs.
- 2.00 Allocation of the state tax-free bonding reserve.

**ENERGY RESEARCH AND DEVELOPMENT AUTHORITY**

- 1.00 Issuance of revenue bonds to finance pollution abatement modifications in power-generation facilities and various energy projects.
- 2.00 New Construction Program – provide assistance to incorporate energy-efficiency measures into the design, construction and operation of new and substantially renovated buildings.
- 3.00 Existing Facilities Program – offers incentives for a variety of energy projects

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

- 1.00 Acquisition, disposition, lease, grant of easement, and other activities related to the management of lands under the jurisdiction of the Department.
- 2.00 Classification of Waters Program; classification of land areas under the Clean Air Act.
- 3.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 4.00 Financial assistance/grant programs:
  - 4.01 Capital projects for limiting air pollution

- 4.02 Cleanup of toxic waste dumps
- 4.03 Flood control, beach erosion, and other water resource projects
- 4.04 Operating aid to municipal wastewater treatment facilities
- 4.05 Resource recovery and solid waste management capital projects
- 4.06 Wastewater treatment facilities
- 6.00 Implementation of the Environmental Quality Bond Act of 1972, including:
  - (a) Water Quality Improvement Projects
  - (b) Land Preservation and Improvement Projects including Wetland Preservation and Restoration Projects, Unique Area Preservation Projects, Metropolitan Parks Projects, Open Space Preservation Projects, and Waterways Projects.
- 7.00 Marine Finfish and Shellfish Programs
- 9.00 Permit and approval programs
  - Air Resources
    - 9.01 Certificate of Approval for Air Pollution Episode Action Plan
    - 9.02 Certificate of Compliance for Tax Relief – Air Pollution Control Facility
    - 9.03 Certificate to Operate: Stationary Combustion Installation; Incinerator; process, exhaust or Ventilation System
    - 9.04 Permit for Burial of Radioactive Material
    - 9.05 Permit for Discharge of Radioactive Material to Sanitary Sewer
    - 9.06 Permit for Restricted Burning
    - 9.07 Permit to Construct; a Stationary Combustion Installation; Incinerator; Indirect Source of Air Contamination; Process, Exhaust or Ventilation System
  - Construction Management
    - 9.08 Approval of Plans and Specifications for Wastewater Treatment Facilities
  - Fish and Wildlife
    - 9.09 Certificate to Possess and Sell Hatchery Trout in New York State
    - 9.10 Commercial Inland Fisheries Licenses
    - 9.11 Fishing Preserve License
    - 9.12 Fur Breeder’s License
    - 9.13 Game Dealer’s License
    - 9.14 Licenses to breed Domestic Game Animals
    - 9.15 License to Possess and Sell Live Game
    - 9.16 Permit to Import, Transport and/or Export under Section 184.1 (11-0511)
    - 9.17 Permit to Raise and Sell trout
    - 9.18 Private Bass Hatchery Permit
    - 9.19 Shooting Preserve Licenses
    - 9.20 Taxidermy License
    - 9.21 Permit – Article 15, (Protection of Water) – Dredge and Deposit Material in a Waterway
    - 9.22 Permit – Article 15, (Protection of Water) – Stream Bed or Bank Disturbances
    - 9.23 Permit – Article 24, (Freshwater Wetlands)
  - Hazardous Substances
    - 9.24 Permit to Use Chemicals for the Control or Elimination of Aquatic Insects
    - 9.25 Permit to Use Chemicals for the Control or Elimination of Aquatic Vegetation
    - 9.26 Permit to Use Chemicals for the Control or Elimination of Undesirable Fish

Lands and Forest

- 9.27 Certificate of Environmental Safety (Liquid Natural Gas/Liquid Petroleum Gas)
- 9.28 Floating Object Permit
- 9.29 Marine Regatta Permit
- 9.30 Navigation Aid Permit

Marine Resources

- 9.31 Digger's Permit (Shellfish)
- 9.32 License of Menhaden Fishing Vessel
- 9.33 License for Non Resident Food Fishing Vessel
- 9.34 Non Resident Lobster Permit
- 9.35 Marine Hatchery and/or Off Bottom Culture Shellfish Permits
- 9.36 Permits to Take Blue Claw Crabs
- 9.37 Permit to Use Pond or Trap Net
- 9.38 Resident Commercial Lobster Permit
- 9.39 Shellfish Bed Permit
- 9.40 Shellfish Shipper's Permits
- 9.41 Special Permit to Take Surf Clams from Waters other than the Atlantic Ocean
- 9.42 Permit – Article 25, (Tidal Wetlands)

Mineral Resources

- 9.43 Mining Permit
- 9.44 Permit to Plug and Abandon (a non-commercial, oil, gas or solution mining well)
- 9.45 Underground Storage Permit (Gas)
- 9.46 Well Drilling Permit (Oil, Gas and Solution Salt Mining)

Solid Wastes

- 9.47 Permit to Construct and/or operate a Solid Waste Management Facility
- 9.48 Septic Tank Cleaner and Industrial Waste Collector Permit

Water Resources

- 9.49 Approval of Plans for Wastewater Disposal Systems
- 9.50 Certificate of Approval of Realty Subdivision Plans
- 9.51 Certificate of Compliance (Industrial Wastewater Treatment Facility)
- 9.52 Letters of Certification for Major Onshore Petroleum Facility Oil Spill Prevention and Control Plan
- 9.53 Permit Article 36, (Construction in Flood Hazard Areas)
- 9.54 Permit for State Agency Activities for Development in Coastal Erosion Hazards Areas
- 9.55 Permit for State Agency Activities for Development in Coastal Erosion Hazards Areas
- 9.56 State Pollutant Discharge Elimination System (SPDES) Permit
- 9.57 Approval – Drainage Improvement District
- 9.58 Approval – Water (Diversion for Power)
- 9.59 Approval of Well System and Permit to Operate
- 9.60 Permit – Article 15, (Protection of Water) – Dam
- 9.61 Permit – Article 15, Title 15 (Water Supply)
- 9.62 River Improvement District Permits
- 9.63 River Regulatory District approvals
- 9.64 Well Drilling Certificate of Registration
- 9.65 401 Water Quality Certification

- 10.00 Preparation and revision of Air Pollution State Implementation Plan.

- 11.00 Preparation and revision of Continuous Executive Program Plan.
- 12.00 Preparation and revision of Statewide Environmental Plan.
- 13.00 Protection of Natural and Man-made Beauty Program.
- 14.00 Urban Fisheries Program.
- 15.00 Urban Forestry Program.
- 16.00 Urban Wildlife Program.

**ENVIRONMENTAL FACILITIES CORPORATION**

- 1.0 Financing program for pollution control facilities for industrial firms and small businesses.

**DEPARTMENT OF FINANCIAL SERVICES (DEPARTMENT OF BANKING)**

- 1.00 Permit and approval programs:
  - 1.01 Authorization Certificate (Bank Branch)
  - 1.02 Authorization Certificate (Bank Change of Location)
  - 1.03 Authorization Certificate (Bank Charter)
  - 1.04 Authorization Certificate (Credit Union Change of Location)
  - 1.05 Authorization Certificate (Credit Union Charter)
  - 1.06 Authorization Certificate (Credit Union Station)
  - 1.07 Authorization Certificate (Foreign Banking Corporation Change of Location)
  - 1.08 Authorization Certificate (Foreign Banking Corp. Public Accommodations Office)
  - 1.09 Authorization Certificate (Investment Company Branch)
  - 1.10 Authorization Certificate (Investment Company Change of Location)
  - 1.11 Authorization Certificate (Investment Company Charter)
  - 1.12 Authorization Certificate (Licensed Lender Change of Location)
  - 1.13 Authorization Certificate (Mutual Trust Company Charter)
  - 1.14 Authorization Certificate (Private Banker Charter)
  - 1.15 Authorization Certificate (Public Accommodation Office – Banks)
  - 1.16 Authorization Certificate (Safe Deposit Company Branch)
  - 1.17 Authorization Certificate (Safe Deposit Company Change of Location)
  - 1.18 Authorization Certificate (Safe Deposit Company Charter)
  - 1.19 Authorization Certificate (Savings Bank Charter)
  - 1.20 Authorization Certificate (Savings Bank DeNovo Branch Office)
  - 1.21 Authorization Certificate (Savings Bank Public Accommodations Office)
  - 1.22 Authorization Certificate (Savings and Loan Association Branch)
  - 1.23 Authorization Certificate (Savings and Loan Association Change of Location)
  - 1.24 Authorization Certificate (Savings and Loan Association Charter)
  - 1.25 Authorization Certificate (Subsidiary Trust Company Charter)
  - 1.26 Authorization Certificate (Trust Company Branch)
  - 1.27 Authorization Certificate (Trust Company – Change of Location)
  - 1.28 Authorization Certificate (Trust Company Charter)
  - 1.29 Authorization Certificate (Trust Company Public Accommodations Office)
  - 1.30 Authorization to Establish a Life Insurance Agency
  - 1.31 License as a Licensed Lender
  - 1.32 License for a Foreign Banking Corporation Branch

**OFFICE OF GENERAL SERVICES**

- 1.00 Administration of the Public Lands Law for acquisition and disposition of lands, grants of land and grants of easement of land under water, issuance of licenses for removal of materials from lands under water, and oil and gas leases for exploration and development.
- 2.00 Administration of Article 4 B, Public Buildings Law, in regard to the protection and management of State historic and cultural properties and State uses of buildings of historic, architectural or cultural significance.
- 3.00 Facilities construction, rehabilitation, expansion, or demolition.
- 4.00 Administration of Article 5, Section 233, Subsection 5 of the Education Law on removal of archaeological and paleontological objects under the waters of the State.
- 5.00 Administration of Article 3, Section 32 of the Navigation Law regarding location of structures in or on navigable waters.
- 6.00 Section 334 of the State Real Estate Law regarding subdivision of waterfront properties on navigable waters to include the location of riparian lines.

**DEPARTMENT OF HEALTH**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Permit and approval programs:
  - 2.01 Approval of Completed Works for Public Water Supply Improvements
  - 2.02 Approval of Plans for Public Water Supply Improvements.
  - 2.03 Certificate of Need (Health Related Facility except Hospitals)
  - 2.04 Certificate of Need (Hospitals)
  - 2.05 Operating Certificate (Diagnostic and Treatment Center)
  - 2.06 Operating Certificate (Health Related Facility)
  - 2.07 Operating Certificate (Hospice)
  - 2.08 Operating Certificate (Hospital)
  - 2.09 Operating Certificate (Nursing Home)
  - 2.10 Shared Health Facility Registration Certificate

**DIVISION OF HOMES AND COMMUNITY RENEWAL and its subsidiaries and affiliates**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Financial assistance/grant programs:
  - 2.01 Federal Housing Assistance Payments Programs (Section 8 Programs)
  - 2.02 Housing Development Fund Programs
  - 2.03 Neighborhood Preservation Companies Program
  - 2.04 Public Housing Programs
  - 2.05 Rural Initiatives Grant Program
  - 2.06 Rural Preservation Companies Program
  - 2.07 Rural Rental Assistance Program
  - 2.08 Special Needs Demonstration Projects
  - 2.09 Urban Initiatives Grant Program
  - 2.10 Urban Renewal Programs

3.00 Preparation and implementation of plans to address housing and community renewal needs.

**OFFICE OF MENTAL HEALTH**

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

2.00 Permit and approval programs:

2.01 Operating Certificate (Community Residence)

2.02 Operating Certificate (Family Care Homes)

2.03 Operating Certificate (Inpatient Facility)

2.04 Operating Certificate (Outpatient Facility)

**DIVISION OF MILITARY AND NAVAL AFFAIRS**

1.0 Preparation and implementation of the State Disaster Preparedness Plan.

**NATURAL HERITAGE TRUST**

1.0 Funding program for natural heritage institutions.

**OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION  
(including Regional State Park Commission)**

1.00 Acquisition, disposition, lease, grant of easement, or other activities related to the management of land under the jurisdiction of the Office.

2.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

3.00 Funding program for recreational boating, safety, and enforcement.

4.00 Funding program for State and local historic preservation projects.

5.00 Land and Water Conservation Fund programs.

6.00 Nomination of properties to the Federal and/or State Register of Historic Places.

7.00 Permit and approval programs:

7.01 Floating Objects Permit

7.02 Marine Regatta Permit

7.03 Navigation Aide Permit

7.04 Posting of Signs Outside State Parks

8.00 Preparation and revision of the Statewide Comprehensive Outdoor Recreation Plan and the Statewide Comprehensive Historic Preservation Plan and other plans for public access, recreation, historic preservation or related purposes.

9.00 Recreation services program.

10.00 Urban Cultural Parks Program.

11.00 Planning, construction, rehabilitation, expansion, demolition or the funding of such activities and/or projects funded through the Environmental Protection Fund (Environmental Protection Act of 1993) or Clean Water/Clean Air Bond Act of 1996.

**OFFICE FOR PEOPLE WITH DEVELOPMENTAL DISABILITIES**

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

- 2.00 Permit and approval programs:
  - 2.01 Establishment and Construction Prior Approval
  - 2.02 Operating Certificate Community Residence
  - 2.03 Outpatient Facility Operating Certificate

**POWER AUTHORITY OF THE STATE OF NEW YORK**

- 1.00 Acquisition, disposition, lease, grant of easement, and other activities related to the management of land under the jurisdiction of the Authority.
- 2.00 Facilities construction, rehabilitation, expansion, or demolition.

**NEW YORK STATE SCIENCE AND TECHNOLOGY FOUNDATION**

- 1.00 Corporation for Innovation Development Program.
- 2.00 Center for Advanced Technology Program.

**DEPARTMENT OF STATE**

- 1.00 Appalachian Regional Development Program.
- 2.00 Coastal Management Program.
  - 2.1 Planning, construction, rehabilitation, expansion, demolition or the funding of such activities and/or projects funded through the Environmental Protection Fund (Environmental Protection Act of 1993) or Clean Water/Clean Air Bond Act of 1996.
- 3.00 Community Services Block Grant Program.
- 4.00 Permit and approval programs:
  - 4.01 Billiard Room License
  - 4.02 Cemetery Operator
  - 4.03 Uniform Fire Prevention and Building Code

**STATE UNIVERSITY CONSTRUCTION FUND**

- 1.0 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

**STATE UNIVERSITY OF NEW YORK**

- 1.00 Acquisition, disposition, lease, grant of easement, and other activities related to the management of land under the jurisdiction of the University.
- 2.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

**DEPARTMENT OF TRANSPORTATION**

- 1.00 Acquisition, disposition, lease, grant of easement, and other activities related to the management of land under the jurisdiction of the Department.
- 2.00 Construction, rehabilitation, expansion, or demolition of facilities, including but not limited to:
  - (a) Highways and parkways
  - (b) Bridges on the State highways system
  - (c) Highway and parkway maintenance facilities
  - (d) Rail facilities

- 3.00 Financial assistance/grant programs:
  - 3.01 Funding programs for construction/reconstruction and reconditioning/preservation of municipal streets and highways (excluding routine maintenance and minor rehabilitation)
  - 3.02 Funding programs for development of the ports of Albany, Buffalo, Oswego, Ogdensburg and New York
  - 3.03 Funding programs for rehabilitation and replacement of municipal bridges
  - 3.04 Subsidies program for marginal branch lines abandoned by Conrail
  - 3.05 Subsidies program for passenger rail service
- 4.00 Permits and approval programs:
  - 4.01 Approval of applications for airport improvements (construction projects)
  - 4.02 Approval of municipal applications for Section 18 Rural and Small Urban Transit Assistance Grants (construction projects)
  - 4.03 Approval of municipal or regional transportation authority applications for funds for design, construction and rehabilitation of omnibus maintenance and storage facilities
  - 4.04 Approval of municipal or regional transportation authority applications for funds for design and construction of rapid transit facilities
  - 4.05 Certificate of Convenience and Necessity to Operate a Railroad
  - 4.06 Highway Work Permits
  - 4.07 License to Operate Major Petroleum Facilities
  - 4.08 Outdoor Advertising Permit (for off premises advertising signs adjacent to interstate and primary highway)
  - 4.09 Real Property Division Permit for Use of State-Owned Property
- 5.00 Preparation or revision of the Statewide Master Plan for Transportation and sub-area or special plans and studies related to the transportation needs of the State.
- 6.00 Water Operation and Maintenance Program Activities related to the containment of petroleum spills and development of an emergency oil spill control network.

**DIVISION OF YOUTH**

- 1.0 Facilities construction, rehabilitation, expansion, or demolition or the funding for approval of such activities.

## 6.2 FEDERAL ACTIVITIES AFFECTING LAND AND WATER USES AND NATURAL RESOURCES IN THE COASTAL ZONE OF NEW YORK STATE

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*Note: This LWRP's list of the federal agency activities is identical to the most recent version of the Table 3 list in the New York State Coastal Management Program as approved by the federal Office for Coastal Management on May 7, 2017. Please contact the New York State Department of State, Office of Planning and Development, at (518) 474-6000, for any updates to New York State Coastal Management Program Table 3 federal agency activities list that may have occurred post-approval of this LWRP.*

This list has been prepared in accordance with the consistency provisions of the federal Coastal Zone Management Act and implementing regulations in 15 CFR Part 930. It is not exhaustive of all activities subject to the consistency provisions of the federal Coastal Zone Management Act, implementing regulations in 15 CFR Part 930, and the New York Coastal Management Program. It includes activities requiring:

1. the submission of consistency determinations by federal agencies;
2. the submission of consistency certifications by entities other than federal agencies; and
3. the submission of necessary data and information to the New York State Department of State, in accordance with 15 CFR Part 930, Subparts C, D, E, F and I, and the New York Coastal Management Program.

### I. ACTIVITIES UNDERTAKEN DIRECTLY BY OR ON BEHALF OF FEDERAL AGENCIES

The following activities, undertaken directly by or on behalf of the identified federal agencies, are subject to the consistency provisions of the Coastal Zone Management Act, its implementing regulations in 15 CFR Part 930, Subpart C, and the New York Coastal Management Program.

#### **Department of Commerce, National Marine Fisheries Service:**

- Fisheries Management Plans

#### **Department of Defense, Army Corps of Engineers:**

- Proposed authorizations for dredging, channel improvement, breakwaters, other navigational works, erosion control structures, beach replenishment, dams or flood control works, ice management practices and activities, and other projects with the potential to impact coastal lands and waters.
- Land acquisition for spoil disposal or other purposes.
- Selection of open water disposal sites.

#### **Department of Defense, Air Force, Army and Navy:**

- Location, design, and acquisition of new or expanded defense installations (active or reserve status, including associated housing, transportation or other facilities).
- Plans, procedures and facilities for handling or storage use zones.
- Establishment of impact, compatibility or restricted use zones.

#### **Department of Energy:**

- Prohibition orders.

**General Services Administration:**

- Acquisition, location and design of proposed federal government property or buildings, whether leased or owned by the federal government.

**Department of Interior, Fish and Wildlife Service:**

- Management of National Wildlife refuges and proposed acquisitions.

**Department of Interior, National Park Service:**

- National Park and Seashore management and proposed acquisitions.

**Department of Interior, Bureau of Ocean Energy Management**

- OCS lease sale activities including tract selection, lease sale stipulations, etc.

**Department of Homeland Security, Coast Guard:**

- Location and design, construction or enlargement of Coast Guard stations, bases, and lighthouses.
- Location, placement or removal of navigation devices which are not part of the routine operations under the Aids to Navigation Program (ATON).
- Expansion, abandonment, designation or anchorages, lightering areas or shipping lanes and ice management practices and activities.

**Department of Transportation, Federal Aviation Administration:**

- Location and design, construction, maintenance, and demolition of Federal aids to air navigation.

**Department of Transportation, St. Lawrence Seaway Development Corporation:**

- Acquisition, location, design, improvement and construction of new and existing facilities for the operation of the Seaway, including traffic safety, traffic control and length of navigation season.

**Department of Transportation, Federal Highway Administration:**

- Highway construction

**II. FEDERAL LICENSES AND PERMITS AND OTHER FORMS OF APPROVAL OR AUTHORIZATION**

The following activities, requiring permits, licenses, or other forms of authorization or approval from federal agencies, are subject to the consistency provisions of the Coastal Zone Management Act, its implementing regulations in 15 CFR Part 930, Subpart D, and the New York Coastal Management Program.

**Department of Defense, Army Corps of Engineers:**

- Construction of dams, dikes or ditches across navigable waters, or obstruction or alteration of navigable waters required under Sections 9 and 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401, 403).

- Establishment of harbor lines pursuant to Section 11 of the Rivers and Harbors Act of 1899 (33 U.S.C. 404, 405).
- Occupation of seawall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the U.S. pursuant to Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408).
- Approval of plans for improvements made at private expense under USACE supervision pursuant to the Rivers and Harbors Act of 1902 (33 U.S.C. 565).
- Disposal of dredged spoils into the waters of the U.S., pursuant to the Clean Water Act, Section 404 (33 U.S.C. 1344).
- All actions for which permits are required pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
- Construction of artificial islands and fixed structures in Long Island Sound pursuant to Section 4 (f) of the River and Harbors Act of 1912 (33 U.S.C.).

**Department of Energy, Federal Energy Regulatory Commission:**

- Licenses for non-federal hydroelectric projects and primary transmission lines under Sections 3 (11), 4 (e) and 15 of the Federal Power Act (16 U.S.C. 796 (11), 797 (11) and 808).
- Orders for interconnection of electric transmission facilities under Section 202 (b) of the Federal Power Act (15 U.S.C. 824 a (b)).
- Certificates for the construction and operation of interstate natural gas pipeline facilities, including both pipelines and terminal facilities under Section 7 (c) of the Natural Gas Act (15 U.S.C. 717 f (c)).
- Permission and approval for the abandonment of natural gas pipeline facilities under Section 7(b) of the Natural Gas Act (15 U.S.C. 717 f (b)).

**Department of Energy, Economic Regulatory Commission:**

- Regulation of gas pipelines, and licensing of import or export of natural gas pursuant to the Natural Gas Act (15 U.S.C. 717) and the Energy Reorganization Act of 1974.
- Exemptions from prohibition orders.

**Environmental Protection Agency:**

- NPDES permits and other permits for Federal installations, discharges in contiguous zones and ocean waters, sludge runoff and aquaculture permits pursuant to Sections 401, 402, 403, 405, and 318 of the Federal Water Pollution Control Act of 1972 (33 U.S.C. 1341, 1342, 1343, and 1328).
- Permits pursuant to the Resources Recovery and Conservation Act of 1976.
- Permits pursuant to the underground injection Control program under Section 1424 of the Safe Water Drinking Water Act (42 U.S.C. 300 h-c).
- Permits pursuant to the Clean Air Act of 1976 (42 U.S.C. 1857).

**Department of Interior, Fish and Wildlife Services:**

- Endangered species permits pursuant to the Endangered Species Act (16 U.S.C. 153 (a)).

**Department of Interior, Bureau of Ocean Energy Management:**

- Permits to drill, rights of use and easements for construction and maintenance of pipelines, gathering and flow lines and associated structures pursuant to 43 U.S.C. 1334, exploration and development plans, and any other permits or authorizations granted for activities described in detail in OCS exploration, development, and production plans.
- Permits required for pipelines crossing federal lands, including OCS lands, and associated activities pursuant to the OCS Lands Act (43 U.S.C. 1334) and 43 U.S.C. 931 (c) and 20 U.S.C. 185.

**Surface Transportation Board:**

- Authority to abandon railway lines (to the extent that the abandonment involves removal of trackage and disposition of right-of-way); authority to construct railroads; authority to construct slurry pipelines.

**Nuclear Regulatory Commission:**

- Licensing and certification of the siting, construction, and operation of nuclear power plants, pursuant to Atomic Energy Act of 1954, Title II of the Energy Reorganization Act of 1974 and the National Environmental Policy Act of 1969.

**Department of Transportation:**

- Construction or modification of bridges, causeways or pipelines over navigable waters pursuant to 49 U.S.C. 1455.
- Permits for Deepwater Ports pursuant to the Deepwater Ports Act of 1974 (33 U.S.C. 1501).

**Department of Transportation, Federal Aviation Administration:**

- Permits and licenses for construction, operation or alteration of airports.

**III. FEDERAL FINANCIAL ASSISTANCE TO STATE AND LOCAL GOVERNMENTS**

The following activities, involving financial assistance from federal agencies to state and local governments, are subject to the consistency provisions of the Coastal Zone Management Act, its implementing regulations in 15CFR Part 930, Subpart F, and the New York Coastal Management Program. When these activities involve financial assistance for entities other than State and local governments, the activities are subject to the consistency provisions of 15 CFR Part 930, Subpart C.

**Department of Agriculture**

10.068 Rural Clean Water Program

10.409 Irrigation, Drainage, and Other Soil and Water Conservation Loans

10.410 Low to Moderate Income Housing Loans

10.411 Rural Housing Site Loans

10.413 Recreation Facility Loans

10.414 Resource Conservation and Development Loans

- 10.415 Rural Rental Housing Loans
- 10.416 Soil and Water Loans
- 10.418 Water and Waste Disposal Systems for Rural Communities
- 10.419 Watershed Protection and Flood Prevention Loans
- 10.422 Business and Industrial Loans
- 10.423 Community Facilities Loans
- 10.424 Industrial Development Grants
- 10.426 Area Development Assistance Planning Grants
- 10.429 Above Moderate Income Housing Loans
- 10.430 Energy Impacted Area Development Assistance Program
- 10.901 Resource Conservation and Development
- 10.902 Soil and Water Conservation
- 10.904 Watershed Protection and Flood Prevention
- 10.906 River Basin Surveys and Investigations

**Department of Commerce**

- 11.300 Economic Development - Grants and Loans for Public Works and Development Facilities
- 11.301 Economic Development - Business Development Assistance
- 11.302 Economic Development - Support for Planning Organizations
- 11.304 Economic Development - State and Local Economic Development Planning
- 11.305 Economic Development - State and Local Economic Development Planning
- 11.307 Special Economic Development and Adjustment Assistance Program - Long Term Economic Deterioration
- 11.308 Grants to States for Supplemental and Basic Funding of Titles I, II, III, IV, and V Activities
- 11.405 Anadromous and Great Lakes Fisheries Conservation
- 11.407 Commercial Fisheries Research and Development
- 11.417 Sea Grant Support
- 11.427 Fisheries Development and Utilization Research and Demonstration Grants and Cooperative Agreements Program
- 11.501 Development and Promotion of Ports and Intermodal Transportation
- 11.509 Development and Promotion of Domestic Water-borne Transport Systems

**Department of Housing and Urban Development**

- 14. 112 Mortgage Insurance - Construction or Substantial Rehabilitation of Condominium Projects
- 14. 115 Mortgage Insurance - Development of Sales Type Cooperative Projects

- 14. 117 Mortgage Insurance - Homes
- 14. 124 Mortgage Insurance - Investor Sponsored Cooperative Housing
- 14. 125 Mortgage Insurance - Land Development and New Communities
- 14. 126 Mortgage Insurance - Manages ant Type Cooperative Projects
- 14. 127 Mortgage Insurance - Mobile Home Parks
- 14. 218 Community Development Block Grants/Entitlement Grants
- 14. 219 Community Development Block Grants/Small Cities Program
- 14. 221 Urban Development Action Grants
- 14. 223 Indian Community Development Block Grant Program

**Department of the Interior**

- 15.400 Outdoor Recreation - Acquisition, Development and Planning
- 15.402 Outdoor Recreation - Technical Assistance
- 15.403 Disposal of Federal Surplus Real Property for Parks, Recreation, and Historic Monuments
- 15.411 Historic Preservation Grants-In-Aid
- 15.417 Urban Park and Recreation Recovery Program
- 15.600 Anadromous Fish Conservation
- 15.605 Fish Restoration
- 15.611 Wildlife Restoration
- 15.613 Marine Mammal Grant Program
- 15.802 Minerals Discovery Loan Program
- 15.950 National Water Research and Development Program
- 15.951 Water Resources Research and Technology - Assistance to State Institutes
- 15.952 Water Research and Technology-Matching Funds to State Institutes

**Department of Transportation**

- 20.102 Airport Development Aid Program
- 20.103 Airport Planning Grant Program
- 20.205 Highway Research, Planning, and Construction Railroad Rehabilitation and Improvement  
- Guarantee of Obligations
- 20.309 Railroad Rehabilitation and Improvement – Guarantee of Obligations
- 20.310 Railroad Rehabilitation and Improvement - Redeemable Preference Shares
- 20.506 Urban Mass Transportation Demonstration Grants
- 20.509 Public Transportation for Rural and Small Urban Areas

**General Services Administration**

39.002 Disposal of Federal Surplus Real Property

**Community Services Administration**

49.002 Community Action

49.011 Community Economic Development

49.013 State Economic Opportunity Offices

49.017 Rural Development Loan Fund

49.018 Housing and Community Development (Rural Housing)

**Small Business Administration**

59.012 Small Business Loans

59.013 State and Local Development Company Loans

59.024 Water Pollution Control Loans

59.025 Air Pollution Control Loans

59.031 Small Business Pollution Control Financing Guarantee

**Environmental Protection Agency**

66.001 Air Pollution Control Program Grants

66.418 Construction Grants for Wastewater Treatment Works

66.426 Water Pollution Control - State and Area-wide Water Quality Management Planning Agency

66.451 Solid and Hazardous Waste Management Program Support Grants

66.452 Solid Waste Management Demonstration Grants

66.600 Environmental Protection Consolidated Grants Program Support

66.800 Comprehensive Environmental Response, Compensation and Liability (Superfund)

*Note: Numbers refer to the Catalog of Federal Domestic Assistance Programs, 1980 and its subsequent updates.*

## SECTION VII – LOCAL COMMITMENT AND CONSULTATION

### LOCAL COMMITMENT

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Community participation for this effort included a variety of outreach and engagement activities designed to inform the public and gather input to guide the LWRP update. Varying techniques were utilized in order to reach a broad audience and stakeholders within the community. The following outreach and engagement activities were used.

#### STAKEHOLDER OUTREACH

Community participation begins with an understanding of the needs of stakeholders within the proposed WRA. A Local Waterfront Revitalization Advisory Group (LWRAG), which includes residents and stakeholders, was created to oversee the development of the Local Waterfront Revitalization Program in cooperation with municipal officials and the project consultants.

The consultants assisted the Town to organize meetings with key stakeholders, including property owners, business owners and neighborhood groups within and adjacent to the WRA, to enrich the general understanding of needs and opportunities for the proposed WRA.

The Town also conducted direct stakeholder outreach, having conversations with existing business owners through the Town Industrial Development Agency (IDA) and local residents. Additionally, the Town's Parks and Recreation Department was engaged and involved with the Henry Hudson Park Master Plan as was the Town Historian in developing the LWRP's inventory and analysis.

The Town also organized a boat tour in order to view the WRA and adjacent waterfront properties from the Hudson River on June 20, 2016. The tour began at the Port of Albany and ended at the Port of Coeymans. Stakeholders of waterfront businesses briefed boat tour participants on work taking place at their facilities. During the return trip north, stakeholders were encouraged to take part in facilitated discussions with Town staff, LWRAG members, Project Team members, and other stakeholders to identify needs and opportunities along the waterfront within the WRA. Maps of the WRA and easels were provided for stakeholders to provide input.

As these meetings were organized and conducted by Town staff and the Project Team, findings were summarized, reviewed, and discussed with the LWRAG. Ultimately, these conversations helped shape the recommendations identified in this LWRP.

#### LWRAG MEETINGS

LWRAG meetings occurred at key milestones throughout the duration of the project. There was a total of 11 LWRAG meetings. Each meeting brought a new opportunity for LWRAG members to discuss project components, review project materials, and learn about updates related to current waterfront activities.

Additionally, all LWRAG meetings were open to the public. Scenic Hudson provided the LWRAG with an educational opportunity on November 16, 2016. Scenic Hudson presented on Resiliency and Sea Level

Rise as it pertains to the Hudson River and the Town's WRA. All meeting agendas and summaries have been made available on the project website.

## **PUBLIC WORKSHOPS**

In addition to Town staff conducting direct stakeholder outreach, the Project Team assisted the Town in conducting four (4) opportunities to learn about progress, findings, and next steps of the LWRP update process through public workshops. Each public workshop occurred at key milestones of the project schedule. The format for each of the public workshops was determined cooperatively with the Town and the LWRAG. Each workshop was organized to maximize public involvement. The Town and LWRAG identified appropriate workshop locations for each workshop within the WRA and at Town Hall. Workshop participants had the opportunity to weigh in about issues and opportunities identified. Each workshop also allowed the public to learn about and weigh in on the Henry Hudson Park Master Plan update.

Public workshop formats included:

- An open house-style engagement event with facilitated stations; and
- A traditional public workshop with a formal presentation followed by a question and answer period.

### **Public Workshop/Open House #1 – Wednesday, October 19, 2016**

On Wednesday, October 19, 2016 the Town held the first public workshop/open house event for the Town of Bethlehem LWRP Update and Henry Hudson Park Master Plan Update. The Town prepared notifications and announcements for the workshop that were posted to the project website. The public workshop involved multiple activities including a day long open house and a concurrent Walk and Talk event at the Henry Hudson Park. The open house was held from 11:00 am to 8:00 pm at the Cedar Hill Schoolhouse at 1003 River Road within the proposed WRA. A formal evening presentation was given from 7:00 pm to 8:00 pm. The Cedar Hill Schoolhouse is home to the Bethlehem Historical Society and is also located within the WRA and in close proximity to Henry Hudson Park where the Walk and Talk took place. Signage was created and placed at the Cedar Hill Schoolhouse along NYS Route 144/River Road and at Henry Hudson Park to draw in community members. Baked goods were provided by the Glenmont Job Corps facility. The Glenmont Job Corps facility is located within the Town's WRA and offers a culinary program for students there. Over 35 residents, property owners, and other stakeholders participated in the event.

The Henry Hudson Park Walk and Talk took place from 12:00 pm to 1:00 pm at Henry Hudson Park. Attendees shared comments, concerns, and ideas with Project Team members while walking through the Park. Following the Walk and Talk, Project Team members worked on transferring ideas generated during the event onto paper to provide a visual representation during the evening presentation.

This public workshop was scheduled following the completion of the initial drafts of Section I – Waterfront Revitalization Area Boundary and Section II – Inventory and Analysis. The open house included a series of activity stations that introduced the project and gathered information about needs and opportunities within the proposed WRA and Henry Hudson Park. Town staff, LWRAG members, and Project Team members were available at each station in order to provide guidance and answer any questions.

The following interactive activity stations were included at this workshop:

About the Project - This station provided information about the LWRP Update. The board displayed at this station provided an overview of the program as well as its intended purpose and outcome.

Waterfront Revitalization Area Boundary - This station provided a review of the existing and proposed waterfront revitalization area boundaries. Participants had the opportunity to share their thoughts about the proposed waterfront revitalization area boundary and identify items on the map.

What's Your Vision? - The vision station provided an opportunity for participants to share their vision for the waterfront. Participants had the opportunity to share their vision on the station board.

Existing Conditions - This station provided an overview of the current conditions and resources within the proposed waterfront revitalization area. The station included two (2) boards with maps of the following existing conditions: Land Use; Zoning; Agricultural Districts and Farmland Soils; Sensitive Environmental Features; Open Space and Recreational Resources; and Historic, Cultural, and Archeological Sites.

Needs/Challenges - Participants were encouraged to identify needs or challenges that they see within the waterfront area on mapping and easel pads.

Opportunities/Ideas - Participants were encouraged to identify opportunities or ideas that they see within the waterfront area on mapping and easel pads.

Henry Hudson Park Master Plan Update - At this station, participants were requested to review the existing amenities at the Henry Hudson Park identified on the map provided. The station was intended to supplement the Walk and Talk event. Participants were prompted to identify what they like, dislike or would like to see improved or included in Henry Hudson Park.

Kids' Corner - A kids' corner was also provided for any children present at the meeting. Construction paper and crayons were set up for children to share their vision for the WRA.

The open house concluded with a formal presentation followed by question and answer session that outlined the project and summarized input gathered during the open house. All input received was compiled into a workshop summary and made available publicly.

### **Public Workshop #2 – Tuesday, April 25, 2017**

On Tuesday, April 25, 2017, the Town of Bethlehem held the second public workshop for the Town of Bethlehem LWRP Update and the Henry Hudson Park Master Plan Update. The workshop was held from 6:00 pm to 8:00 pm at Town Hall at 445 Delaware Avenue. A formal presentation was provided from 6:30 pm to 7:00 pm. Over 40 residents, property owners, and other stakeholders participated in the event. The public workshop included a series of activity stations that introduced the project and gathered feedback on proposed land uses and proposed projects and recommendations. Town staff, LWRAG members, and Project Team members were available at each station in order to provide guidance and answer any questions.

The following interactive activity stations were included at this workshop:

About the Project - This station provided information about the LWRP Update. The board displayed at this station provided an overview of the program as well as its intended purpose and outcome. Additionally, an aerial map of the WRA and a looping project presentation was provided.

New York State Coastal Policies - This station provided information about the New York State's State Coastal Policies which were developed as part of the Coastal Management Program. This program

provides a means for improving coordination between each level of government (local, state, federal), in part by spelling out 44 coastal policy statements.

Proposed Land Uses - Participants were encouraged to review proposed land uses. Town staff and Project Team members facilitated discussions at this table, collecting any insights provided and answering any questions. Large format existing conditions mapping was provided at this station. Maps included existing land uses, zoning, and environmental features to support this activity station's discussions.

Proposed Projects and Recommendations - Participants identified priorities and shared ideas regarding proposed projects and recommendations. This station allowed meeting participants to identify priorities through a dot exercise as well as share their ideas about proposed projects and recommendations in a blank comment area. Each proposed project and recommendation were categorized into one of the following eight (8) topic areas in no particular order: Zoning and Land Use; Infrastructure; Natural and Environmental Resources and Water Quality; Historic, Cultural, and Scenic Resources; Open Space, Public Access, Recreation, and Tourism; Economic Development; Resiliency; and Waterfront Revitalization Partners.

Henry Hudson Park Master Plan - This station allowed meeting participants to weigh in on the draft Henry Hudson Park Master Plan update and the associated recommendations.

Kids' Corner - A kids' corner was also provided for any children present at the meeting. Construction paper and crayons were set up for children to share their ideas about the WRA.

This public workshop included a formal presentation took place outlining the project and the intentions of the workshop. All input received was compiled into a workshop summary and made available publicly.

### **Public Workshop #3**

On Tuesday, October 24, 2017, the Town of Bethlehem held the third public workshop/open house for the Town of Bethlehem Local Waterfront Revitalization Program (LWRP) Update and the Henry Hudson Park Master Plan Update. The workshop was held from 6:00 pm to 8:00 pm at Town Hall at 445 Delaware Avenue. Approximately 20 residents, property owners, and other stakeholders participated in the event. The public workshop included a series of activity stations that introduced the project and gathered feedback on refined proposed projects/recommendations as well as implementation techniques. A formal presentation outlining the project and the intentions of the meeting was given.

The following interactive activity stations were included at this workshop:

Activity Station 1: About the Project - This station provided information about the LWRP Update. The board displayed at this station provided an overview of the program as well as its intended purpose and outcome. Additionally, an aerial map of the proposed Waterfront Revitalization Area (WRA) and a looping project presentation was provided.

Activity Station 2: New York State Coastal Policies - This station provided information about the New York State's State Coastal Policies. The New York State Department of State (NYSDOS) administers the Coastal Management Program. This program provides a means for improving coordination between each level of government (local, state, federal), in part by spelling out 44 coastal policy statements. This approach ensures that future actions in the coastal area will not interfere with the State's long-term commitment to achieve the most beneficial use of coastal resources for society. Each of the 44 statements promotes the beneficial use of coastal resources, prevents their impairment, or deals with major activities that substantially affect numerous resources. In all cases, State agency actions are

required to be consistent with the approved Local Waterfront Revitalization Program (LWRP) upon approval by the Secretary of State. The approval of the LWRP also means that the proposed Waterfront Revitalization Area (WRA) will become the new coastal area boundary, hence the need for consistency review. The 44 coastal policy statements were listed on two presentation boards at this station for review by meeting participants.

Activity Station 3: Proposed Projects and Recommendations - This station allowed meeting participants to review the refined projects and share their input in a blank comment area. Each proposed project and recommendation were categorized into one of the following eight (8) topic areas in no particular order:

- Zoning and Land Use
- Infrastructure
- Natural and Environmental Resources and Water Quality
- Historic, Cultural, and Scenic Resources
- Open Space, Public Access, Recreation, and Tourism
- Economic Development
- Resiliency
- Waterfront Revitalization Partners

Similar to the proposed land uses, each proposed project and recommendation was developed by taking into consideration the following resources:

- 2010 LWRP Proposed Projects and Recommendations
- LWRP Vision Statement
- LWRP Project Goals
- LWRP Existing Conditions Inventory and Analysis
- Local Waterfront Revitalization Advisory Group (LWRAG) Comment
- Public Comment from previous public meetings

Activity Station 5: Henry Hudson Park Master Plan - This station allowed meeting participants to weigh in on the draft Henry Hudson Park Master Plan update and the associated recommendations.

#### **Final Public Hearing / Public Workshop #4**

This will be scheduled prior to the local adoption of the final version of the LWRP

#### **DIGITAL OUTREACH**

Digital outreach included use of a website and digital media to share project information with the public and notify the public of opportunities to participate in the process. The intent was to reach all interested stakeholders using a variety of outreach methods. Digital media was a preferred method of sharing and gathering information by many. An LWRAG email address was developed to enable community members to submit insight, questions, and/or concerns to Town. The email address utilized was [LWRP@townofbethlehem.org](mailto:LWRP@townofbethlehem.org).

#### **Website**

The project website is hosted by the Town of Bethlehem and includes a variety of materials that kept the public informed of the project progress. The website is located at the following link:  
<http://www.townofbethlehem.org/746/Local-Waterfront-Revitalization-Advisory>.

Materials available on the website included:

- An inventory of applicable plans, studies, and policies
- Workshop presentations, handouts, and summaries
- List of LWRAG members
- Mapping
- Versions of the draft LWRP

Community members could also take advantage of the Notify Me feature on the project website. This feature allows subscribers to receive workshop notifications and announcements through email and/or text message regarding community news and Town calendar updates.

### **SOCIAL MEDIA**

The Town utilized its social media outlets, Twitter and Facebook, to advertise public engagement activities. The Project Team also shared information about engagement activities on their respective social media accounts, such as Facebook and Twitter.

### **TOWN FARMERS' MARKET**

In addition to formal flyers and announcements, materials were also distributed at the Town Farmers' Market on Saturday October 8, 2016 and Saturday October 15, 2016. These were unique opportunities to gather public input. A booth dedicated to the LWRP project was set up on both Saturdays. Members of the LWRAG were present to interact with, inform, and take questions and comments from community members.

### **INFORMATION REPOSITORIES**

Information about this project was made available on the project website and at the Planning and Economic Development Office in Town Hall. The website is located at the following link:  
<http://www.townofbethlehem.org/746/Local-Waterfront-Revitalization-Advisory>

### **CONSULTATION**

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Different versions of the draft LWRP were reviewed by the LWRAG members and by the town departments and boards that will be involved in the implementation of the LWRP. The complete version of the draft LWRP will also be reviewed by the Town Board and accepted as complete, by resolution, before formally submitting it to the New York State Department of State for the final review and initiation of the formal 60-day review period. Also, the town completed the State Environmental Quality Review for the preparation and local adoption of the LWRP and local Consistency Review Law.

Albany County, adjacent Towns and villages, local and regional organizations, and State and federal agencies had the opportunity to review the draft LWRP and provide comments during the 60-day review period. The comments received on the draft LWRP were reviewed by the Town and the Department of State and revisions addressing the comments were incorporated in the final LWRP, before its local adoption by the town, the Secretary of State approval and OCM's concurrence with the incorporation of the LWRP into the NYS Coastal Management Program.

# APPENDIX A – LOCAL WATERFRONT REVITALIZATION PROGRAM CONSISTENCY REVIEW LAW AND WATERFRONT ASSESSMENT FORM

*Local Law Filing*

NEW YORK STATE DEPARTMENT OF STATE  
41 STATE STREET, ALBANY, NY 12231

(Use this form to file a local law with the Secretary of State)

County of Bethlehem  
 City of Bethlehem  
 Town of Bethlehem  
 Village of Bethlehem  
 Local Law No. 1 of 2021

FILED  
 STATE DEPT OF STATE  
 MAR 23 2021  
 DEPARTMENT OF STATE

A local law Amending the Code of the Town of Bethlehem to add Chapter 80, Local Waterfront Revitalization Program (LWRP) Consistency Review Law and Waterfront Assessment Form, establishing the administration of the Local Waterfront Revitalization Program

Be it enacted by the Town Board of the

County of Bethlehem  
 City of Bethlehem  
 Town of Bethlehem  
 Village of Bethlehem

as follows:

**BE IT ENACTED BY, the Town Board of the Town of Bethlehem as follows:**

**Section 1. Title**

This law may be known as the Town of Bethlehem Local Waterfront Revitalization Program (LWRP) Consistency Review Law.

**Section 2. Authority and Purpose**

- A. This local law is adopted under the authority of the Municipal Home Rule Law and the Waterfront Revitalization of Coastal Areas and Inland Waterways Act of the State of New York (Article 42 of the Executive Law).
- B. The purpose of this law is to provide a framework for the agencies of the Town of Bethlehem to incorporate the policies and purposes contained in the Town of Bethlehem Local Waterfront Revitalization Program (LWRP) when reviewing applications for actions or direct agency actions located within the waterfront revitalization area; and to assure that such actions and direct actions undertaken by Town agencies are consistent with the LWRP policies and purposes.
- C. It is the intention of the Town of Bethlehem that the preservation, enhancement, and utilization of the unique waterfront revitalization area of the Town occur in a coordinated and comprehensive (If additional space is needed, attach Pages the same size as this sheet, and number each.)

(1)

manner to ensure a proper balance between protection of natural resources and the need to accommodate growth. Accordingly, this law is intended to achieve such a balance, permitting the beneficial use of waterfront resources while preventing: degradation or loss of living waterfront resources and wildlife; diminution of open space areas or public access to the waterfront; disruption of natural waterfront processes; impairment of scenic or historical resources; losses due to flooding, erosion, and sedimentation; impairment of water quality; or permanent adverse changes to ecological systems.

- D. The substantive provisions of this local law shall only apply while there is in existence a Town of Bethlehem Local Waterfront Revitalization Program that has been adopted in accordance with Article 42 of the Executive Law of the State of New York.

**Section 3. Definitions**

- A. "Actions" include all the following, except minor actions:
1. projects or physical activities, such as construction or any other activities that may affect natural, manmade, or other resources in the waterfront revitalization area, or the environment, by changing the use, appearance, or condition of any resource or structure, that:
    - i. are directly undertaken by an agency; or
    - ii. involve funding by an agency; or
    - iii. require one or more new or modified approvals, permits, or review from an agency or agencies;
  2. agency planning and policymaking activities that may affect the environment and commit the agency to a definite course of future decisions;
  3. adoption of agency rules, regulations and procedures, including local laws, codes, ordinances, executive orders and resolutions that may affect waterfront resources or the environment; and
  4. any combination of the above.
- B. "Agency" means any board, agency, department, office, other body, or officer of the Town of Bethlehem.
- C. "Code Enforcement Officer" means the Building Inspector and/or Zoning Enforcement Officer of the Town of Bethlehem who issues building permits and stop work orders.
- D. "Consistent" means that the action will fully comply with the LWRP policy standards, conditions and objectives and, whenever practicable, will advance one or more of them.
- E. "Direct Actions" mean actions planned and proposed for implementation by an agency, such as, but not limited to, a capital project, rulemaking, procedure making and policy making.
- F. "Environment" means all conditions, circumstances, and influences surrounding and affecting the development of living organisms or other resources in the waterfront revitalization area.

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- G. "Environmental assessment form" or "EAF" means the form used by an agency to assist it in determining the environmental significance or non-significance of an action, pursuant to Article 8 of the Environmental Conservation Law (SEQR).
- H. "Environmental impact statement" or "EIS" means a written draft of final document prepared to provide a means for agencies, project sponsors and the public to systematically consider significant adverse environmental impacts, alternatives and mitigation to an action, pursuant to Article 8 of the Environmental Conservation Law (SEQR).
- I. "Local Waterfront Revitalization Program" or "LWRP" means the Town of Bethlehem Local Waterfront Revitalization Program approved by the Secretary of State pursuant to the Waterfront Revitalization of Coastal Areas and Inland Waterways Act (Article 42 of the Executive Law), a copy of which is on file in the Office of the Clerk of the Town of Bethlehem.
- J. "Minor actions" include the following actions, which are not subject to review under this law:
- (1) maintenance or repair involving no substantial changes in an existing structure or facility or to existing infrastructure;
  - (2) replacement, rehabilitation, or reconstruction of a structure or facility, in kind, on the same site, including upgrading buildings to meet building or fire codes, except for structures in areas designated by local law, specifically; Town code Chapter 69, Flood Damage Prevention, 69-12 Development Permit, where structures may not be replaced, rehabilitated or reconstructed without a permit;
  - (3) repaving of existing paved highways not involving the addition of new travel lanes;
  - (4) street openings and right of way openings for the purpose of repair or maintenance of existing utility facilities;
  - (5) maintenance of existing landscaping or natural growth;
  - (6) granting of individual setback and lot line variances, except in relation to a regulated natural feature (such as a State-regulated wetland);
  - (7) minor temporary uses of land having negligible or no permanent impact on waterfront resources or the environment;
  - (8) installation of traffic control devices on existing streets, roads and highways;
  - (9) mapping of existing roads, streets, highways, natural resources, land uses and ownership patterns;
  - (10) information collection including basic data collection and research, water quality and pollution studies, traffic counts, engineering studies, surveys, subsurface investigations and soils studies that do not commit the agency to undertake, fund or approve any Type I or Unlisted action;
  - (11) official acts of a ministerial nature involving no exercise of discretion, including building permits and historic preservation permits where issuance is predicated solely on the

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- applicant's compliance or noncompliance with the relevant local building or preservation code(s);
- (12) routine or continuing agency administration and management, not including new programs or major reordering of priorities that may affect the environment;
  - (13) conducting concurrent environmental, engineering, economic, feasibility and other studies and preliminary planning and budgetary processes necessary to the formulation of a proposal for action, provided those activities do not commit the agency to commence, engage in or approve such action;
  - (14) collective bargaining activities;
  - (15) investments by or on behalf of agencies or pension or retirement systems, or refinancing existing debt;
  - (16) inspections and licensing activities relating to the qualifications of individuals or businesses to engage in their business or profession;
  - (17) purchase or sale of furnishings, equipment or supplies, including surplus government property, other than the following: land, radioactive material, pesticides, herbicides, or other hazardous materials;
  - (18) adoption of regulations, policies, procedures and local legislative decisions in connection with any action on this list;
  - (19) engaging in review of any part of an application to determine compliance with technical requirements, provided that no such determination entitles or permits the project sponsor to commence the action unless and until all requirements of this Part have been fulfilled;
  - (20) civil or criminal enforcement proceedings, whether administrative or judicial, including a particular course of action specifically required to be undertaken pursuant to a judgment or order, or the exercise of prosecutorial discretion;
  - (21) adoption of a moratorium on land development or construction;
  - (22) interpreting an existing code, rule or regulation;
  - (23) designation of local landmarks or their inclusion within historic districts;
  - (24) emergency actions that are immediately necessary on a limited and temporary basis for the protection or preservation of life, health, property or natural resources, provided that such actions are directly related to the emergency and are performed to cause the least change or disturbance, practicable under the circumstances, to waterfront resources or the environment. Any decision to fund, approve or directly undertake other activities after the emergency has expired is fully subject to the review procedures of this Part;
  - (25) local legislative decisions such as rezoning where the Town Board determines the action will not be approved.

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- K. "Waterfront Assessment Form (WAF)" means the form, a sample of which is appended to this local law, used by an agency or other entity to assist in determining the consistency of an action with the Town of Bethlehem Local Waterfront Revitalization Program.
- L. "Waterfront Coordinator" means the person responsible for overall management and coordination of the implementation of the LWRP as designated by the Town Board and as created pursuant to this law.
- M. "Waterfront revitalization area" or "WRA" means that portion of New York State coastal waters and adjacent upland as defined in Article 42 of the Executive Law which is located within the boundaries of the Town of Bethlehem, as shown on the coastal area map on file in the office of the Secretary of State and as described and mapped in the Town of Bethlehem Local Waterfront Revitalization Program (LWRP).

**Section 4. Management and Coordination of the LWRP**

- A. A Waterfront Coordinator is created and shall be the Director of the Department of Economic Development and Planning. The Waterfront Coordinator shall advise the Town Board and other town agencies, boards and departments on LWRP implementation and on policy, project and budget priorities, as well as on the need for preparing an amendment to the LWRP. The Waterfront Coordinator may also perform other functions regarding the waterfront revitalization area as the Town Board may assign to it from time to time.
- B. The Waterfront Coordinator shall be responsible for overall management and coordination of the LWRP. In performing this task, the Waterfront Coordinator shall:
  - (1) Inform the Town Board on implementation, priorities, work assignments, timetables, and budgetary requirements of the LWRP.
  - (2) Make applications for funding from State, Federal, or other sources to finance projects under the LWRP.
  - (3) Coordinate and oversee liaison between Town agencies and departments, including Planning Board, Zoning Board of Appeals, Planning staff, Police Department, Highway Superintendent, Department of Public Works, Parks and Recreation Department, Building Department and Engineering Department to further implement the LWRP.
  - (4) Prepare an annual report on progress achieved and problems encountered in implementing the LWRP and recommend actions necessary for further implementation to the appropriate Town Board.
  - (5) Provide adequate and timely feedback to the New York State Department of State and other State agencies on the consistency of state and federal agencies actions proposed within the Bethlehem WRA. If no conflicts are identified between the proposed action and the applicable policies and purposes of the approved Bethlehem LWRP, written notification will be provided to the state agency. If conflicts are identified, then the specific policies and purposes of the

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LWRP with which the proposed action conflicts shall be sent to the Secretary of State at the time when the state agency is notified.

- (6) Perform other functions regarding the waterfront revitalization area and direct such actions or projects as are necessary, or as the Town Board may deem appropriate, to implement the LWRP.
- C. In order to foster a strong relationship and maintain an active liaison among the agencies responsible for the implementation of the LWRP, the Waterfront Coordinator shall schedule at least semi-annually a LWRP coordinating council/assembly, including but not limited to representatives of the Town Board, Planning Board, Zoning Board of Appeals, and such other Town departments or individuals involved with LWRP implementation.

**Section 5. Review of Actions**

- A. Whenever a proposed action is located in the waterfront revitalization area, each Town agency shall, prior to approving, funding or undertaking the action, make a determination that it is consistent with the LWRP policy standards summarized in Section I below. No action in the waterfront revitalization area shall be approved, funded or undertaken by an agency without such a determination.
- B. The Waterfront Coordinator shall be responsible for coordinating review of actions in the Town 's waterfront revitalization area for consistency with the LWRP, and will advise, assist and make consistency recommendations for other Town agencies in the implementation of the LWRP, its policies and projects, including physical, legislative, regulatory, administrative, and other actions included in the program. The Waterfront Coordinator will also coordinate with NYS Department of State and other directly involved State agencies the town's input, based on the town's knowledge of the local conditions and purposes of the LWRP, regarding consistency review for actions by State or Federal agencies.
- C. The Waterfront Coordinator will assist each agency with preliminary evaluation of actions in the waterfront revitalization area, and with preparation of a WAF. Whenever an agency receives an application for approval or funding of an action, or as early as possible in the agency's formulation of a direct action to be located in the waterfront revitalization area, the agency shall refer to the Waterfront Coordinator for preparation of a WAF, a sample of which is appended to this local law. The Waterfront Coordinator will coordinate their preliminary evaluation with permitting or other review by each agency or the agencies considering an action.
- D. The Waterfront Coordinator shall require the applicant to submit all completed applications, EAFs, and any other information deemed necessary to its consistency recommendation. The recommendation shall indicate whether, in the opinion of the Waterfront Coordinator, the proposed action is consistent with or inconsistent with one or more of the LWRP policy standards and objectives and shall elaborate in writing the basis for its opinion. The Waterfront Coordinator shall, along with its consistency recommendation, make any suggestions to the agency concerning modification of the proposed action, including the imposition of conditions, to make it consistent with LWRP policy standards and objectives or to greater advance them. Such  
(If additional space is needed, attach Pages the same size as this sheet, and number each.)

recommendation shall go to the agency within thirty (30) days of receipt of the completed information submitted by the applicant.

- E. If an action requires approval of more than one agency, decision making will be coordinated between agencies to determine which agency will conduct the final consistency review and make a consistency determination, and that agency will thereafter act as designated consistency review agency. Only one WAF per action will be prepared. If the agencies cannot agree, the Waterfront Coordinator shall designate the consistency review agency.
- F. Upon recommendation of the Waterfront Coordinator, the agency shall consider whether the proposed action is consistent with the LWRP policy standards summarized in section I. herein. Prior to making its determination of consistency, the agency shall consider the consistency recommendation of the Waterfront Coordinator. The agency shall render a written determination of consistency based on the WAF, the Waterfront Coordinator recommendation and such other information as is deemed necessary to its determination. No approval or decision shall be rendered for an action in the waterfront area without a determination of consistency. The designated agency will make the final determination of consistency.

The Zoning Board of Appeals is the designated agency for the determination of consistency for variance applications subject to this law. The Zoning Board of Appeals shall consider the written consistency recommendation of the Waterfront Coordinator in the event and at the time it makes a decision to grant such a variance and shall impose appropriate conditions on the variance to make the activity consistent with the objectives of this law.

- G. Where an EIS is being prepared or required, the draft EIS must identify applicable LWRP policies and standards and include a discussion of the effects of the proposed action on such policy standards. No agency may make a final decision on an action that has been the subject of a final EIS and is located in the waterfront revitalization area until the agency has made a written finding regarding the consistency of the action with the local policy standards referred to in Section I. herein.
- H. In the event the Waterfront Coordinator's recommendation is that the action is inconsistent with the LWRP, and the agency makes a contrary determination of consistency, the agency shall elaborate in writing the basis for its disagreement with the recommendation of the Waterfront Coordinator and explain the manner and extent to which the action is consistent with the LWRP policy standards.
- I. Actions to be undertaken within the waterfront revitalization area shall be evaluated for consistency in accordance with the following summary of LWRP policies, which are derived from and further explained and described in Section III of the Town of Bethlehem LWRP, a copy of which is on file in the Clerk's office and available for inspection during normal business hours. Agencies which undertake direct actions shall also consult Section IV-Proposed Land and Water Uses and Projects of the LWRP, in making their consistency determination. The action shall be consistent with the policies to:

- (1) Restore, revitalize, and redevelop deteriorated and underutilized waterfront areas for commercial, industrial, cultural, recreational and other compatible uses. (Policy 1).

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- (2) Retain, develop and promote water-dependent uses and facilities on or adjacent to coastal waters (Policy 2).
- (3) Further develop the State's port of Albany as center of commerce and industry and encourage the siting of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people. (Policy 3)
- (4) Strengthen the economic base of small harbor areas by encouraging traditional uses and activities (Policy 4).
- (5) Ensure that development occurs where adequate public infrastructure is available. (Policy 5).
- (6) Streamline development permit procedures (Policy 6).
- (7) Protect, preserve and, where practical, restore significant and locally important fish and wildlife habitats from human disruption and chemical contamination (Policies 7, 8).
- (8) Expand recreational use of fish and wildlife resources by increasing access to existing resources, supplementing existing stocks, and developing new resources. (Policy 9).
- (9) Maintain, promote and expand commercial fishing opportunities (Policies 10).
- (10) Minimize flooding and erosion hazards through non-structural means, protecting natural protective features, construction of carefully-selected, long-term structural measures and appropriate siting of structures (Policies 11, 12, 13, 14, 16, and 17).
- (11) Public funds shall be used for erosion protection structures only where necessary and in an appropriate manner (Policy 16).
- (12) Safeguard economic, social and environmental interests in the waterfront revitalization area when major actions are undertaken (Policy 18).
- (13) Maintain and improve public access to the shoreline and to water-related recreational facilities while protecting the environment and being compatible with adjoining uses (Policies 19 and 20).
- (14) Encourage, facilitate and give priority to water-dependent and water-enhanced recreation (Policy 21).
- (15) Encourage development, when located near the shore, to provide for water related recreation where compatible (Policy 22).
- (16) Protect and restore historic and archeological resources (Policy 23).
- (17) Prevent impairment to, protect, restore or enhance scenic resources (Policy 24, and 25).
- (18) Conserve and protect agricultural lands (Policy 26).
- (19) Site and construct energy facilities in a manner which will be compatible with the environment and contingent upon the need for a waterfront or water location (Policies 27, 29, and 40).

(If additional space is needed, attach Pages the same size as this sheet, and number each.)

- (20) Undertake ice management practices in a manner that avoids adverse coastal impacts (Policy 28).
  - (21) Protect surface and groundwater from direct and indirect discharge of pollutants and from overuse (Policies 30, 31, 32, 33, 34, 35, 36, 37, and 38).
  - (22) Ensure that dredging and dredge spoil disposal is undertaken in a manner protective of natural resources (Policies 15 and 35).
  - (23) Ensure that any transportation, handling or disposal of hazardous wastes and effluent is undertaken in a manner which will not adversely affect the environment (Policies 8, 30, 36, and 39).
  - (24) Protect air quality (Policies 41, 42 and 43).
  - (25) Preserve and protect tidal and freshwater wetlands (Policy 44)
- J. If the agency determines that an action will be inconsistent with one or more LWRP policy standards or objectives, such action shall not be undertaken unless modified to be consistent with the LWRP policies.
- K. Each agency shall maintain a file for each action made the subject of a consistency determination, including any recommendations received from the Waterfront Coordinator. Such files shall be made available for public inspection upon request.

**Section 6. Waterfront Assessment Form**

- A. Refer to Waterfront Assessment Form (WAF) at end of chapter "80-Attachment #1".

**Section 7. Enforcement**

In the event that an activity is being performed in violation of this law or any conditions imposed thereunder, the Waterfront Coordinator shall inform the Building Inspector, or any other authorized official of the Town, that a stop work order shall be issued and all work shall immediately cease. No further work or activity shall be undertaken on the project so long as a stop work order is in effect.

**Section 8. Violations**

- A. A person who violates any of the provisions of, or who fails to comply with any condition imposed by, this law shall have committed a violation, punishable by a fine not exceeding three-hundred fifty dollars (\$350.00) for a conviction of a first offense and punishable by a fine of seven hundred dollars (\$700.00) for a conviction of a second or subsequent offense. For the purpose of conferring jurisdiction upon courts and judicial officers, each week of continuing violation shall constitute a separate additional violation.
- B. The Town Attorney is authorized and directed to institute any and all actions and proceedings necessary to enforce this local law. Any civil penalty shall be in addition to and not in lieu of any criminal prosecution and penalty.

(If additional space is needed, attach Pages the same size as this sheet, and number each.)

**Section 9. Severability**

The provisions of this law are severable. If any provision of this law is found invalid, such finding shall not affect the validity of this law as a whole or any law or provision hereof other than the provision so found to be invalid.

**Section 10. Effective Date**

This local law shall take effect immediately upon its filing in the office of the Secretary of State in accordance with Section 27 of the Municipal Home Rule Law.

80-Attachment #1  
**Town of Bethlehem**  
**WATERFRONT ASSESSMENT FORM**

**A. INSTRUCTIONS**

1. Applicants, or, in the case of direct actions, Town agencies shall complete this Waterfront Assessment Form WAF for proposed actions which are subject to the LWRP Consistency Review Law. This assessment is intended to supplement other information used by a Town agency in making a determination of consistency with the policy standards set forth in the LWRP Consistency Review Law.
2. Before answering the questions in Section C, the preparer of this form should review the policies and policy explanations contained in the Town of Bethlehem Local Waterfront Revitalization Program (LWRP), a copy of which is on file in the offices of the Town Clerk. A proposed action should be evaluated as to its beneficial and adverse effects upon the waterfront revitalization area and its consistency with the policy standards.
3. If any question in Section C on this form is answered "yes", the proposed action may affect the achievement of the LWRP policy standards contained in the LWRP Consistency Review Law. Thus, the action should be analyzed in more detail and, if necessary, modified prior to making a determination that is consistent with the LWRP policy standards. If an action cannot be certified as consistent with the LWRP policy standards and conditions, it shall not be undertaken.

**B. DESCRIPTION OF SITE AND PROPOSED ACTION**

1. Describe the nature and extent of action:

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(If additional space is needed, attach Pages the same size as this sheet, and number each.)

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2. Type of Town agency action (check appropriate response):

a. Directly undertaken (e.g. construction, planning activity, agency regulation, land transaction)

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b. Financial assistance (e.g. grant, loan, subsidy)

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c. Permit, approval, license, certification

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d. Agency undertaking action:

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3. If an application for the proposed action has been filed with a Town, the following information shall be provided:

a. Name of applicant

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b. Mailing address:

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(If additional space is needed, attach Pages the same size as this sheet, and number each.)

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c. Telephone number:

( ) \_\_\_\_\_

d. Property tax number:

\_\_\_\_\_

e. Application number, if any:

\_\_\_\_\_

4. Will the action be directly undertaken, require funding, or approval by a State or federal agency?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, which State or federal agency?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Location of action (Street or Site Description and nearest intersection):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Size of site (acres):

\_\_\_\_\_  
\_\_\_\_\_

7. Amount (acres) of site to be disturbed:

\_\_\_\_\_  
\_\_\_\_\_

8. Present land use:

\_\_\_\_\_  
\_\_\_\_\_

9. Present zoning classification:

\_\_\_\_\_  
\_\_\_\_\_

(If additional space is needed, attach Pages the same size as this sheet, and number each.)

10. Describe any unique or unusual landforms on the project site (i.e. bluffs, wetlands, other geological formations):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. Percentage of site that contains slopes of 15% or greater:

\_\_\_\_\_  
\_\_\_\_\_

12. Streams, lakes, ponds or wetlands existing within or continuous to the project area?

(a) Name

\_\_\_\_\_

(b) Size (in acres)

\_\_\_\_\_

13. Is the property serviced by public water? Yes \_\_\_ No \_\_\_

14. Is the property serviced by public sewer? Yes \_\_\_ No \_\_\_

**C. WATERFRONT ASSESSMENT** (Check either "Yes" or "No" for each of the following questions). If the answer to any question above is yes, please explain in Section D any measures which will be undertaken to mitigate any adverse effects.

1. Will the proposed action be located in, or contiguous to, or have a potentially adverse effect upon any of the resource areas found within the waterfront revitalization area as identified in the LWRP?

YES NO

a) Significant fish or wildlife habitats?

\_\_\_\_\_

b) Scenic resources of local or State-wide significance?

\_\_\_\_\_

c) Important agricultural lands?

\_\_\_\_\_

d) Natural protective features in a coastal erosion hazard area?

\_\_\_\_\_

2. Will the proposed action have a significant effect upon

YES NO

a) Scenic quality of the waterfront environment?

\_\_\_\_\_

b) Development of future or existing water-dependent uses?

\_\_\_\_\_

c) Operation of the State's major ports?

\_\_\_\_\_

d) Land or water uses within a small harbor area?

\_\_\_\_\_

(If additional space is needed, attach Pages the same size as this sheet, and number each.)

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- e) Designated State or federal freshwater wetlands? \_\_\_\_\_
  - f) Commercial or recreational use of fish and wildlife resources? \_\_\_\_\_
  - g) Existing or potential public recreation opportunities \_\_\_\_\_
  - h) Structures, sites or districts of historic, archaeological or cultural significance to the Town, State or nation? \_\_\_\_\_
  - i) Stability of the shoreline? \_\_\_\_\_
  - j) Surface or groundwater quality? \_\_\_\_\_
3. Will the proposed action involve or result in any of the following YES NO
- a) Physical alteration of land along the shoreline, underwater land or surface waters? \_\_\_\_\_
  - b) Physical alteration of two (2) acres or more of land located elsewhere in the waterfront area? \_\_\_\_\_
  - c) Expansion of existing public services or infrastructure in undeveloped or low-density areas of the WRA? \_\_\_\_\_
  - d) Siting or construction of an energy generation facility not subject to Article VII or VIII of the Public Service Law? \_\_\_\_\_
  - e) Mining, excavation, filling or dredging in surface waters? \_\_\_\_\_
  - f) Reduction of existing or potential public access to, or along the shoreline? \_\_\_\_\_
  - g) Sale or change in use of publicly-owned lands located on the shoreline or underwater? \_\_\_\_\_
  - h) Development within a designated flood or erosion hazard area? \_\_\_\_\_
  - i) Development on a beach, dune, bluff or other natural feature that provides protection against flooding or erosion? \_\_\_\_\_
  - j) Construction or reconstruction of erosion protective structures? \_\_\_\_\_
  - k) Diminished or degraded surface or groundwater quantity and/or quality \_\_\_\_\_
  - l) Removal of ground cover from the site? \_\_\_\_\_

4. Project YES NO
- a) If a project is to be located adjacent to shore:
    - (1) Does the project require a waterfront location \_\_\_\_\_

(If additional space is needed, attach Pages the same size as this sheet, and number each.)

- (2) Will water-related recreation be provided \_\_\_\_\_
- (3) Will public access to the foreshore be provided \_\_\_\_\_
- (4) Will it eliminate or replace a water-dependent use \_\_\_\_\_
- (5) Will it eliminate or replace a recreational or maritime use or resource \_\_\_\_\_
- b) Is the project site presently used by the community neighborhood as an open space or recreation area? \_\_\_\_\_
- c) Will the project protect, maintain and/or increase the level and types or public access to water-related recreation resources or facilities? \_\_\_\_\_
- d) Does the project presently offer or include scenic views or vistas that are known to be important to the community? \_\_\_\_\_
- e) Is the project site presently used for commercial or recreational fishing or fish processing? \_\_\_\_\_
- f) Will the surface area of any local creek corridors or wetland areas be modified by the proposal? \_\_\_\_\_
- g) Is the project located in a flood prone area? \_\_\_\_\_
- h) Is the project located in an area of high coastal erosion? \_\_\_\_\_
- i) Will any mature forest (over 100 years old) or other locally important vegetation be removed by the project? \_\_\_\_\_
- j) Do essential public services or facilities presently exist at or near the site? \_\_\_\_\_
- k) Will the project involve surface or subsurface liquid waste disposal? \_\_\_\_\_
- l) Will the project involve transport, storage, treatment or disposal of solid waste or hazardous materials? \_\_\_\_\_
- m) Will the project involve shipment or storage of petroleum products? \_\_\_\_\_
- n) Will the project involve the discharge of toxic, hazardous substances or other wastes or pollutants into coastal waters? \_\_\_\_\_
- o) Will the project involve or change existing ice management practices? \_\_\_\_\_
- p) Will the project alter drainage flow, patterns or surface water runoff on or from the site? \_\_\_\_\_
- q) Will best management practices be utilized to control storm water runoff into waterfront waters? \_\_\_\_\_
- r) Will the project affect any area designated as a tidal or freshwater wetland? \_\_\_\_\_
- s) Will the project utilize or affect the quality or quantity of sole source or surface water supplies? \_\_\_\_\_

(If additional space is needed, attach Pages the same size as this sheet, and number each.)

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D. REMARKS OR ADDITIONAL INFORMATION TO SUPPORT OR DESCRIBE ANY ITEM(S) CHECKED "YES" (Add any additional sheets necessary)

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If you require assistance or further information in order to complete this form, please contact the Town of Bethlehem Planning Department

\*

Please submit completed form, along with one copy of a site plan and any other supporting documentation to the Town of Bethlehem Planning Department

Preparer's Name (Please print):

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Affiliation:

---

Telephone Number:

---

Date:

---

(If additional space is needed, attach Pages the same size as this sheet, and number each.)

(Complete the certification in the paragraph that applies to the filing of this local law and strike out that which is not applicable.)

**1. (Final adoption by local legislative body only.)**

I hereby certify that the local law annexed hereto, designated as local law No. 1 of 2021 of the (County)(City)(Town)(Village) of Bethlehem was duly passed by the Town Board on March 24 2021, in accordance with the applicable provisions of law.  
*(Name of Legislative Body)*

**2. (Passage by local legislative body with approval, no disapproval or repassage after disapproval by the Elective Chief Executive Officer\*.)**

I hereby certify that the local law annexed hereto, designated as local law No. \_\_\_\_\_ of 20\_\_\_\_ of the (County)(City)(Town)(Village) of \_\_\_\_\_ was duly passed by the \_\_\_\_\_ on \_\_\_\_\_ 20\_\_\_\_, and was (approved)(not approved) (repassed after disapproval) by the \_\_\_\_\_ and was deemed duly adopted on \_\_\_\_\_ 2021, in accordance with the applicable provisions of law.  
*(Name of Legislative Body)*  
*(Elective Chief Executive Officer\*)*

**3. (Final adoption by referendum.)**

I hereby certify that the local law annexed hereto, designated as local law No. \_\_\_\_\_ of 20\_\_\_\_ of the (County)(City)(Town)(Village) of \_\_\_\_\_ was duly passed by the \_\_\_\_\_ on \_\_\_\_\_ 20\_\_\_\_, and was (approved)(not approved) (repassed after disapproval) by the \_\_\_\_\_ on \_\_\_\_\_ 20\_\_\_\_.  
*(Name of Legislative Body)*  
*(Elective Chief Executive Officer\*)*

Such local law was submitted to the people by reason of a (mandatory)(permissive) referendum, and received the affirmative vote of a majority of the qualified electors voting thereon at the (general)(special)(annual) election held on \_\_\_\_\_ 20\_\_\_\_, in accordance with the applicable provisions of law.

**4. (Subject to permissive referendum and final adoption because no valid petition was filed requesting referendum.)**

I hereby certify that the local law annexed hereto, designated as local law No. \_\_\_\_\_ of 20\_\_\_\_ of the (County)(City)(Town)(Village) of \_\_\_\_\_ was duly passed by the \_\_\_\_\_ on \_\_\_\_\_ 20\_\_\_\_, and was (approved)(not approved) (repassed after disapproval) by the \_\_\_\_\_ on \_\_\_\_\_ 20\_\_\_\_. Such local law was subject to permissive referendum and no valid petition requesting such referendum was filed as of \_\_\_\_\_ 20\_\_\_\_, in accordance with the applicable provisions of law.  
*(Name of Legislative Body)*  
*(Elective Chief Executive Officer\*)*

\* Elective Chief Executive Officer means or includes the chief executive officer of a county elected on a county-wide basis or, if there be none, the chairperson of the county legislative body, the mayor of a city or village, or the supervisor of a town where such officer is vested with the power to approve or veto local laws or ordinances.

**5. (City local law concerning Charter revision proposed by petition.)**

I hereby certify that the local law annexed hereto, designated as local law No. \_\_\_\_\_ of 20\_\_\_\_ of the City of \_\_\_\_\_ having been submitted to referendum pursuant to the provisions of section (36)(37) of the Municipal Home Rule Law, and having received the affirmative vote of a majority of the qualified electors of such city voting thereon at the (special)(general) election held on \_\_\_\_\_ 20\_\_\_\_, became operative.

**6. (County local law concerning adoption of Charter.)**

I hereby certify that the local law annexed hereto, designated as local law No. \_\_\_\_\_ of 20\_\_\_\_ of the County of \_\_\_\_\_ State of New York, having been submitted to the electors at the General Election of November \_\_\_\_\_ 20\_\_\_\_, pursuant to subdivisions 5 and 7 of section 33 of the Municipal Home Rule Law, and having received the affirmative vote of a majority of the qualified electors of the cities of said county as a unit and a majority of the qualified electors of the towns of said county considered as a unit voting at said general election, became operative.

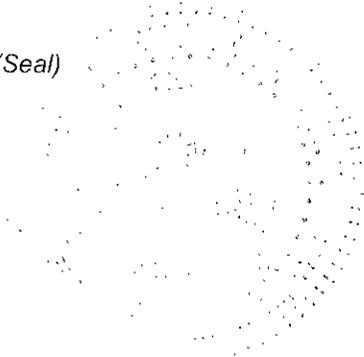
**(If any other authorized form of final adoption has been followed, please provide an appropriate certification.)**

I further certify that I have compared the preceding local law with the original on file in this office and that the same is a correct transcript therefrom and of the whole of such original local law, and was finally adopted in the manner indicated in paragraph \_\_\_\_\_ above.

*Hanni Morgan*  
Clerk of the county legislative body, City, Town or Village Clerk or officer designated by local legislative body

Date: March 25, 2021

(Seal)



# APPENDIX B – HENRY HUDSON PARK MASTER PLAN



## Town of Bethlehem: Henry Hudson Park Master Plan Final Report

**Prepared for:**

The Town of Bethlehem, New York  
Department of Economic Development & Planning &  
Parks & Recreation Department  
September 2017



**Prepared by:**



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# Introduction



Henry Hudson Park (HHP) is a 51 acre riverfront park located in the Hamlet of Selkirk, within the Town of Bethlehem, New York, and just south of the City of Albany. Henry Hudson Park is a site design project within the larger Town of Bethlehem LWRP context that has opportunity to recharge utilization, and be harnessed as an economic booster through resilient place making and programming. With the help of the Town of Bethlehem and community members, the design team was able to analyze existing conditions, its context area, and gather information from the community to produce a master plan that utilizes the parks full potential.

**The stated project vision statement is:**

***“To create a place of passive and active gather for local and regional users while utilizing the site responsibly and resiliently in order to create economic growth to serve a greater network within the LWRP scope.”***

Currently, the site is positioned remotely on the western shore of the Hudson River in the town of Selkirk and seven miles from downtown Albany. The site has limited pedestrian access being separated by route 144 and the New York State Thruway, which makes it a challenge to become the economic generator that it has the potential to be. The site has high potential to be a regional attraction for its location on the Hudson River with fishing access and full boat launch amenities.

The overall goals of the project are to stimulate:

1. Opportunities for increased utilization of park spaces
2. Year-round outdoor recreation;
3. Improved connections throughout the park

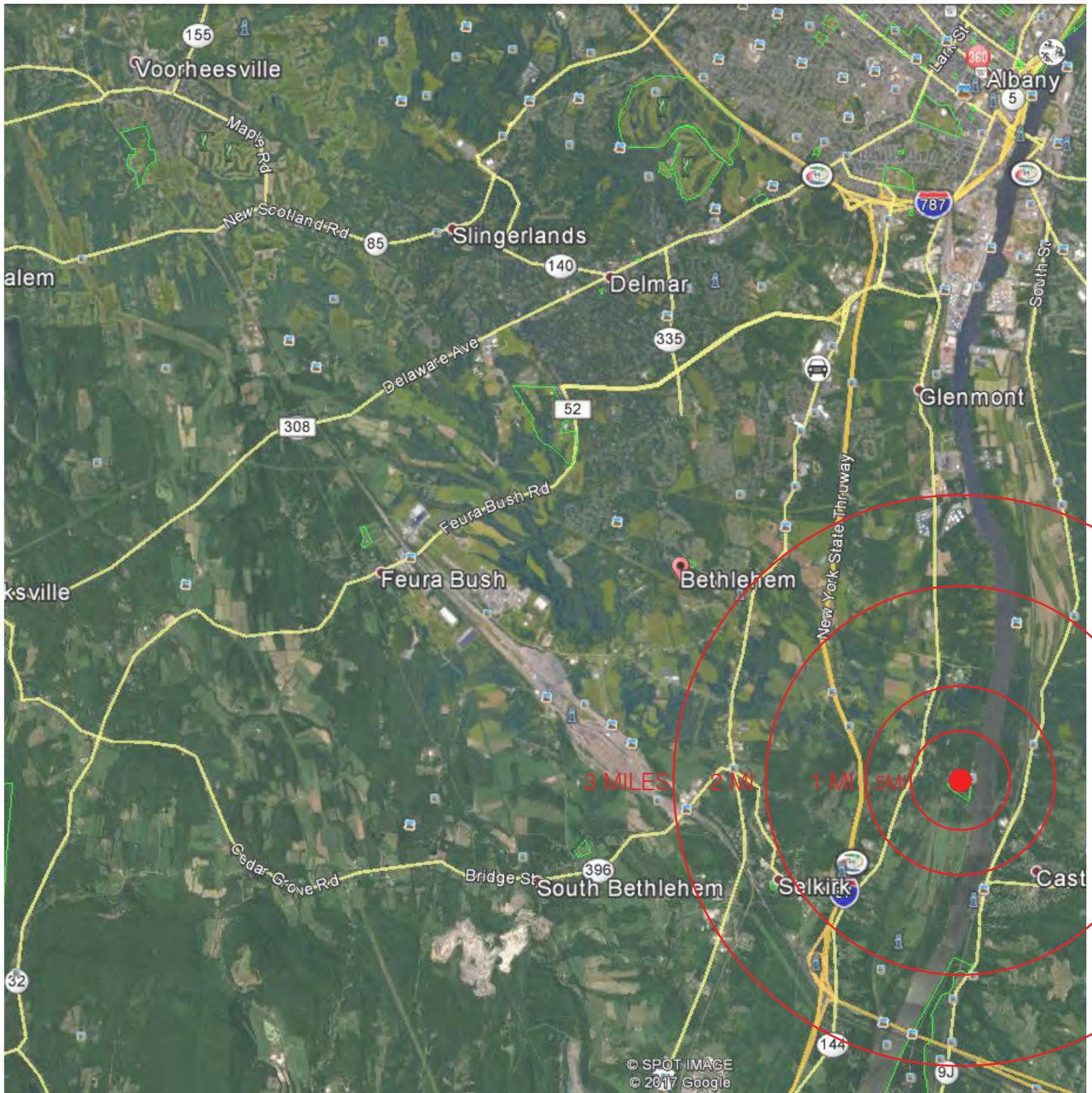
Henry Hudson Park has the potential to capture regional and local users and become a more widely recognized and utilized location for active and passive uses.



Hudson River Shoreline



Sims Metal Management Along the Hudson River



Context image indicating Henry Hudson Park's relationship to nearby towns.

# Existing Conditions



Lyons Road looking north towards the Park Pavilion.



Concrete capped shoreline cribbing looking south



Kayak/Canoe launch into the Vroman Kill, south of site



State boat launch to northern side of site

## Geographic

Henry Hudson Park is located off of Route 144 in the Hamlet of Selkirk, New York. The park is nestled between the Hudson River at its Eastern Shore and the Vroman Kill at its Southern Shore, both offering opportunities for motorized and car-top boating, fishing, recreation, and picnicking. The park is 51 acres and currently utilizes 11 acres for active a passive uses. Much of the remainder of the site is minimally disturbed forested wetland. The utilized 11 acres consists of a half mile linear stretch of riverfront park area that is disconnected from the rest of the site by Lyons Road, which runs parallel to the riverfront. The road separates the main parking from the riverfront park, creating an unsafe condition. The park's main pavilion and softball field, which are both heavily used, are also separated from the remainder of the parks amenities by Lyons Road.

## North to South Experiences

- Public Boat Launch
- Boat Trailer Parking
- Gazebo
- Fishing Pier
- Volleyball Court
- Shaded Picnic Area
- Pavilion
- Playground
- Softball Field
- Canoe/Kayak Launch



Henry Hudson Park is 51 Acres

### Historical

The park's name; Henry Hudson Park, acknowledges the history that started there for the Town of Bethlehem. The Hudson River is thought to have first been explored by Europeans in 1609 when Henry Hudson explored the section between the New York Harbor up to present day Albany. Hudson's ship the Half Moon, is believed to have landed at the shores of Henry Hudson Park during this time which led to European settlement in this desirable area.

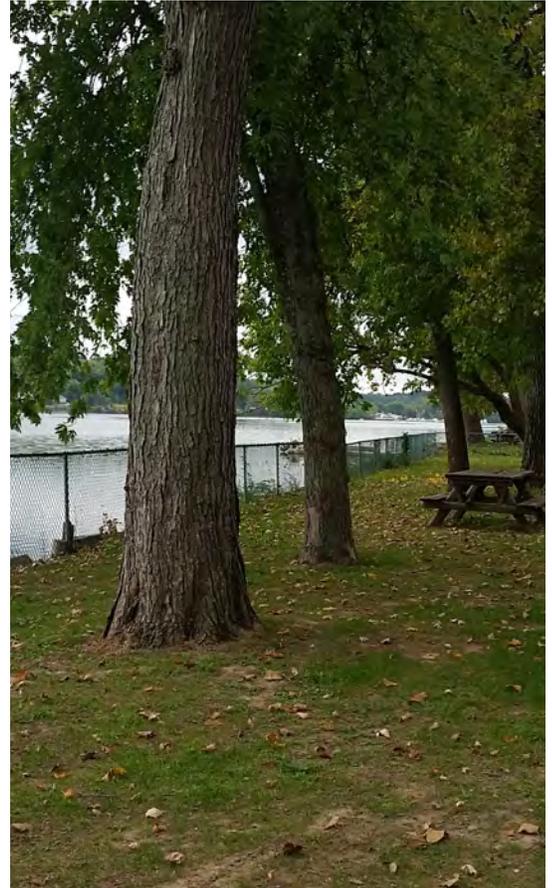
In the early 1900's, Bethlehem's riverfront was utilized for the harvesting of ice during the winter months.

A large sunken timber barge lays beneath the river water on the north end of the park, just off the shoreline.

### Site Amenities

The park area consists of expansive green lawn shaded by mature shade trees. The northern end of the park is utilized by fishermen and boaters with the New York State boat launch being heavily used as the Town of Bethlehem's only public access to the water. Just south of the launch is a small gazebo and fishing pier that is heavily used during the striper season.

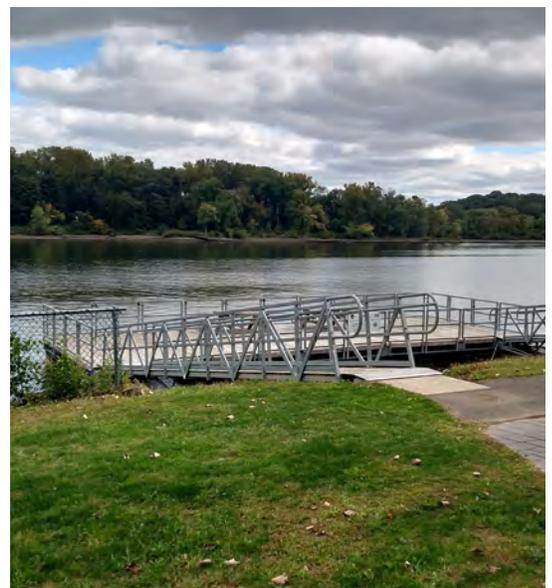
The following area momentarily transitions into a pine grove that creates an opportunistic space within the park. It currently houses a volleyball court and picnic area. People currently informally park their cars in this area, which interrupts the park green and pedestrian connectivity within the park.



*Chainlink fence separating park visitors from shoreline*



*Boat Launch and shoreline at the northern end of site.*



*Fishing Pier towards north end of HHP*



Existing Volleyball Court within the pine grove



An Underutilized View of the Vloman Kill



Southern Tip of HHP Where Vloman Kill Converges with the Hudson River.



Kayak/Canoe Launch

Continuing south along the linear park, the experience does not change drastically from one picnic area to the next, and does not host a diversity of uses. The current programming of the park is predominantly comprised of open green and picnic tables. The physical and visual interaction with the riverfront is interrupted by the chain link fence meant to separate park visitors from the shoreline, limiting the views gained by picnickers or other park visitors.

The majority of the parking is positioned on the west edge of Lyons Road. Most predominantly is the general park use parking lot which sits just on the other side of Lyons Road, opposite from the majority of the park amenities. The drive aisle and the start of the parking lot are separated only by the painted line marking the drive lane creating an unsafe condition as the majority of park users must cross Lyons Road to enter the riverfront park picnic area. The parking lot is not buffered from Lyons Road, and when full, the parked cars screen pedestrians from view while attempting to cross the road. The direct connection to the road also enables visitors to cross at any point along the length of the lot, which adds to the unsafe and unpredictable nature of the parking areas relationship to the park. This condition is compounded by the location of the park's picnic pavilion, which sits just outside of the north-western corner of the parking lot in a narrow area between the wood line and the pavement. Not only does the pavilion location create a safety concern as visitors must cross the road and a busy parking lot, but the experiential consequences as one of the parks primary amenities overlooking a parking lot, which blocks the view of the park and the river.



Pavilion and Parking Lot in relation to Lyons Road



Parking lot lacking any buffer from Lyons Road



Parking lot and Drive Aisle share the same edge



View from Pavilion of Lyons Road and Parking Lot



Pavilion overlooking parking lot and Lyons Road



Eroding Shoreline at Henry Hudson Park



Eroding Shoreline at Henry Hudson Park



Eroding Shoreline and fence at Henry Hudson Park



Flood Map showing a 1% Annual chance of flooding at HHP  
07

### Erosion:

The shoreline at Henry Hudson Park is dilapidated and in disrepair. A shoreline stabilization study was conducted in 2011 which strategizes and prioritizes a plan for a shoreline construction process. The shoreline was originally built by federal dredging initiatives in the 1860's where dredged soils were placed upland and contained through the use of timber cribs containing rip-rap stone. Later on, a concrete capping was installed. Large vessels that navigate the shipping channel create large wakes that have caused damage to the docks and bulkheads in Henry Hudson Park. Much of the eroding shoreline is currently blocked, both visually and physically, by an unsightly, four foot chain link fence. In several areas the fence has been undermined by shoreline erosion.

### Floodplain:

Henry Hudson Park rests in a floodplain type A13; having a 1% chance of annual flooding. In recent years, the park has seen flooding levels nearing 4 feet at the restroom structure located at the southern end of the primary parking lot.

### Tides:

The Hudson River is a 315 mile river that flows north to south, originating in the Adirondack Mountains and draining into the Atlantic Ocean. Bethlehem's waterfront is in tidal reach and the tides of the Hudson River are influential as far north as Troy, New York.

### Wetland

Among the sites 51 acres is a 25 acre federally recognized Freshwater Forested/Shrub Wetland. The wetland wraps around a 1.75 acre high point in the center of the forest. Along the banks of the Vloman Kill are Federally Regulated Freshwater Wetlands. These wetlands are incredibly valuable to Henry Hudson Park for their species and habitat diversity, flood control, and erosion control. They provide an experience that is currently not utilized as an amenity to Henry Hudson Park. The wetland includes a variety of high points and low points which create a diversity of experiences and opportunities.



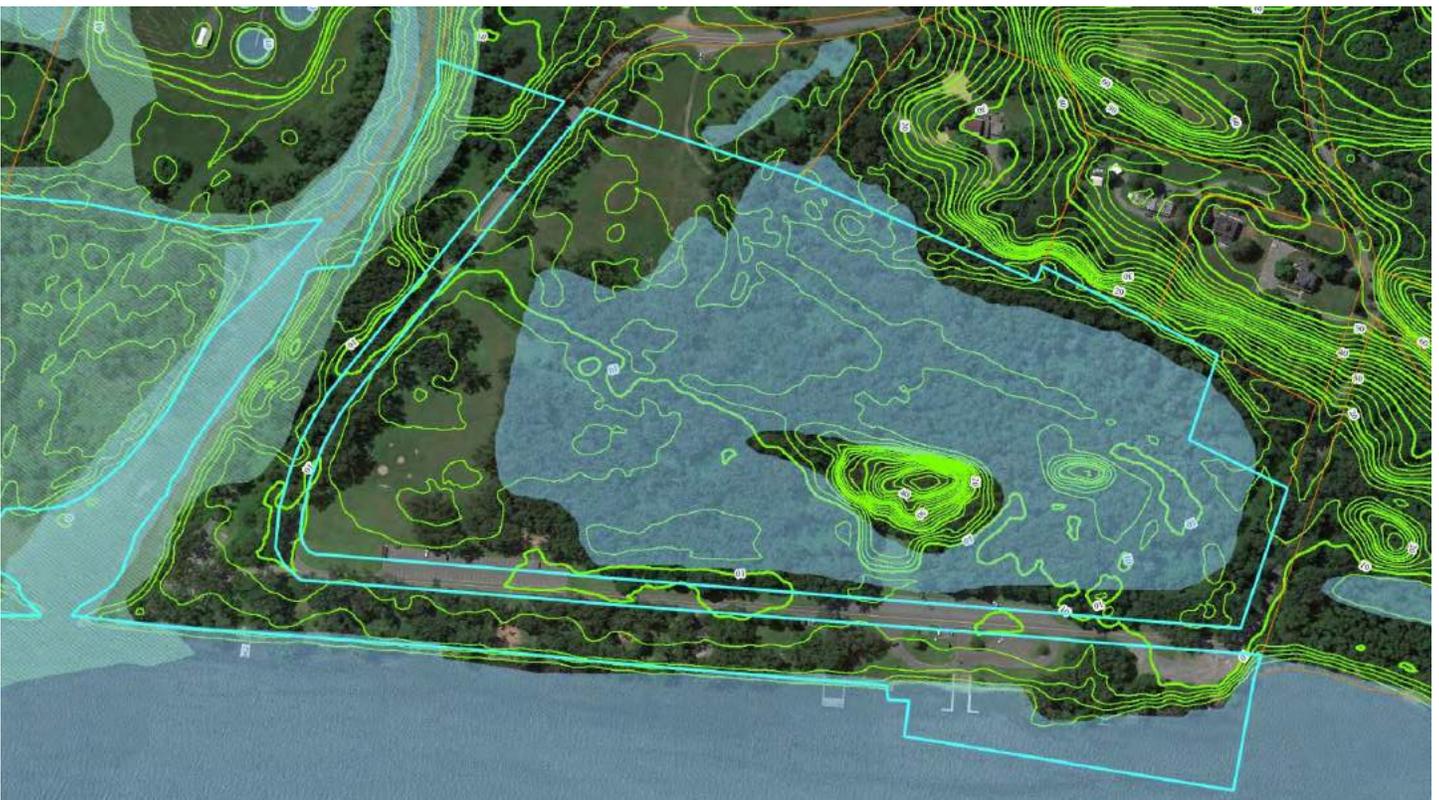
Forested Wetland Makes up a large part of the underutilized sections of Henry Hudson Park



A large barge travels the Hudson River heading north towards Albany



Shoreline erosion often caused by wakes from large barges and boats navigating the Hudson River for shipping.



Wetland Inventory and Analysis by New York State Department of Environmental Conservation





### Public Walk 'n Talk

As part of a full-day outreach event for the LWRP project, the design team conducted a public Walk-n-Talk at Henry Hudson Park. The Walk-n-Talk allowed the design team to experience the park first-hand with residents, stakeholders, and town representatives. The group discussed the park's existing assets and liabilities, as well as opportunities for enhancing the park and expanding its programming. The Walk-n-Talk Ideas and Comments included:

- *Attract regional visitors while still considering existing local users*
- *Access to Park: speeds too high, entry signage, gateways*
- *Direct vehicle drop off at kayak/canoe launch*
- *Incorporation of Natural and historical interpretive signage*
- *Include more bicycle amenities and regional connections*
- *Increase potential for wedding venue and other events*
- *Consider alternative to shoreline chain link fence*
- *Create a short-term plan to work within a long-term plan*
- *Reconfigure parking and Lyons Road to improve pedestrian connectivity in park*
- *Create looped path system with riverfront walk and river overlooks*
- *Create multi-purpose path that loops around the entirety of HHP with access to wooded areas*



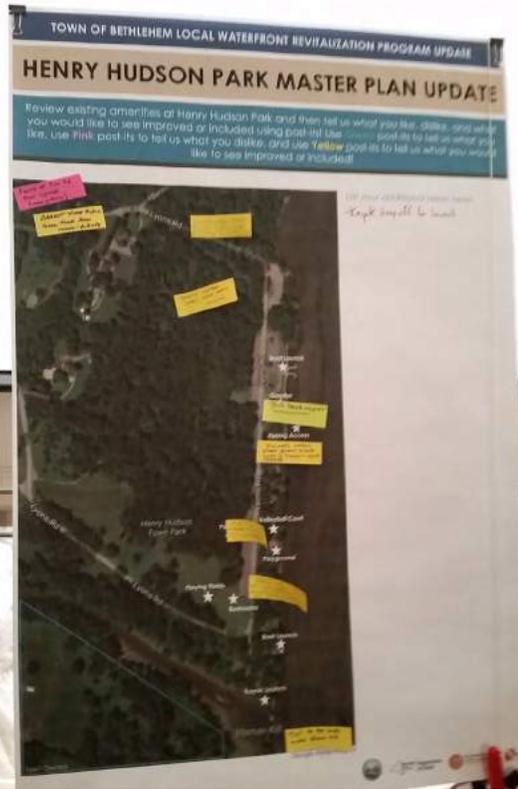
PLACE Alliance discusses the project scope before the Walk-n-Talk



Walk-N-Talk group discusses the concerns about the existing parking lot and pavilion location



Walk-N-Talk group discusses options for the river access and river views



Henry Hudson Park Activity Station led by MJ Engineers at the Public Open House



Guests interpret LWRP maps during the Open House



Ian Law of PLACE Alliance presents feedback received from the public open house to project committee members

## Design Workshop

PLACE Alliance utilized a “Charrette” based design day that enabled the design team, client team and representatives, key stakeholders, and all necessary project consultants to actively engage in the execution of a distinctive project. Working in a highly collaborative and cooperative “charrette” manner enabled the design team to have continuous feedback throughout the design process and vision crafting, allowing greater communication and understanding as every design stage progresses through client input, validation and participation.

## Open House

While the design team was busy producing master plan drawings during the design charrette, the planning team was conducting a public open house to gather more public information. The open house component of the public event allowed participants to informally walk through several activity stations to learn about the project at their own pace and provide input and ideas. At the Henry Hudson Park station, participants were requested to review the existing amenities at the park identified on the map provided. The station was intended to supplement the Walk ‘n Talk event. Participants were prompted to identify what they like, dislike or would like to see improved or included in Henry Hudson Park. Ideas generated were comparable to those presented in the community Walk ‘n Talk.

- *Access at River Road is poorly signed*
- *Both access roads (Barent Winne Road & Lyons Road) need better signage and lower speeds*
- *Crossing from parking lot to park and playground is dangerous*
- *Trails along the Vroman Kill and across the Vroman Kill to connect to Scenic Hudson Trail are needed*
- *Pavilion and tables should be replaced*
- *Vehicle kayak/canoe drop off at launch is desirable*
- *Sink power lines with road improvements in the future*

In addition to gathering input from the maps and station boards, guests had the opportunity to provide input on written comment forms. Comments provided included:

- *Food trucks and boat rentals on peak days and events*
- *Connect park to Moh-He-Con-Nuck Preserve*
- *Keep in mind the windy areas close to the shore*

Other Comments included

- *Self-guided history tour starting at Henry Hudson Park*
- *Historic kayak tour guided by Town Historian*
- *Mosquitoes in HHP - could be addressed with bat boxes*
- *Boat storage at HHP*
- *Birding and bird identification informations at HHP*

## Design Workshop Presentation

Following the public Walk-n-Talk, the design team spent the remainder of the day performing an intensive internal design workshop to generate a preliminary master plan for Henry Hudson Park, that would be presented that evening at the LWRP Public Open House and Presentation. The preliminary plan design was rooted in feedback from all project meetings, including committee meetings, the boat tour, and the morning Walk-n-Talk. Prior to presenting the conceptual Park Master Plan at the Open House and Presentation, the design team included as overview and preliminary analysis of existing conditions, followed by a discussion of key design considerations, which included:

- *Who is the audience we are designing for? Region/local? How will the design benefit the Town of Bethlehem?*
- *Accommodate existing uses - Fishermen during striper season, boaters, kayak & canoe*
- *Expand park to utilize entirety of park property*
- *Accommodate users of all ages and abilities*
- *Improve park functionality, programming and traffic/parking safety*
- *Work with existing shoreline stabilization strategy*
- *Encourage year long recreation, physical activity and exploration of nature*
- *Maintain passive nature of Henry Hudson Park*
- *Design resilience for flooding conditions*

Following the discussion of the key design considerations, the team presented the conceptual park master plan for Henry Hudson Park. The deliverances included a diagram of the overall park recommendations, a detailed enlargement plan of the riverfront park area improvements, and supporting hand sketches and photographic examples of similar design ideas. The Conceptual Master Plan outline the following park enhancements:

- *Improve pedestrian safety between the riverfront park area and parking lot*
- *Create an interconnected pedestrian loop system at the riverfront park area that will link all riverfront amenities, diversify park spaces, create riverfront overlooks and access, and collectively enrich the park experience and utilization for visitors of all ages and abilities*
- *Increase utilization of entire park*
- *Connect Henry Hudson Park to regional trail networks*



PLACE Alliance discusses the park Master Plan with community members



Guests view park master plans after the presentation given



PLACE Alliance and the Town of Bethlehem Parks & Recreation review the conceptual master plan of HHP



Open House guests make their way to each informative station

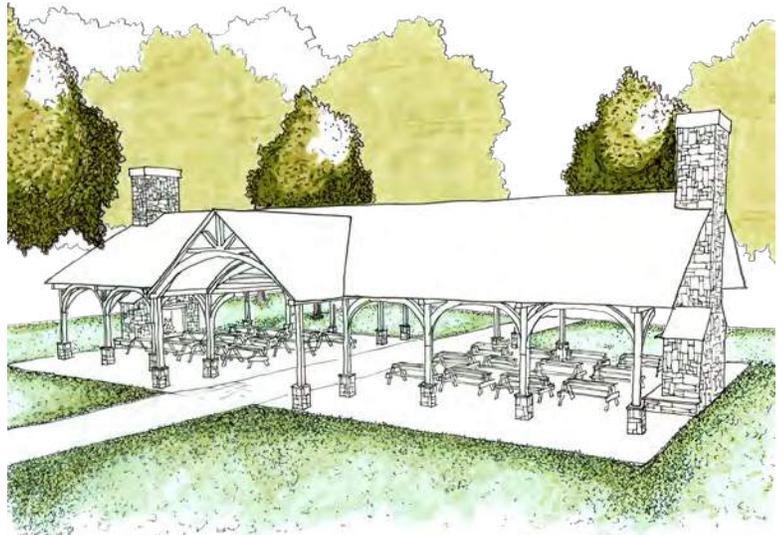
# Conceptual Park Master Plan



After the day-long design workshop presentation, the design team adjusts the original drawings based on recommended revisions



Riverfront Park Enlargement Plan



Proposed Park Pavilion Structure would be centrally located within the park



Proposed Restroom Structure to Complement the Proposed Park Pavilion.



Proposed Trellis Swing Structure at the shoreline of the Hudson River

# Henry Hudson Park Master Plan: Recommendations

## Final Drawings

Following a series of revisions and refinements based upon direct feedback from the public, key stakeholders, and the Project Advisory Committee, the Henry Hudson Park Master Plan graphic was produced and presented at the LWRP Public Open House. The open house provided a final opportunity for public discussion about the park's plan and future enhancements. The master plan introduced three primary strategies that shape the foundation for the parks enhanced utilization and functionality. The three primary strategies are listed below with a more detailed description in the following pages.



*PLACE Alliance and community members discuss the proposed Henry Hudson Master plan during the final public open house and presentation.*



Henry Hudson Park Master Plan showing Riverfront Park, and conceptual multi-purpose and trail paths



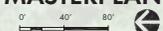
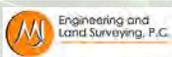
Existing Road Path



Proposed Road Path

**1. Improve Pedestrian Safety/Park Utilization: Shifting Segment of Lyons Road**

- Reconfigure Lyons Road to the west to place existing parking lot between road and riverfront park area
- Eliminates need to cross Lyons Road
- Creates opportunity to expand parking area (existing 82, proposed 144)
- Remove existing bathroom structure and replace with compost bathroom facility within Riverfront park area
- Improve traffic control
- Create the opportunity to introduce a larger pavilion, immersed in the park with a view of the Hudson River



**2. Improve Park Connectivity: Creation of an Interior Loop River Walk**

- Provides .66 mile loop around riverfront park area
- Links riverfront amenities from fishing pier and boat launch area to new canoe/kayak launch
- Delineates specific areas within the riverfront park area
- Provides opportunity for formal river overlooks
- Provides direct connections to future amenities:
  - Natural playground/obstacle challenge course
  - Picnic pavilion/Restrooms
  - Volleyball, bocce, horseshoes

**3. Utilize Entire Park: Creation of a Trail Network**

- Provides access to the entire park property
- Expands park from 11 acre riverfront park to 51 acres (25.6 acres of woods)
- Creates greater connectivity to key park amenities
- Provides opportunity for future regional connections
- Creates an approximately 1.5 mile loop (1.00 in woods)





*Enlargement of Lyons Road Realignment and Riverfront Park*

### **Strategy #1: Improve Pedestrian Safety/Park Utilization**

In effort to dramatically improve the safety, functionality, and visitor experience at Henry Hudson Park, the Master Plan proposes a moderate re-alignment of a key segment of Lyons Road. Currently, Lyons Road runs directly between the riverfront park's passive recreation area and the primary parking lot, forcing visitors to cross Lyons Road to enter the park. This condition is compounded by the existing location of the parks picnic pavilion, which sits just off the north-western corner of the parking lot, requiring pavilion users to cross both the parking lot and Lyons Road to access the riverfront park area and the Hudson River. This is not only an unsafe condition, but it also limits the visitor's experience as the view of the park and river from the picnic pavilion are blocked by the cars in the parking lot.

The Master Plan recommends that the section of Lyons Road beginning just north of the existing parking area be shifted directly west of the parking area and connect to the east/west section of Lyons Road with a perpendicular intersection. This adjustment provides several benefits to the riverfront park area, but none are more important than the impact it will have to the parks pedestrian safety, as visitors once parked, will be able to enter the park and all the riverfront area amenities without ever crossing Lyons Road. The realignment also enlarges the connected greenspace of the riverfront area providing the opportunity to locate amenities in locations that complement one another and enrich the overall experience of the park. Another positive result of the road realignment is that it requires the removal of the existing picnic pavilion, which is nearing the end of its life cycle, and in-turn creates the opportunity for a new centralized grand pavilion in the heart of the riverfront green overlooking the Hudson River. The final component of Strategy 1 maintains the remaining roadway from the old Lyons road alignment that provides access to the canoe/kayak launch area. The master plan proposes that this area be enhanced with a new canoe/kayak drop-off and an expanded formal parking area. The parking area at the canoe/kayak launch will also have direct connections to the proposed river walk and multi-purpose path system.

### **Strategy #2: Improve Park Connectivity and Visitor Experience**

Although the existing riverfront area at Henry Hudson Park offers several significant amenities that provide access to the Hudson River, such as the boat launch, fishing pier, and canoe/kayak launch; most of the riverfront park area is relatively unprogrammed and disconnected greenspace utilized for picnicking. The riverfront green generally looks and feels the same and offers very little in the form of experiential diversity. For example, a visitor picnicking at the northern end of the riverfront green would have very little reason to walk and explore the southern end of the green because the experience does not change.

The Master Plan looks to have the riverfront green function more like a park through the creation of a river walk loop that will wrap around the entirety of the riverfront green area. The .66 mile loop will link the riverfront's key amenities, including the proposed grand pavilion and compost restroom facilities, the boat launch and fishing pier at the north end, and the canoe/kayak launch at the mouth of the Vloman Kill. The river walk will provide overlook and seating areas along the riverfront with enhanced views of the river. The master plan also recommends the removal of the chain link



Wooded Area in Henry Hudson Park



Lyons Road facing north

fence that currently sits atop the riverbank creating an unsightly visual and physical barrier. The plan recommends that the fence be replaced with low native landscaping to provide a safe buffer between the proposed river walk and the river bank. This will give children a visual queue, but still allow fishermen to gain access to the shoreline. The river walk loop will also provide inter-connections within the park that will define space and provide opportunities for new amenities like the proposed natural playground and adventure playground, or the bocce and horseshoe area. In addition to providing direct connections to park amenities, and enhancing the parks diversity through the creation of defined outdoor spaces, the river walk loop also provides a great opportunity for visitors of all ages and abilities to get exercise in a safe and beautiful environment.

### **Strategy #3: Utilize the Entirety of the Park Land**

Despite having 51 acres of land, Henry Hudson Park currently only utilizes about 11 acres along the riverfront green. The wooded wetland area (25 acres), open fields, and wooded lands along the Vloman Kill offer countless opportunities for passive recreation that will attract new visitors to Henry Hudson Park. The master plan seeks to provide access to these under utilized lands within the park through the addition of a multi-purpose path system that wraps around the general perimeter of Henry Hudson Park. The new path system will provide a diverse 1.5 mile loop that offers a variety of year-round recreational opportunities, as the path will extend the river walk to the north and west around the perimeter of the large wooded wetland, through the open field just south of the wetland, and along the banks of the Vloman Kill until the path connects back to the river walk near the canoe/kayak launch area. In addition to providing year-round recreational opportunities that utilize the extent of the park's 51 acres, the multi-purpose path also provides the opportunity to create internal nature trails within the wooded wetland area that offer tremendous opportunity for interpretive learning about the wetlands ecology and wildlife habitat. The internal trail network will provide multiple access points to the park's highest point, where a future lookout tower can provide long views of the Hudson River while overlooking the wetland. The loop path also provides access to secondary park structures and picnic areas at the north and south ends of the riverfront, which offer a more secluded riverfront picnic experience. The path activating the wooded area along the Vloman Kill will coexist with low-ropes challenge stations that engage both kids and adults in problem solving challenges. The path system connects active recreation areas like the existing softball field and the proposed disc golf course. Lastly, the proposed multi-purpose path system at Henry Hudson Park will provide the opportunity to make future connections to regional trail networks and nearby attractions. The plan demonstrates a future connection to the south by incorporating a pedestrian bridge across the mouth of the Vloman Kill that would connect park visitors to the Scenic Hudson's Baker Farm project.

The strategies for Henry Hudson Park's master plan can be implemented incrementally over time as each component of the master plan will improve the park's utilization and visitor experience. Collectively, the recommendations of the Master Plan look to maximize the potential of the park and enrich the quality of life for town residents, as well as demonstrating what the town has to offer its regional visitors.

# Flexible Project Phasing:

**01 | Shoreline Stabilization**

**02 | Riverfront Loop Promenade**

**03 | Natural Playground/Adventure Playground**

**04 | Park Pavilion/Restrooms**

**05 | Road Realignment & Parking Lot Extensions**

**06 | Recreation Components**

**07 | Multi-Purpose Loop Trails**

**08 | Low Ropes Course**

**09 | Secondary Picnic Areas**

**10 | Passive Nature Trails and Boardwalks**

**11 | Pedestrian Bridge to Baker Farm**



Working with Town staff, a flexible project implementation plan was produced, outlining how improvements to Henry Hudson Park can be made as funds become available. The projects have been strategically divided to create feasible steps to apply for funding. Some projects should be completed before others begin; for example, the proposed grand pavilion should be constructed before the existing pavilion is removed for the Lyons Road realignment. Several projects can be accomplished independently, at any time, not relying on the completion of any other project. Although some projects should be accomplished before others, the realistic project implementation of Henry Hudson Park will be dependant on available funding, and the priorities of the community. The shoreline stabilization project is Bethlehem's number one priority for Henry Hudson Park. Many of the projects outlined in this report will be contingent on the completion of the shoreline stabilization.

## Potential Permits & Consultation:

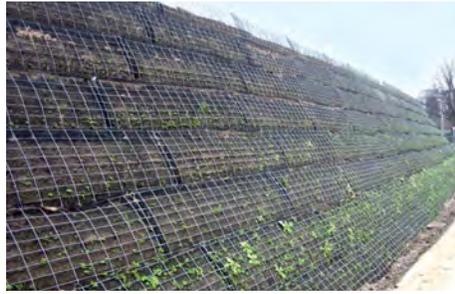
- SWPPP
- SEQR
- Selective tree removal (Arborist)
- Wetland delineation
- NYS Freshwater Wetlands Permit
- NYS Protection of Waters Permit
- Floodplain Development Permit
- Rare Animals, Rare Plants, and Significant Natural Communities Permit
- Archeological assessment

# Flexible Project Phasing: PROJECT 1





Precedent Images: Rip-Rap



Precedent Images: Vegetated Geogrid



Precedent Images: Joint Planting

# 1

## PROJECT 1

# SHORELINE STABILIZATION

**Project 1 Total: \$2.5 Million**

### Components

- Shoreline Stabilization Study Recommendations
  - + Rip-rap
  - + Joint planting
  - + Vegetated geogrid
  - + Live crib wall
  - + Timber bulkhead

### Notes

- The shoreline stabilization project implementation is dependant upon funding and can be constructed in phases recommended in the Shoreline Stabilization Study manual
- This project requires Flood Analysis and permitting



Shoreline Phasing Sections-Refer to Shoreline Stabilization Study

# Flexible Project Phasing: PROJECT 2





Precedent Image: Waterfront Promenade



Precedent Image: Park Loop Trail



Precedent Image: Waterfront Trail

# 2 PROJECT 2 RIVERFRONT LOOP PROMENADE

**Project 2 Total: \$970,500**

**Project 2A: \$780,000**

**Project 2B: \$60,500**

**Project 2C: \$130,000**

*Costs include 15% Construction Contingency & 12% A/E & Permitting Fee's*

*Costs do not include Arborist, tree removal or removal of chain link fence*

## Components

### 2A

- 8'-10' wide concrete riverfront walk along shore
- 5-8' wide concrete loop path connecting to riverfront walk
- 5' wide concrete sidewalk connectors within loop\*
- Removal of Chain Link Fence
- Natural buffer planting between walk and river bank

### 2B

- Pedestrian scale lighting along riverfront walk\*

### 2C

- Primary river pverlook
- Trellis swing\*
- Benches, picnic tables, trash receptacles, bike racks\*

## Alternates

- Reduce riverfront walk from 10 feet to 8 feet
- Potential to use bituminous paving in replacement of concrete

## Notes

- Have an arborist evaluate the trees along the riverfront park prior to construction

\* May Be Accomplished in Later Projects

\* Dependant on Shoreline Stabilization

# Flexible Project Phasing: PROJECT 3





Precedent Image: Natural Playground Tunnel/Hill



Precedent Image: 'Off-the-Shelf' Equipment



Precedent Image: Natural Playground Component

# 3

## PROJECT 3 NATURAL PLAYGROUND/ ADVENTURE PLAYGROUND

**Project 3 Total: \$80,000**

*Costs include 15% Construction Contingency & 12% A/E & Permitting Fee's  
Cost of off-the-shelf equipment will fluctuate*

### Components

- Community gathered equipment
- Off the shelf equipment\*
- Land manipulation (hills, depressions,tunnels)
- Mulch bedding

### Alternates

- Donated labor
- Donated materials

### Notes

- The price of the natural playground will fluctuate based on how many off the shelf items are purchased.

\*May Be Accomplished in Later Projects

# Flexible Project Phasing: PROJECT 4





Precedent Image: Albany Pine Bush Compost Toilet



Precedent Image: Park Pavilion with Fire Place



Precedent Image: Fireplace Pavilion

# 4 PROJECT 4 PAVILION & RESTROOMS

**Project 4T total: 500,000**

**Project 4A: \$200,000**

**Project 4B: \$100,000**

**Project 4C: \$200,000**

*Costs include 15% Construction Contingency & 12% A/E & Permitting Fee's*

## Components

### 4A

- New park pavilion

### 4B

- Restroom north\*

### 4C

- Restroom south\*

## Alternates

- Connect to water instead of composting restrooms

## Notes

- The Pavilion can be designed and built to meet the allocated budget allowance
- The restrooms estimated are assumed to be new 4-stall and 2-stall compost toilet structures.
- The proposed pavilion should be implemented before the existing is removed for the Lyons Road realignment

\*May Be Accomplished in Later Projects

\* Dependant on Shoreline Stabilization

# Flexible Project Phasing: PROJECT 5



# 5

**Project 5 Total: \$600,000**

*Costs include 15% Construction Contingency & 12% A/E & Permitting Fee's*

## PROJECT 5

# LYONS ROAD REALIGNMENT/ PARKING EXPANSION

### Components

- Remove old pavilion
- Realign Lyons Road
- Remove existing road and replace with topsoil and grass
- Extend existing primary parking south
- Full depth construction of kayak/canoe parking\*
- Cross walks from parking lot to softball field

### Alternates

- Kayak/canoe site could potentially function as gravel parking area
- Kayak/canoe parking could be done as separate project

### Notes

- The proposed pavilion should be implemented before the removal of the existing structure for road reconstruction

\*May Be Accomplished in Later Projects

# Flexible Project Phasing: PROJECT 6





Precedent Image: Bocce Ball



Precedent Image: Horseshoes



Precedent Image: Kayak Locker

# 6

## PROJECT 6 PARK RECREATION

**Project 6 Total: \$100,000**

*Costs include 15% Construction Contingency & 12% A/E & Permitting Fee's*

### Components

- Volleyball courts
- Horseshoes
- Bocci ball
- Disc golf\*
- Additional overlooks\*
- Kayak/canoe locker\*

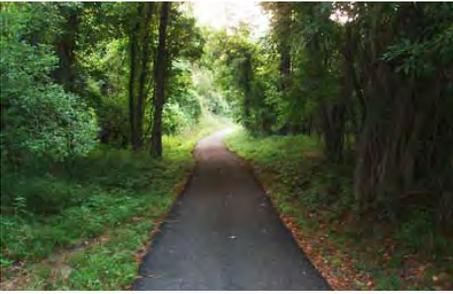
### Notes

- The proposed placement of the volleyball and horseshoes is dependant on the road realignment

\*May Be Accomplished in Later Projects

# Flexible Project Phasing: PROJECT 7





Precedent Image: Paved Trail



Precedent Image: Boarded Nature Trail



Precedent Image: Passive Dirt Trail

# 7

## PROJECT 7 MULTI-PURPOSE PATHS

**Project 7 Total: \$500,000**

*Costs include 15% Construction Contingency & 12% A/E & Permitting Fee's*

### Components

- 8' Wide multi-use asphalt loop trail around perimeter to wetland linking north and south ends of riverfront park area for pedestrians, bicyclists, rollerblades etc.
- Bicycle Repair Station

### Alternates

- Multi-purpose path could be compressed stone gravel

### Notes

- Paths along Vloman Kill and low ropes course should be planned to coexist
- This project will require a wetland delineation and permitting.

\* May Be Accomplished in Later Projects

# Flexible Project Phasing: PROJECT 8





Precedent Image: 'Off-the-Shelves' Station



Precedent Image: Low Ropes Station



Precedent Image: Low Ropes Station

# 8

## PROJECT 8 LOW ROPES COURSE

**Project 8 Total: \$40,000**

*Costs include 15% Construction Contingency & 12% A/E & Permitting Fee's*

### Components

- Low ropes stations
- Mulch bedding at stations

### Alternates

- Community installed low ropes stations
- These challenges can be created simply involving wooden platforms and ropes until off the shelf items are available through funding sources

### Notes

- Paths along Vloman Kill and low ropes course should be planned to coexist
- This area may flood and may require permitting

\*May Be Accomplished in Later Projects

# Flexible Project Phasing: PROJECT 9





Precedent Image: Picnic Structure



Precedent Image: Small Picnic Structure



Precedent Image: Picnic Structure as Stage

# 9

## PROJECT 9 SECONDARY PICNIC AREAS

**Project 8 Total: \$250,000**

**Project 9A: \$125,000**

**Project 9B: \$125,000**

*Costs include 15% Construction Contingency & 12% A/E & Permitting Fee's*

### Components

#### 9A

- Northern secondary park pavilion

#### 9B

- Southern secondary park pavilion

\* May Be Accomplished in Later Projects

\* Dependant on Shoreline Stabilization

# Flexible Project Phasing: PROJECT 10





Precedent Image: Boardwalk Nature Trail



Precedent Image: Nature Trail with Interpretive Signage and Bench

# 10

## PROJECT 10 NATURE TRAILS

**Project 9 Total: \$365,000**

**Project 10A: \$20,000**

**Project 10B: \$320,000**

**Project 10C: \$25,000**

*Costs include 15% Construction Contingency & 12% A/E & Permitting Fee's*

### Components

#### 10A

- Clearing and grubbing of passive trails

#### 10B

- Implementation of boardwalks over wet areas\*

#### 10C

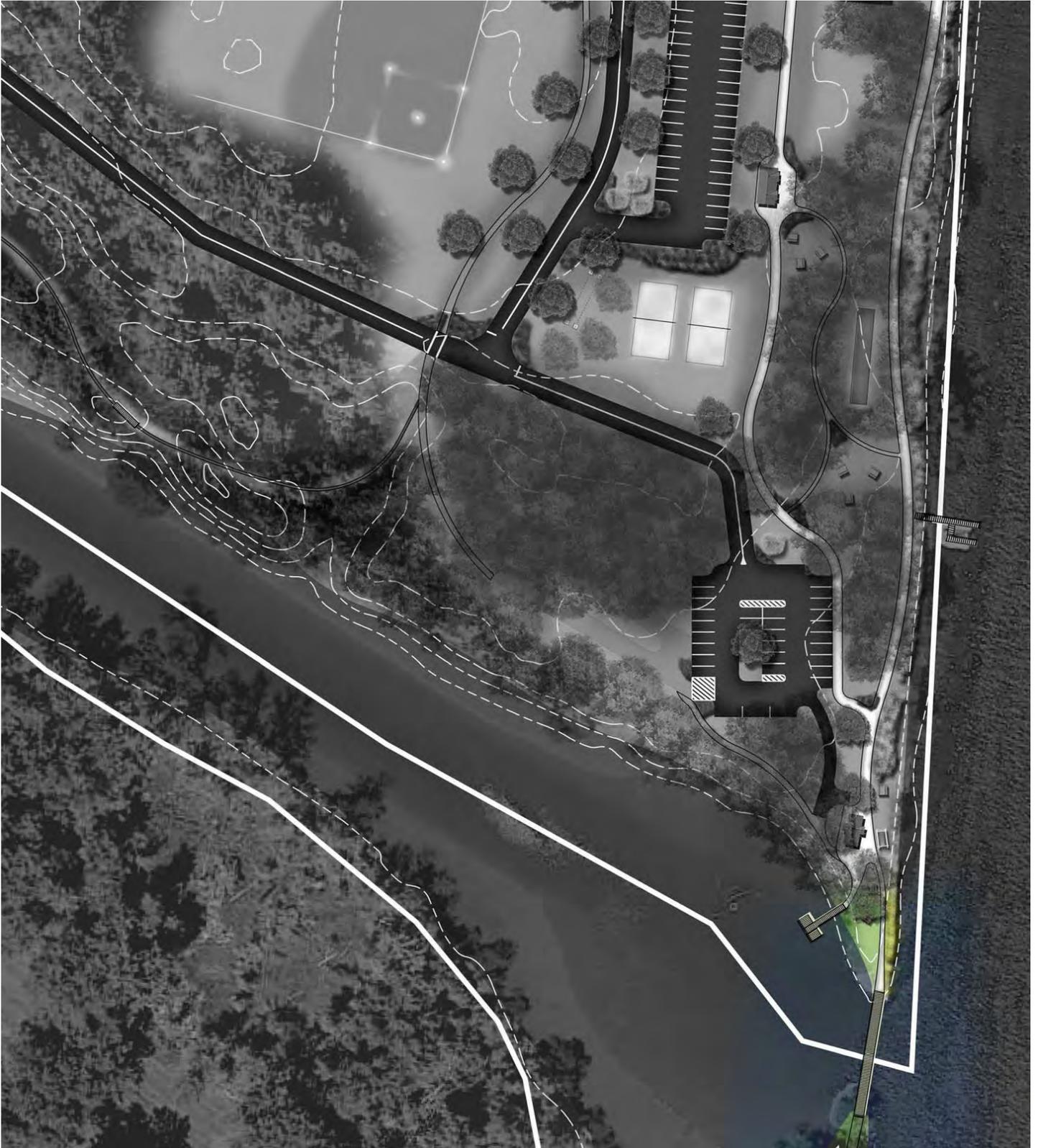
- Interpretive signage
- Wayfinding signage
- Informational bird blinds

### Notes

- This project could include bird-hides and look-outs that have not been included in the cost estimate

\*May Be Accomplished in Later Projects

# Flexible Project Phasing: PROJECT 11





Precedent Images: Pedestrian Bridges over Water

# 11

## PROJECT 11

# PEDESTRIAN BRIDGE

**Project 11: \$250,000**

*Costs include 15% Construction Contingency & 12% A/E & Permitting Fee's*

### Components

- Pedestrian bridge to Baker Farm

### Notes

- This project requires Flood Analysis and permitting
- Bridge would be approximately 120 feet at its narrowest point

\* May Be Accomplished in Later Projects

\* Dependant on Shoreline Stabilization

# Next Steps:



With the conceptual Master Plan complete, the next steps for the project will require retaining and expanding stakeholder participation and support as well as establishing relationships and starting discussions with Town Departments, including the Department of Economic Development & Planning and the Parks and Recreation Department. Other entities including the Local Waterfront Advisory Committee and Scenic Hudson will need to be kept engaged with the project in order to better network the project leading to funding sources. The conceptual master plan can now be used as a tool to secure funding and required labor necessary to undertake the transformation of the under utilized Henry Hudson Park to a locally and regionally recognized natural urban retreat.

The Town of Bethlehem Department of Economic Development and Planning and the Parks and Recreation Department will work together to take the lead as the primary contact, coordinating efforts to move forward with implementation.

At the time of completion of this document, the Town of Bethlehem was already working on development of grant submissions for funding towards several projects within the project scope.

# Project Estimate:

## PROJECT 2: RIVERFRONT LOOP PROMENADE

PROJECT 2A						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Hardscape Path</b>						
-4" Concrete Sidewalk	40,000	SF	\$8.00	\$320,000.00		
- 8" Type 2 Subbase For Sidewalk	1176	CY	\$42.00	\$49,392.00		Includes 20% compaction
- Unclassified Excavation	1470	CY	\$18.50	\$27,195.00		
- Grading	40,000	SF	\$3.50	\$140,000.00		
Hardscape Subtotal					\$536,587.00	
<b>Riverfront Overlook</b>						
-Overlook	1	Allowance	\$40,000.00	\$40,000.00		
Overlook Subtotal					\$40,000.00	
<b>Landscaping</b>						
- Naturalized Shoreline Planting	Allowance	Allowance	\$20,000.00	\$20,000.00		
- Enhanced Planting	Allowance	Allowance	\$10,000.00	\$10,000.00		
Landscaping Subtotal					\$30,000.00	
Project Subtotal					\$606,587.00	
15% Contingency					\$90,988.05	
Construction Subtotal					\$697,575.05	
A/E Fees					\$83,709.01	
<b>Project 2A Total</b>					<b>\$781,284.06</b>	
<b>PROJECT 2B</b>						
<b>Site Electrical</b>						
- LED Pedestrian Lighting	15	EA	\$3,000.00	\$45,000.00		Includes Conduit
- Electrical Meter	1	EA	\$2,000.00	\$2,000.00		Includes Conduit
Electrical Subtotal					\$47,000.00	
Project Subtotal					\$47,000.00	
15% Contingency					\$7,050.00	
Construction Subtotal					\$54,050.00	
A/E Fees					\$6,486.00	
<b>Project 2B Total</b>					<b>\$60,536.00</b>	
<b>PHASE 2C</b>						
<b>Site Furnishings</b>						
- Bike Rack	2	EA	\$1,200.00	\$2,400.00		
- Water Line Connection	1	Allowance	\$2,000.00	\$2,000.00		
- Water Fountain	2	EA	\$1,200.00	\$2,400.00		
- Trash Receptacle	6	EA	\$750.00	\$4,500.00		
- Dog Waste Station	3	EA	\$250.00	\$750.00		
- Bench	16	EA	\$2,500.00	\$40,000.00		
- Picnic Table	15	EA	\$2,500.00	\$37,500.00		
- Trellis Swings	5	EA	\$2,500.00	\$12,500.00		
Site Amenities Subtotal					\$102,050.00	
Project Subtotal					\$102,050.00	
15% Contingency					\$15,307.50	
Construction Subtotal					\$117,357.50	
A/E Fees					\$14,082.90	
<b>Project 2C Total</b>					<b>\$131,440.40</b>	
<b>Project 2 Complete Total</b>					<b>\$973,260.46</b>	

### Preliminary Cost Estimate

The recommended projects were given a preliminary construction cost estimate for the Town of Bethlehem to pursue funding based on estimated costs required to complete each project section. Components of each project could have alternate material or implementation strategy that could influence project cost. It is up to the Town of Bethlehem's discretion and priorities which projects will be implemented at what time.

**PROJECT 3: NATURAL PLAYGROUND**

PROJECT 3						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Natural Playground / Adventure Playground</b>						
- Natural Playground/Adventure Playground	1	Allowance	\$62,000.00	\$52,000.00		
- Bench	4	EA	\$2,500.00	\$10,000.00		
Natural Playground/Adventure Playground Subtotal					\$62,000.00	
Project Subtotal					\$62,000.00	
15% Contingency					\$9,300.00	
Construction Subtotal					\$71,300.00	
A/E Fees					\$8,700.00	
<b>Project 3 Total</b>					<b>\$80,000.00</b>	

**PROJECT 4: PARK PAVILION/RESTROOMS**

PROJECT 4A						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Pavilion</b>						
- Removal of Existing Pavilion Structure	1	Allowance	\$5,000.00	\$5,000.00		
- Custom Pavilion Structure	1	Allowance	\$100,000.00	\$100,000.00		
- Landscaping	1	Allowance	\$8,000.00	\$8,000.00		
- Bench	6	EA	\$2,500.00	\$15,000.00		
- Picnic Table	10	EA	\$2,500.00	\$25,000.00		
- Trash Receptacle	2	EA	\$750.00	\$1,500.00		
<b>Site Electrical</b>						
- Mounted Light within Pavilion	8	EA	\$250.00	\$2,000.00		Includes Conduit
- Electrical Outlet at Pavilion	4	EA	\$350.00	\$1,400.00		Includes Conduit
- Electrical Meter	1	EA	\$2,000.00	\$2,000.00		Includes Conduit
Pavilion Subtotal					\$159,900.00	
Project Subtotal					\$159,900.00	
15% Contingency					\$23,985.00	
Construction Subtotal					\$183,885.00	
A/E Fees					\$22,066.20	
<b>Project 4A Total</b>					<b>\$205,951.20</b>	

PROJECT 4B						
Restrooms						
- Custom 2 stall Compost Bathroom Structure(North)	1	Allowance	\$80,000.00	\$80,000.00		
Restrooms Subtotal					\$80,000.00	
Project Subtotal					\$80,000.00	
15% Contingency					\$12,000.00	
Construction Subtotal					\$92,000.00	
A/E Fees					\$11,040.00	
<b>Project 4B Total</b>					<b>\$103,040.00</b>	

PROJECT 4C						
Restrooms						
- Custom 4 stall Compost Bathroom Structure (South)	1	Allowance	\$150,000.00	\$150,000.00		
Restrooms Subtotal					\$150,000.00	
Project Subtotal					\$150,000.00	
15% Contingency					\$22,500.00	
Construction Subtotal					\$172,500.00	
A/E Fees					\$20,700.00	
<b>Project 4C Total</b>					<b>\$193,200.00</b>	
<b>Project 4 Total</b>					<b>\$502,191.20</b>	

**PROJECT 5: ROAD REALIGNMENT & PARKING EXTENSIONS**

PROJECT 5						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Road Realignment &amp; Bituminous Parking Lot</b>						
- 4" Bituminous Paving Road Realignment	1100	TONS	\$130.00	\$143,000.00		
- 8" Type 2 Subbase For Road Realignment	1321	CY	\$42.00	\$55,482.00		Includes 20% compaction
- Excavation of New Roadway	1652	CY	\$18.50	\$30,562.00		
- Grading	44,600	SF	\$3.50	\$156,100.00		
- Excavation of Existing Roadway for Reseeding	298	CY	\$18.50	\$5,513.00		
- Topsoil	298	CY	\$45.00	\$13,410.00		Includes 20% compaction
- Fine Grading and Seeding	16,000	SY	\$3.50	\$56,000.00		
- Road & Parking Lot Striping	1	Allowance	\$2,000.00	\$2,000.00		
- Landscaping	1	Allowance	\$5,000.00	\$3,000.00		
- Trees (2.5"-3" Caliper)	15	EA	\$550.00	\$8,250.00		
				Road Realignment Subtotal	\$473,317.00	
				Project Subtotal	\$473,317.00	
				15% Contingency	\$70,997.55	
				Construction Subtotal	\$544,314.55	
				A/E Fees	\$65,317.75	
				<b>Project 5 Total</b>	<b>\$609,632.30</b>	

**PROJECT 6: RECREATION COMPONENTS**

PROJECT 6						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Overlooks, Disc Golf, Paths</b>						
-Overlook	2	Allowance	\$25,000.00	\$50,000.00		
-Kayak/Canoe Locker	1	Allowance	\$20,000.00	\$20,000.00		
- Disc Golf	9	EA	\$400.00	\$3,600.00		
- Horse Shoe Course	2	EA	\$500.00	\$1,000.00		
- Bocce Ball Course	1	EA	\$1,000.00	\$1,000.00		
- Sand Volleyball Course	2	EA	\$3,000.00	\$6,000.00		
- Trees (2.5"-3" Caliper)	6	EA	\$550.00	\$3,300.00		Volleyball Court Buffer
				Recreation Subtotal	\$84,900.00	
				Project Subtotal	\$84,900.00	
				15% Contingency	\$12,735.00	
				Construction Subtotal	\$97,635.00	
				A/E Fees	\$11,716.20	
				<b>Project 6 Total</b>	<b>\$109,351.20</b>	

**PROJECT 7: MULTI-PURPOSE LOOP TRAILS**

PROJECT 7						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Hardscape Path</b>						
- 4" Bituminous Paving	1000	TONS	\$130.00	\$130,000.00		
- 8" Type 2 Subbase For Bituminous Path	1700	CY	\$42.00	\$71,400.00		Includes 20% compaction
- Unclassified Excavation	1575	CY	\$18.50	\$29,137.50		
- Grading	42,460	SF	\$3.50	\$148,610.00		
				Hardscape Subtotal	\$379,147.50	
				Project Subtotal	\$379,147.50	
				15% Contingency	\$56,872.13	
				Construction Subtotal	\$436,019.63	
				A/E Fees	\$43,601.96	
				<b>Project 7 Total</b>	<b>\$479,621.59</b>	

**PROJECT 8: LOW ROPES COURSE**

<b>PROJECT 8</b>						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Low Ropes Course</b>						
- Low Ropes Station Mulch	300	SY	\$8.00	\$2,400.00		
- Low Ropes Course Equipment	6	EA	\$5,000.00	\$30,000.00		
<i>Low Ropes Subtotal</i>					\$32,400.00	
<i>Project Subtotal</i>					\$32,400.00	
<i>15% Contingency</i>					\$4,860.00	
<i>Construction Subtotal</i>					\$37,260.00	
<i>A/E Fees</i>					\$4,471.20	
<b>Project 8 Total</b>					<b>\$41,731.20</b>	

**PROJECT 9: SECONDARY PICNIC AREAS**

<b>Project 9A</b>						
<b>Secondary Picnic Areas</b>						
- Secondary North Pavilion Structure	1	Allowance	\$60,000.00	\$60,000.00		
- Trash Receptacle	2	EA	\$750.00	\$1,500.00		
- Dog Waste Station	1	EA	\$250.00	\$250.00		
- Bench	3	EA	\$2,500.00	\$7,500.00		
- Picnic Table	6	EA	\$2,500.00	\$15,000.00		
- Landscaping	1	Allowance	\$5,000.00	\$5,000.00		
<i>North Secondary Picnic Area Subtotal</i>					\$89,250.00	
<i>Project Subtotal</i>					\$89,250.00	
<i>15% Contingency</i>					\$13,387.50	
<i>Construction Subtotal</i>					\$102,637.50	
<i>A/E Fees</i>					\$12,316.50	
<b>Project 9A Total</b>					<b>\$114,954.00</b>	

<b>Project 9B</b>						
<b>Secondary Picnic Areas</b>						
- Secondary North Pavilion Structure	1	Allowance	\$60,000.00	\$60,000.00		
- Trash Receptacle	2	EA	\$750.00	\$1,500.00		
- Dog Waste Station	1	EA	\$250.00	\$250.00		
- Bench	3	EA	\$2,500.00	\$7,500.00		
- Picnic Table	6	EA	\$2,500.00	\$15,000.00		
- Landscaping	1	Allowance	\$5,000.00	\$5,000.00		
<i>South Secondary Picnic Area Subtotal</i>					\$89,250.00	
<i>Project Subtotal</i>					\$89,250.00	
<i>15% Contingency</i>					\$13,387.50	
<i>Construction Subtotal</i>					\$102,637.50	
<i>A/E Fees</i>					\$12,316.50	
<b>Project 9B Total</b>					<b>\$114,954.00</b>	
<b>Project 9 Total</b>					<b>\$229,908.00</b>	

**PROJECT 10: PASSIVE NATURE TRAILS**

PROJECT 10A						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Nature Trails</b>						
- Select Clearing and Grubbing	1	Allowance	\$15,000.00	\$15,000.00		
				Boardwalk Subtotal	\$15,000.00	
				Project Subtotal	\$15,000.00	
				15% Contingency	\$2,250.00	
				Construction Subtotal	\$17,250.00	
				A/E Fees	\$1,725.00	
				<b>Project 10A Total</b>	<b>\$18,975.00</b>	

PROJECT 10B						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Boardwalk</b>						
- Permitting	1	Allowance	\$18,835.00	\$18,835.00		
- Boardwalk	1500	SF	\$154.00	\$231,000.00		
				Boardwalk Subtotal	\$249,835.00	
				Project Subtotal	\$249,835.00	
				15% Contingency	\$37,475.25	
				Construction Subtotal	\$287,310.25	
				A/E Fees	\$34,477.23	
				<b>Project 10B Total</b>	<b>\$321,787.48</b>	

PROJECT 10C						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Signage</b>						
- Informational Bird Blind Structure	2	Allowance	\$4,000.00	\$8,000.00		
- Interpretive Sign	2	EA	\$2,500.00	\$5,000.00		
-Wayfinding Signage	4	EACH	\$1,518.00	\$6,072.00		
				Signage Subtotal	\$19,072.00	
				Project Subtotal	\$19,072.00	
				15% Contingency	\$2,860.80	
				Construction Subtotal	\$21,932.80	
				A/E Fees	\$2,631.94	
				<b>Project 10C Total</b>	<b>\$24,564.74</b>	
				<b>Project 10 Total</b>	<b>\$365,327.22</b>	

**PROJECT 11: PEDESTRIAN BRIDGE TO BAKER FARM**

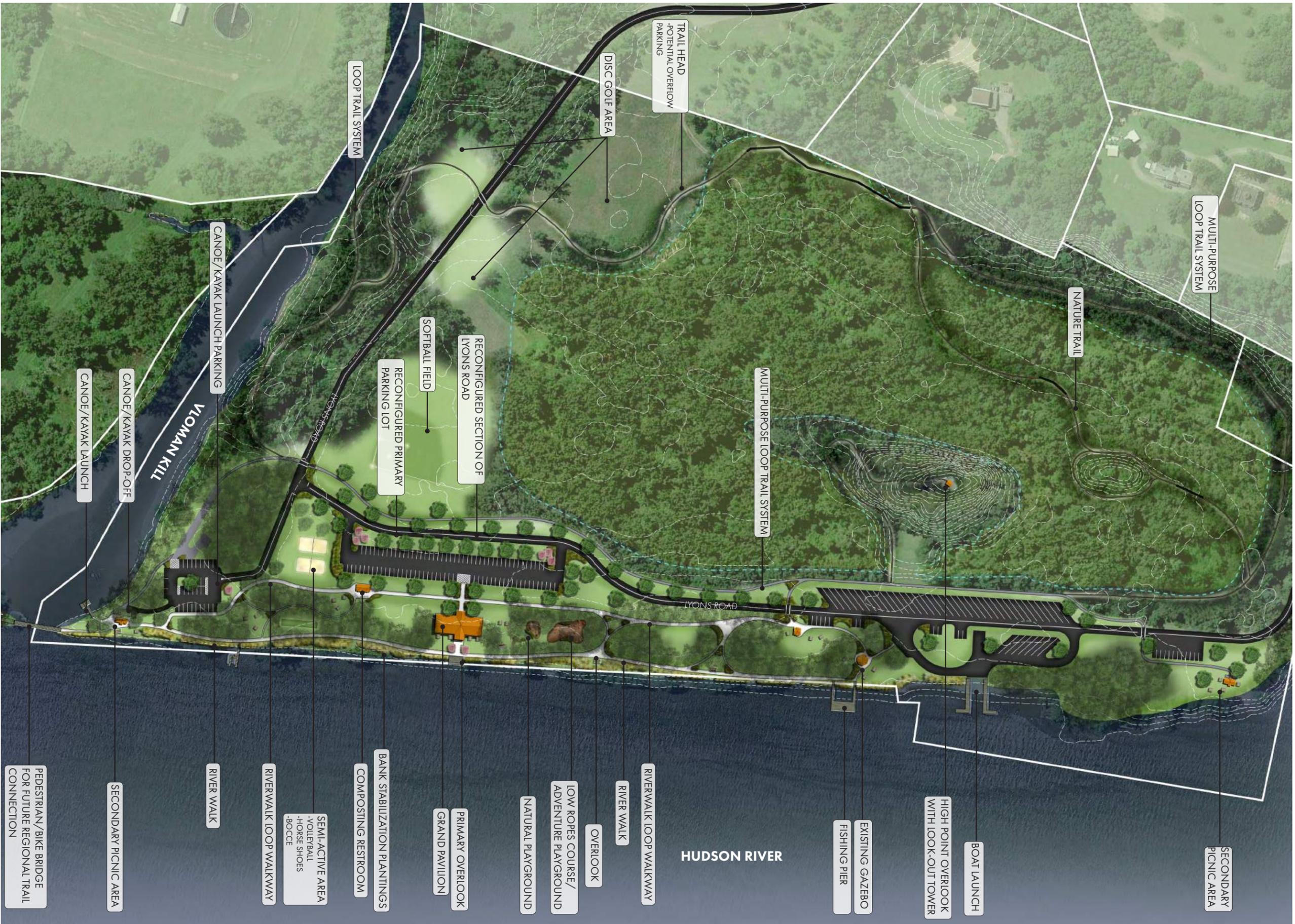
PROJECT 11						
ITEM	QUANTITY	UNIT	UNIT COST	TOTAL	SUBTOTALS	NOTES
<b>Pedestrian Bridge</b>						
-Pedestrian Bridge to Baker Farm	1	Allowance	\$150,000.00	\$188,000.00		
- Trailhead Sign	2	EA	\$2,500.00	\$5,000.00		
				Pedestrian Bridge Subtotal	\$193,000.00	
				Project Subtotal	\$193,000.00	
				15% Contingency	\$28,950.00	
				Construction Subtotal	\$221,950.00	
				A/E Fees	\$28,050.00	
				<b>Project 11 Total</b>	<b>\$250,000.00</b>	



# HENRY HUDSON PARK CONCEPTUAL DIAGRAM

TOWN OF BETHLEHEM, NY

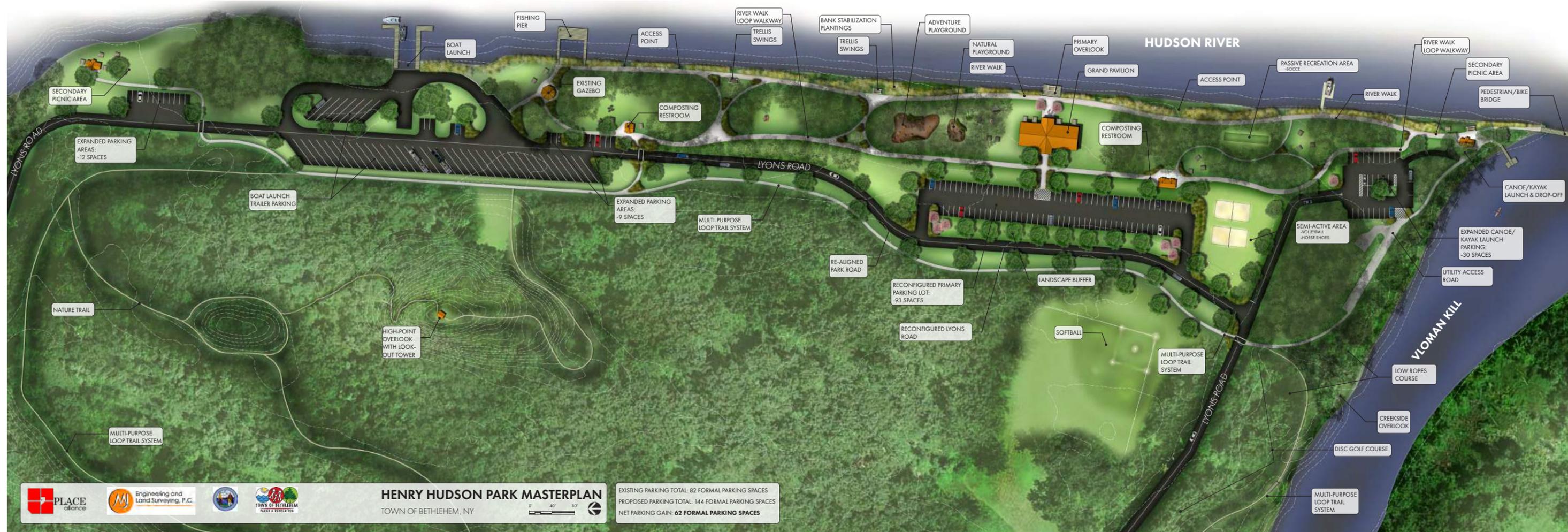




**HENRY HUDSON PARK CONCEPTUAL DIAGRAM**  
TOWN OF BETHLEHEM, NY



- SECONDARY PICNIC AREA
- BOAT LAUNCH
- HIGH POINT OVERLOOK WITH LOOK-OUT TOWER
- EXISTING GAZEBO
- FISHING PIER
- RIVERWALK LOOP WALKWAY
- RIVER WALK
- OVERLOOK
- LOW ROPES COURSE/ ADVENTURE PLAYGROUND
- NATURAL PLAYGROUND
- PRIMARY OVERLOOK
- GRAND PAVILION
- BANK STABILIZATION PLANTINGS
- COMPOSTING RESTROOM
- SEMI-ACTIVE AREA -VOLLEIBALL -HORSE SHOES -BOCCIE
- RIVERWALK LOOP WALKWAY
- RIVER WALK
- SECONDARY PICNIC AREA
- PEDESTRIAN/BIKE BRIDGE FOR FUTURE REGIONAL TRAIL CONNECTION



# APPENDIX C – SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS

## NORMANS KILL SCFWH

### COASTAL FISH AND WILDLIFE RATING FORM

Name of area: **Normans Kill**  
 Designated: **November 15, 1987**  
 Date Revised: **August 15, 2012**  
 County: **Albany**  
 Town(s): **Bethlehem, Albany**  
 7 1/2' Quadrangles: **Albany, NY; Delmar, NY**

<u>Assessment Criteria</u>	<u>Score</u>
<b>Ecosystem Rarity (ER) -- the uniqueness of the plant and animal community in the area and the physical, structural and chemical features supporting this community.</b>	
<b>ER Assessment</b> -- One of the major freshwater tributaries of the upper Hudson River, which is accessible to anadromous fishes and contains freshwater tidal wetland areas.	<b>16</b>
<b>Species Vulnerability (SV) – the degree of vulnerability throughout its range in New York State of a species residing in the ecosystem or utilizing the ecosystem for its survival.</b>	
<b>SV Assessment</b> – No endangered, threatened or special concern species have been found in the area.	<b>0</b>
<b>Human Use (HU) -- the conduct of significant, demonstrable commercial, recreational, or educational wildlife-related human use, either consumptive or non-consumptive, in the area or directly dependent upon the area.</b>	
<b>HU Assessment</b> -- Recreational fishing opportunities attract many Albany County anglers to the area.	<b>4</b>
<b>Population Level (PL) – the concentration of a species in the area during its normal, recurring period of occurrence, regardless of the length of that period of occurrence.</b>	
<b>PL Assessment</b> -- Significant spawning habitat for migratory fishes in the upper Hudson River. Geometric mean: $\sqrt{4} \times \sqrt{9} = 6$	<b>6</b>
<b>Replaceability (R) – ability to replace the area, either on or off site, with an equivalent replacement for the same fish and wildlife and uses of those same fish and wildlife, for the same users of those fish and wildlife.</b>	
<b>R Assessment</b> – Irreplaceable	<b>1.2</b>
<b>Habitat Index (ER+SV+HU+PL) = 26</b>	<b>Significance (HI x R) = 31.2</b>

## LOCATION AND DESCRIPTION OF HABITAT

The Normans Kill is located on the west side of the Hudson River, on the boundary between the City of Albany and the Town of Bethlehem, Albany County (7.5' Quadrangles: Albany, N.Y.; and Delmar, N.Y.).

The fish and wildlife habitat is an approximate two-mile segment of this freshwater tributary, extending from its mouth on the Hudson River to a falls which is located just downstream from the New York State Thruway (Interstate Route 87) bridge. The Normans Kill is a relatively large, medium gradient, perennial, warmwater stream, with a drainage area of over 170 square miles, and an average annual discharge volume of approximately 150 cubic feet per second. The first mile of stream below the falls flows through a steep-sided wooded gorge, and is relatively shallow, with a gravelly substrate. The lower mile of the creek (referred to as "Island Creek") is within the tidal range of the Hudson River, and is relatively deep, with a silt and clay substrate. At least part of this segment was channelized in the past and its mouth relocated south in conjunction with nearby commercial and industrial developments. Despite its proximity to the Port of Albany, the Normans Kill and its associated riparian zone remain in a relatively natural condition.

Several wetland areas are found along the creek in addition to a floodplain forest in the southeast portion of the habitat. Submerged aquatic vegetation beds, mainly water celery (*Vallisneria americana*), are found around the mouth of the creek.

Habitat disturbance in the area can be attributed to the presence of road and railroad crossings, litter, discharges of stormwater runoff from paved areas, and stream channel alterations.

## FISH AND WILDLIFE VALUES

The Normans Kill is the largest tributary stream in Albany County, and is one of about 4 major tributaries emptying into the northern portion of the Hudson River estuary. The length of stream channel accessible to migratory fishes and the lack of significant human disturbance in the upper portion of the creek provide favorable habitat conditions in the Normans Kill for a variety of coastal migratory as well as resident freshwater fish species. The Normans Kill is an important spawning area for a number of fishes: alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*) and white perch (*Morone americana*). Generally, these species enter the stream between April and June; the adults leave the area shortly after spawning, and within several weeks, the eggs have hatched, and larval fish begin moving downstream to nursery areas in the Hudson River. A substantial population of smallmouth bass (*Micropterus dolomieu*) also occurs in the Normans Kill throughout the year. Adults move into the upper section of the creek in May and early June to spawn, and return to deeper areas as water temperatures rise. American eels also make use of this creek. The submerged aquatic vegetation provides food and refuge for fish and invertebrates.

Freshwater inflows from the Normans Kill are also important for maintaining water quality in the Hudson River estuary. The freshwater wetlands within this area contribute to primary productivity and improved quality of water that flows into the Hudson River.

The abundant fisheries resources of the Normans Kill provide significant opportunities for recreational fishing. Although no developed public access facilities exist, the area is popular among Albany County anglers, especially for smallmouth bass fishing during the summer months. Fishing pressure is concentrated on the lower section of the creek, near road crossings.

## IMPACT ASSESSMENT

Any activities that would degrade water quality, increase turbidity, increase sedimentation, or alter flows, temperature, or water depths in the Normans Kill or its tributaries would result in significant impairment of the habitat. Discharges or runoff of sewage effluent and hazardous materials, water withdrawals, and the creation of impoundments would result in significant impairment of the habitat. Discharges of stormwater runoff, pesticides and other effluents could result in significant impairment of the habitat. Of particular concern are the potential effects of upstream disturbances, including water withdrawals, impoundments, streambed disturbances, and effluent discharges.

Substantial alteration of the stream channel, such as impoundments or creation of barriers to fish passage should be prohibited. Impediments to movement and migration of aquatic species, whether physical or chemical (e.g., dams, dikes, channelization, bulkheading, filling), should be prohibited. Plans to reduce or eliminate the impacts of existing hydrological modifications should be developed, including improvements to fish passage, and/or the removal of obstructions or barriers. Enhancement efforts should be monitored, and the associated habitat effects should be reported and evaluated. Habitat disturbances would be most detrimental during bird nesting, and fish spawning and nursery periods, which generally extend from March through August for most species.

Elimination or disturbance of adjacent wetland and forested habitats would adversely affect the habitat. Such areas should be protected to maintain bank cover, soil stabilization, and buffer areas. Where possible such areas should be restored in order to maintain and/or improve water quality.

Where opportunities exist, appropriate restoration of intertidal and subtidal shallow habitats should be undertaken using the best available science and proper monitoring protocols.

## HABITAT IMPAIRMENT TEST

A **habitat impairment test** must be met for any activity that is subject to consistency review under Federal and State laws, or under applicable local laws contained in an approved local waterfront revitalization program. If the proposed action is subject to consistency review, then the habitat protection policy applies, whether the proposed action is to occur within or outside the designated area.

The specific **habitat impairment test** that must be met is as follows.

In order to protect and preserve a significant habitat, land and water uses or development shall not be undertaken if such actions would:

- destroy the habitat; or,
- significantly impair the viability of a habitat.

*Habitat destruction* is defined as the loss of fish or wildlife use through direct physical alteration, disturbance, or pollution of a designated area or through the indirect effects of these actions on a designated area. Habitat destruction may be indicated by changes in vegetation, substrate, or hydrology, or increases in runoff, erosion, sedimentation, or pollutants.

*Significant impairment* is defined as reduction in vital resources (e.g., food, shelter, living space) or change in environmental conditions (e.g., temperature, substrate, salinity) beyond the tolerance range of

an organism. Indicators of a significantly impaired habitat focus on ecological alterations and may include but are not limited to reduced carrying capacity, changes in community structure (food chain relationships, species diversity), reduced productivity and/or increased incidence of disease and mortality.

The *tolerance range* of an organism is not defined as the physiological range of conditions beyond which a species will not survive at all, but as the ecological range of conditions that supports the species population or has the potential to support a restored population, where practical. Either the loss of individuals through an increase in emigration or an increase in death rate indicates that the tolerance range of an organism has been exceeded. An abrupt increase in death rate may occur as an environmental factor falls beyond a tolerance limit (a range has both upper and lower limits). Many environmental factors, however, do not have a sharply defined tolerance limit, but produce increasing emigration or death rates with increasing departure from conditions that are optimal for the species.

The range of parameters which should be considered in applying the habitat impairment test include but are not limited to the following:

1. physical parameters such as living space, circulation, flushing rates, tidal amplitude, turbidity, water temperature, depth (including loss of littoral zone), morphology, substrate type, vegetation, structure, erosion and sedimentation rates;
2. biological parameters such as community structure, food chain relationships, species diversity, predator/prey relationships, population size, mortality rates, reproductive rates, meristic features, behavioral patterns and migratory patterns; and,
3. chemical parameters such as dissolved oxygen, carbon dioxide, acidity, dissolved solids, nutrients, organics, salinity, and pollutants (heavy metals, toxics and hazardous materials).

## **KNOWLEDGABLE CONTACTS**

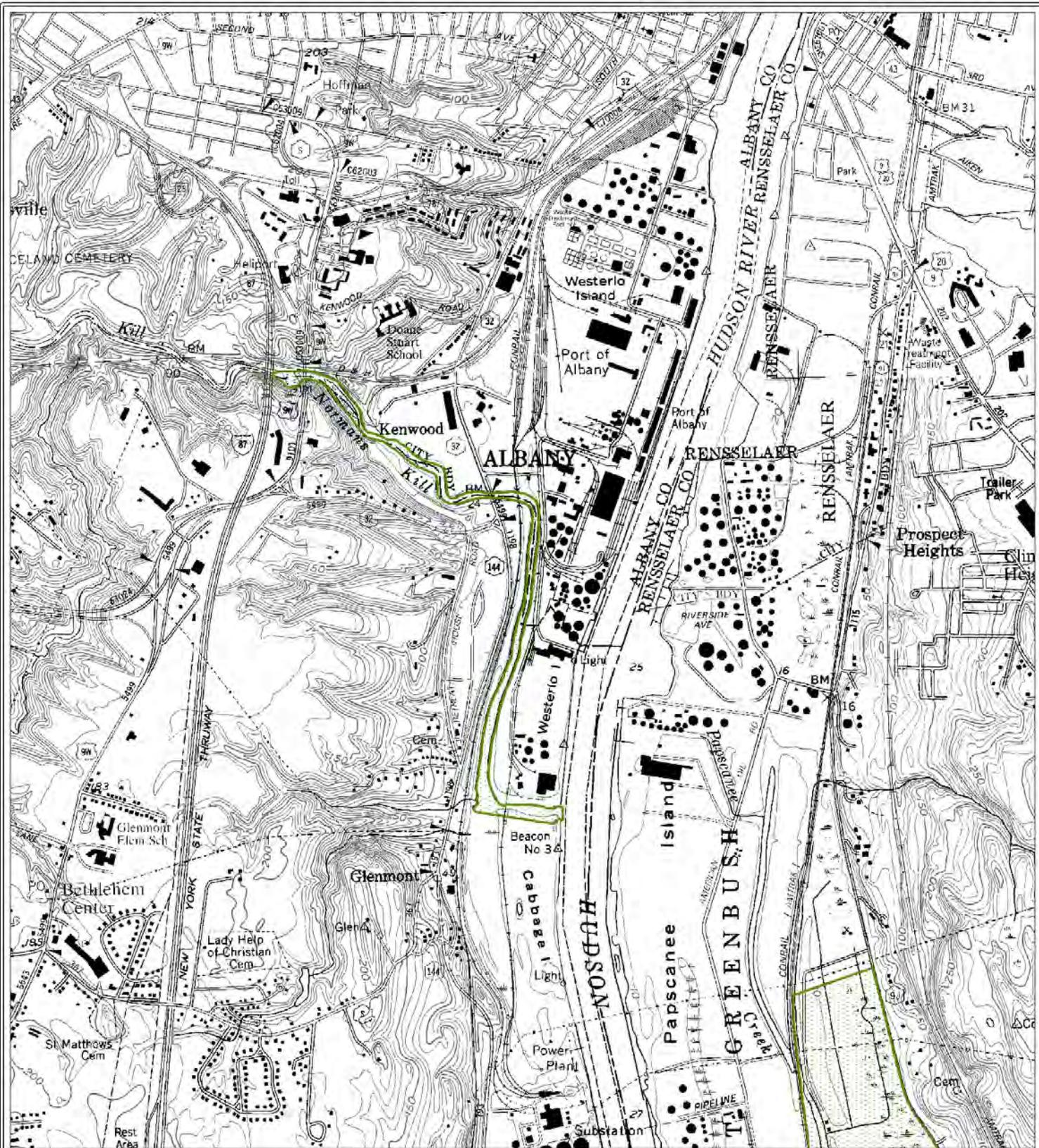
Natural Resources Bureau  
NYS Department of State  
99 Washington Ave, Suite 1010  
Albany, NY 12231  
Phone: (518) 474.6000

Hudson River National Estuarine Research Reserve  
Norrie Point Environmental Center  
PO Box 315  
Staatsburg, NY 12580  
Phone: (845) 889.4745

Hudson River Fisheries Unit  
NYS Department of Environmental Conservation  
21 South Putt Corners Road  
New Paltz, NY 12561  
Phone: (845) 256.3071

The Hudson River Estuary Program  
NYSDEC Region 3  
21 S Putt Corners Rd  
New Paltz, NY 12561  
Phone: (845) 256.3016

New York Natural Heritage Program  
625 Broadway, 5th Floor  
Albany, NY 12233-4757  
Phone: (518) 402.8935



## Significant Coastal Fish and Wildlife Habitats



- Normans Kill
- Papscaene Marsh & Creek (In Part)



**SHAD AND SCHERMERHORN ISLANDS SCFWH**

COASTAL FISH AND WILDLIFE RATING FORM

Name of area: **Shad and Schermerhorn Islands**  
 Designated: **November 15, 1987**  
 Date Revised: **August 15, 2012**  
 County: **Albany**  
 Town(s): **Bethlehem, Coeymans**  
 7.5' Quadrangles: **Delmar, NY; Ravena, NY**

<u>Assessment Criteria</u>	<u>Score</u>
<p><b>Ecosystem Rarity (ER) -- the uniqueness of the plant and animal community in the area and the physical, structural and chemical features supporting this community.</b></p> <p><b>ER Assessment</b> – Large, undeveloped, floodplain area with important littoral zones and tributary streams; uncommon in the upper Hudson Valley, but rarity reduced by human disturbance. Geometric mean: <math>\sqrt{9} \times \sqrt{16} = 12</math></p>	<b>12</b>
<p><b>Species Vulnerability (SV) – the degree of vulnerability throughout its range in New York State of a species residing in the ecosystem or utilizing the ecosystem for its survival.</b></p> <p><b>SV Assessment</b> – Peregrine falcon (E); Least bittern (T), American bittern (SC) Additive Division: <math>36 + 25/2 + 16/4 = 52.5</math></p>	<b>52.5</b>
<p><b>Human Use (HU) -- the conduct of significant, demonstrable commercial, recreational, or educational wildlife-related human use, either consumptive or non-consumptive, in the area or directly dependent upon the area.</b></p> <p><b>HU Assessment</b> – Recreational hunting and fishing in the area are important to residents of Albany County.</p>	<b>4</b>
<p><b>Population Level (PL) – the concentration of a species in the area during its normal, recurring period of occurrence, regardless of the length of that period of occurrence.</b></p> <p><b>PL Assessment</b> – Includes two significant spawning streams for anadromous fishes in Albany County, including one of the top 10 in the upper Hudson Valley subzone. Geometric Mean: <math>\sqrt{4} \times \sqrt{9} = 6</math></p>	<b>6</b>
<p><b>Replaceability (R) – ability to replace the area, either on or off site, with an equivalent replacement for the same fish and wildlife and uses of those same fish and wildlife, for the same users of those fish and wildlife.</b></p> <p><b>R Assessment</b> – Irreplaceable</p>	<b>1.2</b>
<b>Habitat Index (ER+SC+HU+PL) = 74.5</b>	<b>Significance (HI x R) = 89.4</b>

## LOCATION AND DESCRIPTION OF HABITAT

Shad and Schermerhorn Islands are located approximately one and one-half miles east of the hamlet of Selkirk, on the western shore of the Hudson River, across from the Village of Castleton-on-Hudson. The fish and wildlife habitat is within the towns of Bethlehem and Coeymans, Albany County (7.5' Quadrangle: Delmar, N.Y.).

The fish and wildlife habitat area, covering approximately 1100 acres, is comprised of riverine littoral zones, submerged aquatic vegetation beds, freshwater wetlands, two sizeable tributary streams (the Binnen Kill and Vloman Kill), floodplain forest, cliffs, and active agricultural lands. The Vloman Kill is a medium gradient, warm water stream, with a gravelly substrate, and a drainage area of approximately 30 square miles. Substantial areas of shallow secondary channel habitat were filled with dredged material behind the historic islands connecting them to the mainland.

A number of listed plants are found in the wetland portion of this habitat: Hudson River water nymph (*Najas guadalupensis* ssp. *muenscheri*) (E), heartleaf plantain (*Plantago cordata*) (T), Davis' sedge (*Carex davisii*) (T), and Northern estuary beggar ticks (*Bidens hyperborea* var. *heperborea*) (E). The invasive plants purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*) and water chestnut (*Trapa natans*) are also present.

A sewage treatment plant is located along the south side of the Vloman Kill near its mouth.

## FISH AND WILDLIFE VALUES

Shad and Schermerhorn Islands are significant because they comprise a relatively large, undeveloped, floodplain ecosystem on the Hudson River. Important littoral zone areas are located between the deepwater channel and the shoreline in addition to freshwater tidal wetlands and tidal mudflats. This type of habitat serves as a nursery area for young blueback herring (*Alosa aestivalis*), American shad (*Alosa sapidissima*), striped bass (*Morone saxatilis*) as well as spawning and feeding areas for resident freshwater species in the Hudson River, including white perch (*Morone americana*). The submerged aquatic vegetation provides food and refuge for fish and invertebrates, and adds dissolved oxygen to the water.

The Binnen Kill, which flows behind Shad Island and the wetlands between the historic Shad and Schermerhorn Islands also provide spawning and feeding habitat for American shad, blueback herring, alewife (*Alosa pseudoharengus*), and as well as resident freshwater species. Historically, the Vloman Kill has supported significant runs of these three river herring species and significant numbers of river herring have historically been present at the base of this tributary. Striped bass feed upon these herring. Smallmouth bass spawn here as well.

A variety of amphibians and reptiles include map turtles (*Graptemys geographica*), painted turtles (*Chrysemys picta*), mudpuppies (*Necturus maculosus*), American toads (*Bufo americanus*), bull frogs (*Rana catesbeiana*) and green frogs (*Rana clamitans*).

Terrestrial portions of the area provide quality habitat for a variety of upland wildlife species, including white-tailed deer, ruffed grouse, eastern cottontail, and many passerine bird species. The small wetland areas in and around Shad and Schermerhorn Islands support limited numbers of waterfowl and furbearing mammals. Least bittern (*Ixobrychus exilis*) (T), and American bittern (*Botaurus lentiginosus*) (SC) nest here. A naturally created sill area helps to keep the wetlands in this area flooded at all tidal stages.

Most of the land adjacent to Schermerhorn and Shad Islands is made up of large, privately owned estates. Therefore, access for public use is restricted from the landward side. However, the area is generally accessible by boat, along the Hudson River and in the lower end of the Vloman Kill. This provides access for fishing and waterfowl hunting, primarily by Albany County residents.

## **IMPACT ASSESSMENT**

Any activities that would substantially degrade water quality, increase turbidity or temperature, or alter water depths in the littoral zones, wetlands, and streams making up this habitat would result in significant impairment of the habitat. Bulkheading, dredging, and deposition of dredged material would be especially detrimental in these areas. In particular, the submerged aquatic vegetation beds would be negatively impacted by changes in water depth in the littoral zone (through dredging and/or filling) as well as changes in water quality. Spills of oil or other hazardous substances are an especially significant threat to this area, because the biological activity of tidal flats is concentrated at the soil surface, much of which may be directly exposed to these pollutants.

Barriers to fish migration, whether physical or chemical, would have significant impacts on fish populations in the area. Disturbance of vegetation on the steep slopes along the western edge of the floodplain could result in soil erosion and sedimentation with subsequent impairment of fish habitats and reduction of wildlife value. Existing areas of natural vegetation bordering the Shad and Schermerhorn Islands and its tributaries should be maintained to provide bank cover, soil stabilization, and buffer areas. Habitat disturbances would be most detrimental during fish spawning and nursery periods, which generally extend from March through August for most fish species and during bird breeding season (late April-June).

The presence of invasive species and the expansion of their range within the habitat may result in changes in native plant, vertebrate and invertebrate species composition and abundance. In particular, changes in plant communities may affect marsh-nesting birds. Effective control of invasive plant species, through a variety of means, may improve fish and wildlife species use of the area. Control methods, including biological controls and regulated use of herbicides must only be implemented, if other methods of control have been explored, and then only under permit with strict adherence to all precautionary measures to avoid impacts to non-target species. The primary goals of such efforts must be recovery and maintenance of habitat for native fish and wildlife species.

Where opportunities exist, appropriate restoration of intertidal and subtidal shallow habitats should be undertaken using the best available science and proper monitoring protocols, in particular, restoration of shallow intertidal secondary channels that formally divided Shad and Schermerhorn Island. Restoration and enhancement efforts should be monitored, and the associated habitat effects should be reported and evaluated.

Expansion of agricultural activities may also result in a direct loss of valuable habitat area, but could be managed to maintain or enhance certain wildlife species. Development of appropriate public access to the area may be desirable to allow compatible human uses of the fish and wildlife resources. Human use of the area should be conducted in a manner to avoid negative impacts.

## **HABITAT IMPAIRMENT TEST**

A **habitat impairment test** must be met for any activity that is subject to consistency review under Federal and State laws, or under applicable local laws contained in an approved local waterfront revitalization program. If the proposed action is subject to consistency review, then the habitat protection policy applies, whether the proposed action is to occur within or outside the designated area.

The specific **habitat impairment test** that must be met is as follows.

In order to protect and preserve a significant habitat, land and water uses or development shall not be undertaken if such actions would:

1. destroy the habitat; or,
2. significantly impair the viability of a habitat.

*Habitat destruction* is defined as the loss of fish or wildlife use through direct physical alteration, disturbance, or pollution of a designated area or through the indirect effects of these actions on a designated area. Habitat destruction may be indicated by changes in vegetation, substrate, or hydrology, or increases in runoff, erosion, sedimentation, or pollutants.

*Significant impairment* is defined as reduction in vital resources (e.g., food, shelter, living space) or change in environmental conditions (e.g., temperature, substrate, and salinity) beyond the tolerance range of an organism. Indicators of a significantly impaired habitat focus on ecological alterations and may include but are not limited to reduced carrying capacity, changes in community structure (food chain relationships, species diversity), reduced productivity and/or increased incidence of disease and mortality.

The *tolerance range* of an organism is not defined as the physiological range of conditions beyond which a species will not survive at all, but as the ecological range of conditions that supports the species population or has the potential to support a restored population, where practical. Either the loss of individuals through an increase in emigration or an increase in death rate indicates that the tolerance range of an organism has been exceeded. An abrupt increase in death rate may occur as an environmental factor falls beyond a tolerance limit (a range has both upper and lower limits). Many environmental factors, however, do not have a sharply defined tolerance limit, but produce increasing emigration or death rates with increasing departure from conditions that are optimal for the species.

The range of parameters which should be considered in applying the habitat impairment test includes but is not limited to the following:

1. physical parameters such as living space, circulation, flushing rates, tidal amplitude, turbidity, water temperature, depth (including loss of littoral zone), morphology, substrate type, vegetation, structure, erosion and sedimentation rates;
2. biological parameters such as community structure, food chain relationships, species diversity, predator/prey relationships, population size, mortality rates, reproductive rates, meristic features, behavioral patterns and migratory patterns; and,
3. chemical parameters such as dissolved oxygen, carbon dioxide, acidity, dissolved solids, nutrients, organics, salinity, and pollutants (heavy metals, toxics and hazardous materials).

## **KNOWLEDGABLE CONTACTS**

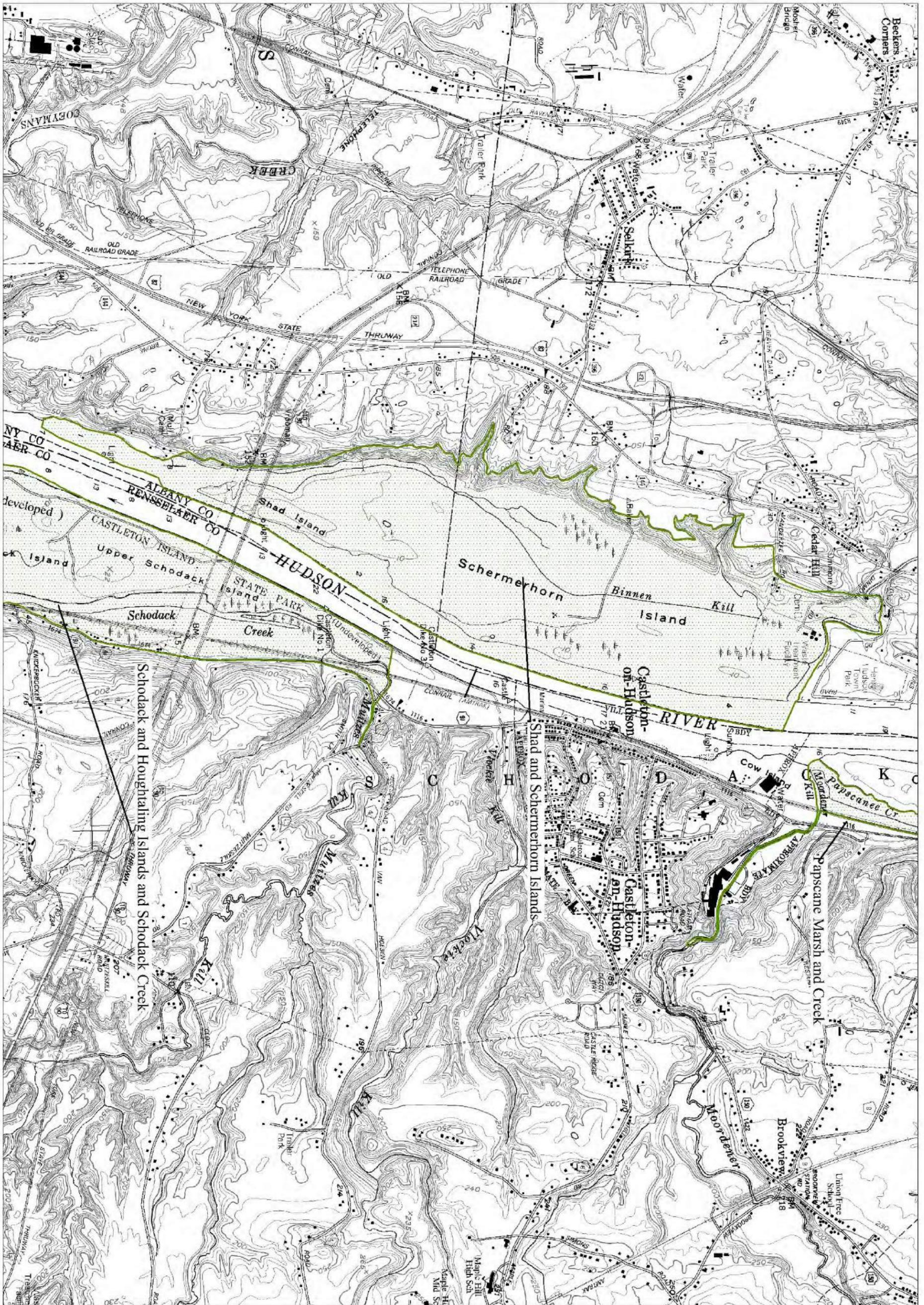
Natural Resources Bureau  
NYS Department of State  
99 Washington Ave, Suite 1010  
Albany, NY 12231  
Phone: (518) 474.6000

Hudson River National Estuarine Research Reserve  
Norrie Point Environmental Center  
PO Box 315  
Staatsburg, NY 12580  
Phone: (845) 889.4745

Hudson River Fisheries Unit  
NYS Department of Environmental Conservation  
21 South Putt Corners Road  
New Paltz, NY 12561  
Phone: (845) 256.3071

The Hudson River Estuary Program  
NYSDEC Region 3  
21 S Putt Corners Rd  
New Paltz, NY 12561  
Phone: (845) 256.3016

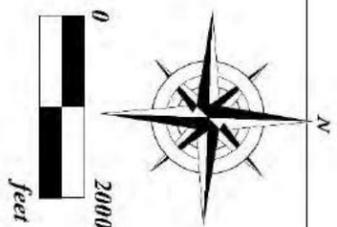
New York Natural Heritage Program  
625 Broadway, 5th Floor  
Albany, NY 12233-4757  
Phone: (518) 402.8935



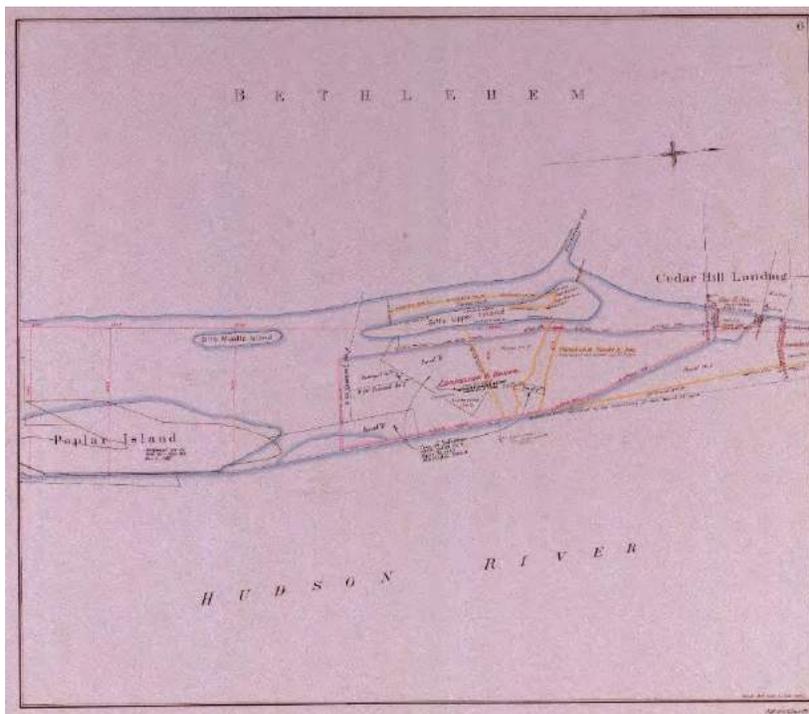
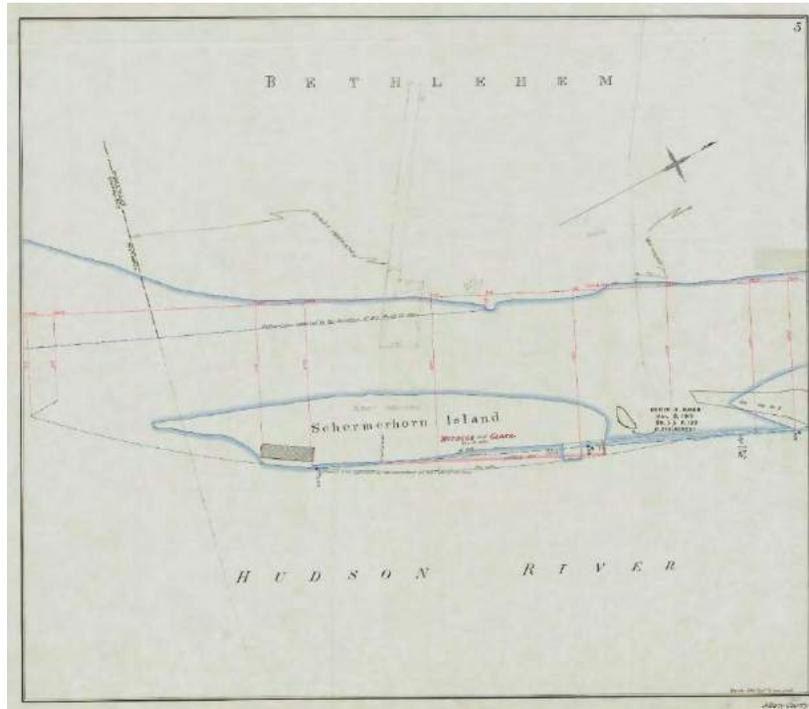
### Significant Coastal Fish and Wildlife Habitats

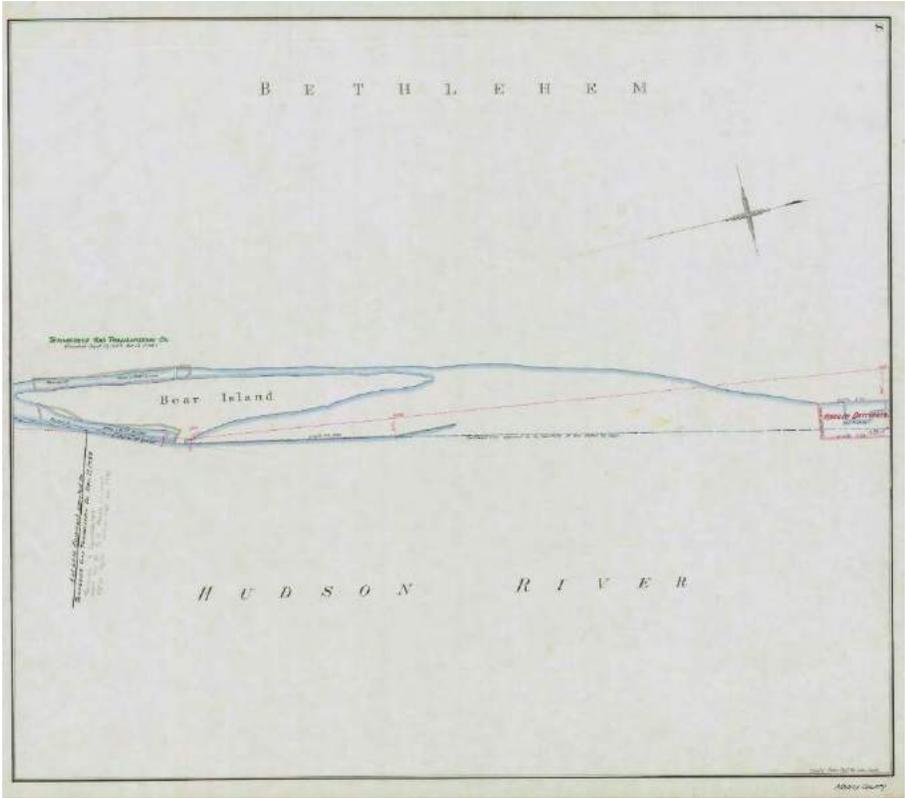
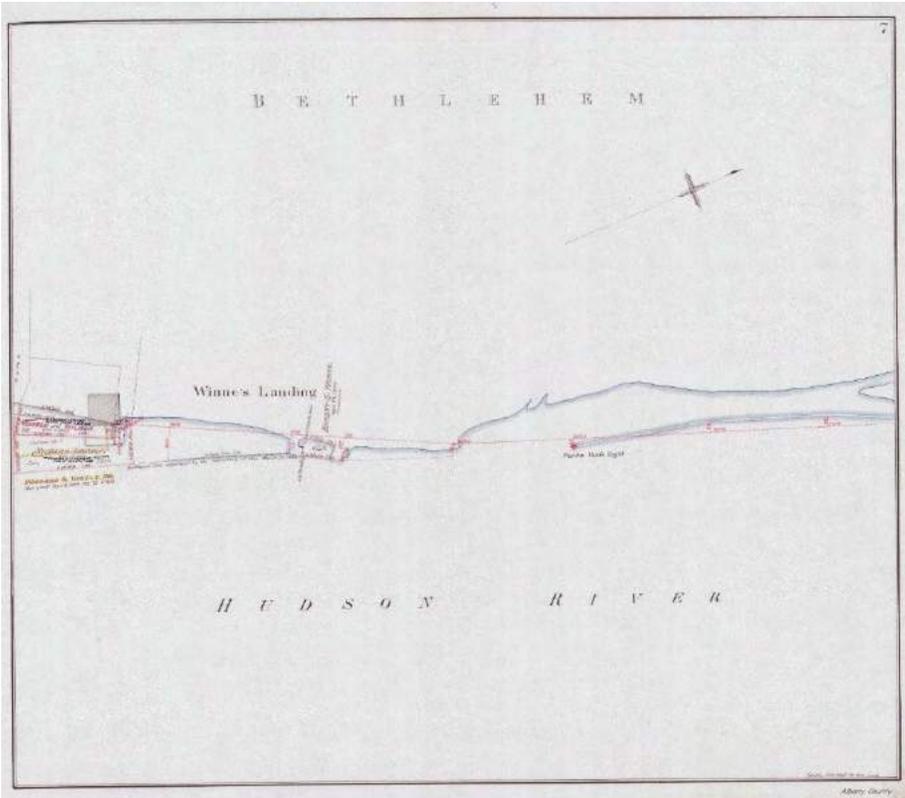


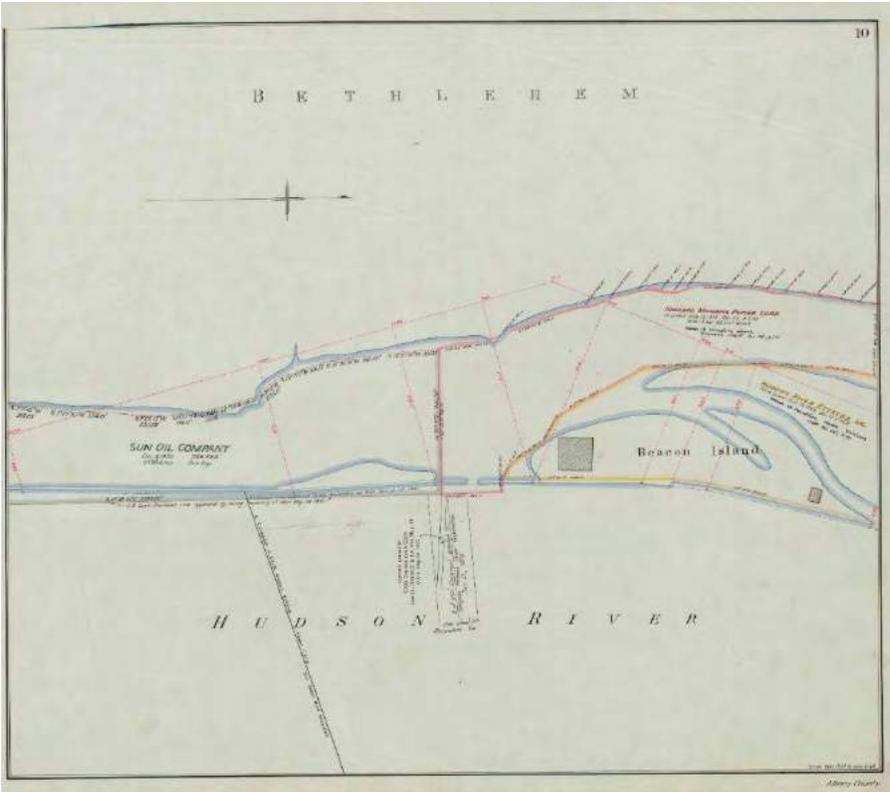
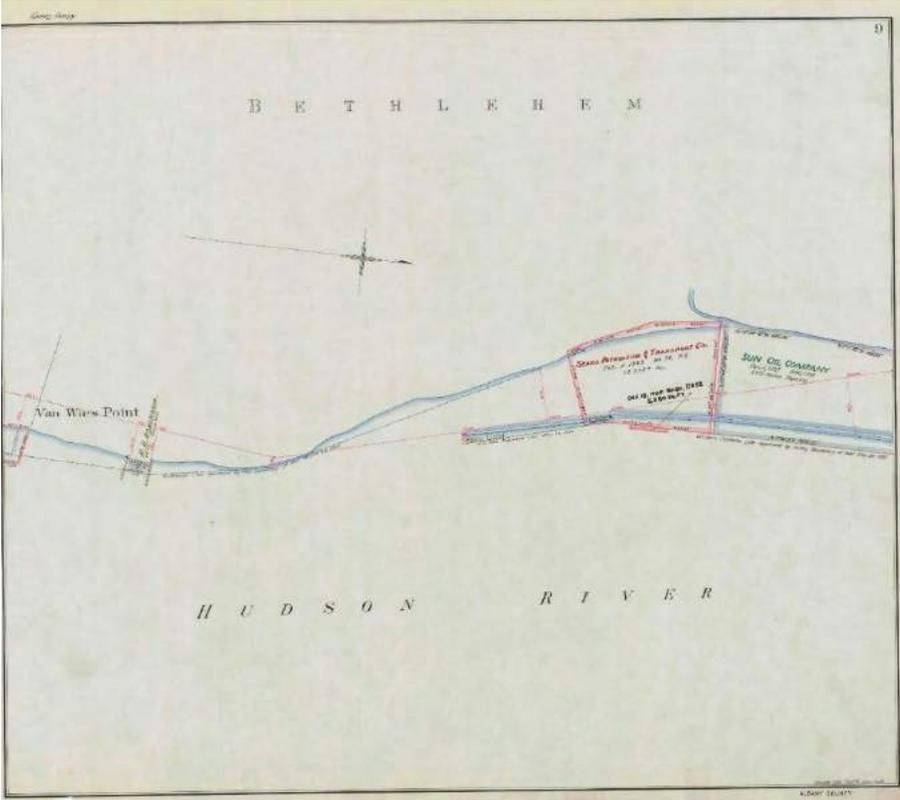
- Shad and Schermerhorn Islands
- Papscaene Marsh & Creek (In Part)
- Schodack and Houtaling Islands and Schodack Creek (In Part)

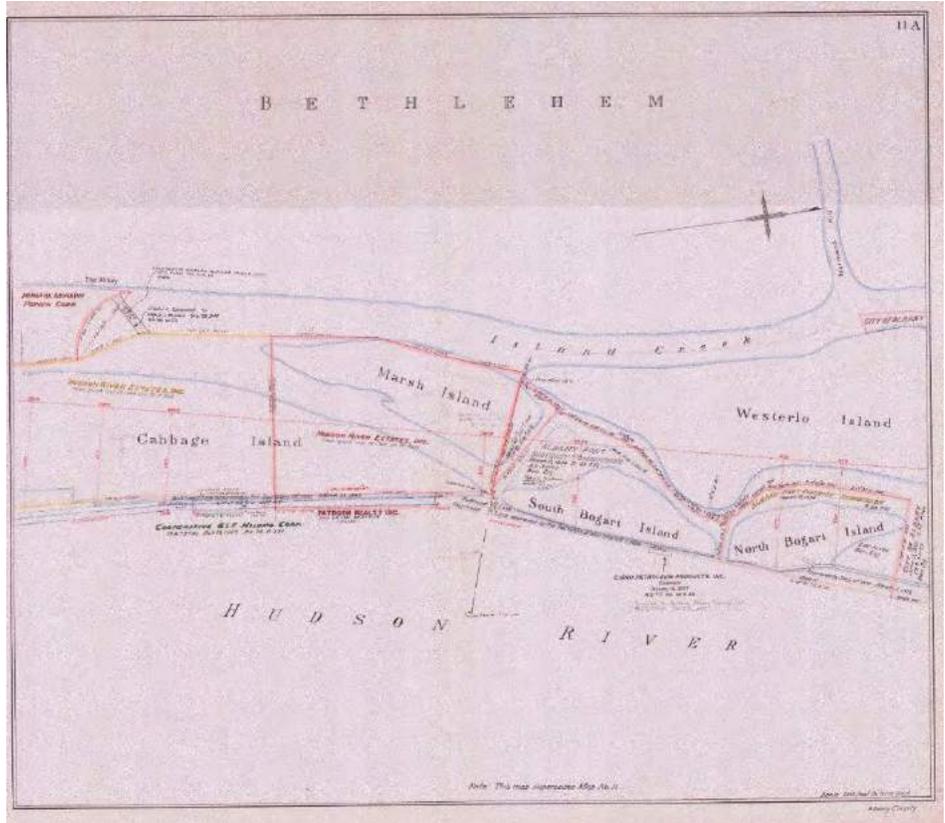
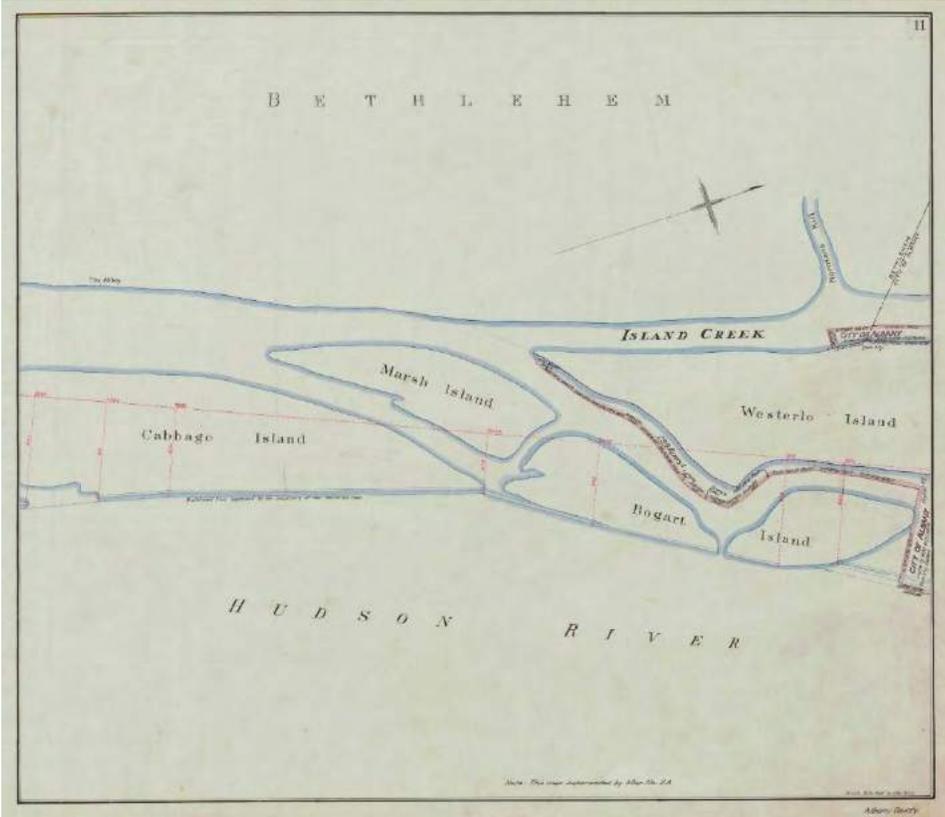


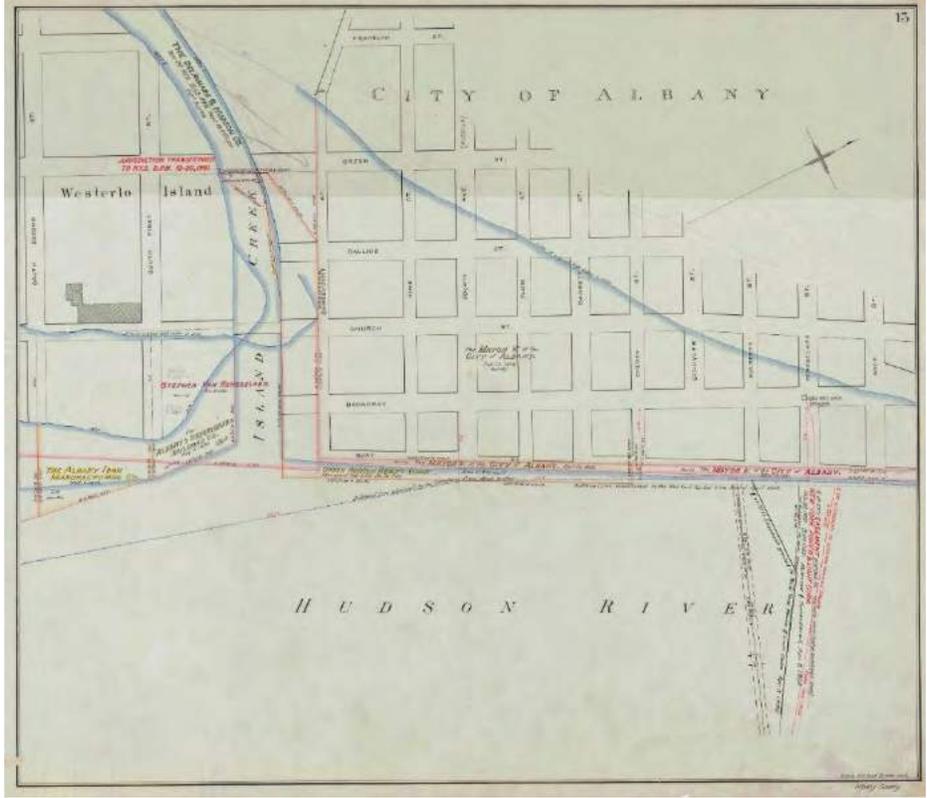
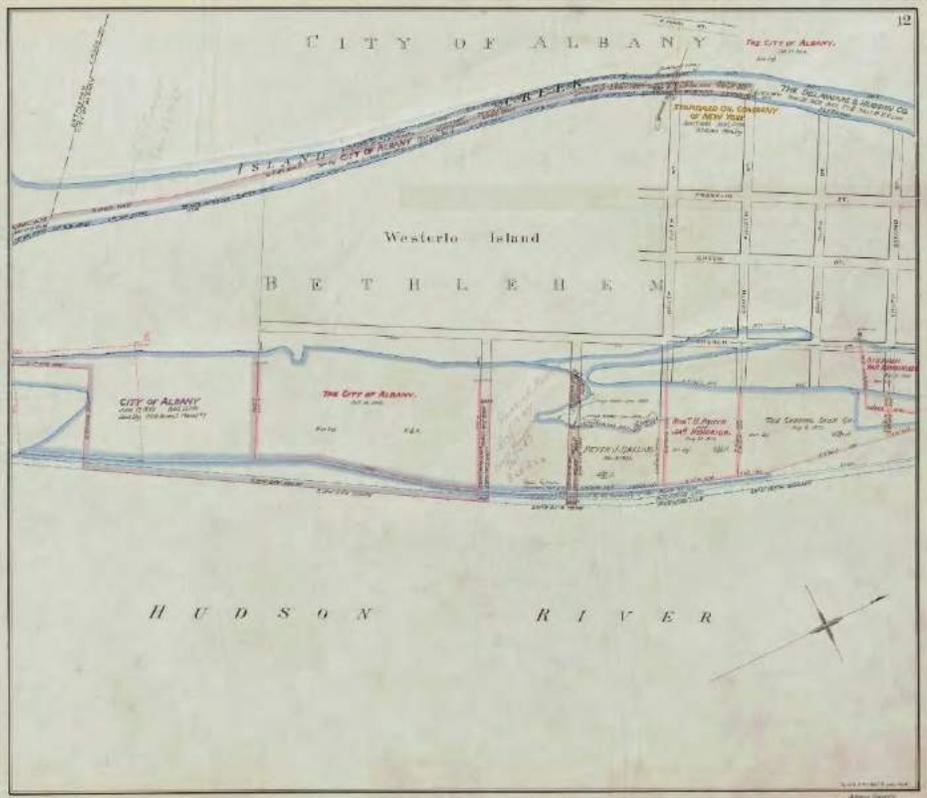
# APPENDIX D – HUDSON RIVER UNDERWATER LANDS







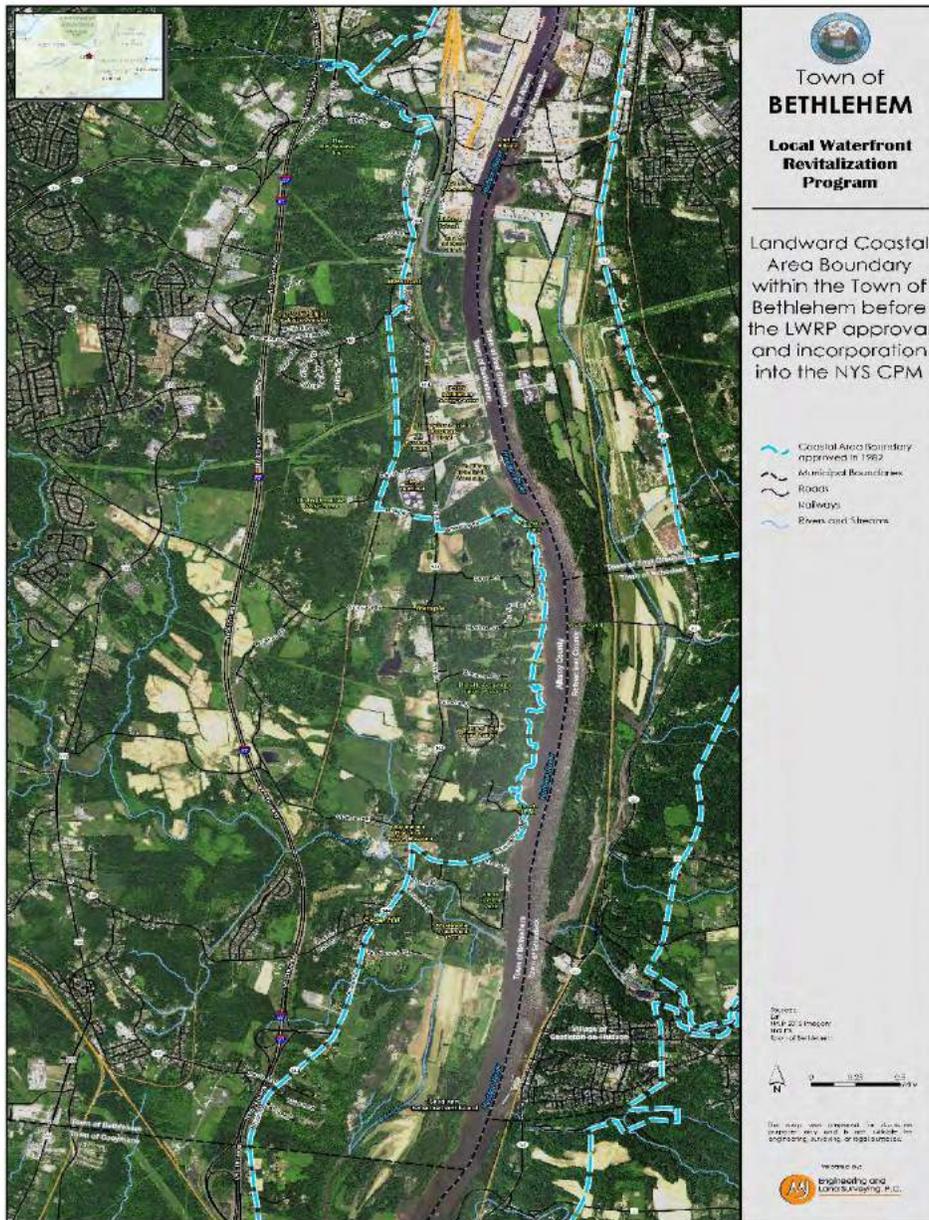




# APPENDIX E – MAPS AND OTHER SUPPORTING RESOURCES

## NEW YORK STATE COASTAL AREA BOUNDARY APPROVED IN 1982

The boundary of the New York State Coastal Management Area (coastal area) was originally approved in 1982, concurrent with the State approval of the New York State Coastal Management Program. The western and eastern landward boundaries of the coastal area along Hudson River and within the Town of Bethlehem and adjacent towns, as approved in 1982, are illustrated below.

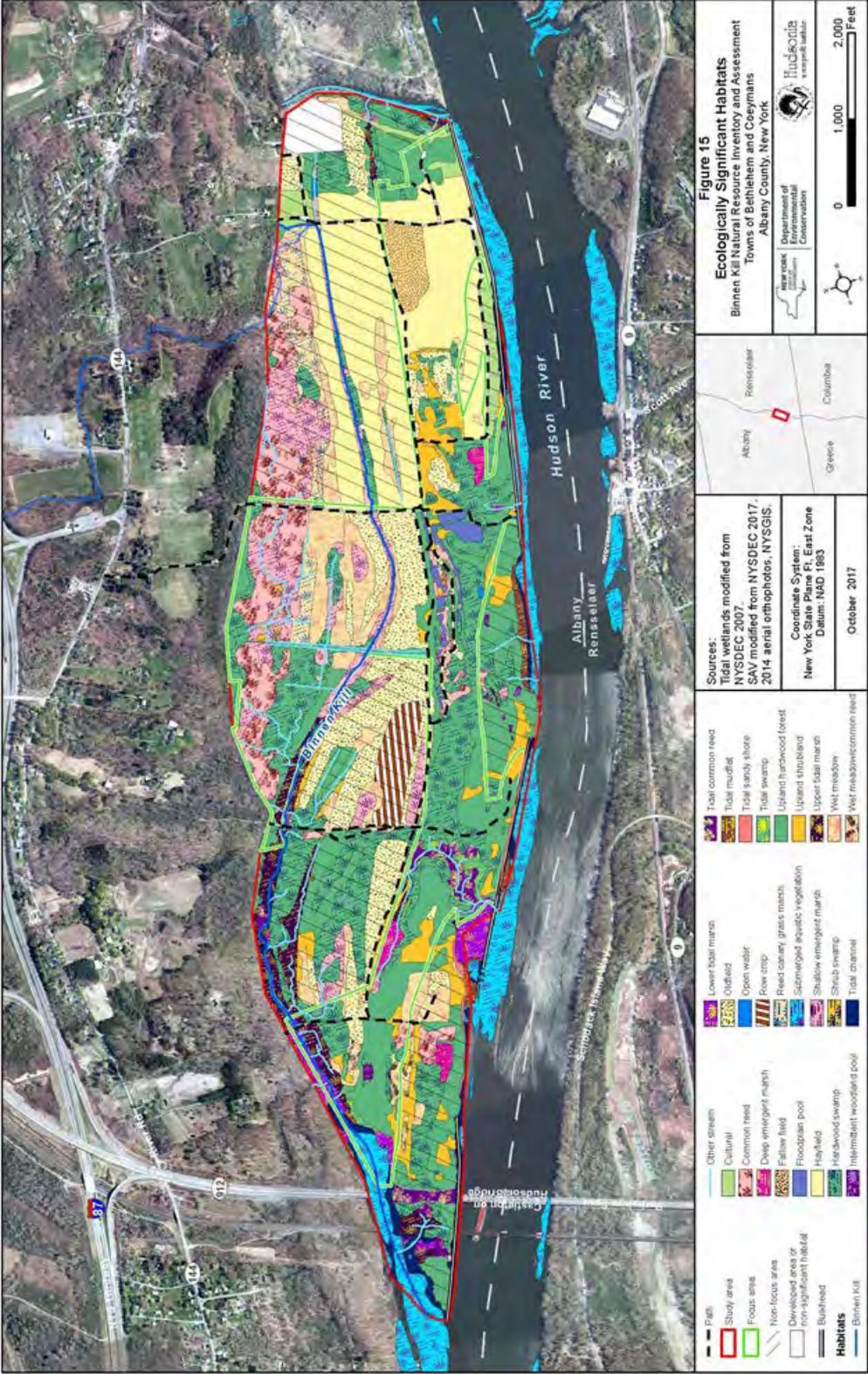


The landward boundary of the coastal area within the Town of Bethlehem, illustrated by the blue line west of the Town of Bethlehem eastern boundary (green line), starts on the northern side of Bethlehem at the intersection of the town's boundary with the City of Albany with the Normans Kill falls, located just downstream from the New York State Thruway (Interstate Route 87) bridge;

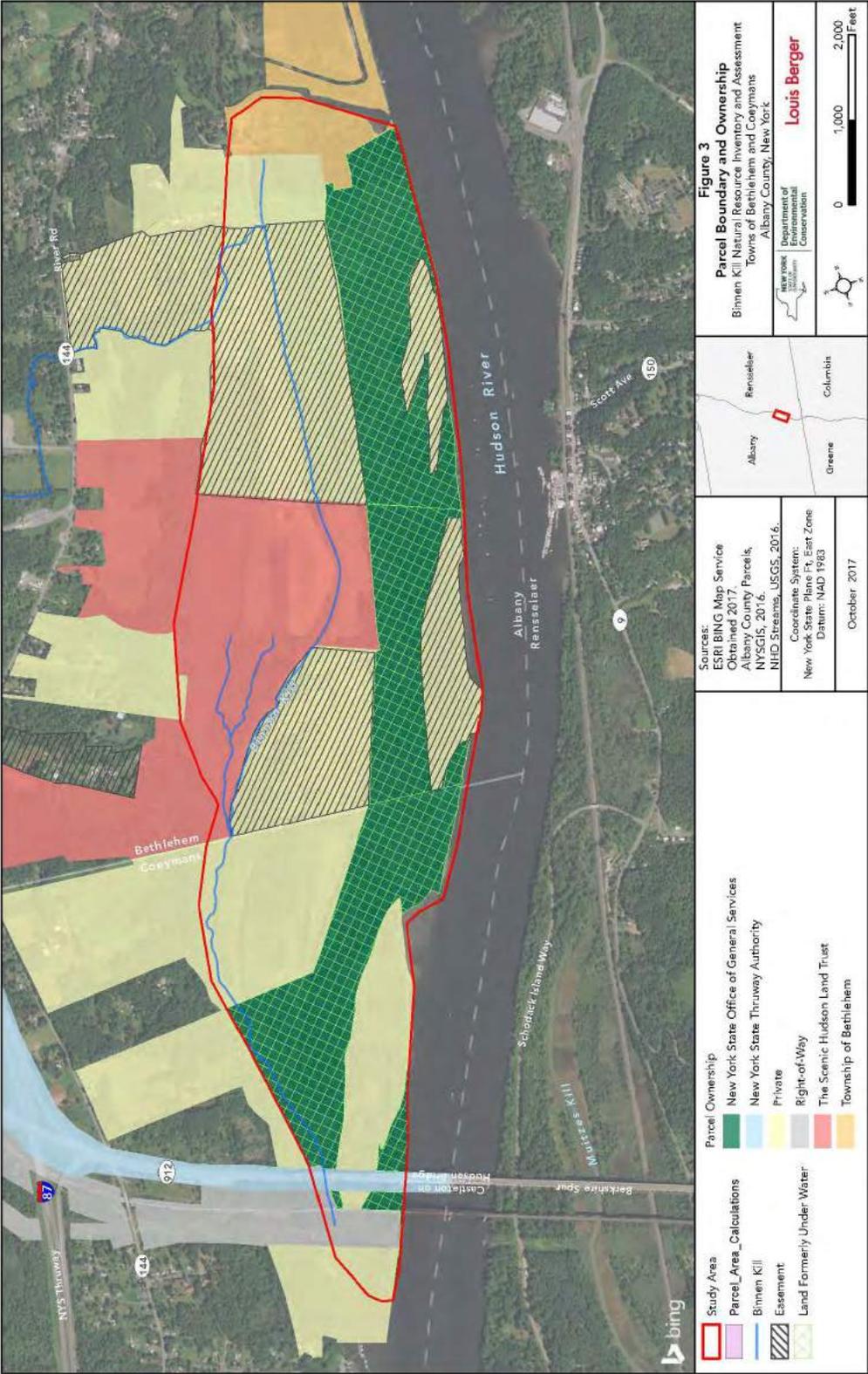
- then, continues in an easterly direction along Normans Kill and the Bethlehem's municipal boundary with the City of Albany to a point of intersection with the centerline of River Road, where it turns southerly;
- then, it continues along the centerline of River Road for approximately 400 feet to a point of intersection with the northern side of Corning Hill Road, where it turns westerly;
- then, the landward boundary continues along Corning Hill Road for approximately 450 feet to a point of intersection with the centerline of Retreat House Road, where it turns southerly
- then, it continues along Retreat House Road for approximately 3640 feet to a point of intersection with the centerline of Halter and River Roads;
- then, the landward boundary continues for approximately 1230 feet along the centerline of River Road to the intersection with Gates Lane;
- then, it continues along River Road for another 1330 feet to a point 50 feet away from the intersection of River Road with Anders lane, where it turns westerly;
- then, the landward boundary follows a line parallel and 50 feet north of Anders Lane, for approximately 580 feet, to a point of intersection with Glenmont Road, where it turns south;
- then, it goes south for approximately 4700 feet along an imaginary line following natural features locate 50 to 500 feet west of the western bank of Hudson River;
- then, the landward boundary turns in a southwestern directions 50 feet before intersecting the CSX railroad tracks;
- then, it continues for approximately 890 feet in a southwestern direction along an imaginary line parallel and 50 feet west of the for CSX railroad tracks to a point of intersection with Smultz Road;
- then, continues along the same imaginary line parallel and 50 feet west of CSX railroad tracks for approximately 1200 feet to a point where it turns in a southeastern direction and continues along the northern side of Bask Road;
- then continues along Bask Road to a point of intersection with the centerline of River Road, where it turns south;
- then, the landward boundary continues for approximately 368 feet along River Road to a point of intersection with Wheeler Road, where it turns easterly;
- then it follows the centerline of Wheeler Road for approximately 2145 feet before turning southerly and following a line 50 to 100 feet west of the eastern bank of Hudson River, to a point of intersection with Barent Winne and Lyons Roads;
- then, the landward boundary follows the centerline of Barent Winne to the intersection with the centerline of River Road, where it turns in a southwestern direction;
- then it follows River Road for approximately 6860 feet to the point of intersection of Bethlehem's southern boundary with the Town of Coeymans.



**ECOLOGICALLY SIGNIFICANT HABITATS**

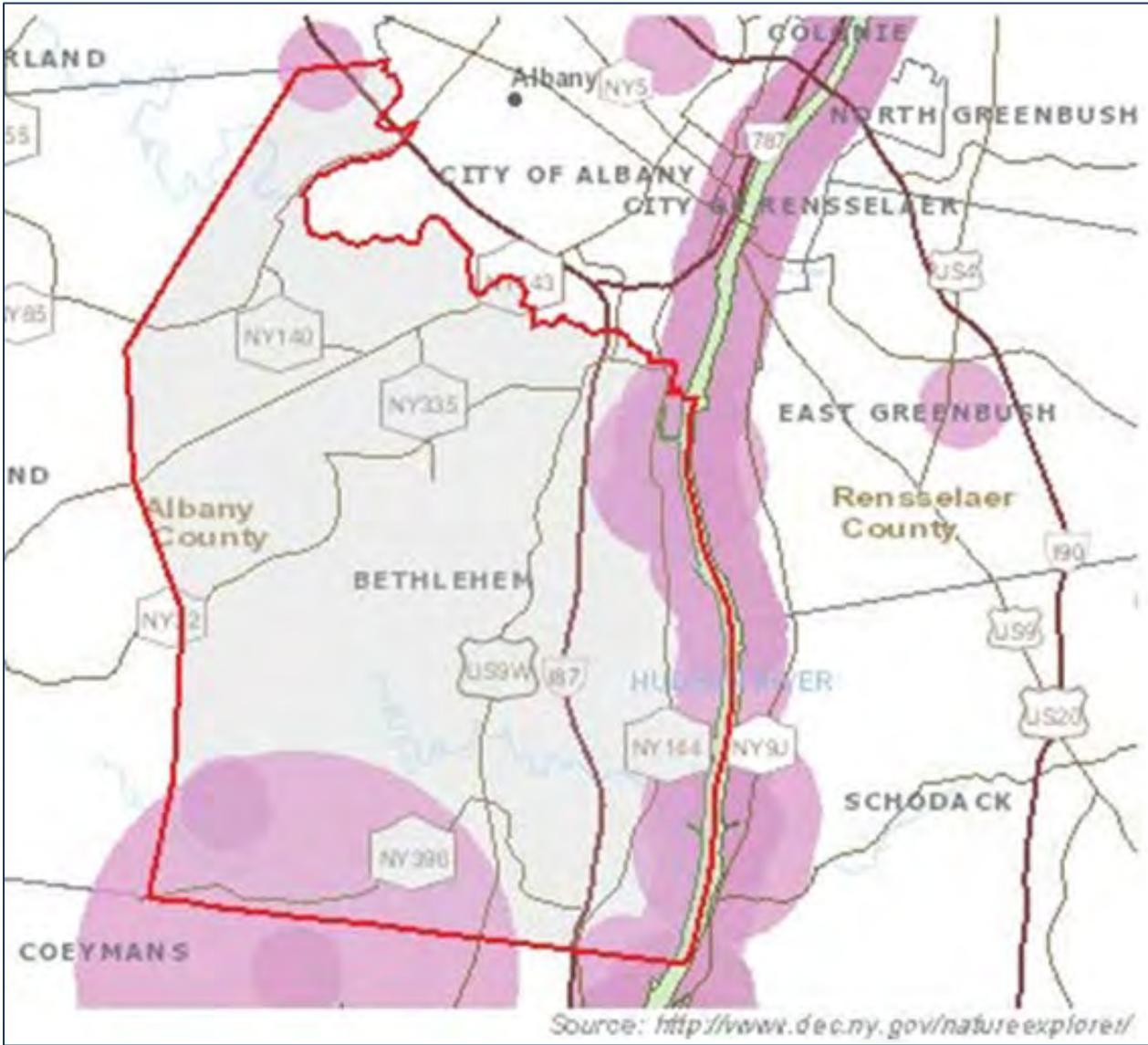


PARCEL BOUNDARY AND OWNERSHIP

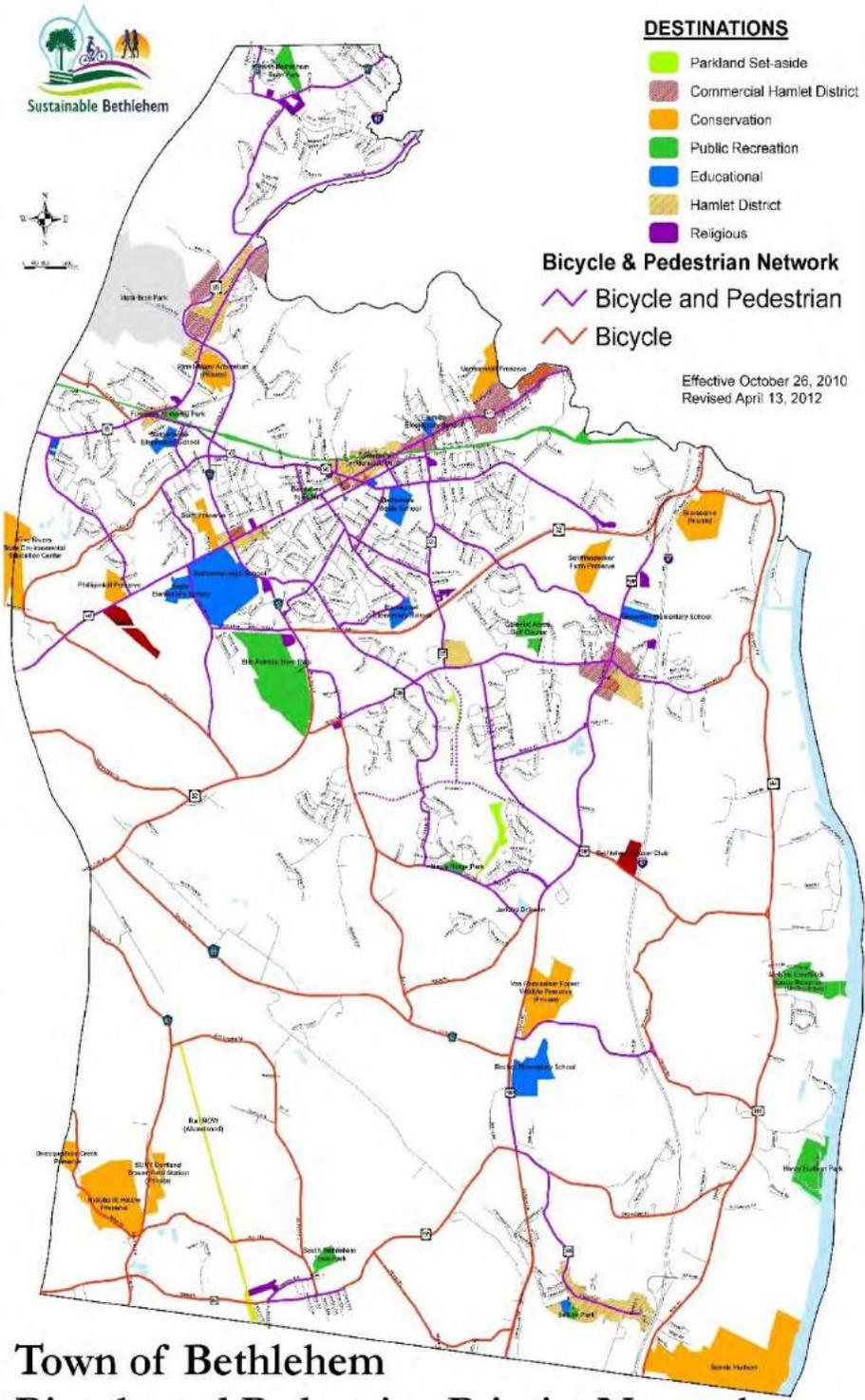


**NEW YORK NATURE EXPLORER**

**POTENTIAL RARE SPECIES AREAS**



# BICYCLE AND PEDESTRIAN PRIORITY NETWORK



**Town of Bethlehem  
Bicycle and Pedestrian Priority Network**

PaTHs 4 Bethlehem Committee