

SECTION II
INVENTORY AND ANALYSIS

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A. ISSUES, PROBLEMS AND OPPORTUNITIES

Albany's Hudson riverfront represents a unique opportunity for the City to initiate the restoration of the waterfront to a position of importance in the life of the City. Albany's central business district has, and will continue to, generate a substantial level of new development and reinvestment in the Waterfront Revitalization Area (WRA). Waterfront development can stimulate and enhance this revitalization by improving the City's image as a business, financial and educational center and as a vital, active place to live and work.

The Albany 2030 Comprehensive Plan incorporates revitalization of the Hudson River waterfront as a critical strategy in achieving the City's vision for a sustainable, prosperous future, as expressed in the Vision Statement:

".....Downtown Albany is a vibrant mix of business, residential, educational, cultural, and entertainment uses connected to the Hudson River waterfront."

The following system strategies identified for the Hudson River waterfront in Albany 2030 are tied directly to the goals and objectives of the LWRP:

- UD-2 Improve waterfront and downtown connections.
- INV-2 Encourage investment in urban land and buildings for employment and housing.
- INV-3 Reinforce, enhance and promote Albany's distinctive character and identity.
- CHR-7 Increase opportunities for recreational use of waterways.
- TR-3 Increase transit connectivity.
- FMP-2 Modernize the port to accommodate increased demand.
- WW-1, WS-1 Implement Long-Term Control Plan to mitigate water quality impacts of CSO's.
- WW-3 Use zoning and environmental review to protect river and stream corridors.
- WW-4 Remediate brownfields to reduce runoff and water table contamination.
- WW-5 Improve public access to waterways.
- OS-1 Expand and connect greenways and trails and link to regional networks.
- NI-1 Target blighting influences.

Where conditions are appropriate, a revitalized waterfront will continue to contribute to the economic development, residential quality and environmental preservation of various areas of the waterfront. Additionally, consideration needs to be given to the potential and projected impacts of climate change-related sea level rise to ensure that existing and future development is (re)designed in a manner that increases the resilience and adaptive capacity of both the natural and manmade environments.

1. **Profile of Opportunities**

a. **North Broadway Sub-Area**

- Vacant and underutilized sites in the North Broadway corridor offer excellent possibilities for the redevelopment of warehouse, light industrial, entertainment, mixed use, retail, and recreational uses.
- Recent retail and entertainment development in the North Broadway corridor has increased nighttime activity in the area.
- The Mohawk Hudson Hike Bike Trail is part of a regional trail system that brings multiple visitors through the area, and is linked to Albany's growing bike network.
- Potential replacement of the Livingston Avenue Bridge will include pedestrian access across the Hudson River to Rensselaer.
- Relatively abundant fish and wildlife on the waterfront offer the possibility of habitat enhancement and increased passive, nature-oriented recreation.
- Proposed Bus Rapid Transit (BRT) on Broadway would provide expanded transit access to the area.

b. **Downtown Sub-Area**

- Plans for the Albany Convention Center on the 6-acre site off Broadway between Hudson Avenue and the South Mall Arterial have been put on hold indefinitely due to funding issues. The site represents a significant redevelopment opportunity for the Downtown. Other prime (re)development sites are available on Broadway, north and south of Union Station.
- Historic buildings are suitable for rehabilitation and development for a variety of residential and commercial uses, including high-tech and hundreds of new apartments and condominiums currently online or in development.
- The Albany Heritage Area Visitors Center, the Henry Hudson Planetarium, and the Irish American Heritage Museum offer visitors access to information and informative exhibits about the history of the city of Albany.
- The Corning Preserve is a public open space with a special significance to City residents, providing outdoor recreation opportunities for downtown employees and City residents.

- Albany Riverfront Park, located at the Corning Preserve, features an 800-seat amphitheater, a bike trail, and a boat launch.
- The Albany Rowing Center provides recreational and competitive rowing opportunities, plus major events such as the Head of the Hudson Regatta.
- The Hudson River Way pedestrian bridge, constructed in 2002, links Downtown Albany with the waterfront.
- Proposed Bus Rapid Transit (BRT) on Broadway would provide expanded transit access to the area and support potential Transit-Oriented Development at key locations, such as Quackenbush Square.
- Passive recreation opportunities should be maintained and enhanced while modest recreationally or service-oriented commercial development should also be permitted.
- The potential exists to deck over Interstate 787, creating additional land area for residential, commercial, and recreational/park development.

c. South End Sub-Area

- The South End Sub-Area is in close proximity to Downtown Albany and the historic South End neighborhood and has good pedestrian and bicycle access to the Corning Preserve, the Mohawk Hudson Bike Trail, and the proposed Albany County Rail Trail.
- Continuation of the riverwalk and public access will support residential and mixed-use development opportunities in this area.
- Existing industrial and commercial buildings offer opportunities for rehabilitation and conversion for residential or mixed uses.
- Residential redevelopment in the adjacent neighborhoods to the west promotes neighborhood stability and encourages further investment.
- Island Creek Park, located in the southernmost part of this sub-area, provides neighborhood level access to a waterfront recreation area.
- Attractions such as the USS Slater, Dutch Apple Cruises, and the African American Cultural Center attract additional visitors to the area.

d. Port Sub-Area

- Albany's role as a river port with access to the sea has long been advantageous to the City's development. Albany's port is the only upstate port with access to ocean-going vessels that operates ice-free, year round. The City's later emergence as a highway and rail center, in part fostered by the attraction of the Port and its facilities, has further contributed to that development.
- The Port offers 20 Acres of open storage and 300,000 square feet of available warehouse storage on the Albany side, along with on dock rail for loading direct to ship.
- The 2010 Port Master Plan identified potential sites for improvement or expansion. The sites were selected either because they are vacant, could soon be vacant, or because the infrastructure at the site could benefit from certain improvements.
- There exists an opportunity to promote the availability of Port sites for solid waste management processing facilities such as the scrap metal and bulk paper recycling operations that have existed at the Port for some time, as well waste to energy facilities that utilize new clean technology.

2. Problems/Constraints

- The Interstate arterial system (I-787) and CSX rail line which parallel the waterfront along the River is a substantial barrier to vehicular or pedestrian access to the waterfront from the developed areas to the west, cutting off the City and its residents from direct access to and enjoyment of its riverfront lands.
- Access limitations to the waterfront and parking constraints impede opportunities for existing and new waterfront businesses.
- Pedestrian access to the waterfront from the Downtown Sub-Area has improved with the completion of the Hudson River Way pedestrian bridge, however, access to the other sub-areas is impeded by the at-grade railroad tracks.
- Vehicular access is limited and possible improvements would involve expensive overpass construction and/or an underpass connection requiring an at-grade rail crossing.
- Parking in the WRA, particularly in the South End and Downtown Sub-Areas, is disorganized and inefficient and does not adequately serve the destination points on the waterfront, such as the USS Slater Museum, the Corning Preserve, the Albany Rowing Center, and the Riverfront Bar and Grill.
- The majority of the WRA (77%) is in the 100-year floodplain, and the City's Climate Adaptation Plan show an increased probability of major flood events as a result of climate change and sea level rise.

- About 2/3 of the City is serviced by an aging combined storm/ sanitary sewer system, which can overflow into the Hudson River during wet weather events.
- The visual quality and aesthetics along sections of the waterfront need improvement, particularly the condition of sidewalks, pedestrian and vehicular access points, the boathouse, and parking areas.
- Funding for maintenance of the Hudson River Way pedestrian bridge is limited.
- Lease agreements between the State and City for Corning Preserve limit commercial development on the waterfront.

B. EXISTING LAND USE AND DEVELOPMENT

The North Broadway and Downtown Sub-Areas are, in a sense, bisected by I-787 so that the character of the land use is fairly consistent on either side in each sub-area. On the east, or river side of the highway, the land is generally distinguished by open space and recreational sites; the west, or inland side being oriented toward residential, commercial and industrial uses (See Map 2).

1. North Broadway Sub-Area

The North Broadway Sub-Area comprises three districts: the Broadway corridor; the Albany Department of General Services site; and Riverfront Preserve.

- Broadway Corridor:** This area has historically been used for commercial and industrial business, including ironworks, lumber manufacturing, auto services, as well as for coal storage and distribution. Currently, business in this area includes metal working, auto services, stone masonry and building supplies and services, warehouse receiving and distribution, as well as some retail stores and commercial business. Although mostly consisting of vacant properties and underutilized industrial buildings, there has been some recent improvement with trendy new commercial establishments and reuse of buildings along Broadway.
- Albany Department of General Services:** Located between Erie Boulevard and I-787, north of I-90, this approximately 60-acre area accommodates the expanded facilities for the City of Albany Department of General Services. The City of Albany Department of Water and Water Supply is also located within this area.
- Riverfront Preserve:** Covering approximately 77 acres, between I-787 and the Hudson in the northeast corner of the sub-area, this area is currently an undeveloped public open space, accessible only by pedestrians or bicyclists from the south or north, and by maintenance or emergency vehicles. An existing bicycle path, the Mohawk Hudson Hike Bike Trail, is part of a trail system that extends along the river's edge from the Corning Preserve to the City of

Watervliet. The only recreational facilities are several picnic tables and exercise stations. The area is characterized by open fields and dense thickets, especially along the edges of the bicycle path. A boat launch is located near the D&H railroad bridge at the southern end of Riverfront Preserve.

2. Downtown Sub-Area

The Downtown Sub-Area also comprises three districts: part of the Central Business District; the Corning Preserve; and the area north of Clinton Avenue.

- a. Central Business District: This section of the Downtown Sub-Area is distinguished by a mix of high-density commercial, governmental, educational and institutional uses. Between Broadway and I-787, existing development includes the State University Headquarters in the former D&H Building, which is an important landmark clearly visible from the Interstate; the federal courthouse; headquarters buildings for the Dormitory Authority of the State of NY and the NYS Department of Environmental Conservation; and the historic Union Station, which was retrofitted for office space in the 1980's and now includes an attached two-level garage. The building was occupied by Bank of America up until 2010 and is currently being considered for use by University at Albany's College of Nanoscale Science and Engineering for use as a high-tech incubator space. A 300,000 square foot convention center has been under consideration to replace vacant and underutilized properties at Broadway and Division Street.
- b. Corning Preserve: The main feature of this public open space of almost 18 acres is a pair of tidal pools located in the center of the Preserve. The Preserve has basic amenities, including picnic tables, a children's play cluster and a permanent rest room/maintenance facility. The park provides a unique waterfront recreation facility for downtown employees and visitors and experiences moderate to heavy use during the warmer months. Some of the Preserve's primary features are its bicycle/pedestrian path, the Albany Rowing Center, and picnic areas and other passive use facilities. The only commercial use in Corning Preserve is the Riverfront Bar and Grill, a waterfront restaurant located in a permanently docked barge on the river. Corning Preserve supports wildlife in the form of ducks and other waterfowl, and recreational fishing in the Preserve has become common, both in the tidal pools and the River itself. Completed in 2002, Albany Riverfront Park is located at the south end of Corning Preserve. The park is a waterfront destination and features an 800-seat amphitheater, an educational visitor's center, bike trail, and floating boat docks. The Hudson River Way pedestrian bridge links Downtown Albany and Broadway with Riverfront Park and the Corning Preserve.
- c. Blocks North of Clinton Avenue: This area includes a complex of historic structures, including Quackenbush House, one of the oldest surviving residential buildings in Albany, now converted into a restaurant; and the City of Albany Visitors Center, which exists within a complex of industrial buildings that previously housed the City of Albany Water Works. A major expansion of the Visitors Center, which now includes a planetarium, was completed in 1991. The Quackenbush Pumping Station, which pumped the city's water from the Hudson River up until the 1930's, was converted to the Albany Pump Station, a popular local restaurant and brewpub, in 1999.

3. South End Sub-Area

The South End Sub-Area, extending roughly from Rte. 20 to just south of Gansevoort St., is one of Albany's oldest residential districts. Unlike the previous sub-areas, the South End is relatively homogeneous on the west side of I-787 and continues to function primarily as a residential area, interspersed with neighborhood-oriented commercial activity. Island Creek Park, a recommended project from the 1985 LWRP, was completed in 1993.

On the river side of the arterial, off of Quay Street, is the "Snow Dock", so named for the City's former practice of dumping snow from it in the winter. This is a landscaped facility providing docking for attractions such as the USS Slater Historical Museum and the Dutch Apple Cruises. Directly south of the Snow Dock is U-Haul's Albany warehouse and van yard. Further south, between Broadway and I-787, are several other industrial/warehousing buildings currently occupied by a number of small-scale wholesale and storage companies whose functions have no relationship to the river. ***There has been revitalization of 40 & 44 Broadway that should be included here.

South of Route 20 and west of I-787 are two residential neighborhoods: the Pastures and Steamboat Square. The Pastures, which comprises the Pastures Historic District, involved the restoration of several buildings dating from the first half of the 19th century. Many historic homes were rehabilitated by homeowners and some were rehabilitated and converted to condominiums and apartments. In addition, new homes were constructed along South Pearl Street. Steamboat Square is an affordable housing complex owned and operated by the Albany Housing Authority. The complex lies partially within the South End/ Groesbeckville Historic District and includes four renovated high-rise apartment buildings, rehabilitated historic rowhouses, and newer townhouses constructed in the 1980's.

Residential development continues south of Rensselaer Street dominated by the four 12-story towers of affordable housing which anchor the Steamboat Square neighborhood.

Since completion of the Capital South Plan in 2007, the City of Albany and the South End Action Committee (SEAC) have completed major development and redevelopment projects such as the John A. Howe Library expansion, new community gardens, and many new and rehabilitated affordable housing units through the South End Revitalization Project and in conjunction with the Albany Housing Authority and Habitat for Humanity.

Island Creek Park, a 1.3-acre park located along the Hudson River between the Corning Preserve and the Port of Albany, features a waterfront promenade, a fishing pier, a boat launch, picnic tables, barbecue grills and a playground.

4. Port Sub-Area

This sub-area comprises of the Albany Port District. The Port of Albany is the northern-most inland port in North America that operates, ice-free, on a twelve-month basis. The largest industrial district in the City, the Port is a facility of great regional importance handling the distribution of a wide range of products.

Most of the land in this district, lying between the area south of Gansevoort Street and the City's border with the Town of Bethlehem, is owned by the Albany Port District Commission (APDC) and is leased to industrial and commercial tenants primarily involved with cargo related business, including grain, wood pulp, salt, dry and liquid bulk, scrap metal, construction, recycling, and warehousing. As of the completion of the 2010 Port Master Plan, approximately eight parcels in the Port were vacant.

Other uses in the Port Sub-Area include the 31.4 acre Albany County South Wastewater Treatment Plant and heavy industrial uses west of Church Street, such as scrap metal and construction companies utilizing railroad lines.

Along South Pearl Street are two residential areas: the town houses constructed by Interfaith Homes along Old South Pearl Street and the Ezra Prentice Homes (public housing) at the foot of Mt. Hope Drive.

There is vacant land west of South Pearl Street along the banks of the Normans Kill, which has always been considered undesirable for development due to erosion hazards and the threat of flooding. Steep slopes and unstable soils characterize the Normans Kill valley at this location.

C. OWNERSHIP PATTERNS

An inventory of publicly-owned land, prepared using the City's GIS database identified 153 publicly-owned parcels in the WRA (See Map 3). Parcels range in size from 33 acres (owned by the Albany Port District Commission) to various parcels of 0.1 acres. Though the publicly-owned parcels west of I-787 are relatively small and widely-distributed, virtually all of the land east of the highway is in public ownership.

In the WRA, publicly-owned land totals 574 acres, which represents approximately 52% of the 1,107 acres of land that comprise the WRA. By contrast, 533 acres, or approximately 48% of the land in the WRA remains in private ownership.

The following is a breakdown of how publicly-owned lands in the WRA are distributed:

1. North Broadway Sub-Area – 13 parcels totaling 156 acres.
2. Downtown Sub-Area – 34 parcels totaling 95 acres.
3. South End Sub-Area – 48 parcels totaling 50 acres.
4. Port Sub-Area – 57 parcels totaling 288 acres.

Lands within the WRA boundary which are submerged under the waters of the Hudson River and the Normans Kill total 231.3 acres and are owned by the New York State Office of General Services and the City of Albany respectively.

Rights-of-way of the two highways, I-90 and I-787, which pass through the WRA are owned by the New York State Department of Transportation.

Publicly-owned parcels targeted for major projects are: 1) Corning Preserve Master Plan Phase 2 - visioning and development planning for the second phase of the Corning Preserve master plan, including potential for a new permanent covered stage for performances and events, a restaurant, café, improved docking facilities, bicycle and kayak rentals, and improved access and parking.; 2) A new greenway is proposed to cut through the northern portion of the Port District along Normans Kill.

D. VACANT AND UNDERUTILIZED SITES AND BUILDINGS

Albany 2030 includes a Pre-Nomination Study as part of the NYS Brownfield Opportunity Areas (BOA) Program. The study provides the methodology for selecting target areas for potential future redevelopment scenarios in alignment with the Albany 2030 vision. The methodology included creating an inventory of vacant buildings and underutilized properties as criteria for selecting pre-nomination sites as BOA redevelopment areas.

Vacant Buildings - According to the City of Albany, a vacant building is defined as a building or building portion that is unoccupied and left unsecured according to City Code. As of 2000, the City requires owners to register their vacant buildings and secure them in accordance with City Code. The Division of Building and Codes maintains a list of registered buildings in a Vacant Building Registry. Currently, there are 730 buildings registered within the City. Within the WRA, there are 14 buildings on the Vacant Building Registry, as indicated on Map 4. Of the 14 vacant buildings in the WRA, nine are located in the South End Sub-Area, two are located in the Downtown Sub-Area, and one is in the North Broadway Sub-Area. There are no registered vacant buildings in the Port Sub-Area.

Vacant Properties – The City of Albany defines a vacant property as a property that is not in use, is in temporary use, or lacks permanent improvement. There are 229 vacant properties in the WRA. Of the total WRA vacant properties, 30 are located in the Port Sub-Area, 132 are located in the South End Sub-Area, 14 are in the Downtown Sub-Area, and 53 are in the North Broadway Sub-Area.

Underutilized Properties - A property is considered underutilized if it is partially maintained or improved, and may only be in use intermittently by the owner. In these cases, the property may not be operating as its highest and best use in the context of a larger area-wide redevelopment scenario. The City of Albany identified underutilized lots during field research when planning neighborhood projects or working with neighborhood stakeholders. Within the WRA, there are 114 underutilized properties. Of the total WRA underutilized properties, 14 are located in the

South End Sub-Area, four are located in the Downtown Sub-Area, and 40 are located in the North Broadway Sub-Area. No underutilized properties were identified in the Port Sub-Area.

Targeting vacant buildings and vacant / underutilized properties for redevelopment and blight removal was identified as a priority in the Albany 2030 Comprehensive Plan. As an ongoing implementation project, Albany 2030 recommends completing and implementing the Neighborhood Revitalization Strategic Plan. The plan augments the City's successful programs for combating abandonment and blight, the Albany Vacant Building Registry and Vacant Building Court – a monthly court date reserved specifically for vacant building registry and code violation cases, with four major programs that will be created and administered by the Neighborhood Revitalization team:

1. A strategic property acquisition fund;
2. The City of Albany Land Bank;
3. A comprehensive disposition strategy; and
4. Choose Albany – the City's campaign to promote homeownership and City living, which began its pilot program in 2011.

E. EXISTING WATER-DEPENDENT USES

Existing water-dependent uses in the WRA are located on Map 5 and described below.

1. North Broadway Sub-Area

- a. Bicycle Path: One of this sub-area's prime water-enhanced features is the Mohawk-Hudson Hike Bike Trail which parallels the Hudson River from State Route 20 to Watervliet and on to Niskayuna, providing scenic vistas of the River.
- b. Boat Launch: Boating opportunities are provided by the public boat launch located on the River near the D&H Railroad bridge at the south end of this sub-area.
- c. Sport Fishing: Sport fishing opportunities are available from points along the Riverfront Preserve shoreline .

2. Downtown Sub-Area

- The Corning Preserve: This 18-acre park preserve provides ample scenic vistas of the Hudson which enhance the use of the bike path continued from the North Broadway Sub-Area. Primarily, the Preserve, with its close proximity to Downtown, is ideal for open-air picnics, festivals and large-scale public gatherings all of which are enhanced by vistas of the River. Albany Riverfront Park and amphitheater is located on the southern end of the Corning Preserve. As in the North Broadway Sub-Area, there are opportunities for sport fishing from the Preserve's shores.

- **Albany Rowing Center:** Located on the Hudson River in downtown Albany, the Albany Rowing Center (ARC) is a non-profit organization providing instructional, recreational, and competitive rowing opportunities for youth and adults. ARC also hosts regional boating events such as the Head of the Hudson Regatta.

c. South End Sub-Area

- a. **The Snow Dock:** The Snow Dock provides opportunities for sport fishing and scenic vistas of the River. It also provides docking for the Dutch Apple Cruises and the USS Slater Museum. Docking for the USS Slater is currently a major concern. An expanded ice-deflection system is needed for permanent mooring.
- b. **Island Creek Park:** This waterfront park offers passive recreational opportunities, such as fishing, as well as a boat launching facility.

Comment [n1]: Status of this situation?

Comment [DM2]: Not sure if they ever installed the expanded ice-deflection system. Need to check with them. I think this is no longer a concern.

d. Port Sub-Area

- a. The Port, by nature, is primarily a water-dependent facility for cargo transport and warehousing.
- b. The Port's marine and industrial facilities and activities prohibit public access to this sub-area's shoreline, restricting scenic vistas and opportunities for sport fishing and public access.
- c. The 31.4 acre Albany County South Wastewater Treatment Plant takes its in-plant water supply entirely from the City Water Department system, however, it is dependent on the Hudson for effluent discharge.

F. EXISTING ZONING

The Waterfront Revitalization Area encompasses 11 different zoning classifications as indicated on Map 6. Three of these zoning classifications were recommended by the 1985 LWRP and adopted by the Common Council in July 1990 for waterfront properties located east of I-787 in the South End, Downtown and North Broadway Sub-Areas. These three classifications are WF-1 (Waterfront Residential/Commercial), WF-2 (Waterfront Recreation) and LC (Land Conservation).

1. The WF-1 Classification is designed to encourage residential, mixed use development or renovation primarily within the South End portion of the waterfront.
2. The WF-2 classification is primarily designed to permit moderate-intensity recreational development within and adjacent to the Corning Preserve and boat launch area. The designation will permit the development of a wide range of public or private recreational activities, while still maintaining the open-space character of the Preserve area.

3. The LC classification is designed to protect, maintain and enhance passive, open-space recreation areas in the Riverfront Preserve and other publicly-owned preserve, park or greenspace properties throughout the City.
4. The North Broadway Sub-Area is comprised of the LC zoning classification along the waterfront and M-1 Heavy Manufacturing, C-M Light Industrial, and C-3 Central Business District generally west of I-787.
5. The Downtown Sub-Area includes a WF-2 (Waterfront Recreation) designation for the Corning Preserve and the C-3 Central Business District classification for that portion of the Downtown Business district located within the WRA boundary.
6. The South End Sub-Area is comprised of WF-1 (Waterfront Residential/Commercial), WF-2 (Waterfront Recreation), C-M Light Industrial, and M-1 (General Industrial) zoning districts east of I-787 and an amalgam of C-1 Neighborhood Commercial and Residential districts to the west of the arterial.
7. The Port Sub-Area is designated almost entirely M-1 Heavy Manufacturing and contains mainly port-related and solid waste management facilities. Other classifications include C-M (Light Industrial) and R-1 (Single-Family Low Density) along Normans Kill.

G. OPEN SPACE, PUBLIC ACCESS, AND RECREATIONAL RESOURCES

1. General Context

Interstate 787 and the train tracks are the primary barriers to improved access to the waterfront, particularly in the North Broadway and Downtown Sub-Areas. There are only four points of access to the shoreline along these sub-areas. (See Map 7.)

2. Access

a. North Broadway Sub-Area

- Existing Access: Presently, bicycle access through the North Broadway Sub-Area is provided via NYS Bicycle Route 9, a major bikeway and designated on-street bicycle route along Broadway. Access by pedestrians and cyclists to Riverfront Preserve is possible via the Mohawk-Hudson Hike Bike Trail, which connects to NYS Bicycle Route 9 via Colonie and Quay Streets at the Corning Preserve.
- Access Possibilities/Constraints: The Patroon Greenway is a proposed 6.5 mile long corridor connecting The Pine Bush, Tivoli and Corning Preserves. A “Bicycle Boulevard” concept was developed for the route between Livingston Academy and the Hudson River. The Bicycle Boulevard alternative would use the existing width of Northern Boulevard through Arbor Hill to create a new urban street section with built-in bicycle lanes, pedestrian walkways and a canopy of trees and landscaping.

b. Downtown Sub-Area

- **Existing Access:** Access to the Corning Preserve is available from the south, crossing under I-787 at either the Broadway-Water Street intersection, or at Quay Street, south of the Dunn Memorial Bridge. Northbound on and off ramps from I-787 also lead to the Preserve, merging with a one-way northbound frontage road which skirts the western boundary of the park providing exits at Colonie Street and Clinton Avenue. From west of I-787, pedestrians can access Corning Preserve by crossing the Hudson River Way Pedestrian Bridge. The Mohawk-Hudson Hike-Bike Trail also extends north and south from the preserve. Construction of the pedestrian bridge in 2002 greatly increased access to the waterfront.
- **Access Possibilities/Constraints:** The 2009 City of Albany Bicycle Master Plan indicates that Hamilton Street (Hudson Riverfront underpass) and Colonie Street will provide another connection between the Downtown Sub-Area and the waterfront by connecting Broadway to the Hudson Mohawk Bikeway. Colonie Street would also provide the connection to the planned crossing of the Hudson River on the existing Livingston Avenue railway bridge to Rensselaer.

c. South End Sub-Area

Existing Access: Vehicular underpasses at Quay Street and Fourth Avenue connect to a two-way extension of Broadway running parallel to the River's edge.

There is relatively unobstructed pedestrian access to the Snow Dock along Quay Street, which is the starting point of the Mohawk-Hudson Hike Bike trail leading north to Watervliet and Niskayuna.

- **Access Possibilities/Constraints:** South of the Snow Dock, the City holds title to a number of undeveloped rights-of-way, including the River's edge along the entire length of the sub-area. This represents an excellent opportunity for continuation of the Mohawk-Hudson Hike Bike Trail as far south as Island Creek Waterfront Park.

The Quay Street and Fourth Avenue access points are only about one third of a mile apart. Since the circulation system in the South End Sub-Area is entirely two-way, there is no need for increased accessibility except under very intense levels of development on the waterfront.

Access is restricted by at-grade railroad tracks. To connect with any of the other streets through to Broadway (Arch, Rensselaer, Cherry or Bassett Streets), would involve further at-grade railway crossings which impose inordinate operational and liability burdens on the railroad company.

d. Port Sub-Area

- Existing Access: Currently, there are no designated bike lanes in the Port Sub-Area but there are sidewalks along South Pearl Street in the northern section of the sub-area. Vehicular access via Church Street and South Pearl Street adequately serves the port and its tenants.
- Access Possibilities/Constraints: The Albany County Rail Trail is proposed along the D&H rail corridor from Route 32 (South Pearl Street) in Albany to County Road 201 in the Village of Voorheesville, including the Pearl Street overpass in the northern section of the Port Sub-Area. The Albany Bicycle Master Plan recommends access to the Rail Trail be provided via the major bikeway of South Pearl Street, Fourth Avenue, and Green Street, which would then tie Pearl Street to Albany's downtown and the waterfront with a potential southerly extension of the Mohawk-Hudson Bike Trail.

3. Recreation

Recreation is primarily confined to the Riverfront Preserve in the North Broadway Sub-Area, Corning Preserve and Riverfront Park in the Downtown Sub-Area, and the small Island Creek Park in the South End Sub-Area. Recreation in the Port is precluded by the Port's dominant industrial character. The following is a brief profile of active and passive recreation forms in the other three sub-areas of the LWRP:

a. North Broadway Sub-Area

- Pedestrian/Bicycle path; parallels the Hudson providing scenic vistas of the River.
- Fitness trail
- Sport fishing/Bird Watching
- Boat launch

b. Downtown Sub-Area

- Corning Preserve: This 18-acre riverfront park is the centerpiece of Albany's coastal area providing picnic areas, open recreation space and the site of the annual Head of the Hudson Regatta. In summer months, live performances happen at the park's amphitheater located at the south end of the preserve. The Riverfront Bar and Grill restaurant is located at the Corning Preserve's north end.
- Albany Rowing Center
- Pedestrian/Bike path
- Outdoor festivals, gatherings
- Musical performances

- Charity marathons and recreational events
- Sport fishing
- Scenic Vistas

c. South End Sub-Area

- Docking for festival ships at the Snow Dock
- Passive recreation in Island Creek Park
- Sport fishing
- Scenic vistas

H. TRANSPORTATION ACCESS AND CIRCULATION

1. Vehicular Access

The WRA is served by two highways: Interstate-90, which runs east-west; and Interstate-787, which runs north-south. I-787 is currently undergoing a rehabilitation project, which includes replacing the concrete driving surface, along with bridge bearings and joints, and rehabilitating the Clinton Avenue interchange ramps. Each of these highways serves regional commuters to downtown, as well as inter- and intra-state traffic.

I-787 originates from Exit 23 on I-87 (commonly known as the NYS Thruway as it stretches from New York City to Albany and the Northway from Albany to Canada) in the southwestern portion of Albany. It enters the WRA just a few hundred feet south of McCarty Avenue's juncture with South Pearl Street. It leads north, passing between the residential areas of the South End Sub-Area and the river. It continues north, passing through the Downtown Sub-Area between the Central Business District and the Corning Preserve and continues through the North Broadway Sub-Area to Menands and on to its termination about 7 miles north of Albany in Cohoes.

I-787 intersects with I-90 in the North Broadway Sub-Area. Access points to Downtown Albany include on-off ramps connecting to Clinton Avenue and to the Mall Arterial, which leads to the Empire State Plaza and Capitol buildings.

I-90 passes through the WRA in the North Broadway Sub-Area where it connects with I-787. This highway provides service east as far as Boston and west to Schenectady, Syracuse and Buffalo. I-90 also connects with I-87 at Exit 24 in western Albany.

While the existing system of roads and highways adequately serve the WRA, I-787 poses a substantial public access barrier to the River and its shoreline.

a. North Broadway Sub-Area

This sub-area is served by Erie Boulevard which follows the former course of the Erie Canal from the Downtown Albany Sub-Area north to Menands, paralleling the D&H Railroad tracks. This road serves as the main thoroughfare in this sub-area, providing access to the several industrial sites in this district.

b. Downtown Sub-Area

The main road serving this sub-area is Broadway, which runs north-south, paralleling the WRA boundary from the north end of the North Broadway Sub-Area to the South End Sub-Area. Major streets carrying traffic into the sub-area from areas to the west are State Street and Clinton Ave.

c. South End Sub-Area

Access to this sub-area from areas to the west is provided primarily by Madison Avenue and Morton Avenue. Broadway continues from the Downtown Sub-Area and passes beneath the I-787 interchange at the north end of the South End Sub-Area. Broadway leads south out of this sub-area and connects directly to Church Street, the main access road into the Port Sub-Area.

d. Port Sub-Area

Church Street continues south from Broadway in the South End Sub-Area. It is the main access road into the shipping/industrial section of the Port.

South Pearl Street continues south from the South End Sub-Area into the Port Sub-Area and becomes Route 32 just south of its juncture with Kenwood Road.

The remainder of this sub-area is not served by public roadways or streets, as it is dominated by industrial sites and shipping facilities.

2. Bus Service

The Capital District Transportation Authority (CDTA) serves the Riverfront Preserve, Downtown, and South End Sub-Areas with several bus lines, most of which travel north-south along North Pearl Street and Broadway just west of the WRA boundary and along I-787 or east-west along State Street, Madison Street, and the South Mall Arterial.

Thirteen bus lines provide services to the Downtown Sub-Area: Trunk Routes 1, 6, 7, 10, 12, and 13; Neighborhood Routes 19, 29, 100, 114, 116, and 125; and the 21-Altamont Express. The Greyhound/Trailways bus depot at Hamilton and Liberty Streets is also located in the Downtown Sub-Area. Routes 1, 6, 19, 29, 100, 114, 116, and 125 also provide access to the South End Sub-Area. Bus Route 114 provides service across the Dunn Memorial Bridge with access to the Town of

Rensselaer. Bus Routes 29, 100, 116, and the 21-Altamont Express provide service to the North Broadway Sub-Area and Trunk Route 7 provides access to the Port Sub-Area.

The new BusPlus Bus Rapid Transit system from Downtown Albany to Schenectady includes stops at Broadway and Hudson Ave. and Madison Ave. and Green St. in the Downtown Sub-Area. A proposed BRT route is planned to run along the Broadway corridor, providing service along the entire waterfront.

3. Rail Service

Currently, there is no passenger rail service into the WRA itself, but the Amtrak train station serving Albany, located in Rensselaer, is accessible via the Dunn Memorial Bridge. NYDOT is currently in the planning stage for the High Speed Rail Empire Corridor Project. This project will examine and recommend ways of introducing higher passenger train speeds on the Empire Corridor and ways to improve reliability, travel times, service frequency, and passenger amenities. A major component of the project is replacement of the Livingston Avenue Bridge, which will be engineered to accommodate both high speed rail and bicycle and pedestrian access.

In addition to passenger rail, the WRA is served by freight rail service. The Albany Port Railroad Corporation, jointly owned by CSX and Canadian Pacific Railway, operates industrial trackage in the Port Sub-Area. CSX/Canadian Pacific also serves the North Albany–Erie Street Yard in the North Broadway Sub-Area.

I. CONDITION OF INFRASTRUCTURE

1. Public Water Supply in the WRA

With the exception of the area to the east of I-787 on Riverfront Preserve, the waterfront area is serviced by the City's water supply system.

In 2007 and 2010, Albany won first prize for the best tasting drinking water in the State during a competition at the New York State Fair. In 2011, it was honored as a top-five best tasting city waters in America. Recent improvements at the Water Filtration Plant have further improved drinking water quality.

2. Public Sewage System in the WRA

The City maintains a system of combined and separate collection sewers, while the Albany County Sewer District maintains treatment plants located within the Port and within the Village of Menands.

The combined system is old, prone to breakdowns, and can overflow into the Hudson River during wet weather events. The Albany Water Board, under the leadership of the Capital District Regional Planning Commission (CDRPC), is currently undertaking a major planning study for mitigation of the impacts of combined sewer overflows. The Phase I Albany Pool Combined Sewer Overflow Long Term Control Plan began in 2007. The LTCP recommends improvements to both the combined sewer system and the three wastewater treatment plants (WWTPs) that comprise the project service area. The draft Long Term Control Plan (LTCP) was submitted to NYSDEC in June 2011 for approval of the overall mitigation program. The main impact at this time, on the CSO abatement, will be the mandated disinfection project.

Stormwater Management in the WRA

In addition to the LTCP and measures to address CSOs, significant improvements in stormwater management practices have been implemented since adoption of the 1992 LWRP to address the impacts of stormwater runoff and improve water quality in Albany County. In 2008, the Stormwater Coalition of Albany County was formed. The Coalition is comprised of 11 municipalities and the University at Albany. The Coalition's operations are hosted by Albany County and include a working group of staff from member municipalities, the County Soil and Water Conservation District, and Capital District Regional Planning Commission working together to implement a plan and projects that meet shared stormwater management goals and keep municipalities in compliance with stormwater regulations. Coalition members collaboratively implement various components of a comprehensive Stormwater Management Program. A significant component of the implementation of Storm Water Management Program is Best Management Practices (BMPs), including local green infrastructure projects. Green infrastructure is the practice of managing and treating stormwater through the natural hydrology and ecological system by infiltration, evapotranspiration, capture and reuse of stormwater. Examples of such techniques include green roofs, trees and tree boxes, pervious pavement, rain gardens, vegetated swales, planters, reforestation, and protection and enhancement of riparian buffers and floodplains.

The Coalition received a NYSDEC grant to create a model ordinance to be used by local municipalities and others who maintain a separate storm system in order to foster green infrastructure practices during development or redevelopment. The grant includes a provision for training of municipal/MS4 staff and board members.

In addition to green infrastructure training, several local green infrastructure demonstration projects have been implemented in the region, including the following in Albany:

- Albany Pine Bush Discovery Center Porous Pavement
- SUNY Albany Permeable Paving
- SUNY Albany Dry Swale
- Normanskill Stream Buffer Restoration

More information about these demonstration projects can be found at <http://www.dec.ny.gov/lands/58930.html#County>.

3. Solid Waste Disposal

The City of Albany provides a public landfill and waste processing facility off Rapp Road in the western portion of the City. The Rapp Road Landfill is near capacity and is located in a sensitive preserved ecosystem, the Pine Bush Preserve.

Albany currently diverts 42% of its waste in the form of recycling, reuse and composting. The City's goal is to divert 65% of the city's waste from the landfill by 2030.

4. Infrastructure Adequacy

Although the public water supply and separate sewer systems are old, they do not pose a significant constraint to existing or proposed WRA development. The primary concern with the combined sewer pipes is the impact on the Hudson River for recreational use and the health of aquatic life. Since CSOs contain mixtures of domestic sewage, storm water runoff, and sometimes, industrial wastewater, they may contain high levels of suspended solids, toxic chemicals, floatable material and other pollutants that can cause the exceedance of NYS water quality standards and pose risks to human and aquatic health.

J. HISTORIC AND SCENIC RESOURCES

1. General Context

Historic resources in the WRA are located mainly in the Downtown and South End Sub-Areas (See Map 9). Structures in the City's historic districts date primarily from circa 1820 to the 1930's.

In addition to being listed on the National Register of Historic Places, all historic districts and structures discussed in this section are covered under a local ordinance for design review by the City of Albany Historic Resources Commission. It should be noted that a large number of historically significant structures have been successfully rehabilitated to office, residential, and commercial uses while retaining their historic integrity.

a. North Broadway Sub-Area

No formally recognized historic resources have been identified in the North Broadway Sub-Area at this time.

b. Downtown Sub-Area

The Downtown Sub-Area has the highest concentration of historic sites in the LWRP area. It includes a large portion of the Downtown Albany Historic District, which includes much of Albany's Central Business District. It is a mixed district of residential, commercial, and governmental uses in buildings dating mainly from the mid-19th century to the 1930's. The

Downtown Sub-Area also includes six individual structures which are listed on the National Register of Historic Places.

Notable historic structures located in the Downtown Sub-Area include the following:

Quackenbush Waterworks Complex: Actually a complex of two and three-story brick buildings, this structure is located at 23 Quackenbush Street on a one-acre parcel on the northwest corner of Montgomery and Quackenbush Streets. The oldest structure in the complex was built in 1852, with others being added between 1873 and 1897. Since the late 19th century, the complex served as a pumping station for the City's water system. It is now the headquarters for the Albany County Convention and Visitors Bureau and the Visitors' Center for Albany's Heritage Area.

Quackenbush House: One of the oldest remaining structures in Albany, this two and a half story brick building located at 683 Broadway dates from around 1736 and stands as a remnant of the Dutch settlement of colonial Albany. It is exceptionally important to the City as the best-preserved remaining example of an urban architecture once characteristic of Albany.

Union Station: Located north of State Street at 575 Broadway in the Downtown Historic District, this three story stone structure was designed in 1899 in an effort to accommodate Albany's increasing rail traffic and to give an impression of a prosperous and progressive city. Upon its completion in 1900 it served 96 trains daily and was widely considered to be one of the most modern railroad stations of the country. Served by the New York Central Railroad, Union Station attracted industry and commerce to Albany and was one of the most significant buildings in the day-to-day lives of the citizens of Albany. After train service here was discontinued in 1968, the building was vacant until its renovation as a bank headquarters was completed in 1986. Currently vacant, the building now is being considered for use by University at Albany.

Old Post Office: Begun in 1879, this building, located on the northeast corner of State Street and Broadway in the Downtown Historic District, was fully occupied by Federal revenue offices and the U.S. Post Office by the end of 1884. This structure, along with the D & H Railroad Building and the First Trust Company Building, form one of the most visually dynamic urban compositions in Albany.

D & H Building: Located on Broadway at the base of State Street, this Flemish and Gothic Revival structure is one of the City's most important architectural attractions. Designed by local architect Marcus T. Reynolds as a component of Arnold W. Brunner's "Plaza" concept, it was completed in 1918 and served as corporate headquarters for the Delaware and Hudson Railroad. The D&H Building provides an exciting visual terminus for the eastern end of State St. It now houses the central administrative headquarters of the State University of New York.

c. **South End Sub-Area**

Encompassing parts of the oldest remaining residential section in the City, the South End Sub-Area includes two historic districts listed on the National Register of Historic Places.

South End/Groesbeckville Historic District: Buildings in the South End first appeared along South Pearl Street in the 1820's and 1830's and on parallel and intersecting streets through the late 19th century. The earliest development occurred on land formerly owned by Philip Schuyler, and the Schuyler Mansion (listed on the National Register) itself is located in this district, just outside the WRA.

Developed in the mid-19th century, Groesbeckville was a small unincorporated village adjacent to the South End district at Third Avenue. It was annexed to the City in 1870. Existing structures are mostly residential, two-to three story frame and brick row houses dating from the 1840's - 1930's, with the majority built in the second half of the 19th century.

Pastures Historic District: This is the oldest remaining residential area in Albany. The majority of the surviving structures here date from 1810 to 1850. It has been the focus of major renovation projects, returning vacant historic structures to use as private homes, condominiums and rental property. The Pastures was formerly a mixed neighborhood of residential, commercial, and industrial uses.

d. Port Sub-Area

No formally recognized historic resources have been identified in the Port Sub-Area at this time.

2. Archeological Resources

The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) Field Services Map indicates that the entire WRA and adjacent areas are considered zones of highly sensitive historic and prehistoric archeological resources. These zones are too numerous and expansive to be displayed individually.

K VISUAL QUALITY

Albany's major contribution to the scenic quality of the coastal area is its well-known and impressive city skyline. Approach views to downtown, however, are diminished by an unattractive foreground of major rail and freeway installations and scattered industrial development. The waterfront sub-areas could play an important role in providing attractively landscaped entrances to the City, both from north and south, and in focusing more attention on its special riverfront location.

Several areas in the Downtown and South End Sub-Areas are under the jurisdiction of the City's Historic Resources Commission (See Part J. - "Historic and Scenic Resources.") The Commission monitors and must approve the design for most new construction or alterations that would be visible from the street.

All new construction requires approval by the City Planning Board under a City-wide site plan review ordinance.

The City is also concerned with preserving views from the River to a shoreline that has not been fully developed. The shoreline along Albany's waterfront is in most cases properly vegetated and attractive when viewed from the River. Exceptions are the Port and South End Sub-Areas. The Port by nature is a working waterfront that cannot, and should not, be embellished with vegetation or screening for aesthetic purposes. With the exception of Island Creek Park, the shoreline in the South End Sub-Area is in a somewhat bedraggled condition which reduces the visual and scenic quality of the waterfront in this vicinity. An improvement plan for this sub-area should focus on appropriate redevelopment, maintenance and enhancement of public access to the shoreline.

L. ENVIRONMENT AND NATURAL RESOURCES

Albany's land, water, vegetation, and air perform essential functions and provide vital benefits for the City and its residents. Map 10 provides an inventory of the natural resources and environmental remediation sites within the Waterfront Revitalization Area.

1. Wetlands

Although there are no State or federally-designated wetlands within the WRA, the tidal pools in the Corning Preserve and areas along the Normans Kill within the Port Sub-Area may fall under the authority of the US Army Corps of Engineers. Any filling of these areas would require a permit from the Corps.

2. Surface and Groundwater Resources

Surface and groundwater resources in the WRA are limited to its two major streams: the Hudson River and the Normans Kill. Water tables in the WRA, though generally high, are in no way a source or resource of public water supply. The City of Albany is served by two public reservoirs: 1) the Alcove Reservoir, located 12 miles to the southwest of the City in the Town of Coeymans; and 2) the Basic Creek Reservoir, located 15.8 miles to the southwest in the Town of Westerlo.

a. The Hudson River

The Hudson River rises from its source near Mt. Marcy in the Adirondack Mountains in northern New York State and flows south for 350 miles where it empties into New York Harbor. At Waterford, 14 miles north of the Port of Albany and some 2.5 miles above the Federal lock and dam at Troy, the River connects with the New York State Barge Canal System. Canals in this system run to Oswego on Lake Ontario, west to the Niagara River, and north to Lake Champlain and the St. Lawrence River.

The Hudson River Channel, upon which the Port of Albany depends, is maintained by the Army Corp of Engineers to a depth of 32 feet. Along the Albany Waterfront, the River varies from 1,100 to 650 feet in width and has an average tidal fluctuation of 4.7 feet.

The River's water at this point maintains a "C" classification, meeting State standards. This classification designates the water as suitable for sport fishing, boating and all other uses except drinking and bathing. (See Part N - Water Quality.)

The River also supports significant habitats for fish, waterfowl and mammals. (See Section L.5, Wildlife).

b. The Normans Kill

The Normans Kill is located on the west side of the Hudson River on the boundary between the City of Albany and Schenectady County. It is a relatively large, medium gradient, perennial warm water stream with a drainage area of over 170 square miles. The lower mile of this stream falls within the tidal range of the Hudson River.

The Normans Kill is the largest tributary stream in Albany County. It is one of four major tributaries which empties into the northern portion of the Hudson River estuary.

The Normans Kill begins in Duanesburg and flows to the Watervliet Reservoir in the Town of Guilderland. It flows through the Towns of Guilderland, New Scotland and Bethlehem, where it flows beneath Route 85. From this point, the Normans Kill follows Albany's boundary with the Town of Bethlehem, flowing through the WRA for a total of 1.2 miles to its terminus at the Hudson River just south of the WRA.

The Normans Kill passes through a more secluded and diverse environment than the Hudson, not being exposed to the highway noise and industrial intrusion of the River locale. In addition, there are a variety of cover types present along the banks of the Normans Kill: woods, open brushland, and exposed rock cliffs.

The classification and standards for the Normans Kill from its mouth on the Hudson to the Route 443 bridge, on the Albany/Bethlehem line approximately 3 miles northwest of the WRA are "C". Freshwater inflows from the Normans Kill are important for maintaining water quality in the Hudson River estuary.

Portions of this stream provide favorable habitat conditions for a variety of regionally common fishes and small mammals. (See Section L.5.-Wildlife).

In addition, a two mile segment of the Normans Kill, from its mouth at the Hudson River to an upstream falls located near the NYS Thruway (I-90) bridge, has been designated by the New York State Secretary of State as a coastal fish and wildlife habitat of statewide significance.

5. Wildlife

Although much of Albany's waterfront is characterized by a high degree of development, some areas do provide suitable habitats to support a relative abundance and diversity of regionally common wildlife. These areas are the shoreline of the Hudson River at the Corning Preserve and in the North Broadway Sub-Area, and the Normans Kill where it passes through the WRA in the Port Sub-Area. Particular sites of importance include nesting sites for endangered Peregrine Falcons and Bald Eagles.

These coastal green belts provide important opportunities for sport fishing, bird-watching, wildlife photography and other wildlife-related activities in close proximity to an urban population center. Nonetheless, actual utilization of these areas is significantly below capacity.

There is one aspect in which these areas share common wildlife values: the wooded slopes along the Normans Kill, and isolated areas of the North Broadway Sub-Area support significant populations of muskrat, rabbit, raccoon, and other small mammals common to a tidal zone. These areas also support small populations of such larger mammals as deer and red fox.

Following is a general description of bird and fish habitats in these areas:

c. The Hudson River

In the Corning Preserve and in the eastern portion of the North Broadway Sub-Area, it is possible to observe common species of waterfowl, predatory birds, songbirds and other species such as mallards, red-tailed hawk, orioles, kingbirds, and flickers.

Most of the habitat can be described as maintained open field dominated by grass sod. The rest of the area includes meadows, a tree and shrub line between river and field, and six acres of what was formerly rice paddies, virtually abandoned and reverting gradually to a natural state.

The river habitat supports an abundance of fish, and sport fishing opportunities in the Hudson are excellent. In addition, the River supports a significant population of short-nosed sturgeon, an endangered species whose range is up to the Troy dam. But while general water quality and fish habitat are improving, toxic contamination prohibits the consumption of the River's fish.

Species diversity along the river bank in the North Broadway Sub-Area could be furthered by the following: leaving more land in meadow; constructing nesting boxes for wood ducks; and encouraging re-vegetation of the rice paddies so as to protect the habitats of breeding mallards and other wildfowl that have come to rely on these sites for nesting.

d. The Normans Kill

The considerable length of stream channel accessible to migratory fish, and the lack of significant human disturbances in the upper portion of the Normans Kill, provide favorable habitat conditions for a variety of anadromous, as well as resident freshwater, fish species.

A two-mile segment of the Normans Kill, from its mouth on the Hudson River to an upstream falls located near the New York State Thruway (I-90) bridge, has been designated by the New York State Secretary of State as a Coastal Fish and Wildlife Habitat of Statewide Significance. As an important spawning area for alewife, blueback herring, and white perch, it is one of only ten significant spawning streams for these anadromous fish in the upper Hudson River.

Water quality in the Normans Kill is a significant concern for wildlife habitat. Testing for sewage performed by the Riverkeeper, a local conservation group, identified the area where the Normans Kill enters the Hudson as the worst site in the region for sewage contamination. More information on water quality testing is discussed in Section N. Water and Air Quality.

While waterfront development and redevelopment are important components of the LWRP, steps must be taken to mitigate the impacts of development activities on habitat restoration. Erosion and sedimentation caused by disturbances such as dredging and in-river and shoreside construction, results in impaired water quality that has a significant impact on migrating anadromous fish as they try to reach their spawning areas, and also results in loss of shoreline and wetland habitat.

6. Soils

a. Percentages of Soil Types in the LWRP Area:

- 60% - Urban land: greater than 85% of area covered by impervious surfaces.
- 25% - Urban land complex of disturbed soils cut and fill areas, and impervious surfaces.
- 10% - Undisturbed natural soils.
- 5% - Made Land, landfills of non-soil materials.

b. Urban Land

The soils in the Port, Downtown, and South End Sub-Areas are "Urban Land." This soil type is more than 85% covered by impervious surfaces such as parking lots, roadways and buildings. Identification of the soils in this area was considered impractical by the soil surveyors.

c. Made Land

"Made land" - areas of dry land that have been created through the reclamation of marshes, lakes, or shorelines with an artificial fill (landfill) - is present throughout the WRA, including the former canal route (now Erie Blvd.), former demolition landfill, and basins in the North Broadway Sub-Area; much of the Corning Preserve and the former Albany Yacht Club basin behind the D & H Building in the Downtown Sub-Area; Island Creek Park in the South End Sub-Area; and other parts of the Port Sub-Area. These areas are extremely

unpredictable depending on the fill content. The landfill material may be unstable, poorly drained and subject to erosion and settling. Any development must be very carefully chosen and designed.

d. Natural Soils

The small percentage of natural soils found in the WRA are on the undeveloped slopes near the Normans Kill or in that stream's floodplain. These can be summarized as modern floodplain deposits (Alluvium) and lake-deposited clays, silts and sands. They are all severely limited for development due to high water tables, flooding, low bearing strength, slope instability and frost heave potential.

7. Geology

a. Surficial Geology

The WRA is included within the area referred to by geologists as the Hudson River Flood Plain.

The following surficial geologic materials are present in the WRA:

- al - Recent alluvium: Oxidized fine sand to gravel, permeable, generally confined to flood plains within a valley, in larger valleys may be overlain by silt, subject to flooding, thickness 1-10 meters.
- ls - Lacustrine sand: Generally quartz sand, well sorted, stratified, usually deposited in pro-glacial lakes, but may have been deposited on remnant ice, generally a near-shore deposit or near a sand source, permeable, thickness variable (2-20 meters).
- lsc - Lacustrine silt and clay: Generally laminated silt and clay, deposited in pro-glacial lakes, generally calcareous, low permeability, potential land instability, thickness variable (up to 50 meters).

b. Bedrock

The underlying bedrock in Albany's WRA is called Snake Hill Shale. It is judged as a fair to poor foundation for heavy structures, and is generally found 50 feet below the soil surface.

c. Development Constraints

Because of the degree of variability, each building site must be studied for its soil and geological characteristics and limitations. The following can be generally stated:

- River deposits are normally poorly drained with a seasonally high water table. Thick clay layers generally increase construction costs. They have a low bearing strength and are highly unstable when wet.
- Flooding hazard is the most significant natural development constraint on riverfront properties. (See Part L - Flooding Hazards).

8. Topography

The most dramatic feature of waterfront topography is the steep gorge-like valley cut by the Normans Kill as it flows into the Hudson River floodplain. At this point, the valley is characterized by relatively gentle slopes.

Steep slopes also occur on Riverfront Preserve where I-787 intersects with I-90.

Except for the slopes of fill areas under the highway and some berming in the Corning Preserve, the waterfront is relatively low-lying and level, at an average elevation of about 10 feet above the mean water level.

In the Corning Preserve, excavation spoils from the tidal pools have been disposed throughout the park to form a more varied topography at elevations from 12 to 20 feet in the southern section. Ridges, to 22 and 30 feet above water level, have been formed along the western edge of the Preserve, providing some screening of the Frontage Road and I-787 from the central park area.

9. Vegetation

As indicated on Map10, the most heavily vegetated areas in the WRA are in the Riverfront Preserve in the North Broadway Sub-Area and the southwestern most part of the Port Sub-Area along the Normans Kill, Some mature tree canopy can also be found in the Corning Preserve in the Downtown Sub-Area, and in Island Creek Park in the South End Sub-Area. Very little vegetation exists in the developed areas in the WRA.

10. Environmental Remediation Sites

Map 10 indicates the locations of sites designated by the Department of Environmental Conservation's (DEC) Division of Environmental Remediation (DER) as eligible for funding under the following programs:

- State Superfund Program (Inactive Hazardous Waste Disposal Site Remedial Program) - Oversees the identification, investigation and cleanup of sites where consequential amounts of hazardous waste exist.

- Brownfield Cleanup Program - Developed to enhance private-sector cleanup of brownfields and to reduce development pressure on "greenfields."
- Environmental Restoration Program - Provides municipalities with financial assistance for site investigation and remediation at eligible brownfield sites.
- Spill Response Program - Oversees the cleanup of releases of petroleum or other contaminants into the environment that occur throughout New York State.
- Bulk Storage Program - Provides guidelines and controls for the storage of many different hazardous chemicals in conjunction with a tank registration program.
- Hazardous Waste Management Program - Oversees all aspects of hazardous waste management in the State, including: generators, transporters, and treatment, storage and disposal facilities.
- Radiation Program - Oversees the discharge and disposal of radioactive material to the environment and the transportation and disposal of low-level radioactive waste.

Currently there is one site administered under the Brownfield Cleanup Program (Amos at Quackenbush Square) and one site under the Superfund Program (Niagra Mohawk Power Corporation) in the WRA. Several remediation sites are also located adjacent to the WRA.

M. AGRICULTURE

The Riverfront Preserve in the North Broadway Sub-Area used to contain two rice paddies established as a cooperative experiment between a Jamaican rice grower, the City of Albany and the Albany County Cooperative Extension. Use of this area for rice cultivation has discontinued.

There is no other agricultural development of any significance in the WRA.

N. WATER AND AIR QUALITY

1. Water Quality

a. The Hudson River and the Normans Kill

Water quality assessments performed by NYDEC in 2007 indicate that the waters of the Hudson River, from south end of Houghtaling Island to Troy, and the Normans Kill, from its mouth on the Hudson River to Voorheesville, maintain a "C" classification. (See classification descriptions below).

State Water Classifications

"A" - Source of drinking water; suitable for all other uses; water treatment required.

"B" - Suitable for bathing and all other uses except drinking.

"C" - Suitable for fishing and all other uses except drinking and bathing.

"D" - Suitable only for fish survival.

Specific impacts for the segment of the Hudson River identified in the assessment include:

Uses Impacted	Severity
Fish consumption	Impaired ¹
Aquatic life	Stressed ²
Recreation	Stressed
Habitat/hydrology	Stressed
Aesthetics	Stressed

Impaired or stressed conditions are caused by elevated levels of priority organics (PCBs, dioxin), heavy metals (cadmium) and other toxics primarily the result of past industrial discharges, sediment, combined sewer overflows, and urban stormwater runoff.

Specific impacts for the segment of the Normans Kill identified in the assessment include:

Uses Impacted	Severity
Aquatic life	Stressed

Aquatic life support in this portion of the Normans Kill is thought to experience minor impacts from silt/sediment and nutrient enrichment. A variety of non point sources contribute to the impacts.

In addition to the NYDEC water quality assessment, the Riverkeeper, a local conservation group, has been routinely testing water for sewage at 74 sites along the length of the Hudson River since 2006. The most recent report by the Riverkeeper found that nearly a quarter of 2,300 sample sites contained enough sewage-based bacteria to make swimming, boating, or other contact with the water unsafe. The location with the highest levels of bacteria was around

¹ Impaired - Occasional water quality, or quantity, conditions and/or habitat characteristics periodically prevent specific uses of the waterbody, or; waterbody uses are not precluded, but some aspects of the use are limited or restricted, or; waterbody uses are not precluded, but frequent/persistent water quality, or quantity, conditions and/or associated habitat degradation discourage the use of the waterbody, or; support of the waterbody use requires additional/advanced measures or treatment.

² Stressed - Waterbody uses are not significantly limited or restricted (i.e. uses are *Fully Supported*), but *occasional* water quality, or quantity, conditions and/or associated habitat degradation *periodically discourage* specific uses of the waterbody.

where the Normans Kill enters the Hudson River, just south of a discharge pipe for the Albany sewer system, Nearly two-thirds of samples here tested as unsafe.

b. Industrial Waste Restrictions

NYDEC regulates industrial waste discharge through the State Pollutant Discharge Elimination System (SPDES). A SPDES permit establishes stringent performance standards and operating conditions that are designed to protect the state's waters. In addition to industrial waste discharge, SPDES regulates municipal, institutional, private/commercial, and stormwater discharge. A SPDES permit requires the owner or operator of a facility to comply with specific conditions found in the permit. These requirements typically include limits on physical, chemical or biological characteristics of the discharge. For example, it is prohibited to release visible amounts of oil, toxic substances, colored, heated or acidic waters into the River.

All present industries in the WRA release their wastewater into the City sewer system. The Albany County Sewer District determines which types of industrial wastes are acceptable for discharge to the sewer and which, being hazardous or untreatable by the County treatment plant, require pre-treatment by the industry.

c. Non-Point or Stormwater Pollution

About two-thirds of the City's sewers are combined (sanitary/storm) sewers. The combined sewers discharge to the South Plant. During heavy rains, excess water is discharged to the Hudson River. This is referred to as combined sewer overflow (CSO) and has serious impacts on water quality. The Albany Water Board and the Capital District Regional Planning Commission are currently undertaking a major planning study for mitigation of the CSOs, called the CSO Long Term Control Plan. The LTCP recommends improvements to both the combined sewer system and the three wastewater treatment plants (WWTPs) that comprise the project service area. The draft Long Term Control Plan (LTCP) was submitted to NYSDEC in June 2011 for approval of the overall mitigation program. The main impact at this time, on the CSO abatement, will be the mandated disinfection project.

d. Hudson River Estuary Program

To further restore and protect the waters of the Hudson River, NYS DEC established in 1987 the Hudson River Estuary Program to provide a watershed approach to management of the ecosystem. The Hudson River Estuary Program leads a unique regional partnership of agencies, organizations and the public to restore the Hudson in ways that support the quality of life so valued by Hudson Valley residents. The program focuses on conservation of natural resources, promotion of full public use and enjoyment of the river and reducing pollution that affects the ability to use and enjoy the river.

2. Air Quality

New York's air permitting program identifies and controls sources of air pollution. The air permitting program is required by the Clean Air Act. To obtain a permit, a facility owner or operator must apply to the department and supply information on the facility's emissions, the processes operating at the facility, the raw materials being used, the height and location of stacks or vents, the requirements that apply to the facility, and the controls being applied.

Before enactment of the Clean Air Act, few limitations were placed on the amount of pollutants that could be discharged to the air. Today, DEC's air permitting program sets stringent standards that have been successful in reducing emissions by requiring the use of effective pollution control technology and enforcing compliance with permit conditions.

While state and federal regulations have steadily improved air quality over the past 40 years, some areas of the state, particularly urban areas like Albany, struggle to meet minimum air quality standards. The following table provides a comparison between Albany Testing Station results and NYDEC Ambient Air Quality Standards for four major pollutants:

1. Carbon Monoxide
2. Ozone
3. Inhalable Particulates
4. Sulfur Dioxide

The following table is adapted from the US Environmental Protection Agency's National Ambient Air Quality Standards for the Albany and Loudonville Monitoring Stations.

2011 Comparison: NYDEC Ambient Air Quality Standards and Albany / Loudonville Monitoring Stations

Pollutant	Station Measurement	Station	Measurement Period	NYDEC Ambient Air Quality Standard (maximum not to exceed)
Carbon Monoxide	1 ppm*	Loudonville	8 hour average	9 ppm
Ozone	0.065 ppm	Loudonville	8 hour average	0.075 ppm
Inhalable Particulates	8.7 µg/m ³ ***	Albany	Annual Mean	15 µg/m ³
Sulfur Dioxide	10.5 ppb	Loudonville	24 hour average	140 ppb

* parts per million

** micrograms per cubic meter

*** parts per billion

Source: New York Department of Environmental Conservation

According to the data, Albany was is in attainment with all NYDEC Ambient Air Quality Standards in 2011..

M. FLOODING, EROSION, AND OTHER COASTAL HAZARDS

1. Flooding

Flooding of the City's WRA is a very real issue. Even though Albany is not a coastal community, the City is located on the tidal Hudson River which is affected by changes in sea level. Almost the entire Waterfront Revitalization Area is located within the Flood Zone as delineated by the Federal Emergency Management Agency (FEMA). The Federal Insurance Administration Flood Insurance Study for the City of Albany, New York established the boundaries of the hundred year and 500 year floodplains (See Map 11), but did not designate a probable floodway. The FIA reported that, since the Hudson River along Albany is an estuary, "water surface elevations during floods are ... a complex function of discharge, flood volume, tide levels and wind effects." Because there is no "unique relationship between water-surface elevation and (floodwater) discharge ... no floodway can be computed."

The natural floodplain in the City has been filled in. The interstate highway system may act as a levee, channeling floodwaters until the highway system heads up the valley walls, and the topography flattens out in the Port Sub-Area. From this point on, it is likely a new floodway would be carved out farther inland.

During a major flood, the highway banks would be scoured and might collapse in some areas. Areas west of I-787 would be swamped by slow or still waters. Erosion damage would be heavy and since wet soils, especially clays weaken with wet loads, building foundations could be shifted, and structural damage would result.

The most recent significant flooding event to affect Albany occurred after Tropical Storm Irene in August, 2011. Major flooding caused damage to businesses and homes in the waterfront area, and may have contributed to weakening road and bridge infrastructure, which has implications for future development / redevelopment in the WRA. Flood protection for new and rehabilitated structures will need to be addressed as part of the LWRP. Overflow of combined sewer systems during major flooding events is also a major concern for waterfront development, with potential contamination of water quality in the Hudson River impacting the potential for water recreation.

2. Coastal Erosion Hazards

Although no part of the Albany waterfront has been identified as an erosion hazard area and erosion potential is not seen as a serious disincentive to waterfront development in Albany, local actions can have significant regional consequences and the LWRP, therefore, must include comprehensive erosion control measures. Any shoreline development in the North Broadway Sub-Area or Corning Preserve area of the Downtown Sub-Area should meet strict design and construction standards.

3. Redevelopment Considerations

While major floods have been a rare occurrence this century, the City should remain aware of their inevitability. Good floodplain management must be incorporated into the redevelopment and revitalization plans for the waterfront. This is not a serious constraint to recreational development in the area, but imposes a severe cost premium on any other type of development which must be flood-proofed to a foot above the 100-year flood elevation, or constructed over non-habitable space, such as parking.

The City presently has a local ordinance in place that establishes procedures to promote public health and safety considerations and the minimization of property damage and disruption of commerce during a 100-year flood.

The City itself may find it important to further investigate the designation of a floodway. The ordinance defines floodway as "an extremely hazardous area" where it would "prohibit encroachment, including fill, new construction, substantial improvements, and other developments unless a technical evaluation demonstrates that encroachment shall not result in any increase in flood levels during a 100-year flood."

Types of redevelopment compatible with close proximity to the floodway are highways, preserves, agriculture, and outdoor recreational facilities such as parks, walkways, marinas, baseball fields, bike paths, and gardens.

Erosion could be a problem in the future for the light industrial facilities in the South End Sub-Area. Edge stabilization will be required to provide for new residential development.

N. CLIMATE CHANGE VULNERABILITY

The New York State Energy Research and Development Authority (NYSERDA) recently completed, *Responding to Climate Change in New York State*, referred to as ClimAID. The report outlines the potential impacts of climate change across New York State and provides recommendations for adaptation strategies to address these impacts. The City of Albany recently completed a Climate Change Vulnerability Assessment to determine how climate change could affect the people, infrastructure and natural resources of the City.

The impacts of climate change that Albany can anticipate are an increase in temperature, including more frequent high heat days and heat waves, an increase in precipitation and more intense precipitation events, and sea level rise along the tidal Hudson River. There is also a possibility that Albany will experience more extreme weather events such as ice storms, thunderstorms bringing hail and even tornadoes, and tropical storms including Hurricanes and Nor'easters.

The combination of rising water levels in the Hudson River and an increase in precipitation could overwhelm the stormwater systems leading to significant flooding. The current 100 year floodplain is projected to expand by 2030, as indicated on Map 12, resulting in more frequent flooding throughout the City. This will have implications on a range of infrastructure systems from sewer and water to

transportation and energy. Extreme heat has public health implications due to a decrease in air quality and increased risk of heat related illnesses such as heat stroke. A warmer climate can affect natural resources by putting additional stress on already sensitive ecosystems such as the Pine Bush Preserve. In addition, water quality can be significantly reduced as it warms, making it less capable of supporting ecological functions and recreational opportunities.

The potential impacts of climate change on waterfront revitalization efforts include:

- Increased severe flooding events that would require enhanced structural reinforcements to prevent damage to buildings, roads, bridges, and other infrastructure.
- Increased precipitation, coupled with a winter storm event occurring at high tide could severely impact the Port's ability to operate.
- Reduced opportunities for fishing due to impacted ecosystems.
- Reduced opportunities for water recreation, such as boating or swimming due to water quality issues.

The City of Albany has been taking action to address climate change since 2005 when Mayor Jennings joined an inaugural group of mayors from around the country in signing the Mayors' Climate Protection Agreement. The City also developed a climate action plan that has been integrated in to the Albany 2030 Comprehensive Plan. The following climate adaptation strategies were identified in the Climate Action Plan to address to prepare Albany for the impacts of changing climate:

- **Assess emergency response plans in anticipation of climate change impacts** and develop a citywide natural disaster response plan.
- **Limit encroachment into habitat areas through land use control.** Restore and maintain high quality natural habitats. Natural areas are better able to absorb increases in precipitation and runoff, reducing the potential for flooding.
- **Limit encroachment on steep slopes through land use controls.** Steep slopes can contribute to landslides during extreme rain events and create significant liabilities
- **Support local food production.** Local food options can enhance the City's ability to feed its population following significant storm events.
- **Modernize the port.** Investigate the feasibility of utilizing alternative construction materials for pavement and rail tracks in preparation for climate change.
- **Increase resilience of housing stock to impacts of climate change.** Investigate resiliency strategies such as the formation of mutual insurance pools to spread the risk of climate change.
- **Create a green infrastructure system** as an alternative and complement to "grey" (engineered) infrastructure in order to better absorb stormwater runoff and filter pollutants
- **Reduce impermeable surfaces through land development regulations.** Impermeable surfaces increase runoff and flooding during storm events and increase urban heat island effect.
- **Protect and enhance the urban forest.** Trees absorb precipitation and runoff, filter air pollutants, and provide shade to reduce temperatures.

O. NAVIGATION AND DREDGING

Comment [NT3]: Are there any issues with navigation and dredging?

P. AUTHORITIES OF FEDERAL, STATE, REGIONAL, AND LOCAL AGENCIES THAT HAVE JURISDICTION IN THE WATERFRONT REVITALIZATION AREA

The following authorities of federal, state, regional, and local agencies have jurisdiction in the waterfront revitalization area.

- The National Oceanic and Atmospheric Administration
- The U.S. Coast Guard
- The U.S. Army Corps of Engineers
- The U.S. Department of Interior
- The New York State Departments of State, Environmental Conservation, Health, and Transportation
- The New York State Offices of General Services and Parks, Recreation, and Historic Preservation
- The City of Albany
- The Albany Port District Commission
- Albany County
- The Capital District Transportation Authority
- The Capital District Transportation Committee